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## Directory of Courses

Courses are grouped in categories (English, Industrial Design, Pharmacy Practice, etc.). Abbreviations are based on these category names. Category names are listed first. The college or school that offers the course follows the category name.

<table>
<thead>
<tr>
<th>Name, College or School</th>
<th>Abbr.</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accompanying, Fine Arts</td>
<td>ACMP</td>
<td>176</td>
</tr>
<tr>
<td>Accounting, Business</td>
<td>ACCT</td>
<td>95</td>
</tr>
<tr>
<td>Advanced Design Studies, Fine Arts</td>
<td>ADS</td>
<td>171</td>
</tr>
<tr>
<td>Aerospace Engineering, Engineering</td>
<td>AE</td>
<td>143</td>
</tr>
<tr>
<td>African &amp; African-American Studies, Liberal Arts &amp; Sciences</td>
<td>AAAS</td>
<td>200</td>
</tr>
<tr>
<td>American Studies, Liberal Arts &amp; Sciences</td>
<td>AMS</td>
<td>202</td>
</tr>
<tr>
<td>Anatomy &amp; Cell Biology, Medicine</td>
<td>ANAT</td>
<td>322</td>
</tr>
<tr>
<td>Anthropology, Liberal Arts &amp; Sciences</td>
<td>ANTH</td>
<td>204</td>
</tr>
<tr>
<td>Applied Behavioral Science, Liberal Arts &amp; Sciences</td>
<td>ABSC</td>
<td>209</td>
</tr>
<tr>
<td>Architectural Engineering, Engineering</td>
<td>ARCE</td>
<td>150</td>
</tr>
<tr>
<td>Architecture, Architecture &amp; Urban Design</td>
<td>ARCH</td>
<td>80</td>
</tr>
<tr>
<td>Art, Fine Arts</td>
<td>ART</td>
<td>169</td>
</tr>
<tr>
<td>Astronomy, Liberal Arts &amp; Sciences</td>
<td>ASTR</td>
<td>285</td>
</tr>
<tr>
<td>Atmospheric Science, Liberal Arts &amp; Sciences</td>
<td>ATM O</td>
<td>248</td>
</tr>
<tr>
<td>Audiology, Allied Health</td>
<td>AUD</td>
<td>62</td>
</tr>
<tr>
<td>Band, Fine Arts</td>
<td>BAND</td>
<td>181</td>
</tr>
<tr>
<td>Bassoon, Fine Arts</td>
<td>BASN</td>
<td>178</td>
</tr>
<tr>
<td>Biochemistry &amp; Molecular Biology, Medicine</td>
<td>BCHM</td>
<td>324</td>
</tr>
<tr>
<td>Biological Sciences, Liberal Arts &amp; Sciences</td>
<td>BIOL</td>
<td>220</td>
</tr>
<tr>
<td>Biometry, Allied Health</td>
<td>BMTR</td>
<td>61</td>
</tr>
<tr>
<td>Brass, Fine Arts</td>
<td>BRSS</td>
<td>176</td>
</tr>
<tr>
<td>Business, Business</td>
<td>BUS</td>
<td>95</td>
</tr>
<tr>
<td>Business Law, Business</td>
<td>BLAW</td>
<td>102</td>
</tr>
<tr>
<td>Carillon, Fine Arts</td>
<td>CARI</td>
<td>176</td>
</tr>
<tr>
<td>Ceramics, Fine Arts</td>
<td>CER</td>
<td>171</td>
</tr>
<tr>
<td>Chamber Music, Fine Arts</td>
<td>CHAM</td>
<td>177</td>
</tr>
<tr>
<td>Chemical &amp; Petroleum Engineering, Engineering</td>
<td>C&amp;PE</td>
<td>148</td>
</tr>
<tr>
<td>Chemistry, Liberal Arts &amp; Sciences</td>
<td>CHEM</td>
<td>225</td>
</tr>
<tr>
<td>Chinese, Liberal Arts &amp; Sciences</td>
<td>CHIN</td>
<td>237</td>
</tr>
<tr>
<td>Choral Music, Fine Arts</td>
<td>CHOR</td>
<td>181</td>
</tr>
<tr>
<td>Church Music, Fine Arts</td>
<td>CHUR</td>
<td>176</td>
</tr>
<tr>
<td>Civil Engineering, Engineering</td>
<td>CE</td>
<td>151</td>
</tr>
<tr>
<td>Clarinet, Fine Arts</td>
<td>CLAR</td>
<td>178</td>
</tr>
<tr>
<td>Classics, Liberal Arts &amp; Sciences</td>
<td>CLSX</td>
<td>228</td>
</tr>
<tr>
<td>Clinical Laboratory Sciences, Allied Health</td>
<td>CLLS</td>
<td>61</td>
</tr>
<tr>
<td>Communication Studies, Liberal Arts &amp; Sciences</td>
<td>COMS</td>
<td>231</td>
</tr>
<tr>
<td>Conducting, Fine Arts</td>
<td>COND</td>
<td>182</td>
</tr>
<tr>
<td>Construction Management, Engineering</td>
<td>CMGT</td>
<td>153</td>
</tr>
<tr>
<td>Croatian &amp; Serbian, Liberal Arts &amp; Sciences</td>
<td>CRSB</td>
<td>306</td>
</tr>
<tr>
<td>Czech, Liberal Arts &amp; Sciences</td>
<td>CZCH</td>
<td>307</td>
</tr>
<tr>
<td>Dance, Fine Arts</td>
<td>DANC</td>
<td>174</td>
</tr>
<tr>
<td>Decision Sciences, Business</td>
<td>DSCI</td>
<td>102</td>
</tr>
<tr>
<td>Dietetics &amp; Nutrition, Allied Health</td>
<td>DN, DIET</td>
<td>63</td>
</tr>
<tr>
<td>Double Bass, Fine Arts</td>
<td>DBBS</td>
<td>177</td>
</tr>
<tr>
<td>Drawing, Fine Arts</td>
<td>DRWG</td>
<td>170</td>
</tr>
<tr>
<td>Design Theory, Fine Arts</td>
<td>DSGN</td>
<td>171</td>
</tr>
<tr>
<td>East Asian Languages &amp; Cultures, Liberal Arts &amp; Sciences</td>
<td>EALC</td>
<td>238</td>
</tr>
<tr>
<td>Economics, Liberal Arts &amp; Sciences</td>
<td>ECON</td>
<td>240</td>
</tr>
<tr>
<td>Electrical Engineering &amp; Computer Science, Engineering</td>
<td>EECS</td>
<td>156</td>
</tr>
<tr>
<td>Engineering, Engineering</td>
<td>ENGR</td>
<td>160</td>
</tr>
<tr>
<td>Engineering Management, Engineering</td>
<td>EMGT</td>
<td>159</td>
</tr>
<tr>
<td>Engineering Physics, Engineering</td>
<td>EPHX</td>
<td>161</td>
</tr>
<tr>
<td>English, Liberal Arts &amp; Sciences</td>
<td>ENGL</td>
<td>244</td>
</tr>
<tr>
<td>Environmental Studies, Liberal Arts &amp; Sciences</td>
<td>EVRN</td>
<td>223</td>
</tr>
<tr>
<td>Euphonium, Fine Arts</td>
<td>EUPH</td>
<td>176</td>
</tr>
<tr>
<td>European Studies, Liberal Arts &amp; Sciences</td>
<td>EURS</td>
<td>245</td>
</tr>
<tr>
<td>Finance, Business</td>
<td>FIN</td>
<td>102</td>
</tr>
<tr>
<td>Flute, Fine Arts</td>
<td>FLUT</td>
<td>178</td>
</tr>
<tr>
<td>French, Liberal Arts &amp; Sciences</td>
<td>FREN</td>
<td>246</td>
</tr>
<tr>
<td>French Horn, Fine Arts</td>
<td>FRHN</td>
<td>178</td>
</tr>
<tr>
<td>Geography, Liberal Arts &amp; Sciences</td>
<td>GEOG</td>
<td>248</td>
</tr>
<tr>
<td>Geology, Liberal Arts &amp; Sciences</td>
<td>GEOL</td>
<td>252</td>
</tr>
<tr>
<td>German, Liberal Arts &amp; Sciences</td>
<td>GERM</td>
<td>254</td>
</tr>
<tr>
<td>Graduate Studies, Graduate School &amp; International Programs</td>
<td>GS</td>
<td>44</td>
</tr>
<tr>
<td>Greek, Liberal Arts &amp; Sciences</td>
<td>GREEK</td>
<td>238</td>
</tr>
<tr>
<td>Haitian, Liberal Arts &amp; Sciences</td>
<td>HAIT</td>
<td>201</td>
</tr>
<tr>
<td>Harp, Fine Arts</td>
<td>HARP</td>
<td>177</td>
</tr>
<tr>
<td>Harpsichord, Fine Arts</td>
<td>HPCD</td>
<td>176</td>
</tr>
<tr>
<td>Health, Sport, &amp; Exercise Sciences, Education</td>
<td>HSES</td>
<td>114</td>
</tr>
<tr>
<td>Health Policy &amp; Management, Medicine</td>
<td>HP&amp;M</td>
<td>326</td>
</tr>
<tr>
<td>Hebrew, Liberal Arts &amp; Sciences</td>
<td>HEBR</td>
<td>303</td>
</tr>
<tr>
<td>History, Liberal Arts &amp; Sciences</td>
<td>HIST</td>
<td>258</td>
</tr>
<tr>
<td>History &amp; Philosophy of Medicine, Medicine</td>
<td>H&amp;PM</td>
<td>328</td>
</tr>
<tr>
<td>History of Art, Liberal Arts &amp; Sciences</td>
<td>HA</td>
<td>263</td>
</tr>
<tr>
<td>Humanities &amp; Western Civilization, Liberal Arts &amp; Sciences</td>
<td>HWC</td>
<td>264</td>
</tr>
<tr>
<td>Indigenous Nations Studies, Liberal Arts &amp; Sciences</td>
<td>INS</td>
<td>267</td>
</tr>
<tr>
<td>Industrial Design, Fine Arts</td>
<td>INDD</td>
<td>171</td>
</tr>
<tr>
<td>Information Systems Technology, Business</td>
<td>IST</td>
<td>102</td>
</tr>
<tr>
<td>Interior Design, Fine Arts</td>
<td>INTD</td>
<td>171</td>
</tr>
<tr>
<td>International Business, Business</td>
<td>IBUS</td>
<td>102</td>
</tr>
<tr>
<td>International Studies, Liberal Arts &amp; Sciences</td>
<td>INTL</td>
<td>269</td>
</tr>
<tr>
<td>Italian, Liberal Arts &amp; Sciences</td>
<td>ITAL</td>
<td>247</td>
</tr>
<tr>
<td>Japanese, Liberal Arts &amp; Sciences</td>
<td>JPN</td>
<td>238</td>
</tr>
<tr>
<td>Jazz, Fine Arts</td>
<td>JAZZ</td>
<td>182</td>
</tr>
<tr>
<td>Journalism, Journalism &amp; Mass Communications</td>
<td>JOUR</td>
<td>192</td>
</tr>
<tr>
<td>Korean, Liberal Arts &amp; Sciences</td>
<td>KOR</td>
<td>238</td>
</tr>
<tr>
<td>Latin, Liberal Arts &amp; Sciences</td>
<td>LAT</td>
<td>229</td>
</tr>
<tr>
<td>Latin American Area Studies, Liberal Arts &amp; Sciences</td>
<td>LAA</td>
<td>271</td>
</tr>
<tr>
<td>Liberal Arts &amp; Sciences, Liberal Arts &amp; Sciences</td>
<td>LA&amp;S</td>
<td>272</td>
</tr>
<tr>
<td>Linguistics, Liberal Arts &amp; Sciences</td>
<td>LING</td>
<td>273</td>
</tr>
<tr>
<td>Management, Business</td>
<td>MGMT</td>
<td>102</td>
</tr>
<tr>
<td>Marketing, Business</td>
<td>MKTG</td>
<td>102</td>
</tr>
<tr>
<td>Mathematics, Liberal Arts &amp; Sciences</td>
<td>MATH</td>
<td>276</td>
</tr>
</tbody>
</table>
Directory of Courses; Tables of Contents; Contents

Name, College or School | Abbr. | Page
---|---|---
Mechanical Engineering, Engineering | ME | 162
Medicinal Chemistry, Pharmacy | MDCM | 353
Metalsmiting/Jewelry, Fine Arts | METL | 171
Microbiology, Molecular Genetics, & Immunology, Medicine | MICR | 329
Molecular & Integrative Physiology, Medicine | PHSL | 330
Music Studies, Liberal Arts | MUSE | 278
Music, Fine Arts | MUS | 174
Music Education & Music Therapy, Fine Arts | MEMT | 183
Music Theory & Composition, Fine Arts | MTHC | 180
Musicology, Fine Arts | MUSC | 180
Neurosciences, Pharmacy | NURO | 355
Nurse Anesthesia, Allied Health | NURA | 65
Nursing, Nursing | NRSG | 343
Oboe, Fine Arts | OBOE | 178
Occupational Therapy, M.O.T., Allied Health | OCTH | 69
Pathology & Laboratory Medicine, Medicine | P&O | 331
Percussion, Fine Arts | PCUS | 179
Percussion Ensemble, Fine Arts | PENS | 182
Pharmaceutical Chemistry, Pharmacy | PHCH | 357
Pharmacology, Medicine | PHCL | 332
Pharmacology & Toxicology, Pharmacy | P&TX | 359
Pharmacy Practice, Pharmacy | PHPR | 351
Philosophy, Liberal Arts & Sciences | PHIL | 281
Physical Therapy & Rehabilitation Sciences, Allied Health | PTRS | 72
Physiology, Liberal Arts & Sciences | PHSX | 285
Physics, Molecular & Integrative, Medicine | PHSL | 330
Piano, Fine Arts | PIAN | 177
Polish, Liberal Arts & Sciences | PLSH | 307
Political Science, Liberal Arts & Sciences | POLS | 288
Portuguese, Liberal Arts & Sciences | PORT | 311
Preventive Medicine & Public Health, Medicine | PRVM | 335
Printmaking, Fine Arts | PRNT | 170
Psychology, Liberal Arts & Sciences | PSYC | 294
Psychology & Research in Education, Education | PRE | 122
Public Administration, Liberal Arts & Sciences | PUAD | 301
Religious Studies, Liberal Arts & Sciences | REL | 303
Russian, Liberal Arts & Sciences | RUSS | 307
Russian & East European Studies, Liberal Arts & Sciences | REES | 305
Saxophone, Fine Arts | SAXO | 179
Scandinavian, Liberal Arts & Sciences | SCAN | 255
Sculpture, Fine Arts | SCUL | 170
Slavic Languages & Literatures, Liberal Arts & Sciences | SLAV | 307

Name, College or School | Abbr. | Page
---|---|---
Social Welfare, Social Welfare | SW | 368
Sociology, Liberal Arts & Sciences | SOC | 309
Spanish, Liberal Arts & Sciences | SPAN | 312
Special Education, Education | SPED | 126
Speech-Language-Hearing: Sciences & Disorders, Liberal Arts & Sciences | SPLH | 235
Strings, Fine Arts | STRG | 177
Teaching & Leadership, Education | T&L | 133
Textile Design, Fine Arts | TD | 171
Theatre & Film, Liberal Arts & Sciences | TH&F | 315
Therapeutic Science, Allied Health | TS | 70
Toxicology, Medicine | PTOX | 333
Trombone, Fine Arts | TROM | 176
Trumpet, Fine Arts | TRUM | 176
Tuba, Fine Arts | TUBA | 176
Tuba-Euphonium Consort, Fine Arts | TUEU | 176
Turkish, Liberal Arts & Sciences | TURK | 308
Ukrainian, Liberal Arts & Sciences | UKRA | 308
Urban Planning, Architecture & Urban Design | UBPL | 83
Viola, Fine Arts | VIOA | 177
Violin, Fine Arts | VION | 178
Violoncello, Fine Arts | VNCL | 178
Visual Art Education, Fine Arts | VAE | 172
Visual Communication, Fine Arts | VISC | 171
Voice, Fine Arts | VOIC | 179
Wind & Percussion, Fine Arts | W&P | 179
Wind Ensemble, Fine Arts | WENS | 182
Women's Studies, Liberal Arts & Sciences | WS | 318

Tables of Contents
A complete Table of Contents for each chapter of this catalog appears on the right-hand page before the chapter begins. The page numbers in the following table are those of each chapter’s Table of Contents.

Contents
General Information ................................................. 9
The Graduate School and International Programs .................................... 37
Research and Academic Support ............................................ 45
School of Allied Health .................................................. 59
School of Architecture and Urban Design .................................. 75
School of Business ....................................................... 87
School of Education ..................................................... 103
School of Engineering .................................................. 139
School of Fine Arts ...................................................... 165
School of Journalism and Mass Communication .................................. 189
College of Liberal Arts and Sciences ..................................... 195
School of Medicine ..................................................... 319
School of Nursing ....................................................... 339
School of Pharmacy ..................................................... 349
School of Social Welfare ................................................ 361
Graduate Faculty ........................................................ 371
Index .......................................................................... 381
Campus Maps ......................................................... 390

The University of Kansas is the only school in Kansas belonging to the Association of American Universities, a select group of 58 leading higher education institutions in the United States and Canada. Member institutions are chosen on the basis of their national significance in graduate studies and research.

KU catalogs and other academic publications are online at www.ur.ku.edu/publications/current publications.

**Graduate School Calendar**

**Fall Semester 2005**
See www.registrar.ku.edu/timetable for enrollment dates.

*August 18*
Classes begin.

*September 5*
Labor Day. No classes.

*Check with individual Graduate Divisions* for the last day for May 2006 doctoral aspirants to take comprehensive oral examinations.

*October 13*
Fall break begins.

*October 17*
Classes resume.

*November 23*
Recess begins.

*November 28*
Classes resume.

*Check with individual Graduate Divisions* for the last day for December 2005 master’s and doctoral candidates to take final examinations.

*December 8*
Last day of classes.

*December 12-16*
Final examinations.

*December 16*
Last day for December 2005 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. **No extensions will be granted by Graduate Divisions.**

*December 31*
December degrees awarded (formally conferred at May 2006 commencement).

**Spring Semester 2006**
See www.registrar.ku.edu/timetable for enrollment dates.

**May 15-19**
Final examinations.

**May 20**
Doctoral hooding ceremony (tentative date).

**May 21**
Commencement (tentative date).

**Summer Session 2006**
See www.registrar.ku.edu/timetable for enrollment dates.

**June 6**
Classes begin.

*Check with individual Graduate Divisions* for the last date for December 2006 doctoral aspirants to take comprehensive oral examinations.

*Check with individual Graduate Divisions* for the last date for August 2006 master’s and doctoral candidates to take final examinations.

*July 28*
Last day for August 2006 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. **No extensions will be granted by Graduate Divisions.**

**July 28**
Last day of classes.

*August 1*
August degrees awarded (formally conferred at May 2007 commencement).

**Fall Semester 2006**
See www.registrar.ku.edu/timetable for enrollment dates.

*August 17*
Classes begin.

*September 4*
Labor Day. No classes.

*Check with individual Graduate Divisions* for the last date for May 2007 doctoral aspirants to take comprehensive oral examinations.

*October 12*
Fall break begins.

*October 16*
Classes resume.

*November 22*
Recess begins.

*November 27*
Classes resume.

*Check with individual Graduate Divisions* for the last date for December 2006 master’s and doctoral candidates to take final examinations.

*December 7*
Last day of classes.

*December 11-15*
Final examinations.

*December 15*
Last day for December 2006 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. **No extensions will be granted by Graduate Divisions.**

*December 31*
December degrees awarded (formally conferred at May 2007 commencement).
Spring Semester 2007
See www.registrar.ku.edu/timetable for enrollment dates.

**January 19**
Classes begin.

*Check with individual Graduate Divisions* for the last date for August 2007 doctoral aspirants to take comprehensive oral examinations.

**February 2**
Last day to file applications for Graduate School fellowships in the Graduate School

**March 19**
Spring recess begins.

**March 26**
Classes resume.

*Check with individual Graduate Divisions* for the last date for May 2007 master’s and doctoral candidates to take final examinations.

**May 3**
Last day for May 2007 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. **No extensions will be granted by Graduate Divisions.**

**May 10**
Last day of classes.

**May 14-18**
Final examinations.

**May 19** (tentative date)
Doctoral hooding ceremony.

**May 20** (tentative date)
Commencement.

KU’s academic calendars are online at www.registrar.ku.edu/calendar.

Prospective students in the continental United States may request a free copy of the Graduate School Catalog. Call (785) 864-9036, or send e-mail to graduate@ku.edu.


Summer Session 2007
See www.registrar.ku.edu/timetable for enrollment dates.

**June 5**
Classes begin.

*Check with individual Graduate Divisions* for the last date for December 2007 doctoral aspirants to take comprehensive oral examinations.

*Check with individual Graduate Divisions* for the last date for August 2007 master’s and doctoral candidates to take final examinations.

**July 27**
Last day for August 2007 master’s and doctoral candidates to file theses, dissertations, and other materials in their Graduate Division offices. **No extensions will be granted by Graduate Divisions.**

**July 27**
Last day of classes.

**August 1**
August degrees awarded (formally conferred at May 2008 commencement).

*These dates vary among the schools. Consult the Graduate Division of your school for the correct date.**

*Dates shown are subject to change. See the online Timetable, www.registrar.ku.edu/timetable, for specific dates.

KU’s academic calendars are online at www.registrar.ku.edu/calendar.
General Information

Robert Hemenway, Chancellor of the University
Strong Hall, 1450 Jayhawk Blvd., Room 230
Lawrence, KS 66045-7535, www.chancellor.ku.edu
(785) 864-3131

The Mission of the University of Kansas ..... 11
Nondiscrimination, Equal Opportunity, & Affirmative Action Policy .................. 11
University Policy on Diversity in the Student Body .................................................. 12
The University Communities ................... 12
Lawrence ................................................. 12
Kansas City & the Medical Center .......... 12
Edwards Campus, Overland Park .......... 13
University Support ................................. 13
University Service to the State ................. 13
Admission ............................................. 13
Degree-seeking Students ....................... 13
Nondegree Students ............................... 14
Application Procedure ......................... 14
Application Forms ............................... 14
Limitations on Admission ..................... 15
Minimum English Proficiency Requirements .... 15
Degrees .................................................... 15
Master’s Degrees ................................. 16
M.A. & M.S. with a Major in Special Studies ..... 16
Professional Master’s Degrees ................. 16
Combined Degrees .............................. 16
Master’s Degree Programs ................... 16
Specialist in Education ....................... 17
Doctoral Degrees ................................. 17
Doctor of Philosophy ......................... 17
Ph.D. with a Major in Special Studies ..... 17
Doctor of Education ............................ 17
Doctor of Audiology .......................... 17
Doctor of Engineering ....................... 18
Doctor of Musical Arts ..................... 18
Doctor of Physical Therapy ............... 18
Doctoral Degree Programs .................. 18
Graduate Certificate Programs .............. 19
Eligibility & Admission Criteria ............. 19
Approved Graduate Certificate Programs ... 19
Master’s Degree Requirements ............... 19
Program Time Constraints .................. 19
M.A. & M.S. Degrees ......................... 19
M.A. & M.S. with a Major in Special Studies ... 20
Combined Medical & Master’s Degrees ..... 20
Doctoral Degree Requirements ............. 20
Doctor of Philosophy ......................... 20
1. Application & Admission ................. 20
2. Program Time Constraints .............. 21
3. Research Skills ............................ 21
4. Comprehensive Oral Examination ..... 22
5. Candidacy .................................... 22
6. Dissertation ............................... 22
7. Final Oral Examination .................. 23
8. Dissertation Submission & Publication .... 23
Ph.D. with a Major in Special Studies .......... 23
Combined Medical & Doctoral Degrees ...... 24
Special Sessions & Programs .................. 24
Graduate Work in the Summer Session ........ 24
Extramural (Off-campus) Graduate Study .... 24
Continuing Education Classes & Centers ... 25
Independent Study/Distance Learning ...... 25
General Regulations .......................... 25
Course Numbering System .................. 25
Credit by Examination ...................... 25
Credit by Transfer ............................ 25
Enrollment ....................................... 26
Grading .......................................... 26
Probation ........................................ 27
Graduate Credit ................................. 27
Graduate Student School, Division, & Level Codes .......... 27
Grievances ........................................ 27
Intellectual Property Policy ................. 27
Language Requirements .................. 27
Leave of Absence (Doctoral Students) ...... 28
Seniors & Graduate Study (Coenrollment) .... 28
Special Conditions for Specified Types of Research .......... 28
Student Responsibilities .................... 28
Time Limit on Graduate Courses ............ 28
Undergraduate Student Enrollment ........ 28
University Faculty & Advanced Degrees ... 29
Withdrawal from a Course .................. 29
Withdrawal from the University ............ 29
Tuition & Fees ....................................... 29
Late Enrollment Fee ......................... 29
Residency Requirements .................... 29
Books & Supplies ............................ 29
Reciprocal Agreements ...................... 29
Financial Aid ....................................... 30
Loans ............................................. 30
Tuition Payment ............................... 30
Graduate Assistantships ..................... 30
Graduate Teaching Assistantships .......... 30
Graduate Research Assistantships .......... 30
Summer Session Enrollment Requirements ... 31
Health Insurance ............................. 31
Non-native Speakers of English ............ 31
Other Employment Opportunities .......... 31
Student Services ............................... 31
Graduate Student Associations ............. 31
Health Services ............................... 31
Housing ......................................... 32
Lawrence Campus Services .................. 32
KU Medical Center Campus Services ...... 34
KU Edwards Campus Services ............. 35
Non-native Speakers of English ............ 31
Health Insurance ............................. 31
Grievances ........................................ 27
Intellectual Property Policy ................. 27
Language Requirements .................. 27
Leave of Absence (Doctoral Students) ...... 28
Seniors & Graduate Study (Coenrollment) .... 28
Special Conditions for Specified Types of Research .......... 28
Student Responsibilities .................... 28
Time Limit on Graduate Courses ............ 28
Undergraduate Student Enrollment ........ 28
University Faculty & Advanced Degrees ... 29
Withdrawal from a Course .................. 29
Withdrawal from the University ............ 29
Tuition & Fees ....................................... 29
Late Enrollment Fee ......................... 29
Residency Requirements .................... 29
Books & Supplies ............................ 29
Reciprocal Agreements ...................... 29
Financial Aid ....................................... 30
Loans ............................................. 30
Tuition Payment ............................... 30
Graduate Assistantships ..................... 30
Graduate Teaching Assistantships .......... 30
Graduate Research Assistantships .......... 30
Summer Session Enrollment Requirements ... 31
Health Insurance ............................. 31
Non-native Speakers of English ............ 31
Other Employment Opportunities .......... 31
Student Services ............................... 31
Graduate Student Associations ............. 31
Health Services ............................... 31
Housing ......................................... 32
Lawrence Campus Services .................. 32
KU Medical Center Campus Services ...... 34
KU Edwards Campus Services ............. 35
The University of Kansas opened its doors to its first eager but scantily prepared students in 1866, progressed rapidly to full undergraduate and beginning graduate-level work, and in 1896 organized its Graduate School and awarded its first doctoral degree, a Ph.D. in mathematics.

Within the Kansas Board of Regents system, the university accounts for about 70 percent of all doctoral study and a large percentage of all other graduate work in the liberal arts and sciences, fine arts, and a number of professional fields.

The Mission of the University of Kansas

The complete Statement of Institutional Mission, as approved by the Kansas Board of Regents, appears in University of Kansas Profiles. Profiles is available online at www.ku.edu/~otrped/pdfs.htm, or at the reference desk in Watson Library on the Lawrence campus. It is also available from the University of Kansas, Office of Institutional Research and Planning, Carruth-O’Leary Hall, 1246 West Campus Rd., Room 339, Lawrence, KS 66045-7505, (785) 864-4412; and the Office of the Provost, Strong Hall, 1450 Jayhawk Blvd., Room 250, Lawrence, KS 66045-7535, (785) 864-4904. On the KU Medical Center campus, write or call the Office of the Executive Vice Chancellor, 2nd floor Murphy Administration Building, Mall Stop 2015, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1400.

Lawrence

The University of Kansas is a major comprehensive research and teaching university that serves as a center for learning, scholarship, and creative endeavor. KU is the only Kansas Regents university to hold membership in the prestigious Association of American Universities, a select group of public and private research universities that represent excellence in graduate and professional education and the highest achievements in research internationally.

The University of Kansas offers the highest-quality undergraduate, professional, and graduate programs as well as outstanding libraries, teaching museums, and information technology. Educational, research, and service programs are offered on the main campus in Lawrence, through the health-related degree programs and services in Kansas City and Wichita, on the KU Edwards Campus in Overland Park, and at other sites throughout Kansas. More than 100 international study and cooperative research programs are available to students and faculty members.

The university is committed to excellence. KU fosters a multicultural environment in which the dignity and rights of the individual are respected. Intellectual diversity, integrity, and disciplined inquiry in the search for knowledge are of paramount importance.

The University of Kansas Medical Center

The University of Kansas Medical Center includes the School of Medicine in Kansas City and Wichita; the Schools of Nursing and Allied Health; the University of Kansas Hospital; and Graduate Studies in Kansas City.

The KU Medical Center is committed to serving the health care needs of the citizens of Kansas, the region, and the nation by providing educational opportunities for careers in the health professions, comprehensive services to maintain health and wellness, ongoing support of the state’s and the nation’s health service systems, and continued development of medical knowledge through research and education.

Nondiscrimination, Equal Opportunity, and Affirmative Action Policy

The University of Kansas prohibits discrimination on the basis of race, color, religion, sex, national origin, age, ancestry, and disability and veteran status in accordance with state and federal law. The university also prohibits discrimination on the basis of sexual orientation, marital status, and parental status as a matter of policy. Discrimination is prohibited in employment and all education programs and activities of the university and its affiliates. Sexual, racial, and ethnic harassment are forms of discrimination that are also expressly prohibited by university policy.

The university is committed to taking affirmative action in employment and education programs for underutilized group members and protected-class citizens. The university also is committed to providing equal opportunity in all aspects of education and employment. Full texts of university policies related to nondiscrimination, equal opportunity and affirmative action, sexual harassment, and racial and ethnic harassment are available at www.hreo.ku.edu/policies_procedures/eo_aa_policies.

Inquiries regarding the affirmative action program, equal opportunity policy, nondiscrimination policy, and reports or allegations of discrimination or harassment on the Lawrence campus should be made to the Department of Human Resources and Equal Opportunity, Carruth-O’Leary Hall, 1246 West Campus Rd., Room 101, Lawrence, KS 66045-7505, (785) 864-3686, www.hreo.ku.edu. On the KU Medical Center campus, contact the Director, Equal Opportunity Office, 1040 Wescoe, Mail Stop 2014, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160, (913) 588-1206 (voice), (913) 588-7963 (TDD), www.kumc.edu/eoo.
University Policy on Diversity of the Student Body

The University of Kansas values diversity in its student body and believes that the intentional creation of a diverse learning environment is essential to achieving the university’s educational mission. The university fosters a multicultural environment in which the dignity and rights of the individual are respected.

To build a diverse community, the university considers, in addition to academic credentials, the following criteria for student admission decisions, scholarship recognition, and program participation. While each factor is significant, no one factor will be considered determinative in the decision process:

- Bilingual or multilingual abilities
- Cultural background
- Ethnicity
- Evidence of commitment to diversity
- Evidence of leadership skills
- First-generation college student
- Geographic diversity
- Financial, social, family, physical, or educational hardships
- Previous career before pursuing higher education
- Race
- Service to community
- Socio-economic status
- Urban/rural background
- Other unique contributions

This policy was approved by Chancellor Robert E. Hemenway on April 9, 2004, and applies to all campuses of the University of Kansas.

The University Communities

Lawrence

KU’s main campus is in Lawrence, Kansas, a youthful, thriving community with a population of about 85,000. The campus is in the heart of the city on a ridge called Mount Oread. The city began as a small outpost on the banks of the Kansas River and retains many interesting reminders of its colorful past. The tree-lined main street just a few blocks from campus has an abundance of small specialty shops, many of which cater to student needs and interests. Other shopping centers are nearby. The community has 32 public parks covering about 1,400 acres of land, three community swimming pools, an arts center, a historical museum, a public library, a community center, and active community education and recreation programs.

The Lawrence Community Theatre, Lawrence Chamber Orchestra, and Seem-To-Be Players children’s theatre group present music and theatre events. The Lawrence Arts Center offers classes in arts, crafts, music, dance, and other areas for children and adults, as well as gallery shows. Local galleries sponsor art exhibits. The 1,000-acre Lawrence campus has 100 major buildings.

Dennis E. Rieger Scholarship Hall, funded by a $3-million gift from Roger and Annette Rieger, will house 50 women in a mix of traditional rooms and suites. This will be the 11th scholarship hall at KU, which is one of few universities nationwide to have a cooperative housing system on or near campus. The scholarship hall is scheduled to open in fall 2005.

The new Hall Center for the Humanities has approximately 14,700 square feet of space and includes a 120-seat conference room, a seminar room, and offices for staff and research fellows. The center, which opened in 2005, celebrates the humanities and incorporates elements of KU’s oldest surviving structure, the 1887 Powerhouse.

KU dedicated a new Structural Biology Center in 2004. The primary instrument of the 17,000-square-foot center is the 800-megahertz nuclear magnetic resonance spectrometer, which will allow researchers to learn more about how proteins interact with the human body and how those interactions can be used to develop new drugs. The center cost $7.4 million to build, including the cost of the spectrometer and other instruments. Bonds authorized by the Kansas Legislature provided $5 million of that total. The remaining $2.4 million was provided directly by the KU Center for Research and the provost’s office at KU. The KU Endowment Association donated land for the building.

The S11-million, 28,000-square-foot Robert J. Dole Institute of Politics was dedicated in 2003. It houses Senator Dole’s papers and features a 3,300-square-foot public forum, a 120-seat seminar room/media center, KU’s first satellite uplink, and extensive exhibits.

Eaton Hall, KU’s $15-million, 82,000-square-foot engineering building, opened in 2003. It features a 230-seat, state-of-the-art lecture hall and the Self Computing Commons with both Windows and Unix systems.

KU has educational, research, and service centers throughout Kansas. There is a clinical campus of the School of Medicine in Wichita and a program in Topeka, the state capital, in public administration. KU’s Institute for Life Span Studies has facilities in Parsons and Kansas City, as well as in Lawrence.

Kansas City and the Medical Center

The KU Medical Center and an estimated one-and-a-half million people call Kansas City home. Metropolitan Kansas City, about 45 minutes from Lawrence by interstate highway, encompasses seven counties and 50 municipalities in two states. Kansas City International Airport provides easy access to the area, and interstate highways provide access to 12 lakes, more than 140 parks, and various vacation and resort areas.

Popular attractions include Kansas City’s jazz museum, the Nelson-Atkins Museum of Art, the Kansas City Art Institute, Union Station, Science City, and the Kansas City Museum of History and Science.

Entertainment in Kansas City ranges from theme parks, golf courses, tennis courts, and the Kansas City Zoo to international cuisine, dinner theatre, and dancing. Local businesses offer diverse shopping in downtown areas, Farmers’ Market, Country Club Plaza, Crown Center, and Westport Square. The Arts Fest, the Ethnic Enrichment Festival, and the Renaissance Festival are popular events. Sports fans enjoy NASCAR racing, Kansas City Royals baseball, Chiefs football, and Wizards soccer. The Kansas City Symphony, Lyric Opera, Starlight Theatre, Midland Center for the Performing Arts, Folly Theatre, Theatre for Young America, the Coterie, State Ballet of Missouri, Westport Ballet, and local universities and colleges, as well as KU, offer entertainment for music and theatre lovers.

The KU School of Medicine began in 1905 with a merger of three proprietary medical schools to form a four-year school directed by the university. The School of Nursing was established a year later. By 1924, the institution had outgrown its original location, and the first building on the present campus was occupied.
KUMC is involved with teaching, patient care, medical research, and community service. There are 725 full- and part-time faculty members, more than 2,300 students, and 2,700 employees. KUMC is centrally located in the metropolitan Kansas City area. It offers educational programs through the Schools of Allied Health, Medicine, and Nursing, and Office of Graduate Studies.

KU Edwards Campus, Overland Park
KU offers part-time undergraduate and full- and part-time graduate programs on the KU Edwards Campus, 12600 Quivira Road, Overland Park, KS 66213-2402. KU offers doctorate, master’s and professional degree programs, undergraduate degree completion programs, and an undergraduate certificate program in their entirety on the Edwards Campus. Edwards Campus courses are taught by KU faculty members and carry the same credit as those taught on the Lawrence campus.

The Edwards Campus is currently undergoing the first stage of a $70-million expansion. Completed in fall 2004, Victor and Helen Regnier Hall has doubled the space on the Edwards Campus. Regnier Hall auditorium allows the Lied Center of Kansas, Hall Center for the Humanities, Spencer Museum of Art, and Dole Institute of Politics to offer cultural programming in Overland Park.

For further information, call the Edwards Campus at 864-8400 from Lawrence or (913) 897-8400 from other locations. Visit the Edwards Campus online at http://edwards campus.ku.edu.

University Support
The University of Kansas is the largest of the Regents institutions in Kansas. Nearly one-third of the Lawrence campus budget and more than a third of the Medical Center budget come from state appropriations. The sources of the rest of the university budget are gifts, grants, hospital revenues, and fees. KU set a record of $274 million for total research expenditures in fiscal year 2004, an increase of 6.2 percent from $258 million in total expenditures in FY2003.

At the close of the 2004 fiscal year, the Kansas University Endowment Association market value of assets reached $1.16 billion. Among public universities, KU Endowment ranks 19th in size of endowment per student; 86 percent of KU’s total land holdings are per student; 86 percent of KU's total land holdings are a result of gifts and nonstate grants.

Private gifts have provided, in whole or in part, 110 of the 150 buildings on KU's campuses, including construction of the Biomedical Research Building at the KU Medical Center, Regnier Hall on the Edwards Campus, and in Lawrence, Eaton Hall (engineering), the Kansas Public Radio building, and the Anderson Strength and Conditioning Center.

Throughout its 110-year history, KU Endowment has provided more than $1 billion in private support of KU through the generosity of its donors. In 2004, more than 8,500 KU students received scholarships, awards, prizes, and loans through KU Endowment totaling more than $25.1 million. That year, KU Endowment made available $15.4 million for faculty and staff support and $5.6 million for equipment, book acquisitions, and works of art.

University Service to the State
KU serves the state by providing support for education at all levels, including gathering and analyzing information for state government, business, industry, and citizenry; providing formal and informal educational and cultural opportunities for all Kansans; and providing professionals to meet Kansas’ work-force needs.

Many service functions are offered through the libraries, museums, and research agencies described in the chapter of this catalog on Research and Academic Support. Each of these agencies is involved in making its resources and the information it gains from research available to the people of Kansas.

Other services are provided through the conferences, independent study courses, and special programs of the Division of Continuing Education in cooperation with the other academic units of the university. More than 75,000 Kansans participate each year in continuing education activities.

KU brings to the state a wide variety of events, including intercollegiate athletics, theatre and dance performances, concerts, and radio and television programming. Many special projects of benefit to Kansans are extensions of the teaching, research, and creative activities of the university. Representatives from virtually every academic division of KU are engaged in lectures for special interest and community groups, workshops for Kansas professionals, and research to improve the quality of life in Kansas.

Admission
Persons whose records indicate their ability to succeed with advanced work may be admitted to the Graduate School through the Graduate Division of one of the schools. Admission requires a bachelor’s degree and a grade-point average of at least a B (3.0 on a 4.0 scale), both overall and in the proposed major, from KU or another regionally accredited institution or foreign university with substantially equivalent bachelor’s degree requirements. The bachelor’s degree is not acceptable if it contains credit awarded for work experience that was not directly supervised by faculty members (life experience) of an accredited university or not evaluated in units that identify the academic content (e.g., P/F, S/U). In exceptional cases, persons not holding bachelor’s degrees may be admitted if they are academically well prepared. The Graduate School dean reviews the student’s academic background before a student without a bachelor’s degree is admitted. Students who wish to work toward specific, established graduate degrees may be admitted in regular, probationary, or provisional categories. Those who do not have defined degree goals may be admitted in other categories to take advanced work in appropriate areas.

Regardless of the category of initial admission, no student may work toward a graduate degree without being accepted by a specific department or program.

Degree-seeking Students
Regular Graduate Student. The applicant meets the academic standards of the department, Graduate Division, and Graduate School to work for an advanced degree without excessive deficiencies in prerequisites.

Note: At the discretion of graduate degree programs, probation or provisional admission may be recommended due to deficiencies, scores, etc.
**Probationary Graduate Student.** An applicant who meets other admission standards may be admitted on probation when his or her undergraduate grade-point average is 2.75 to 3.0 on a 4.0 scale. Upon finishing the equivalent of one semester of full-time graduate study with an average of 3.0 or higher, the student automatically attains regular status. A student admitted on probation who earns a grade-point average lower than 3.0 will not be permitted to re-enroll in the Graduate School except under unusual circumstances. In such cases, the student’s department or program may recommend re-enrollment on probation for the equivalent of one more semester of full-time graduate study.

**Provisional Graduate Student.** An applicant may be admitted as a provisional graduate student when either the quality or kind of undergraduate preparation is deficient, i.e., the undergraduate grade-point average is below 2.75 on a 4.0 scale or the student has not met the prerequisites to do graduate work in the department or program to which he or she has applied. After the equivalent of one semester of full-time study as a provisional graduate student, the department or program in which the student is enrolled reviews his or her performance and recommends that the student be (1) transferred to regular status or (2) dropped from the Graduate School or (3) allowed to continue the equivalent of another semester as a provisional student. It is ordinarily expected that provisional status will not exceed two semesters. The transfer from provisional status is not automatic as it is in the case of probationary status.

**Regular Graduate Student, Special B.** This category is available only to degree-seeking graduate students in the School of Medicine at KU Medical Center. (1) The student is admitted to graduate study in the School of Medicine. (2) The student meets the academic standards of the Graduate School and the basic science departments without excessive deficiencies in prerequisites. (Same as current Regular Graduate Student category.) (3) At any time during the first year after admission, the student may seek entrance directly into a specific graduate discipline in one of the basic science departments. The department reviews the application and makes a recommendation to the Dean of Graduate Studies, KU Medical Center. If the application is approved, a completed Do-all form will change the student’s status. (4) At the end of the first academic year, which begins with the first semester of enrollment, the student will retain graduate status if a department has completed a Do-all form or submitted a petition to the Dean of Graduate Studies, KU Medical Center. The dean may extend the Special-B status for one semester or an appropriate period of time.

**Nondegree Students**

**Nondegree A Graduate Student.** The applicant is admissible to regular status but does not intend to work for an advanced degree at KU at the time of admission. If a student in the nondegree A category later requests admission as a regular degree-seeking student and is so accepted by a department or program, only that work taken as a nondegree A student which is approved by the appropriate department may be applied to the degree program.

**Nondegree C Graduate Student.** Students may gain admission to the nondegree C category upon presentation of evidence of receipt of a baccalaureate degree from an institution with requirements for the degree substantially equivalent to those at KU. This category of admission to the Graduate School limits enrollment to continuing education courses, institutes, workshops, or graduate certificate programs. Under special circumstances, however, students in this category may be permitted to enroll in residence credit courses for graduate credit with the consent of the instructor and of the Graduate Division. If students admitted in the nondegree C category are later admitted to a department to work toward a degree, then, within the limitations specified below, applicable courses taken under the nondegree C category may, upon recommendation of the department or program to its Graduate Division and within general guidelines established by the Graduate School, be approved by the division to be counted in the degree program. The total of transfer credit from another accredited graduate school and nondegree C category credit earned at KU may together not exceed 6 hours, or 8 hours if the student holds a baccalaureate degree from KU.

**Admission Procedure**

Application for admission should be filed with the Graduate School. Since some departments have a limited number of student positions, applications should be submitted as early as possible. To ensure adequate time for review, the applicant should check with each individual degree program for its application deadline date. The application must be accompanied by two copies of official transcripts of all college and university records. Transcripts and test scores that have been faxed will not be accepted as official copies. The schools and departments may require additional application materials such as test scores or letters of recommendation.

International applicants must also provide English test scores. The university is unable to issue immigration documents until the international applicant furnishes a financial resources statement. Degree programs may choose not to consider international applications if they are not accompanied by a financial statement.

(See Minimum English Proficiency Requirements.)

Nonrefundable application fees payable to the University of Kansas are required. Rates are subject to change.

**Domestic degree-seeking applicants pay**

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<td>Education and Journalism</td>
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<td>Other Schools</td>
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**International degree-seeking applicants pay**

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<td>Other Schools</td>
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Deposits are required of students admitted to some departments and programs, to be fully credited against required fees upon enrollment.

**Application forms** are available from the major department or the Graduate Division of the appropriate school or online at www.graduate.ku.edu. Send original transcripts of all completed college and university course work to

**The University of Kansas**

Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to the appropriate department or program.
On the KU Medical Center campus, contact

Office of Graduate Studies
5015 Wescoe Pavilion, Mail Stop 1040
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160, (913) 588-1258

Each applicant is notified by letter and receives an explanation of the admission classification (regular, regular special B, probationary, provisional, nondegree A or C).

The enrollment of nondegree A or C graduate students in particular courses, like that of all graduate students, is subject to fulfillment of departmental course prerequisites and consent of the instructor in the case of limitations on class size.

Admission to the Graduate School does not imply admission to candidacy for a higher degree. A student becomes a candidate for an advanced degree only by demonstrating through resident study at KU the requisite preparation and ability. Requirements specified for any advanced degree must be regarded as minimum requirements. Additional requirements depend on the student’s undergraduate preparation and the particular field of graduate work chosen.

After an absence of five years from KU, students must apply for readmission to their graduate programs and to the appropriate Graduate Division.

Limitations on Admission
Because of limitations of space, faculty, or general resources for research and instruction, some programs must restrict the number of applicants they admit.
Questions should be directed to the program to which the prospective student wishes to apply.

Minimum English Proficiency Requirements
Following are the acceptable means of verifying English proficiency for purposes of admitting international students to the Graduate School. These guidelines also apply to U.S. citizens and permanent residents who are not native speakers of English; they are subject to change by official action of the appropriate Graduate School governance bodies.

1. Verification that the applicant’s native language is English, as shown to a high degree of probability by citizenship in an English-speaking country such as Great Britain, Australia, New Zealand, or English-speaking provinces in Canada.

2. Graduation with a baccalaureate degree or higher from an accredited U.S. institution of higher education or from such an institution in one of the countries listed above whose medium of instruction is English.

3. Receipt of the applicant’s Test of English as a Foreign Language or International English Language Testing System (academic format) scores achieved no more than two years before the semester of admission.

4. If English test scores other than the TOEFL are offered, the Applied English Center interprets the scores to determine if they are equivalent to the TOEFL scores given above.

All international students who are not native speakers of English must visit the Applied English Center on arrival for verification of their English language proficiency. Additional information that may warrant recommending a waiver from these guidelines may be brought to the attention of the Graduate School by the Graduate Divisions.

Students who have been admitted by graduate degree programs may be admitted provisionally to the Graduate School with a postponement of the requirement to submit a TOEFL score. Upon arrival at KU, the sponsored international student must demonstrate his or her English proficiency by the submission of a TOEFL score or by passing a proficiency examination administered by the Applied English Center at KU. After the sponsored international student’s English proficiency has been verified to meet Graduate School requirements, the status of the sponsored international graduate student may be changed from provisional to regular.

The Graduate School may consider and grant exceptions to the minimum English proficiency requirements on a case-by-case basis.

Note: All students whose first language is not English must be cleared by the Applied English Center before enrolling.

Degrees
The Graduate School awards degrees three times each year, in August, December, and May. Each academic year’s degrees are conferred formally at the annual commencement in May. Degree candidates are not eligible to graduate if the graduate grade-point average is lower than 3.0 on all courses acceptable for graduate credit. A doctoral hooding ceremony is held each May at commencement for those eligible for the degrees of Doctor of Philosophy, Doctor of Education, Doctor of Engineering, and Doctor of Musical Arts. Only doctoral candidates who have fulfilled all of their degree requirements by the date established by the Graduate School as its deadline for graduation in May will be allowed to participate in the May doctoral hooding ceremony.
Students who are working toward two degrees must complete degree requirements for each degree. Course work may not count toward fulfilling degree requirements for more than one degree.

Graduate students may not be awarded an additional KU degree with the same name and degree code as a previously awarded degree from KU. This applies to the completion of different degree tracks, concentrations, and subspecialties within a given degree. This does not prohibit students from earning additional master’s or doctoral degrees in another discipline.

**Master’s Degrees**

The Graduate School grants the traditional Master of Arts and Master of Science degrees as well as 15 professional master’s degrees that have developed out of the arts and science degrees.

**Master of Arts and Master of Science.** Historically, most of the degrees granted by the Graduate School have been the Master of Arts and Master of Science. This fact conforms with the traditional liberal arts background out of which most U.S. graduate schools developed. These degrees require at least one year of full-time graduate work or its equivalent and are generally concentrated in one area or major discipline.

**Master of Arts and Master of Science with a Major in Special Studies.** For students whose academic and professional goals can best be achieved by interdisciplinary study at the master’s level, KU offers the M.A. and M.S. degree programs in special studies. See M.A. and M.S. with a Major in Special Studies under Master’s Degree Requirements in this chapter. Specific information on eligibility for admission may be obtained from the Graduate Division offices or from the Graduate School.

**Professional Master’s Degrees.** The Graduate School grants a number of professional master’s degrees, of which all but one are offered through the professional schools. These degrees are Master of Science in Education, Master of Accounting and Information Systems, Master of Health Policy and Management, Master of Public Health, and Master of Urban Planning. Most require considerably more hours of credit than the M.A. and the M.S., and therefore a longer time, usually a minimum of two academic years, to complete. Consult the chapter pertaining to the appropriate professional school for detailed descriptions of all professional master’s programs.

**Exceptions:** The Master of Public Administration is administered by the Department of Public Administration, listed in the College of Liberal Arts and Sciences chapter. The Master of Public Health is administered by the Department of Preventive Medicine and Public Health, and the Master of Health Services Administration is administered by the Department of Health Policy and Management. Both are listed in the School of Medicine chapter.

**Combined Degrees.** The Graduate School, along with KU’s other post-baccalaureate schools, grants several combined degrees in programs meeting the requirements of the graduate master’s or doctoral degree and the professional post-baccalaureate degree. Approved programs include those for the degrees of M.A. or M.S. in basic medical science fields with the M.D.; M.A. with a major in American studies with M.U.P.; M.A. with a major in geography with M.U.P.; M.A. with a major in economics, indigenous nations studies, or philosophy with J.D.; M.B.A., M.H.S.A., M.P.A., or M.U.P. with J.D.; M.B.A. with Ph.D. in nursing; M.B.A. with M.H.S.A.; M.P.A. with M.U.P.; M.B.A. with M.A. in area studies (Russian and East European studies or Latin American studies); M.S. in nursing with M.H.S.A. or M.P.H.; M.D. with M.P.H.; and M.D. with M.H.S.A.; Ph.D. in applied behavioral science with M.P.H.

**Master’s Degree Programs**

The master’s degrees offered by the Graduate School are listed below.

**School of Allied Health**
- Master of Arts
  - Audiology
- Master of Occupational Therapy
- Master of Science
  - Dietetics and Nutrition
  - Nurse Anesthesia
  - Occupational Therapy

**School of Architecture and Urban Design**
- Master of Architecture
- Master of Science
  - Architectural Engineering (with School of Engineering)
  - Master of Urban Planning

**School of Business**
- Master of Accounting and Information Systems
- Master of Business Administration
- Master of Science
  - Business

**School of Education**
- Master of Arts
  - Education
- Master of Science
  - Counseling Psychology
  - Master of Science in Education

**School of Engineering**
- Master of Civil Engineering
- Master of Construction Management
- Master of Engineering—Aerospace Engineering
- Master of Science
  - Aerospace Engineering
  - Architectural Engineering (with School of Architecture and Urban Design)
  - Chemical Engineering
  - Civil Engineering
  - Computer Engineering
  - Computer Science
  - Electrical Engineering
  - Engineering Management
  - Environmental Engineering
  - Environmental Science
  - Mechanical Engineering
  - Petroleum Engineering
  - Water Resources Science

**School of Fine Arts**
- Master of Arts
  - Visual Art Education
- Master of Fine Arts
  - Art
  - Design
  - Scenography
- Master of Music
  - Master of Music Education
  - Music Education
  - Music Therapy

**School of Journalism and Mass Communications**
- Master of Science
  - Journalism

**College of Liberal Arts and Sciences**
- Master of Arts
  - American Studies
  - Anthropology
  - Applied Behavioral Science
  - Audiology
  - Biochemistry and Biophysics
  - Botany
  - Chemistry

The University of Kansas • 2005-07 Graduate School Catalog
Doctoral Degrees
KU’s Graduate School offers six doctoral degrees: the Doctor of Philosophy (Ph.D.), Doctor of Audiology (Au.D.), Doctor of Education (Ed.D.), Doctor of Engineering (D.E.), Doctor of Musical Arts (D.M.A.), and Doctor of Physical Therapy (D.P.T.). The programs that offer these degrees are administered by the several schools and colleges through their departments and Graduate Divisions, from admission through final recommendation for degree award through the Graduate School.

General descriptions for each of the doctoral degrees are given here in succinct form to provide convenient comparison of the degrees. Detailed information about requirements for each degree as it is offered in specific disciplines should be obtained from the appropriate college, school, or department listing in this catalog. The requirements there are in addition to the general requirements described in this chapter of the catalog.

Doctor of Philosophy. The degree of Doctor of Philosophy (Ph.D.) is the highest degree offered by the university. It is awarded for mastering a field of scholarship, for learning the methods of investigation appropriate to that field, and for completing a substantial piece of original research. In addition to preparing research specialists, the process of earning a Ph.D. shares certain goals with liberal education: putting order into human experience, fostering a love of learning for its own sake, instilling a respect for human values, integrating various human powers into a process of creation, and making vital, in many fields at least, a sense of history.

Although the courses and research leading to the Ph.D. are necessarily specialized, the attainment of this degree should not be an isolated event in the enterprise of learning. The Ph.D. aspirant is expected to be a well-educated person with a broad base of general knowledge, not only as preparation for more advanced work but also as a means of knowing how the chosen specialty is related to other fields of human thought.

To give depth and breadth to their doctoral programs, many departments require some work in a minor field or at least an articulated selection of extradepartmental courses. Because of the diversity of the fields in which the Ph.D. is offered and the variety of needs and interests of individual students, the degree does not have a specific requirement for a minor. However, the Ph.D. aspirant is encouraged to plan an integrated program, under departmental direction, that includes courses outside the major field.

Ph.D. with a Major in Special Studies. To accommodate the student whose academic and professional goals require a program embracing several disciplines that cannot be obtained through a single, established program, the Graduate School offers interdisciplinary special studies doctoral programs. To be eligible for admission to such a program, the student must already have demonstrated academic excellence in graduate studies at KU and must present evidence of basic knowledge in each of the involved disciplines.

For specific admission and implementation procedures, see Ph.D. with a Major in Special Studies under Doctoral Degree Requirements in this chapter.

Doctor of Audiology. The Doctor of Audiology (Au.D.) program prepares students to meet the academic and clinical requirements for the Certificate of Clinical Competence awarded by the American Speech-Language-
Most health sciences programs of the University of Kansas are offered at the KU Medical Center in Kansas City. KU is one of only 20 public colleges and universities to make the Best Buys of 2005 list in the Fiske Guide to Colleges. In the Fiske Guide, which rates “the best and most interesting” U.S. colleges and universities, KU scores four out of five stars in academics, quality of life, and social life.

Hearing Association. General requirements are the same as those listed for the Ph.D. degrees in audiology and speech-language pathology, except that Au.D. students are not required to complete a doctoral dissertation. Instead, and consistent with ASHA certification standards, a minimum of 2,000 hours of supervised, clinical practicum hours is required for completion of the degree. Degree requirements are listed in the School of Allied Health chapter of this catalog.

**Doctor of Education.** The degree of Doctor of Education (Ed.D.) is a professional degree designed primarily for practitioners in the field of education. Applicants must present evidence of successful experience in professional education. While many of the requirements for the degree closely parallel those for the Ph.D., the degree program—particularly the dissertation—focuses on research concerned with application of existing knowledge rather than on basic research. Specific degree requirements are listed in the School of Education chapter of this catalog.

**Doctor of Engineering.** The degree of Doctor of Engineering (D.E.) is directed toward the practice of engineering and includes the entire process of technology from planning to product. Candidates for the degree are intimately associated throughout their tenure with technology project teams, generally composed of master’s degree candidates and undergraduates.

**Doctor of Musical Arts.** The degree of Doctor of Musical Arts (D.M.A.) is intended as a recognition of high professional attainment. Since only exceptionally well-qualified candidates are admitted to the program, students are expected to devote their doctoral studies primarily to developing professional qualifications for teaching at the college level. The degree of Doctor of Musical Arts is offered in the specific fields of bassoon; church music (organ or chorale conducting emphasis); clarinet; composition; conducting (band, chorale, or orchestral); flute; French horn; oboe; organ; percussion; piano performance, literature, and pedagogy; saxophone; strings; trombone; trumpet; tuba; and voice.

**Doctor of Physical Therapy.** The Doctor of Physical Therapy (D.P.T.) is a professional degree designed primarily for individuals entering physical therapy. Graduates with the D.P.T. may apply for state licensure or registration to practice physical therapy. To be eligible for admission, the student must have a minimum of a baccalaureate degree or its equivalent and have completed all prerequisites. Requirements for admission are listed in the School of Allied Health chapter of this catalog.

**Doctoral Degree Programs**

The doctoral degrees offered by the Graduate School are listed below.

**School of Allied Health**

- Doctor of Philosophy
  - Audiology
  - Rehabilitation Science
  - Speech-Language Pathology
  - Therapeutic Science
- Doctor of Audiology
- Doctor of Physical Therapy

**School of Business**

- Doctor of Philosophy
  - Business

**School of Education**

- Doctor of Education
- Doctor of Philosophy
  - Education
  - Counseling Psychology

**School of Engineering**

- Doctor of Engineering
  - Aerospace Engineering
  - Civil Engineering
  - Electrical Engineering
  - Mechanical Engineering
- Doctor of Philosophy
  - Aerospace Engineering
  - Chemical and Petroleum Engineering
  - Civil Engineering
  - Computer Science
  - Electrical Engineering
  - Environmental Engineering
  - Environmental Science
  - Mechanical Engineering

**School of Fine Arts**

- Doctor of Musical Arts
- Doctor of Philosophy
  - Music
  - Music Education

**College of Liberal Arts and Sciences**

- Doctor of Philosophy
  - American Studies
  - Anthropology
  - Audiology
  - Behavioral Psychology
  - Biochemistry and Biophysics
  - Botany
  - Chemistry
  - Child Language
  - Clinical Child Psychology
  - Communication Studies
  - Ecology and Evolutionary Biology
  - Economics
  - English
  - Entomology
  - French
  - Geography
  - Geology
  - Germanic Languages and Literatures
  - Gerontology
  - History
  - History of Art
  - Linguistics
  - Mathematics
  - Microbiology
  - Molecular, Cellular, and Developmental Biology
  - Philosophy
  - Physics
  - Political Science
  - Psychology
  - Public Administration
  - Slavic Languages and Literatures
  - Sociology
  - Spanish
  - Speech-Language Pathology
  - Theatre and Film

**School of Medicine**

- Doctor of Philosophy
  - Biochemistry and Molecular Biology
  - Cell Biology and Anatomy
  - Microbiology
  - Molecular and Integrative Physiology
  - Pathology
  - Pharmacology
  - Toxicology

**School of Nursing**

- Doctor of Philosophy
- Nursing

**School of Pharmacy**

- Doctor of Philosophy
  - Medicinal Chemistry
  - Neurosciences
  - Pharmaceutical Chemistry
  - Pharmacology and Toxicology

**School of Social Welfare**

- Doctor of Philosophy
  - Social Work

For description of the Ph.D. with a major in special studies, see Doctoral Degree Requirements.

The University of Kansas School of Medicine offers the Doctor of Medicine degree. See the School of Medicine Catalog for further information.
Graduate Certificate Programs

Eligibility and Admission Criteria
A student admitted for a graduate certificate program must either have regular graduate status as a current KU student or be admitted as a nondegree C graduate student. Students may be admitted to the nondegree C category by presenting evidence of receipt of a baccalaureate degree from an institution with degree requirements substantially equivalent to those at KU. Degree-seeking graduate students admitted to a certificate program must be in good standing (3.0 or higher grade-point average) with their departments. A degree-seeking student currently enrolled in a graduate degree program who wishes to pursue a simultaneous graduate certificate in another department must inform the graduate director/adviser/ coordinator in the home department of his or her intent to seek the certificate. A degree-seeking KU graduate student must make known her or his intent to receive the certificate before completing the certificate program requirements.

Graduate certificates are not granted retroactively.

Graduate credit from another institution may not be transferred to a KU graduate certificate program.

The graduate certificate program is not a means of entry into a graduate degree program. If students admitted to the nondegree certificate category are later admitted to a department to work toward a graduate degree, applicable courses taken for the graduate certificate program in the nondegree category may, upon recommendation of the department or program to its Graduate Division and within general guidelines established by the Graduate School, be approved by the division to be counted toward the degree.

In meeting degree requirements, the total graduate hours earned as a KU nondegree graduate certificate student and graduate hours transferred from another accredited graduate school may not exceed 6 hours (8 hours if the student holds a baccalaureate degree from KU).

As part of the application, a graduate certificate program must set the minimum grade-point average, minimum TOEFL scores, standardized test scores and similar criteria in accordance with Graduate School policies, regardless of whether certificate courses may be counted toward the related graduate degree program.

Approved Graduate Certificate Programs
An updated list of graduate certificate programs offered at KU may be found at www.gradle.ku.edu.

- Brazilian Studies, offered by the Latin American Area Studies Program
- Building-Level Special Education Leadership, offered by the Department of Special Education
- Central American and Mexican Studies, offered by the Latin American Area Studies Program
- Collection Conservation, offered by the Museum Studies Program
- Community Health and Development, offered by the Department of Applied Behavioral Science
- Dietetic Internship, offered by the Department of Dietetics and Nutrition
- Family Nurse Practitioner, offered by the School of Nursing
- Gerontology, offered by the Gerontology Program
- Marketing Communication, offered by the School of Journalism and Mass Communications (KU Edwards Campus)
- Nurse Educator, offered by the School of Nursing
- Nurse Midwifery, offered by the School of Nursing

Outcomes Management and Research, an interdisciplinary certificate program administered by the Department of Health Policy and Management

Peace and Conflict Studies, an interdisciplinary certificate program administered by the Humanities and Western Civilization Program

Psychiatric Mental Health, offered by the School of Nursing

Women’s Studies, an interdisciplinary certificate program administered by the Women’s Studies Program

Master’s Degree Requirements
This section gives the general and common requirements of the Graduate School for the traditional degrees of Master of Arts and Master of Science. The school and college chapters of this catalog give specific requirements for these degrees in the programs they offer. Schools list requirements for the professional master’s degrees they offer.

Program Time Constraints
Master’s degree students are allowed seven years for completion of all degree requirements. Normal expectations, however, are that most master’s degrees (excluding some professional terminal degrees) should be completed in two years of full-time study. In cases in which compelling reasons or circumstances recommend a one-year extension, the Graduate Division, on recommendation of the department/committee, has authority to grant the extension. In cases where more than eight years are requested, the appropriate appeals body of the school or division considers petitions for further extensions and, where evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant them. Some departments may have more stringent rulings about time restrictions. Students should ask about the policy in effect in the department in which they plan to study.

M.A. and M.S. Degrees
A Master of Arts or a Master of Science degree requires at least one year of graduate work or its equivalent. Stated in terms of hours of credit, the standard master’s program requires 30 hours, though some degrees, especially in professional areas, may require as many as 36 or 40 or more. With permission of the department (or in the case of interdepartmental programs, permission of the joint program committee) and of the Graduate Division, it is sometimes possible to complete a 30-hour master’s degree with as few as 24 hours if the student enters the program especially well prepared and maintains a superior grade-point average.

Work for a master’s degree is concentrated in the major area, with only a minimal amount of work (usually no more than 6 hours) that is completed at KU permitted outside the major department. Each master’s program must contain a research component, represented either by a thesis (usually for 6 hours of credit) or by an equivalent enrollment in research, independent investigation, or seminars. Within these Graduate School requirements and well-founded practices, departmental master’s programs may be flexible enough to meet the particular needs of individual students.

In a few cases, the degree is offered through two schools and administered by joint committees from the two faculties. The Master of Arts degree in speech-language pathology and the Master of Arts degree in audiology are administered by an intercampus committee drawn from the Department of Speech-Language-Hear-
it is each graduate student’s responsibility to know and observe all regulations and procedures relating to the graduate degree program the student is pursuing. See Student Responsibilities on page 28.

Master’s Degree Requirements; Doctoral Degree Requirements

Combined Medical and Master’s Degrees
Graduate students in the basic medical science departments in the School of Medicine are enrolled, for the most part, only in graduate programs. Outstanding medical students, however, are allowed to participate in work leading jointly to the M.D. degree and a graduate degree. A student admitted to both schools may enroll concurrently in courses in the respective schools, provided the regular medical course load is reduced to compensate for the added graduate work. The student should discuss concurrent enrollment with the chair or graduate adviser of the basic science department; departmental policies vary. All requirements for the degrees must be met (both for the Graduate School and the department involved), but within these limitations, superior students may be able to complete the joint degree program in less time than the total required for the two degrees to be earned separately. For the master’s degree, a student must complete graduate work equivalent to at least one academic year in addition to the time spent on the medical curriculum. A structured joint degree program between the M.D. and Master of Public Health is offered.

Doctoral Degree Requirements
The sections immediately following list the general and common requirements for doctoral degrees. Specific degree requirements, including requirements for the professional doctoral degrees, set by specific departments, programs, and schools, appear in the sections of the catalog devoted to those units.

Doctor of Philosophy
This section lists KU regulations common to the administration of all doctoral programs. The particular application, interpretation, or method of implementation of such a common element for individual degree programs and departments is, in certain cases, left to the faculty of the department or the degree program (e.g., Research Skills). Additional requirements specific to each degree, along with variations permitting each student to achieve particular academic goals, are listed in the chapter of this catalog for the school through which the degree program is offered.

When a department or program requests its Graduate Division to schedule a comprehensive oral examination or a final oral examination for a student, it must report on the student’s completion of both the general requirements prescribed by the Graduate School and the specific requirements of the degree program, department, and school. The degree program and Graduate Division should ascertain that the graduate student is in good academic standing (3.0 or higher grade-point average) before scheduling a comprehensive oral examination or a final oral examination.

Doctoral students completing all their degree requirements within the first week of summer session or within the first two weeks of the fall or spring semester are not required to be enrolled for that term.

1. Application and Admission. A student who seeks admission to a doctoral program must apply to the department and school offering the desired degree. Upon admission, the student is known as an aspirant for the degree and remains so designated until successful completion of the comprehensive oral examina-
tion. After passing that examination, the student is designated a candidate for the degree.

2. Program Time Constraints. Minimum Tenure: The student must spend three full academic years, or the bona fide equivalent thereof, in resident study at this or some other approved university, including the time spent in attaining the master’s degree. Resident study at less than full time requires a correspondingly longer period, but the requirement is not measured merely in hours of enrollment. Since the Graduate School does not prescribe a minimum number of hours for the degree, no transfer of credit is appropriate. However, departments take relevant prior graduate work into consideration in setting up programs of study leading to the doctorate.

Residence Requirement: Two semesters, which may include one summer session, must be spent in resident study at KU. During this period, the student must be involved full time in academic or professional pursuits, which may include an appointment for teaching or research if it is directed specifically toward specific objectives. Enrollment in approved distance-learning courses offered through KU cannot be used to meet the doctoral residency requirement. The student must be enrolled in a minimum of 6 credit hours per semester, and the increased research involvement must be fully supported and documented by the dissertation supervisor as contributing to the student’s dissertation or program objectives. Research must be performed under the direct supervision of the major adviser if on campus, or with adequate liaison if off campus.

Note: These are minimum Graduate School residence requirements. Please check with the Graduate Division of your school or college for any additional requirements.

Maximum Tenure: After being admitted to doctoral programs at KU, students complete all degree requirements in eight years. In cases in which compelling circumstances recommend a one-year extension, the Graduate Division has authority to grant the extension on the written advice of the department and dissertation committee. Students who complete the master’s degree at KU and subsequently begin doctoral studies have a maximum total enrolled time of 10 years to complete both degrees. Normal expectations, however, are that most master’s degrees (excluding some professional terminal degrees) should be completed in two years of full-time study, and both master’s and doctorate in six years of full-time study. Some departments may have more stringent time restrictions. Students should inquire about the policy in effect in the department in which they plan to study.

A student in any of the above categories may petition the Graduate Division through the department for a leave of absence during either the pre- or post-comprehensive period to pursue full-time professional activities related to the doctoral program and long-range professional goals. Leaves of absence also may be granted because of illness or other emergency. Ordinarily a leave of absence is granted for one year, with the possibility of extension upon request. After an absence of five years, however, a doctoral aspirant or candidate loses status as such and must apply for readmission to the program and the Graduate Division.

3. Research Skills. Specific research skills requirements vary with departments and programs, but all reflect the Graduate School expectation of a significant research skill component distinct from, but strongly supportive of, the dissertation. Traditionally, a reading knowledge of two foreign (non-English) languages, a demonstrated competence in reading, writing, and speaking in one foreign language, or a reading knowledge of one foreign language and demonstrated proficiency in some other research skill, such as computer science, has been required. However, to fit research training to the needs of the individual student, some programs have found it appropriate to regard as research skills formal training in ancillary areas or within a broad spectrum of skills. A statement concerning research skills should appear in each departmental or program section of this catalog and in any graduate study guides issued by departments, programs, or schools.

When the aspirant has met the requirements for research skills recommended by the program and approved by the school, the program must report this fact to the Graduate Division on the appropriate form, certifying that the student is prepared to proceed to the comprehensive oral examination. If a program requires research skills that are tested separately from the program, completion of each requirement should be reported immediately to the Graduate Division so that it may be recorded on the student’s permanent record.

Because foreign language and computer science competences are the most commonly used research skills requirements, the formal procedures that have been established for demonstration of these competences are listed here for guidance.

Foreign Language: An aspirant who wishes to demonstrate a reading knowledge of a foreign language ordinarily may do so in one of two ways: (1) pass a language examination devised and administered by the student’s own department in consultation with the appropriate KU language department or (2) complete FREN 100, GERM 101, ITAL 100, SCAN 101, SLAV 101, or SPAN 100 with a grade of C or higher, or LAT 101 with a grade of B or higher. If some other language is proposed, arrangements should be made through the major or departmental adviser with the appropriate language department or competent testing authority. Some departments accept as evidence of language competence the certification of a graduate student by a qualified KU professor in a given language at the fourth level of competence in reading, comprehension, and speaking or accept 16 hours in a single language taken at this or another university as a graduate or undergraduate student. Requirements for demonstrating competence in reading, writing, and speaking one foreign language are set by the language departments. The student should ask these departments for further information and advice. In all cases, the Graduate Division should be notified which method each student has used to satisfy this requirement.

A student whose native language is not English may use the native language to fulfill the language requirement only if the language is considered an adequate research tool for his or her program.

Computer Science: To establish competence in computer science, a student must (a) demonstrate proficiency in a commonly used programming language and (b) create at least one original program on a problem that is certified by the major department as important and relevant to the field of study.
Doctoral Degree Requirements

As specified by the department, requirement (a) may be met by passing an examination developed and administered by the Department of Electrical Engineering and Computer Science or by satisfactorily completing an appropriate course in computer science. In consultation with the department, the Department of Electrical Engineering and Computer Science provides certification of requirement (b).

4. Comprehensive Oral Examination. When a doctoral aspirant has completed the major portion of the course work at a level satisfactory to the major department and school and met all other departmental, school, and Graduate School requirements prerequisite to the comprehensive oral examination, including the research skills requirement as appropriately applied and established for the student's particular program, the department must request the Graduate Division of its school to schedule the comprehensive oral examination. It should be determined that the student is in good academic standing (3.0 or higher grade-point average) before scheduling the examination. The examination request must be submitted in advance of the examination date by at least the period specified by the Graduate Division, normally minimum of two weeks. The Graduate Division ascertains whether all pertinent requirements have been satisfied and if reports of any previously scheduled comprehensive oral examinations have been properly submitted and recorded.

The committee for the comprehensive oral examination must consist of at least five members, all of whom must be members of the Graduate Faculty. Its members are appointed by the Graduate Division of the school or college on the basis of nominations submitted by the department. At least one member must be from a department other than the aspirant's major department. This member represents the Graduate School and must be a regular member of the Graduate Faculty. The Graduate School representative is a voting member of the committee from outside the university. All members of the committee must be chosen from the Graduate School and must be members of the Graduate Faculty before appointment to the committee. Members from other departments and divisions or, on occasion, members from outside the university. The Graduate Division ascertains whether all pertinent requirements have been satisfied and if reports of any previously scheduled comprehensive oral examinations have been properly submitted and recorded.

Post-comprehensive Enrollment: After passing the comprehensive oral examination for a doctoral degree, the candidate must be continuously enrolled, including summer sessions, until all requirements for the degree are completed, and each enrollment must reflect as accurately as possible the candidate's demands on faculty time and university facilities. During this time, until all requirements for the degree are completed, the candidate must enroll for a minimum of 6 hours a semester and 3 hours a summer session. Post-comprehensive enrollment may include enrollment during the semester or summer session in which the comprehensive oral examination has been passed. If after 18 hours of post-comprehensive enrollment the degree is not completed, the candidate must continue to enroll each semester and each summer session until all degree requirements have been met. The number of hours of each enrollment must be determined by the candidate's adviser and must reflect as accurately as possible the candidate's demands on faculty time and university facilities.

6. Dissertation. The candidate must present a dissertation showing the planning, conduct, and results of original research and scholarly creativity. The purpose of the dissertation is to encourage and ensure the development of broad intellectual capabilities as well as to demonstrate an intensive focus on a problem or research area. The dissertation itself should be an evident product of the candidate's growth and attainment of the ability to identify significant problems; organize, analyze, and communicate scholarly results; and bring to bear on a useful area of interest a variety of research skills and scholarly or creative processes. It must show some original accomplishment, but it should also demonstrate without doubt the candidate's potential to make future contributions to knowledge and understanding.

The dissertation is to be a coherent scholarly work, not a collage of separate, distinct pieces. Its unity of theme and treatment may still accommodate several subtopics by demonstrating their relationships and interactions. If previously published material by other authors is included in the dissertation, it must be quoted and documented. It should be noted that prior publication does not guarantee acceptance of the dissertation by the dissertation committee. Final acceptance of the
dissertation is subject to the approval of the dissertation committee. The dissertation—or one or more substantial portions of it, often rewritten—is expected to be publishable and indeed to be published (see Dissertation Submission and Publication section).

Both the dissertation research and the dissertation itself are to be completed under the guidance and direction of the committee appointed as described above. Instructions about the proper form of the dissertation may be obtained from the Graduate School or from the Graduate Division of each program. Candidates and faculty members are reminded that the dissertation is to be a coherent, logically organized scholarly document. Because the demands and practices of different disciplines are varied, the format is somewhat flexibly described, and moderate departures from the norm are allowed when justified by the nature of the work or the circumstances of presentation. Any substantial divergences must be approved in advance as prescribed by the instructions, and candidates and faculty members are urged to seek early approval to avoid last-minute disappointments over unacceptable format or reproduction.

7. Final Oral Examination. Completion of the dissertation is the culminating academic phase of a doctoral program, climaxing by the final oral examination and defense of the dissertation. In all but the rarest cases, tentative approval of the dissertation is followed promptly by the final oral examination, and the examination is followed promptly by submission of the signed dissertation to the Graduate Division, with assurance that all degree requirements have been met.

When the completed dissertation has been accepted by the committee in final draft form, and all other degree requirements have been satisfied, the chair of the committee requests the Graduate Division to schedule the final oral examination. This request must be made in advance of the desired examination by at least the period specified by the Graduate Division (normally at least three weeks). The submission of the request must allow sufficient time to publicize the examination so that interested members of the university community may attend. At least five months must elapse between the successful completion of the comprehensive oral examination and the date of the final oral examination.

The committee for the final oral examination must consist of at least five members (the members of the dissertation committee plus other members of the Graduate Faculty recommended by the committee chair and the department and appointed by the Graduate Division). At least one member must be from a department other than the major department. This member represents the Graduate School and must be a regular member of the Graduate Faculty. Before the examination, the Graduate Division provides a list of responsibilities to the Graduate School representative. The Graduate School representative is a voting member of the committee, has full right to participate in the examination, and provides a written report on any unsatisfactory or irregular aspects of the examination to the committee chair, department chair, Graduate Division, and Graduate School. The Graduate Division ascertains whether all other degree requirements have been met and if reports of any previously scheduled final oral examinations have been submitted and recorded. Upon approval of the request, the final oral examination is scheduled at the time and place designated by the Graduate Division. This information must be published in a news medium as prescribed by the Graduate Faculty. Interested members of the university community are encouraged to attend these examinations.

For every scheduled final oral examination, the department reports to the Graduate Division a grade of Honors, Satisfactory, or Unsatisfactory for the candidate’s performance. If an Unsatisfactory grade is reported, the candidate may be allowed to repeat the examination on the recommendation of the department.

8. Dissertation Submission and Publication. When the final oral examination has been passed and the dissertation has been signed by the members of the dissertation committee, two unbound copies and an additional abstract (not more than 350 words) are to be delivered to the Graduate Division so that completion of degree requirements may be officially certified. In addition, the candidate must arrange publication of the dissertation, through the customary procedure of publication of the abstract in “Dissertation Abstracts International” and microfilming of the dissertation through University Microfilms.

The student must be the author of the dissertation, and every publication from it naturally must indicate that authorship. However, practices vary among disciplines, and even among scholars in a given field, as to whether the mentor’s name may appear as a co-author and whether as senior or junior, on the published dissertation, usually revised, or on articles prepared from it. Clear understandings in individual cases are expected to derive from the apprenticeship period, when the inculcation of ethical practices in the student best results from their regular application by the mentor.

Ph.D. with a Major in Special Studies

The student seeking to enter the special studies program must have an outstanding academic record (a grade-point average of 3.75 or higher on a 4.0 scale for graduate courses or a grade-point average of 3.5 or higher on a 4.0 scale for undergraduate courses if no graduate courses have been taken) and must be admitted to and enrolled in a graduate program at KU at the time of application. A graduate student who has failed to maintain the required grade-point average is not eligible for the special studies program. A student is not eligible for this program if he or she has tried and failed to achieve candidacy in a regular graduate department or program at KU.

The student is expected to assume the initiative in determining his or her potential eligibility through consultation with graduate advisers and, if deemed eligible, in forming an advisory committee and preparing documentation to support the application.

Preadmission Procedures. To enter the program, a student should

1. Determine that KU offers courses and research in the areas appropriate to the student’s interest.
2. Prepare a tentative study plan based on those offerings to serve as a basis for initial discussion.
3. Approach a professor whose interests are comparable to those of the student and request that he or she act as adviser. Normally this professor is a faculty member of the program of principal interest to the
Doctoral Degree Requirements; Special Sessions & Programs

It is essential that this program be one that grants doctorates and that the selected professor be authorized to chair doctoral dissertation committees.

4. Upon agreement by the professor to serve as advisor, the student should assemble an advisory committee of at least three additional professors representing the disciplines covered in the special program. At least two disciplines or departments must be represented.

5. In conjunction with the advisor and the committee, the student prepares a proposal for study, including:

(a) A statement, with supporting documentation, that the proposed special studies Ph.D. cannot be accomplished through established programs.

(b) A definition of the field of study incorporating in a consistent way a description of the contribution of each included discipline to the broader field.

(c) An outline of the course of study, indicating substantive work in the fields represented. Readings courses and independent study do not substitute for regular courses.

(d) A description of the method for satisfying research skills requirements.

(e) A description of the comprehensive examination procedures (nature of the examinations and possible examining committee).

(f) A description, to the extent possible, of the nature of the field in which a dissertation might be written, indicating the respective contributions of the selected disciplines to the final product.

(g) Attach the following: (i) complete transcripts of all previous work, (ii) a cover sheet, signed by committee members, indicating their support of the proposal, (iii) letters of recommendation and other appropriate supporting documents.

Note: Diplomas and transcripts indicate the degree awarded as "Ph.D. in Special Studies" and do not specify the area of specialization.

**Admission and Review Procedure.** Upon completion of the above, the student must present to the Graduate School the application for admission to the special studies program. At that time, a review committee is appointed by the Graduate School, chaired by the Dean of the Graduate School (or the Dean’s designate) and consisting of (a) Dean(s) or Director(s) of Graduate Studies (or their designates) for the school(s) involved in the interdisciplinary undertaking and (b) two or more doctoral chairing faculty members (from unrelated fields) who are members of the Graduate Council, at least one of whom must represent a discipline not involved in the special studies program under consideration.

The Graduate School committee reviews the documents and may, if necessary, interview the student and the adviser for clarification and additional information or to discuss suggested revisions to the proposal.

**Approved Program Implementation.** Upon acceptance of the proposal and admission to the special program, the student is admitted to the school of the major advisor to facilitate record keeping and to provide a central administrative office. The director of graduate studies of that school must enroll the student and monitor the program and, along with the major advisor, must make periodic reports to the Graduate School on the student’s progress. These reports are distributed to the directors of other involved programs along with a request to supply any additional information regarding the student’s performance. Proposals for major deviations from the approved course of study must be submitted to the Graduate School for review by that office and by the graduate studies office(s) of the involved school(s). It is understood that no additional requirements unique to traditional graduate programs of the involved school(s) or departments may be imposed unless stated explicitly in the approved study plan.

All basic Graduate School rules and requirements for the Doctor of Philosophy degree apply to special studies doctoral programs. These include program time constraints, residence requirement, post-comprehensive enrollment, final oral examination, dissertation submission and publication, grade-point average, etc. (See Doctoral Degree Requirements, Doctor of Philosophy, in this chapter of the catalog.)

**Combined Medical and Doctoral Degrees**

Outstanding medical students who are qualified to do so may participate concurrently in work leading to the medical degree and the Ph.D. For the Ph.D. degree, a student must complete graduate work equivalent to that requiring at least three academic years in addition to the time spent on the medical curriculum.

Credit hours obtained in the medical curriculum cannot be transferred as graduate credit hours toward the requirements for the Ph.D. degree, although recognition of satisfactory performance in appropriate medical courses may be given by the involved basic medical science department when formulating the student’s additional graduate curriculum for the Ph.D. All the requirements for the respective degrees, both of the Graduate School and of the basic medical science department, must be met.

**Special Sessions and Programs**

**Graduate Work in the Summer Session**

Graduate students in the summer session are subject to the same scholastic requirements as during the regular academic year. Students desiring graduate credit for summer work must enroll in the Graduate School. Attendance at four summer sessions, each one-half a semester in length, is considered the equivalent of one year for the purpose of satisfying the minimum requirement for a master’s degree.

**Extramural (Off-campus) Graduate Study**

With the approval of the Graduate Council, off-campus centers may be established to permit students to work for graduate residence credit (credit that counts toward a graduate degree). Extramural centers must meet established criteria for faculty, students, programs, resources (library and laboratory, etc.), and administration. Centers for extramural programs have been approved in Asolo, Italy (business); the U.S. Army Command and General Staff College at Fort Leavenworth (journalism); the KU Public Management Center at Topeka (public administration and civil engineering); and the KU Edwards Campus for graduate studies generally in the Kansas City area. Write to KU’s Edwards Campus, 12600 Quivira Rd., Overland Park, KS 66213-2402, (785) 864-8400 or (913) 897-8400. Residence credit courses (education and applied behavioral science) are offered in the Leavenworth public school system, although it is not fully recognized as a center.

The Schiefelbusch Institute for Life Span Studies coordinates KU extramural programs at the Kansas Mental Retardation and Developmental Disabilities Research Center at Parsons State Hospital and Training Center in Parsons, Kansas. These programs are offered by the School of Education, the Department of Applied Behavioral Science, and the Intercampus Program in Communicative Disorders.
Credit by Transfer in this chapter of the catalog.

Residency requirement. For maximum combined deferred through KU cannot be used to fulfill the doctoral student's record to count toward an advanced degree. It is sometimes possible to gain limited admission through a simplified procedure whereby students fill out an application form and present evidence of holding the baccalaureate. Students so admitted are placed in a special, nondegree category. If the student decides to work toward a graduate degree, only a limited number of hours taken in this category may be approved to apply toward the KU degree.

If admission to the Graduate School was not gained at the time of first enrollment, the student may be permitted to enroll in a special undergraduate category. However, the graduate admission process should be started immediately since, if the student is not officially admitted by the deadline of the individual Graduate Divisions (or, if no deadline is set, before the end of the course), credit is recorded as undergraduate. Graduate status may not be awarded retroactively for course work after a semester has ended or after completion of a distance-learning course. For courses of short duration (less than one semester), early admission is particularly urgent. Being permitted to enroll in a graduate-level course without first being admitted as a graduate student does not guarantee admission to graduate status.

Criteria for admission and categories of admission are described under Admission in this chapter.

Continuing Education Classes and Centers

A student who has a baccalaureate degree and wishes to take graduate courses but not to earn a graduate degree may enroll as a special graduate student in continuing education courses. Many of these may be approved for graduate credit. A student admitted for graduate work under special, nondegree status who subsequently decides to seek a graduate degree may apply for admission as a regular student. The major department makes a recommendation concerning which, if any, of the continuing education courses already completed may count toward an advanced degree. Transferred credit and graduate continuing education credit including distance-learning courses (limited to KU) together may not exceed 6 hours (8 hours if the student holds a baccalaureate degree from KU), and they must not be the last hours required for the degree.

No distance-learning courses or continuing education credit earned elsewhere may be transferred to a student’s record to count toward an advanced degree. Enrollment in approved distance-learning courses offered through KU cannot be used to fulfill the doctoral residency requirement. For maximum combined distance-learning courses and transferred credits, see Credit by Transfer in this chapter of the catalog.

Independent Study/Distance Learning

Independent study may refer to course work taken through Continuing Education or to campus course work independently pursued. No graduate credit is given for Continuing Education Independent Study courses outside of those approved and offered by KU under these distance-education guidelines: Distance learning courses (Internet, interactive television, video, continuing education courses, and others) may be offered for graduate credit only if they are assigned a line number, taught by a member of the KU graduate faculty, approved by the dean of the school or college offering the course, and confirmed by the dean of the Graduate School.

General Regulations

Course Numbering System

Courses that may give graduate credit are numbered according to the following scheme:

- Courses numbered 500-699 are designed primarily for juniors and seniors, but are also taken by some graduate students who have fewer than 30 hours of graduate credit.
- Courses numbered 700-799 are designed primarily for graduate students who have fewer than 30 hours of graduate credit, but they are also taken by some undergraduates.
- Courses numbered 800-899 are designed primarily for graduate students who have fewer than 30 hours of graduate credit.
- Courses numbered 900-999 are designed primarily for graduate students who have 30 or more hours of graduate credit.

Courses that contain a mixture of undergraduate and graduate students should set requirements for graduate credit beyond or different from the requirements for undergraduate credit. No course, regardless of its number, can give graduate credit unless it has been approved for graduate credit by the appropriate Graduate Division or the Graduate School and is taught by a person holding a current appointment to the Graduate Faculty.

Undergraduates who enroll in graduate-level courses (numbered 700 through 999) pay tuition at the graduate rate. Graduate students who enroll in undergraduate-level courses (numbered 000 through 499) pay tuition at the undergraduate rate.

Credit by Examination

The Graduate School does not accept credit by examination.

Credit by Transfer

Six hours of graduate credit (but not distance-learning courses) taken at a regionally accredited graduate school may be transferred and applied to a program leading to one of the master’s degrees, if the transfer has the approval of the major department and the appropriate school. Eight hours may be approved for transfer if the student holds a baccalaureate degree from KU. Transferred credit and graduate continuing education credit including distance-learning courses (limited to KU courses) together may not exceed 6 hours—8 hours if the condition just indicated is met—and they must not be the last hours required for the degree. Only work graded B (3.0 on a 4.0 scale) or higher may be transferred. Courses that have been graded B—do not transfer. KU does not accept transfer credit from other institutions for graduate-level courses completed in institutes and workshops or given for life/work experience.
No courses taken for undergraduate or post-baccalaureate (nongraduate) credit either at KU or elsewhere may be transferred to KU to count toward an advanced degree.

Courses that were counted toward meeting the requirements of a graduate degree, completed either at KU or at another institution, may not be used toward meeting the requirements for an additional advanced degree at KU.

No credit is actually transferred toward the doctorate, but departments take relevant prior graduate work into consideration in setting up programs of study.

General Regulations

Sexual Violence Education and Support Services, (785) 864-3552, offers programs, information, and assistance on issues related to rape, sexual assault, and other forms of sexual violence.

All enrolled students are subject to the Board of Regents and KU Intellectual Property Policies.

The Kyoo portal gives students access to many online services and resources.

Visit the Kyoo portal at https://students.ku.edu.

Enrollment

The normal full-time enrollment for a graduate student is 9 credit hours per semester or 6 hours per summer session. Students are not normally permitted to enroll for more than 16 hours a semester or more than 8 hours in summer session. (See 5. Candidacy under Doctoral Degree Requirements, Doctor of Philosophy, in this chapter of the catalog.) If a student is on the staff, the hours of enrollment should be limited accordingly—usually to no more than 10 hours for a half-time or 6 hours for a full-time staff member. The enrollment of those with foreign student (F-1) visas must conform to the minimum established by the regulations of the Immigration and Naturalization Service. International students must conform to the residence requirements of the Graduate School, even if the minimal enrollments of the INS are lower.

Note: Students should check with their graduate degree programs to determine if the program has additional enrollment requirements.

Online Enrollment. The Office of the University Registrar offers enrollment online. KU Enroll & Pay offers enrollment assistance in Lawrence, at KU Medical Center, and on the KU Edwards Campus in person, by telephone, and online. For current information and procedures, see www.registrar.ku.edu/enrollment.

Full-time Student Classification and Residence Requirement. The following student loads for course work and/or appointments at KU for teaching or research represent full-time graduate student status for degree-seeking students for purposes of qualifying for fellowship tenure, student loan deferment, and similar certification, and for meeting residence requirements for doctoral degrees. (These are minimum Graduate School residence requirements. Please check with the Graduate Division of your school or college for additional requirements.) Those on foreign student (F-1) visas holding assistantships must meet INS requirements. See Enrollment, above.

9 credit hours
6 credit hours and half-time teaching or research at KU

These figures are the minimum number of credit hours a student may carry and still be certified full time. A student may enroll for more hours with the approval of the department or program adviser, within general guidelines. Degree-seeking graduate students who are employed more than half time must be enrolled for at least 6 hours per semester to be certified as full-time students. For a student who is a full-time employee at KU to fulfill the residence requirement, the KU employment must contribute substantially to the student's graduate program. For additional information on residence requirements for doctoral degrees, see the requirements for those degrees.

Grading

The basic system in the Graduate School is an A, B, C, D, F system, where A designates above-average graduate work; B, average graduate work; C, passing but not average graduate work (C– is not considered a passing grade); D and F, failing graduate work. C–, D, and F work does not count toward a degree.

The letter P is used only to indicate participation in thesis, dissertation, and research enrollments (related to thesis or dissertation), and in the first semester enrollment of a two-semester sequence course. In any semester, an instructor may, at his or her option, assign a letter grade of A, B, C, D, or F when evidence about performance is available. Upon completion of thesis/dissertation or research hours leading to a master’s or doctoral degree, the P remains on the final transcript except for the last semester of enrollment. A letter grade (A, B, C, D, or F) is assigned in the last semester of enrollment to characterize the quality of the final product. The I grade is not appropriate for enrollment in thesis, dissertation, or research, and is not accepted.

For enrollments other than thesis, dissertation, or research, the letter I indicates course work that has been of passing quality, some part of which is, for good reason, unfinished. The grade of I for graduate courses remains unchanged on the student’s record except that, should the student subsequently complete the course work, the instructor would then change the I to a letter grade: A, B, C, D, or F.

The grades of S and U may be used to designate satisfactory and unsatisfactory performance, respectively, in continuing education, workshop, and institute courses upon the recommendation of the department offering the course. No more than 6 hours total of graduate courses graded S are permitted to count toward a degree.

In courses numbered 800 or above for which specific authorization has been given, the instructor may report a grade of S for students who have satisfactorily attended the course but for whom it has not been possible to evaluate the quality of performance.

Once the S grade for a particular course (or a particular faculty member’s section of a multi-section course) has been recommended by the department and approved by the Graduate Division and Graduate School, it must be applied to the entire student enrollment in the course or section. This applies to those 800- or 900-level courses eligible for the S grade (or its alternative of F), as well as to Continuing Education, institute, and workshop courses. The S and U grades are not used in computing the grade-point average.

The Credit/No Credit option is not authorized for graduate students’ enrollments, including, but not limited to, courses taken to fulfill the research skills requirements, undergraduate deficiencies, etc.

The individual schools have the option of using or not using +/−, according to the policy adopted by the particular school. B− does not represent satisfactory work in the Graduate School.

In the Graduate School grading system defined above, at least a B average is required on course work counted toward any of the master’s degrees or the Specialist in Education degree at KU, and only courses graded A, B, or C (excluding C-) may be so counted. Course work counted toward a doctorate, including that for a master’s degree if obtained at KU, should av-
verage better than a B. Courses graded P, S, U, or I are excluded from the computation of the average.

Performance is graded Honors, Satisfactory, or Unsatisfactory for the following examinations:
1. The general examination for the master’s degree.
2. The general examination for the degree of Specialist in Education.
3. The comprehensive oral examination for the doctorate.
4. The final examination for the doctorate.

Probation. Upon falling below a cumulative graduate grade-point average of B, computed with the inclusion of grades earned at KU for all courses acceptable for graduate credit, the student is placed on probation by the Graduate Division of the school or the Graduate School. The grades of F, S, U, and I, for which no numerical equivalents are defined, are excluded from the computation. If the student’s overall graduate average has been raised to B by the end of the next semester of enrollment after being placed on probation, the student may be returned to regular status. If not, the student will not be permitted to re-enroll in the Graduate School unless the Graduate Division or the Graduate School acts favorably on a departmental recommendation for the student to continue study.

If admitted on probation, a student must earn an overall graduate average of at least B during the first semester of enrollment (in which case the student is considered to have achieved regular status) to be permitted to re-enroll. A student admitted on probation who fails to earn a B average in the first semester is not permitted to re-enroll. When the particular circumstances are deemed to justify continuation, and upon the recommendation of the department or program, such a student may be continued on probation by the Graduate Division or the Graduate School for one additional semester equivalent of full-time graduate study.

Graduate Credit
Three conditions must be met for a student to receive graduate credit for work satisfactorily completed at KU:
1. The student must have gained admission to the Graduate School.
2. The course must have been approved by the Graduate School for the award of graduate credit.
3. The instructor must have gained appointment to the Graduate Faculty.

Courses on permanent records that are assigned the course classification codes of S (social welfare) and L (law) do not earn graduate credit and are not reflected in computation of the grade-point average.

Graduate School code: G
School/College codes:
Liberal Arts & Sciences: A
Business: B
Education: D
Engineering: E
Fine Arts: F
Allied Health: H
Journalism and Mass Communications: J
Medicine: M
Nursing: N
Pharmacy: P

Level codes:
Degree-seeking students admitted to regular, probationary, and provisional status:
Lower-level students, those who have completed fewer than 30 hours of graduate credit
Upper-level students, those who have completed 30 or more hours of graduate credit
Nondegree students, those who have been admitted to nondegree A or C categories or Continuing Education (Z)

Grievances
A graduate student who believes himself or herself to be unfairly or unlawfully treated in an academic matter may present a grievance to the academic department or program chair. Each academic unit, all Graduate Divisions, and the College have established grievance policies and procedures. Appeal of a grievance heard at one of these levels is made to the Judicial Board. The Graduate School has established a set of guidelines for graduate student petitions in certain categories that may not be under the jurisdiction of other hearing bodies. The Executive Committee of the Graduate Council has identified two categories as the purview of the Graduate School:
1. Cases involving the Graduate Divisions of two or more schools or colleges.
2. Cases involving the interpretation of Graduate School policy as it pertains to the Graduate Division of a school or college.

For disputes involving alleged academic misconduct or alleged violations of student rights, the initial hearing normally is held at the unit level. There is an option to hold an initial hearing at the Judicial Board level if both parties agree, or if either party petitions the Judicial Board for a fair hearing. The petition must state why a fair hearing cannot be obtained at the unit level; the opposing party has an opportunity to respond to the petition.

For information on these guidelines, contact the Graduate School, (785) 864-6161.

Intellectual Property Policy
All enrolled students are subject to the Board of Regents and KU Intellectual Property Policies. The ownership of student works submitted in fulfillment of academic requirements is retained by the creator(s). By enrolling, the student gives the institution a nonexclusive royalty-free license to mark on, modify, retain the work in the process of instruction, or otherwise handle the work, as set out in the institution’s Intellectual Property Policy or in the course syllabus. The institution does not have the right to use the work in any other manner without the written consent of the creator(s). The policy is available in its entirety at the Provost’s Web site: www.provost.ku.edu.

Language and Research Skills
Requirements (Doctoral Degrees)
See Doctoral Degree Programs.

Language Requirements (Master’s Degrees)
The Graduate School has no language requirement for any of the master’s degrees, but some departments and programs have such a requirement. Applicants should consult their prospective departments.
Leave of Absence (Doctoral Students)

A doctoral student may petition his or her Graduate Division or the Graduate School through the department for a leave of absence during either the pre- or post-comprehensive period to pursue full-time professional activities related to the doctoral program and long-range professional goals. Leaves of absence also may be granted because of illness or other emergency. Ordinarily a leave of absence is granted for one year with the possibility of extension upon request. After an absence of five years, a doctoral aspirant or candidate loses status as such and must apply for readmission to the program and the Graduate Division.

Seniors and Graduate Study (Coenrollment)

Seniors at KU who will complete the requirements for a baccalaureate degree in a given semester, and who have very strong academic records (grade-point average higher than 3.0 on a 4.0 scale), may apply for contingent admission to the Graduate School and request the permission of the appropriate Graduate Division or the Graduate School to coenroll in the Graduate School for the final undergraduate semester. Seniors requesting the privilege of coenrollment must make formal application through the appropriate Graduate Division or the Graduate School for admission to the Graduate School.

If admission is approved, the student enrolls with undergraduate school and level codes. The Graduate Division is responsible for sending written notification to the University Registrar’s office, designating which courses will earn graduate credit and which will earn undergraduate credit. The student’s graduate permanent record begins with the first term of graduate enrollment following the awarding of the baccalaureate degree, although the coenrolled graduate credit applies to the graduate degree.

To meet the criteria of co-enrollment, the student must earn undergraduate credit for at least one class during the co-enrollment semester. Graduate courses completed beyond the initial semester of co-enrollment revert to undergraduate status if co-enrolled students fail to complete their undergraduate degrees in the specified semester.

Special Conditions for Specified Types of Research

There are certain types of research or activities that may not be pursued unless specific prior approval and/or training has been obtained. The student is responsible to know themselves of requirements of the Graduate School as stated in the most recent issue of the Graduate School Catalog. They are also expected to be familiar with the regulations and requirements of their Graduate Divisions and departments and of their graduate programs.

Student Responsibilities

All graduate students are responsible for informing themselves of requirements of the Graduate School as stated in the most recent issue of the Graduate School Catalog. They are also expected to be familiar with the regulations and requirements of their Graduate Divisions and departments and of their graduate programs. Members of the Graduate Faculty and of the staffs of the Graduate Divisions and Graduate School office are ready to answer questions and offer counsel.

It is each graduate student’s responsibility to know and observe all regulations and procedures relating to the graduate degree program the student is pursuing. In no case will a regulation be waived or an exception be granted because students plead ignorance of, or contend that they were not informed of, the requirements, regulations, procedures, and deadlines. Responsibility for following all policies and meeting all requirements and deadlines of graduate programs and the Graduate School rests with the student.

Time Limit on Graduate Courses

See Program Time Constraints under Master’s Degree Requirements and Doctoral Degree Requirements. See also Grading.

Undergraduate Student Enrollment

Well-qualified undergraduate students may be permitted to enroll in 800- or 900-level courses for undergraduate credit with the approval of the instructor; the student’s adviser; and the Graduate Division or Graduate School. The student must bring a course selection form, a letter of explanation and recommendation from the adviser, and current academic record to the Graduate Division or Graduate School for approval. If approved, the Graduate Division or Graduate School prepares and signs a Special Permission/Approval form, which the student must present to the staff in Enrollment Services in order to enroll in the courses.

Courses taken for undergraduate credit may not be transferred to graduate credit.
University Faculty and Advanced Degrees
Members of the university faculty having, or eligible for, tenure or holding any rank above that of instructor will not be granted degrees or certificates in the Graduate School. Because of the variety of appointments covered by such terms as Lecturer, Associate, or the like, every such case must be considered individually, with the student’s department making a recommendation to the Graduate School before the student begins the graduate degree or certificate program, or for students already in graduate programs, before the appointment is made.

Although appointing departments are expected to bring this rule to the attention of prospective appointees who plan to seek degrees or certificates in the Graduate School, the responsibility for initiating a request for waiver of the rule lies with the student. The Graduate School may make waivers in rare cases where the student and his or her department demonstrate satisfactorily that circumstances and conditions assure freedom from conflict of interest and undue influence.

Withdrawal from a Course
Complete information about withdrawing from a course is online at www.registrar.ku.edu/timetable. Select “Add/ Drop/Change of Section” to find current procedures. The Office of the University Registrar, Enrollment Services, 1450 Jayhawk Blvd, Room 151, Lawrence, KS 66045-7335, (785) 864-5462, enrollment@ku.edu, also can provide current information.

Withdrawal from the University
Complete information about withdrawing from all classes is online at www.registrar.ku.edu/timetable. Select “Withdrawal” to find current procedures. The Office of the University Registrar, Enrollment Services, 1450 Jayhawk Blvd, Room 151, Lawrence, KS 66045-7335, (785) 864-5462, enrollment@ku.edu, also can provide current information.

Tuition and Fees
At the time of this printing, tuition and fee rates for academic year 2006-06 had not been established. For current information, see www.registrar.ku.edu/fees. Rates are subject to change at any time by the Kansas Board of Regents. Tuition and fees are assessed by the Office of the University Registrar on the Lawrence campus and the Office of the Registrar at the Medical Center in Kansas City. Tuition and fee rates vary for students according to the program in which the student is enrolled. Students must pay tuition and fees in full by the designated date each term in order to maintain their enrollments. A full description of tuition and fees is available each semester in the Timetable, www.timetable.ku.edu, and at the Office of the University Registrar on the Lawrence campus and the Office of the Registrar at the Medical Center in Kansas City. Tuition and fee rates vary for students according to the program in which the student is enrolled. 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Late Enrollment Fee
Each student who enrolls late is assessed an additional fee. Fees and applicable dates are announced in the Timetable, www.timetable.ku.edu, each term.

Residency Requirements
Kansas statutes and Board of Regents regulations govern who qualifies for resident tuition. This description does not replace or supersede the Kansas statutes or Regents’ regulations. For a copy of the statutes and regulations, write the Office of the University Registrar, Strong Hall, 1450 Jayhawk Blvd., Room 121, Lawrence, KS 66045-7335.

In general, you qualify for resident rates if you meet three basic criteria: (1) continuous physical residence in Kansas, (2) reliance on Kansas sources of support to meet living expenses, and (3) demonstrated intent to make Kansas your permanent home indefinitely and that you are residing in the state for purposes other than just educational. You must meet these criteria for 365 days before the first day of the semester in which you wish to pay resident rates. Those who meet the following criteria are also eligible for resident rates:

- Alumni or students of Haskell Indian Nations University.
- Kansas high school graduates who enroll at a Board of Regents institution within six months of high school graduation, who were residents for tuition and fee purposes at some point in the 12 months before graduation, and who remain continuously enrolled at a Board of Regents institution.
- Employees of Kansas Board of Regents institutions who are employed at least 40-percent time and are not seasonal, hourly, or temporary. Their dependents are also eligible.
- Employees who are transferred or recruited to Kansas and their dependents. This privilege is valid for one year.
- Military personnel and their dependents on full-time assignment at a Kansas base.
- Retired military personnel who were assigned to a Kansas base for at least two years, then retired or were honorably discharged and stayed in Kansas.

Books and Supplies
The cost of new textbooks and supplies varies, but is about $600 a year for most students.

Reciprocal Agreements
By joint agreement of the Board of Regents of the state of Kansas and the Board of Curators of the University of Missouri, qualified students who would be eligible to pay only resident rates at the University of Missouri may enroll in certain educational programs at the University of Kansas at the rates paid by Kansas residents. Eligibility requirements include actively pursuing the degree and enrolling in required courses unique to the major.

These programs are the B.A. and M.A. in East Asian languages and cultures, B.A., M.A., and Ph.D. in Slavic languages and literatures (not Russian), M.M.E. in music therapy, B.Arch., B.S. in architectural engineering, professional M.Arch., and Ph.D. in linguistics.

A reciprocal agreement between Kansas and Iowa allows a qualified Iowa student to enroll in KU’s M.S. program in occupational therapy at resident rates.
Financial Aid

For information about fellowships and scholarships, see The Graduate School and International Programs chapter of this catalog.

Loans
KU's loan program for students is administered by the Office of Student Financial Aid, Strong Hall, 1450 Jayhawk Blvd., Room 50, Lawrence, KS 66045-7535, financialaid@ku.edu or www.financialaid.ku.edu.

Tuition Payment
KU pays the tuition and 3 hours of campus fees of graduate students who receive appointments as graduate teaching assistants. The percentage paid by KU depends on the level of appointment.

- 40 to 50%: 100% of tuition, 100% of 3 hours of campus fees
- 30 to 39%: 100% of tuition, 75% of 3 hours of campus fees
- 20 to 29%: 50% of tuition, 50% of 3 hours of campus fees
- 10 to 19%: 25% of tuition, 25% of 3 hours of campus fees
- 0%: 0% of tuition, 0% of 3 hours of campus fees

Where applicable, staff (resident) rates are assessed before tuition is paid. Only graduate students involved in direct classroom or laboratory instruction are eligible for appointments as graduate teaching assistants and for the tuition payment program. Eligibility is limited to the term during which students have instructional appointments. The tuition payment program covers only tuition and 3 hours of campus fees. It is not applicable to the remaining hours of campus fees, Edwards Campus construction and other special fees, off-campus fees, mediated fees, or additional professional school fees in Business, Engineering, Law, and Pharmacy.

Graduate Assistantships
Graduate Teaching Assistantships may be available to graduate students through graduate departments. Usual appointments are for one-half-time service. Graduate students should apply directly to the department for GTA appointments.

Graduate teaching assistantships in Lawrence are governed by a memorandum of agreement between KU, the Kansas Board of Regents, and the Kansas Association of Public Employees, which represents KU GTAs in Lawrence. Persons holding GTA appointments must meet the following minimum conditions:

1. During the term of appointment, the GTA must be enrolled in a graduate degree program offered by KU.
2. During the term of appointment, the GTA must be enrolled in no fewer than 6 credit hours per semester. GTAs who are unable to enroll in course work related to their degree program on probationary or provisional status are not in good standing for the purpose of GTA appointments. A graduate student must maintain a cumulative grade-point average of 3.0 to remain in good academic standing. If a department judges that a graduate student whose grade-point average falls below 3.0 after the first semester at KU is nonetheless making satisfactory progress, the department may recommend to the Provost that the student be allowed to keep the GTA position for one additional semester.
3. The GTA must satisfy any and all English proficiency criteria established by the Regents and the university.

4. The research performed for the GRA appointment must be in the student’s field or a closely related field and the Edwards Campus program fee, and a portion of the required Lawrence campus fees (3 hours). GTAs are responsible for the remainder of the required campus fees and, as applicable, the Edwards Campus construction fee, Edwards Campus union fee, Edwards Campus required fee, mediated course fees, housing costs, optional fees, and other specialized fees.

5. During the term of appointment, the GTA’s assigned duties must consist primarily of direct involvement in classroom or laboratory instruction.

6. The GTA must attend all orientation and training sessions designated as mandatory by either the university or the department in which the GTA is appointed. GTAs who fail to do so are subject to immediate termination of their current appointment.

KU also requires that a GTA's teaching assignment be in his or her field of study or one that is closely related. Out-of-field appointments require consultation with the student's academic unit and the explicit approval of the Office of the Provost. If during the term of appointment a GTA fails to meet any of these conditions, the appointment may be terminated immediately without further review or appeal. Departments may establish more stringent conditions.

If a GTA appointment for an enrolled student is found to be invalid at any time during the term, tuition is assessed for the entire term at the rates listed under Tuition and Fees, Lawrence Campus Courses in the schedule of classes, online at www.registrar.ku.edu/timetable. The student is responsible for paying the difference between the original assessment and the final assessment. If a graduate student resigns a GTA appointment before the end of the term, tuition and fees are recalculated at the regular rates, and the student is responsible for the difference.

Depending on the level of appointment, the university pays some or all of the GTA’s tuition, including differential tuition and the Edwards Campus program fee, and a portion of the required Lawrence campus fees (3 hours). GTAs are responsible for the remainder of the required campus fees and, as applicable, the Edwards Campus construction fee, Edwards Campus union fee, Edwards Campus required fee, mediated course fees, housing costs, optional fees, and other specialized fees.

The memorandum of agreement, with additional information on tuition and fee payment, appointments, wages, benefits, and other topics of interest to GTAs, is available on the Provost’s Office Web site, www.provost.ku.edu. Graduate Research Assistantships are available to graduate students through grants from federal and private agencies and from state-appropriated research funds. For further information, the applicant should write directly to the chair or graduate adviser of the major department.

To be eligible for a GRA, a student must meet all of the following criteria:

1. The GRA must be a degree-seeking graduate student admitted to a graduate program during the current fall, spring, or summer term.
2. During fall or spring semester, the GTA must be enrolled for no fewer than 6 credit hours required for the graduate degree. During summer session, the GTA must be enrolled in course work related to the graduate program. The number of hours is determined by the advisor and must reflect as accurately as possible the student's demand on faculty time and university facilities. Generally, an enrollment of 3 credit hours is appropriate for the summer session. Upon successful completion of the doctoral comprehensive examination and all other Graduate School and departmental requirements for doctoral candidacy and upon completion of 18 post-comprehensive credit hours, a doctoral student may qualify for a graduate research assistantship by enrolling in one or more credit hours of dissertation, thesis, or equivalent work approved by the Office of the Provost.
3. During the term of appointment, the GTA must be in good academic standing and make satisfactory progress toward a graduate degree, as determined by the Graduate School and the department in which the student is enrolled. Students admitted to a degree program on probationary or provisional status are not in good standing for the purpose of GTA appointments. A graduate student must maintain a cumulative grade-point average of 3.0 to remain in good academic standing. If a department judges that a graduate student whose grade-point average falls below 3.0 after the first semester at KU is nonetheless making satisfactory progress, the department may recommend to the Provost that the student be allowed to keep the GTA position for one additional semester.
4. The GTA must satisfy any and all English proficiency criteria established by the Regents and the university.
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6. The GRA position must be approved by the Office of the Vice Provost for Research, the Office of Budget Management and Fiscal Services, or the College of Liberal Arts and Sciences. The GRA must be paid through the KU payroll system.

A graduate student who has a research assistantship appointment of at least 40-percent time is eligible for resident tuition rates. Required campus fees; Edwards Campus program, construction, union, and required fees; mediated course fees; housing costs; optional fees; and the differential tuition charged by the several schools still apply. To qualify for the resident rate for fall or spring semester, the student must have a GRA appointment starting no later than the first day of the first full month of the semester and continuing through the 60th class day. To qualify for this rate during the summer, the GRA must have met the eligibility criteria for the preceding fall and spring semesters or must have a GRA appointment starting no later than the first day of the summer session and continuing through the 30th class day.

GRA Tuition Assistance. In certain instances, tuition assistance may be available for GRAs, either through the grant source or through the tuition assistance program for doctoral graduate research assistants managed by the Office of the Provost. Information about the latter is available in the GTA/GRA Information/Documents section of the Provost’s office Web site, www.provost.ku.edu. Prospective GRAs should consult the chair or graduate adviser of the major department for more specific information.

Summer Session Enrollment Requirements. The 6-hour enrollment criterion does not apply to summer GTA or GRA appointments. To be eligible for a summer session GTA appointment, a student must have met the GTA enrollment criteria above during the previous semester, be enrolled in summer session, or be admitted to a graduate degree program for the next fall semester. To be eligible for a summer session GRA appointment, a student must be enrolled; the number of hours is determined according to the GRA enrollment criteria above. Doctoral candidates must enroll in at least 3 hours during the summer session unless they have completed 18 post-graduate hours, in which case enrollment in fewer hours is permitted.

Health Insurance. A graduate student who has a GTA, GRA, or combination appointment at the half-time level for a semester is eligible to participate in a health care benefits program, for which KU provides a contribution. Other student health insurance plans are available to all students, regardless of employment status. Information about GTA/GRA health care benefits plans, costs, and KU contributions is available from the Office of Staff Benefits, Department of Human Resources and Equal Opportunity, (785) 864-4946, or on the HR/EQ Web site, www.hrco.ku.edu/employment/student_ employment/gta_gra_health_insurance.shtml. Information about other student health plans is available from Watkins Memorial Health Center.

Non-native Speakers of English. All applicants for graduate teaching assistantships whose first language is not English, including international students and U.S. residents or citizens, must submit a score on the Test of Spoken English, administered by the Educational Testing Service at Test of English as a Foreign Language centers in the United States or abroad or a score on the SPEAK administered by the Applied English Center at KU. The minimum TSE or SPEAK score necessary for an offer of an assistantship is 50 points. Applicants who do not attain that score are not eligible for GTA positions but may enroll in an English course for international graduate teaching assistants offered by the Applied English Center. Upon attaining a minimum score of 50 on the SPEAK or TSE, a student may reapply for an assistantship. This regulation applies to all students who are not native speakers of English, regardless of country of origin, previous teaching experience, or department in which the position is sought.

Other Employment Opportunities

KU and the community offer a variety of employment opportunities. For further information, contact the University Career Center, (785) 864-3624, www.uccc.ku.edu. A listing of current jobs is available at https://jobs.ku.edu.

Student Services

Graduate Student Associations

Lawrence. All KU graduate students on the Lawrence campus are members of the Graduate and Professional Association. The GPA is governed by a seven-member elected Executive Committee (GradEx). The GPA lobbies for budgetary support to fund graduate student organizations, paper-presentation travel, and the Graduate Student Mentorship Award program. It offers job, grant, and scholarship information. It also represents graduate student interests in university governance, the state legislature, and grievance mediation. The GPA publishes the Graduate NewsPaper (GNP) and other publications several times each year, conducts surveys on matters of graduate student concern, and co-sponsors campuswide events for graduate students. The GPA office is in 426 Kansas Union, (785) 864-4914, www.ku.edu/~gpa.

KU Medical Center. The Graduate Student Council is composed of representatives from all graduate departments on the Kansas City campus. The GSC sponsors and organizes the annual Student Research Forum. In the SRF, students from basic science, medicine, nursing, and allied health give brief presentations of their research in the format of national research meetings. SRF promotes faculty-student and interdepartmental interactions at the research level. The GSC also sponsors social events and participates in philanthropic events. It provides orientation information for incoming graduate students at registration. The GSC lobbies for student interests on the Kansas City campus and provides student representation on numerous faculty committees at the medical center.

Health Services

Lawrence. Student Health Services, Watkins Memorial Health Center, has full-time physicians and support personnel. Hours: 8 a.m. to 8 p.m. Monday—Friday; 8 a.m. to 4:30 p.m. Saturday, 12:30 to 4:30 p.m. Sunday. An optional health insurance plan is available. All international students must have health insurance.

Lawrence Campus Immunization Policy. All new or newly admitted students must provide proof of two immunizations for measles,
mumps, and rubella (MMR) on the health center’s health history form. A hold is placed on the subsequent enrollment of students who do not provide this information within the first semester at KU. The MMR vaccination is available at the health center. The health center may grant exceptions for medical or religious reasons.

**KU Medical Center.** Student Health Services is available to students who pay the student health fee to the KU Medical Center campus. Student Health Services is in 1012 Student Center Building. Hours: 7 a.m. to 7 p.m. Monday, 8 a.m. to 4:30 p.m. Tuesday—Friday. Closed on all state holidays.

**Medical Center Health Insurance.** All full- and part-time students at KU Medical Center must have proof of health insurance coverage at all times. Upon enrollment, each student must complete a health insurance affidavit form and supply a copy of the front and back of the current insurance card to Student Health Services. Students who do not have proof of health insurance may purchase the university student health insurance plan provided by the state.

**Medical Center Immunization Policy.** All KUMC students must have complete immunization records on file in Student Health Services. Students who do not have proof of health insurance may purchase the university student health insurance plan provided by the state.

**Housing**

**Lawrence.** KU has seven residence halls. Stouffer Hall has apartments for students with children who live with the student parent on a permanent basis. Jayhawk Towers is an apartment complex for unmarried students. Off-campus housing is available.

**KU Medical Center.** Apartment complexes, private apartments, and houses are available within walking distance of the Medical Center.

**Lawrence Campus Services**

**Academic Offices.** The Graduate School and dean’s offices provide academic information and support. You may request information from the KU school or department that offers a program in your field of interest or from the Graduate School.

The University of Kansas School/Department of ____________
Lawrence, KS 66045

or

The University of Kansas Graduate School
Strong Hall, 1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7533

graduate@ku.edu, www.graduate.ku.edu
(785) 864-6161, fax: (785) 864-4555

**Academic Records and Enrollment**

Office of the University Registrar
Strong Hall, 1450 Jayhawk Blvd., Room 121
Lawrence, KS 66045-7535:

- Enrollment, Transcripts, Tuition and Fee Payment, (785) 864-4422
- Residency, (785) 864-4472
- Veterans’ Services, (785) 864-5426
- www.registrar.ku.edu

**Applications.** Submit your application to the Graduate School online at www.graduate.ku.edu. Forward all requested supporting application documents to the University of Kansas Graduate School Graduate Application Processing Center

Strong Hall, 1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

**Assistantships.** Contact the department that offers a program in your field of interest.

**Bookstores**

KU Bookstore, Burge Union, Level 2
1601 Irving Hill Rd.
Lawrence, KS 66045-7557

www.jayhawks.com, (785) 864-5697

KU Bookstores, Kansas Union, Level 2
1301 Jayhawk Blvd.
Lawrence, KS 66045-7548

www.jayhawks.com, (785) 864-4640

**Career Planning and Placement**

School of Business Career Services
Summerfield Hall, 1300 Sunny Side Ave., Room 125
Lawrence, KS 66045-7585

www.business.ku.edu, (785) 864-5591

School of Engineering Career Services Center,
Eaton Hall, 1520 West 15th St., Room 1001
Lawrence, KS 66045-7621

www.engr.ku.edu/engr-care, (785) 864-3891

School of Journalism and Mass Communications
Career Center
Stauffer-Flint Hall, 1435 Jayhawk Blvd., Room 210,
Lawrence, KS 66045-7575

www.journalism.ku.edu, (785) 864-7648

University Career Center
Burge Union, 1601 Irving Hill Rd., Room 110
Lawrence, KS 66045-7557

www.unc.ku.edu, (785) 864-3624

**Catalogs**

Request Graduate School Catalogs, 24 hours a day, seven days a week: graduate@ku.edu, (785) 864-9036

**Child Care**

Hilltop Child Development Center
1605 Irving Hill Rd., Lawrence, KS 66045

www.hilltop.ku.edu, (785) 864-4940

Edna A. Hill Child Development Center, (785) 864-0502

(Space is limited, and both programs have waiting lists.)

**Computer Resources**

For information about labs and hours, see Computer Labs and Resources: www.computerlabs.ku.edu/lablist

**Concerts and Recitals**

Department of Music and Dance
www.ku.edu/~sfa/mad, (785) 864-3436

Lied Center Box Office
www.lied.ku.edu, (785) 864-ARTS (2787)

Murphy Hall Box Office
www.kutheatre.com, (785) 864-3982

Student Union Activities
www.suaevents.com, (785) 864-3477

**Continuing Education**

Continuing Education, 1515 St. Andrews Dr.
Lawrence, KS 66045-1625

www.jayhawks.com, (785) 864-4790

**Counseling**

Academic Achievement and Access Center
Strong Hall, 1450 Jayhawk Blvd., Room 22
Lawrence, KS 66045-7535

www.achievement.ku.edu, (785) 864-4064

Counseling and Psychological Services
Watkins Memorial Health Center
1200 Schwegler Dr., Room 2100
Lawrence, KS 66045-7599

www.caps.ku.edu, (785) 864-2277
Information and Referrals
Academic Achievement and Access Center
Strong Hall, 1450 Jayhawk Blvd., Room 22
Lawrence, KS 66045-7535
www.achievement.ku.edu, (785) 864-4064
University Information Center, Anschutz Library
www.kuinfo.lib.ku.edu, walk-in and phone, (785) 864-3506

International Students
Applied English Center
Lippincott Hall, 1410 Jayhawk Blvd., Room 204
Lawrence, KS 66045-7515
www.aec.ku.edu, (785) 864-4606
International Undergraduate Admissions
Strong Hall, 1450 Jayhawk Blvd., Room 17
Lawrence, KS 66045-7535
issapps@ku.edu, (785) 864-2616
Office of International Student and Scholar Services
Strong Hall, 1450 Jayhawk Blvd., Room 2
Lawrence, KS 66045-7535
www.ku.edu/~issfacts, (785) 864-3617

Language Laboratory
Ermal Garinger Academic Resource Center
Wescoe Hall, 1445 Jayhawk Blvd., Room 4069
Lawrence, KS 66045-7590
EGARC@ku.edu, www.ku.edu/~egarc, (785) 864-4759

Legal Services
Legal Services for Students
Burge Union, 1601 Irving Hill Rd., Room 312
Lawrence, KS 66045-7557
legals@ku.edu, www.ku.edu/~legals, (785) 864-5665

Libraries
Watson Library, 1425 Jayhawk Blvd.
Lawrence, KS 66045-7544
www.lib.ku.edu, (785) 864-3956
(See also Research and Academic Support.)

Loans
Office of Student Financial Aid
Strong Hall, 1450 Jayhawk Blvd., Room 50
Lawrence, KS 66045-7535
financialaid@ku.edu, www.financialaid.ku.edu
(785) 864-4700

Multicultural Students
Office of Multicultural Affairs
Strong Hall, 1450 Jayhawk Blvd., Room 145
Lawrence, KS 66045-7535
www.oma.ku.edu, (785) 864-4351
Multicultural Resource Center
1530 Summerfield Hall Dr.
Lawrence, KS 66045-7607
www.mrc.ku.edu, (785) 864-4350

Nontraditional Students
Student Involvement and Leadership Center
Kansas Union, 1301 Jayhawk Blvd., Room 400
Lawrence, KS 66045-7548
www.ku.edu/~sile, (785) 864-4861

Recycling
Dept. of Environmental Stewardship
Varsity House, 1043 Indiana St.
Lawrence, KS 66044
www.ku.edu/~recycle, (785) 864-2855
Safety and Crime on Campus
The annual security report about KU safety policies, crime statistics, and campus resources is available online at www.ku.edu/safety or on paper by contacting the Dean of Students, Strong Hall, 1450 Jayhawk Blvd., Room 113, Lawrence, KS 66045-7535, (785) 864-4060.

Sexual Assault Prevention
Sexual Violence Education and Support Services
Emily Taylor Women’s Resource Center
Kansas Union, 1301 Jayhawk Blvd., Room 400
Lawrence, KS 66045-7548
www.womensresourcecenter.ku.edu, (785) 864-3552

Speech-Language-Hearing Clinic
Schiefelbusch Speech-Language-Hearing Clinic
Haworth Hall, 1200 Sunnyside Ave., Room 2101
Lawrence, KS 66045-7534
www.lsi.ku.edu/sph/clinic.htm, (785) 864-4690

Student Activities, Organizations, Recreation
Student Involvement and Leadership Center
Kansas Union, 1301 Jayhawk Blvd., Room 400
Lawrence, KS 66045-7548
www.ku.edu/~sile, (785) 864-4861

Dean of Students
Strong Hall, 1450 Jayhawk Blvd., Room 113
Lawrence, KS 66045-7535
www.deanofstudents.ku.edu, (785) 864-4060

Jaybowl, Recreation Center
Kansas Union, 1301 Jayhawk Blvd.
Lawrence, KS 66045-7548
www.jayhawks.com/union, (785) 864-3475

Kansas and Burge Unions
www.jayhawks.com, (785) 864-4651

Recreation Services, Student Recreation Fitness Center
1740 Watkins Center Dr.
Lawrence, KS 66045-7507
www.recreation.ku.edu, (785) 864-3546

Student Union Activities
Kansas Union, 1301 Jayhawk Blvd.
Lawrence, KS 66045-7548
www.suanetworks.com, (785) 864-3477

Student Employment
University Career Center
Burge Union, 1601 Irving Hill Rd., Room 110
Lawrence, KS 66045-7557
www.unc.ku.edu, (785) 864-3624

Student Success
Office of the Vice Provost for Student Success
Strong Hall, 1450 Jayhawk Blvd., Room 133
Lawrence, KS 66045-7535
www.vppss.ku.edu, (785) 864-4381, fax: (785) 864-5090

Students with Disabilities
Disability Resources
Strong Hall, 1450 Jayhawk Blvd., Room 22
Lawrence, KS 66045-7535
www.disability.ku.edu, (785) 864-2620 (Voice/TTD)

Study Abroad
Office of Study Abroad
Lippincott Hall, 1410 Jayhawk Blvd., Room 108
Lawrence, KS 66045-7515
www.ku.edu/~osa, (785) 864-3742

Testing
Counseling and Psychological Services, Testing Services
Watkins Memorial Health Center
1200 Schwessler Dr., Room 2150
Lawrence, KS 66045-7559
www.caps.ku.edu/testing, (785) 864-2768

University Ombuds Office
Carruth-O’Leary Hall, 1246 West Campus Rd., Room 28
Lawrence, KS 66045-7615
www.ku.edu/~ombuds, (785) 864-7261

Women’s Resources
Emily Taylor Women’s Resource Center
Kansas Union, 1301 Jayhawk Blvd., Room 400
Lawrence, KS 66045-7548
www.womensresourcecenter.ku.edu, (785) 864-3552

Writing Center
KU Writing Center
Wescoe Hall, 1445 Jayhawk Blvd., Room 4017
Lawrence, KS 66045-7590
www.ku.edu/~writing, (785) 864-2399

KU Medical Center Campus Services
Academic Offices. Graduate Studies and the dean’s offices of the schools provide academic information and support to students. You may request information from the KUMC school or department that offers a program in your field of interest or from the Office of the Dean of Graduate Studies.

School/Department of...
The University of Kansas Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
or
Office of the Dean of Graduate Studies
5015 Wescoe, Mail Stop 1040, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
vbiscani@kumc.edu, www.kumc.edu, (913) 588-1258

Applications and Assistantships
Contact the school or department that offers a program in your field of interest.

Bookstore
KU Medical Center Bookstore
G014 Orr-Major, Mail Stop 4036, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
bookstore@kumc.edu, www.kumedbooks.com
(913) 588-2357 or (800) 262-7509

Computer Resources
Archie R. Dykes Library for Health Sciences
Mail Stop 1050, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.library.ku.edu, (913) 588-7166
Telecom Help, (913) 588-7995

Counseling
Student Counseling Services
G116 Student Center, Mail Stop 4006, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/counsel, (913) 588-6580

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
Student Services—KU Medical Center Campus Services; KU Edwards Campus Services

Equal Opportunity
Equal Opportunity Office
1040 Wescoe Pavilion, Mail Stop 2014, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/eoo
(913) 588-1206 (voice), (913) 588-7963 (TDD)

Health Service
Student Health Center
1012 Student Center, Mail Stop 4044, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/health, (913) 588-1941

Housing
Housing Office
G116 Student Center, Mail Stop 4006, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www2.kumc.edu/classifieds/housingads, (913) 588-6580

Libraries
Archie R. Dykes Library for Health Sciences
Mail Stop 1050, KUMC
2100 W. 39th St., Kansas City, KS 66160
www.library.kumc.edu, (913) 588-7166

Clendening History of Medicine Library
1020 Robinson, Mail Stop 1024, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.clendening.kumc.edu, (913) 588-7244

Loans
Office of Student Financial Aid
4003 Student Center, Mail Stop 4005, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
financialaid@kumc.edu, www.kumc.edu/studentcenter/financialaid, (913) 588-5170

Registrar
(Registrar, Student Records, Loan Deferments, Registration, Tuition and Fee Payment, Veterans’ Benefits)
Office of the Registrar,
3001 Student Center, Mail Stop 4029, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/registrar, (913) 588-7055

Student Activities, Organizations, Recreation
Kirmayer Fitness Center, Mail Stop 1007, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/kirmayer, (913) 588-1532

Student Resources, Wellness, and Diversity
3001 Student Center, Mail Stop 4029, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/swrd, (913) 588-6681

Student Union Corporation,
G014 Orr-Major Bldg., Mail Stop 4036, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumedbooks.com, (913) 588-2537 or (800) 262-7509

Student Employment
Employment Office
1052 Wescoe Pavilion, Mail Stop 2033, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www2.kumc.edu/hr, (913) 588-5086

Student Health Insurance
Student Health Insurance
G116 Student Center, Mail Stop 4006, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
shinsurance@kumc.edu, www.kumc.edu/studentcenter/healthinsure, (913) 588-4695, fax: (913) 588-6597

Student Services
Student Services Division
3001 Student Center, Mail Stop 4029, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/studentcenter/dean, (913) 588-6498

KU Edwards Campus Services
The University of Kansas Edwards Campus
12600 Quivira Rd.
Overland Park, KS 66213-2402
Phone: 864-8400 (from Lawrence) or (913) 897-8400.

Academic Offices
The professional schools and the College of Liberal Arts and Sciences from KU’s Lawrence campus deliver academic information and support to students on the KU Edwards Campus. For questions, contact Mary Ryan, Associate Dean, Academic Affairs
KU Edwards Campus, 12600 Quivira Rd.
Overland Park, KS 66213-2402
mryan@ku.edu, http://edwardscampus.ku.edu
(913) 897-8400

Bookstore
KU Edwards Campus Bookstore
Jayhawk Central, 12520 Quivira Rd.
Overland Park, KS 66213-2402
www.jayhawks.com/edwards, (913) 897-8400

Computer Resources and Educational Technology
Information Technology Department
KU Edwards Campus, 12600 Quivira Rd.
Overland Park, KS 66213-2402
http://edwardscampus.ku.edu/Technology_Services/Technology_Services_Index.htm, (913) 897-8400

Library
Regents Center Library
KU Edwards Campus, 12600 Quivira Rd.
Overland Park, KS 66213-2402
reg_ref@ku.edu, www.lib.ku.edu/~rclibrary
(913) 897-8570
The Graduate School and International Programs

Diana B. Carlin, Dean
Strong Hall, 1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535, www.graduate.ku.edu

Goals of Graduate Study ......................... 39
The Graduate Faculty ............................. 39
  Regular Graduate Faculty Membership .......... 39
  Chair of Doctoral Dissertation Committees
    (Dissertation Status) ........................... 40
  Ad Hoc & Special Graduate Faculty Appointments 40
  Ad Hoc Appointments ................................ 40
  Special Appointments ............................. 40
  Graduate Education Privileges (chart) .......... 40
The Graduate School .............................. 41
  International Programs ......................... 41
    International Student Policy .................. 41
    Office of International Programs .............. 41
    KU Medical Center International Programs ..... 42
Interinstitutional Programs & Studies ....... 42

Fellowships & Scholarships ..................... 42
  Graduate Teaching Assistantships and Graduate
    Research Assistantships ....................... 42
  Chancellor’s Fellowships ....................... 42
  Honors Fellowships ................................ 42
  First-year Graduate Fellowships ................ 42
  Madison & Lila Self Graduate Fellowships .... 43
  Dissertation Fellowships ....................... 43
  Melik Graduate Fellowships .................... 43
  Melik Graduate Scholarships ................... 43
  Supplemental Scholarships ..................... 43
  Graduate Teaching Assistantship for Diversity 43
  Dwight Eisenhower/Clifford Roberts Fellowships 43
  Harry S. Truman Good Neighbor Awards ........ 43
  Departmental Fellowships & Traineeships .... 44
  Graduate Student Travel Funds .................. 44
Preparing Future Faculty ....................... 44
  Graduate Studies Courses ....................... 44
Preparing Future Professionals ................ 44
The Graduate School and International Programs

Diana B. Carlin, Dean
Saeed Farokhi, Associate Dean
Michael Mosser, Assistant Dean
Carole Ross, Assistant Dean
Strong Hall, 1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535
graduate@ku.edu or www.graduate.ku.edu
Phone: (785) 864-6161, Fax: (785) 864-4555

The Graduate School of the University of Kansas is responsible for graduate education at campuses in Lawrence, Kansas City, and Wichita and at educational and research facilities throughout the state. The Graduate School consists of the Graduate Faculty, the graduate student body, and the Graduate School administrative organization, composed of the Office of the Graduate School and the Graduate Divisions of the schools responsible for programs leading to degrees awarded by the Graduate School.

The Graduate School offers the Master of Arts degree in 48 fields, the Master of Science in 33, and specific professional master’s degrees in 15 programs; the professional degree of Specialist in Education; and the Doctor of Philosophy degree in 63 fields, as well as professional doctorates of Education, Engineering, and Musical Arts. In these degree programs and, in increasing numbers in nondegree-oriented enrollments, on the Lawrence and Kansas City campuses and off campus, the Graduate School currently enrolls about 6,000 graduate students.

Goals of Graduate Study

Independent scholarship, competence in research or other creative work, and the nurture of teaching commitment and skill are the traditional goals of graduate study. Having acquired a broad education as an undergraduate, the student is expected to master a special field, to learn the methods of investigation employed therein, and to proceed toward making an original contribution to knowledge. Since many of those who earn advanced degrees find careers in higher education, the acquisition of skill in teaching and in directing research is also an essential part of graduate education.

These traditional goals remain significant in changing times, while newly emerging societal interests and needs and new demands of the marketplace both underscore their importance and emphasize the necessity for flexibility in programs and accommodation in career objectives. Careers for graduates in many fields are more broadly dispersed, and the contributions of graduate study and research to society must become more widely spread and recognized in government, business and industry, and the diverse professions and arts. At the same time, entering students must realize that a change in employment patterns for graduates is under way in many fields where the major, if not the sole, employment opportunity after graduation was once to be found in a teaching career.

The Graduate Faculty

The Graduate Faculty consists of members of the university faculty and other persons qualified by training and experience who are duly nominated and appointed. Only members of the Graduate Faculty may teach courses for graduate credit, supervise master’s programs and theses, or serve on doctoral committees.

Membership criteria for Graduate Faculty status may be found online at www.graduate.ku.edu.

Criteria for membership in the Graduate Faculty, approved by the Graduate Council, April 26, 2001:

Regular Graduate Faculty Membership. Regular members of the Graduate Faculty may teach courses for graduate credit, supervise the master’s program and thesis, serve on Graduate School committees, and sit on doctoral and/or master’s committees. When appropriate, a qualified member of the Regular Graduate Faculty may be nominated to serve as co-chair of a specific dissertation committee if a faculty member with Dissertation Chair status serves as co-chair of the committee and agrees to ensure that the requirements of the department and the Graduate School are met. However, if the regular member of the Graduate Faculty has lost dissertation chair status, this does not apply. Present or newly appointed faculty members in tenure-track appointments of the rank of assistant professor or above in departments or programs with approved graduate programs are granted regular membership in the Graduate Faculty, provided they have received the terminal degree in their field of specialization or have acquired equivalent training and/or professional experience as determined by the appropriate Graduate Division. To hold regular membership in the Graduate Faculty, a faculty member must continue to show evidence of a pattern of productive professional activity demonstrating the ability to contribute to high-quality graduate education. The form that productive professional activity may take varies across disciplines. Conventional evidence of such activity includes such things as effective teaching, scholarly publication, participation in professional societies, and other scholarly activity. Graduate degree programs are responsible for monitoring faculty with regular membership in the Graduate Faculty.
Chair of Doctoral Dissertation Committees (Dissertation Status). To qualify for the privilege of chairing doctoral dissertation committees, a regular member of the Graduate Faculty must demonstrate (1) the maintenance of a continuous program of scholarly activity including a record of current scholarship, publication, and other contributions to the field; (2) a record of teaching graduate courses; and (3) continuous advising and mentoring graduate students and serving on thesis and dissertation committees. It is the graduate program’s responsibility to nominate members of the Graduate Faculty for authorization to chair doctoral committees and to provide evidence of scholarship and involvement in the graduate education program. Authorization for continuation of the privilege of chairing dissertation committees is reviewed as part of each periodic graduate program review and may also be reviewed in the context of other external or internal program reviews.

Ad Hoc and Special Graduate Faculty Appointments. When conditions warrant, Ad hoc and Special membership in the Graduate Faculty may be granted to persons who do not meet all the qualifications for Regular Graduate Faculty membership. The essential condition for such appointments is that graduate education in the department recommending the appointment will be strengthened by the appointments. Ad hoc and Special appointments are not to be used to avoid employing needed additional tenure-track faculty. Appointments that involve significant exceptions to these rules for membership come before the Standing Committee on Graduate Faculty Appointments and Authorizations for consideration.

Ad Hoc Appointments to the Graduate Faculty may be granted to persons who are not employed by the university or its affiliates but who are uniquely qualified by training or experience for appointment for a specific, named purpose. Such an appointment is for the purpose of (1) teaching a course or courses; (2) cross-listing courses taught as part of a cooperative graduate program between KU and the appointee’s home institution as KU courses; (3) serving on the thesis, dissertation, or examination committee of a particular student or students; or (4) co-chairing a master’s thesis committee of a particular student. Ad hoc appointments are limited to a maximum period of five calendar years for teaching purposes or for the duration of the specified committee assignment. KU graduate students are not granted Ad hoc membership. Emeritus faculty members who wish to continue serving on committees and teaching graduate courses should be appointed to Ad hoc status. All nominations for Ad hoc appointments must state clearly the specific purposes for which the nomination is being sought and, when it can be known in advance, the length of time for which it is being requested. When appropriate, a qualified individual with an Ad hoc appointment may be nominated to serve as co-chair of a specific dissertation committee if a faculty member with dissertation chair status on the Graduate Faculty serves as co-chair and agrees to ensure that the requirements of the department and the Graduate School are met.

Special Appointments to the Graduate Faculty may be granted to employees of the university and its affiliates who do not have tenure-track faculty appointments in a department granting graduate degrees but who are uniquely qualified by training or experience for service in the interest of graduate education at KU. Such membership is for the purpose of (1) teaching a course or courses; (2) having courses cross listed as KU courses if they are part of a cooperative graduate program between KU and the appointee’s home institution; (3) serving on the thesis, dissertation, or examination committee of a particular student; or (4) chairing a master’s thesis committee of a particular student. Special appointments are limited to a maximum period of five calendar years for teaching purposes or for the duration of the specified committee assignment. KU graduate students are not granted Special membership. All nominations for Special appointments must

This table shows the organization and privileges of the various types of Graduate Faculty appointments.

<table>
<thead>
<tr>
<th>Type of Graduate Faculty</th>
<th>Employed by</th>
<th>Type of faculty appt.</th>
<th>Teach graduate courses</th>
<th>Serve on master’s &amp; doctoral committee</th>
<th>Chair&lt;sup&gt;2&lt;/sup&gt; master’s committee</th>
<th>Serve as outside member on doctoral committee</th>
<th>Chair&lt;sup&gt;2&lt;/sup&gt; doctoral committee&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Co-chair&lt;sup&gt;2&lt;/sup&gt; doctoral committee&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Graduate Faculty</td>
<td>KU</td>
<td>Tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes, unless dissertation status was discontinued</td>
</tr>
<tr>
<td>Graduate Faculty with dissertation status</td>
<td>KU or any of its affiliates</td>
<td>Tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Ad Hoc Graduate Faculty</td>
<td>Not by KU or any of its affiliates</td>
<td>Non-tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes, if a Graduate Faculty member with dissertation status serves as co-chair</td>
</tr>
<tr>
<td>Special Graduate Faculty</td>
<td>KU or its affiliates</td>
<td>Non-tenure-track</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

<sup>1</sup>The term “doctoral committee” refers to both oral comprehensive and dissertation defense committees.

<sup>2</sup>A faculty member with the appropriate status may chair a degree committee alone or co-chair a degree committee with another faculty member (i.e., both co-chairs have equal status). Degree committees cannot have both a chair and a co-chair.

KU has been a leader among public universities in national fellowships, producing 25 Rhodes scholars and 388 student Fulbright award winners since the programs began.

KU is one of only five U.S. universities to receive the 2005 Senator Paul Simon Award for Campus Internationalization.
state clearly the specific purposes for which the nomination is being sought and, when it can be known in advance, the length of time for which it is being requested. Special appointments are reviewed by the appointing graduate department and continued as appropriate. When appropriate, a qualified individual with a Special appointment may be nominated to serve as co-chair of a specific dissertation committee if a faculty member with dissertation chair status serves as co-chair and agrees to ensure that the requirements of the department and the Graduate School are met.

Faculty members given a notice of nonreappointment are not eligible to hold Graduate Faculty status in any category.

The Graduate School

The graduate student body is composed of those persons admitted to graduate study in the Graduate School by the Graduate Divisions of the college and schools and currently enrolled in graduate programs.

The Office of the Graduate School comprises the Dean of the Graduate School and any Associate or Assistant Deans of the Graduate School.

Along with its traditional undergraduate administrative structure, each school (Architecture and Urban Design, Business, Education, Engineering, Fine Arts, Journalism and Mass Communications, Pharmacy, and, for the doctoral degree, Social Welfare) maintains a Graduate Division*, headed by a Dean or Director of Graduate Studies. Graduate Studies on the KU Medical Center campus maintains the Graduate Division* for the Schools of Allied Health, Medicine, and Nursing. Graduate Divisions are responsible for the day-to-day administration of graduate programs under guidelines laid down by Graduate School governance. Such responsibilities include admission and retention of graduate students, maintenance of student files, conduct of degree examinations, approval of course and curricular changes, and granting of exceptions to Graduate School regulations. For graduate students in the College of Liberal Arts and Sciences, these functions are shared between the Graduate School and the dean’s office of the College of Liberal Arts and Sciences. Graduate Divisions report to the Graduate School dean on matters within the dean’s purview and refer other matters directly or through appropriate committees for action.

In 1997, the Graduate School adopted a new Constitution and Bylaws. The governance bodies of the Graduate School are the Graduate Council and five standing committees. The Graduate Council is made up of representatives from each graduate degree-granting department or program of the Graduate School. The Graduate Council is responsible for setting and maintaining major policies having to do with graduate education brought to it by the Dean of the Graduate School or the standing committees. Its actions are final unless the council chooses by a two-thirds vote to place a motion for voting by mail ballot before the Graduate Faculty, the Graduate Executive Committee, and the representatives of all Graduate Student Organizations. In such a case, a majority of those voting by mail determine the issue.

Each standing committee is made up of members of the Graduate Council and has specifically assigned responsibilities. The standing committees are New Degrees and Degree Program Changes; Program Review; Graduate School Fellowships, Scholarships, and Student Affairs; Graduate Faculty Appointments and Authorizations; and the Executive Committee. The Executive Committee receives reports and recommendations of the other standing committees; determines whether new matters should go to one of the standing committees, to an ad hoc committee, or to the entire Graduate Council; sets the agenda for Graduate Council meetings; and refers committee recommendations and reports to the Graduate Council.

*The term “Graduate Division” without further qualification indicates the administrative office of each school responsible for graduate programs.

International Programs

International Student Policy

The University of Kansas believes that the increasing interdependence of the nations of the world makes any kind of isolationism undesirable. Personal interactions among qualified foreign students and U.S. students and faculty can help all those involved to eliminate prejudices and cross-cultural misunderstandings. The experience should create a healthy appreciation of the world’s cultures, ideas, and nationalities.

Office of International Programs

Dean: Diana B. Carlin
Associate Dean: Thomas Heilke
Assistant Dean: Hodgje Bricke
Assistant Dean: Michael Mosser
Strong Hall, 1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535
www.international.ku.edu, (785) 864-6181

The office coordinates international activities on the Lawrence campus, working with area-studies centers, professional schools, and other units to provide enriched international opportunities for faculty and students. It helps faculty seek external funding for international projects and administers grants and fellowships for graduate students and faculty. It develops programs for international visitors and outreach initiatives aimed at increasing global awareness and cross-cultural expertise among members of the university, the business community, and the general public. The office actively cooperates with state agencies, community organizations, schools, the private sector, and other groups in the community and region that have international interests. The following units report to this office: the Applied English Center, which is responsible for instruction and certification in English as a second language; the Office of Study Abroad, which organizes study abroad for KU students; and the Office of International Student and Scholar Services, which provides nonacademic advising and handles immigration matters for international students.

Besides Direct Exchange Scholarship programs, KU offers opportunities for study and research (including, where appropriate, foreign language study) at foreign universities through formal agreements. Agreements are now in place with these institutions:

- University of Costa Rica (Costa Rica)
- Université de France-Comté, Besançon (France)
- Gorny Institute, St. Petersburg University (Russia)
- University of Santiago de Compostela (Spain)
- Ivan Franko University, Lviv (Ukraine)
Individual departments, especially foreign language departments, also conduct summer sessions abroad in which KU resident graduate credit may be earned. For information, call or write the Office of Study Abroad, Lippincott Hall, 1410 Jayhawk Blvd., Room 108, Lawrence, KS 66045-7515, (785) 864-3742.

For information on the above, as well as Fulbright and Boren Graduate Fellowships or other funded opportunities for overseas graduate study and research, consult departments or International Programs, Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535, (785) 864-6161.

Information about business studies in Asolo, Italy, through the Consortium of Universities for International Business Studies in Italy is available from the School of Business, 1300 Sunnyside Ave., Lawrence, KS 66045-7585, (785) 864-7576, ItalyCIMBA@ku.edu.

KU Medical Center International Programs
Director: Judith E. Reagan, jreagan@kumc.edu
4016 Student Center, Mail Stop 3033, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
(913) 588-1480

International Programs, under the direction of the Vice Chancellor for Academic Affairs, coordinates and facilitates international activities and handles all immigration matters for KU Medical Center. The office promotes the exchange of students, residents, and faculty members; sponsors international activities on campus; and handles exchange agreements between KU and international medical schools. Active programs link KU Medical Center with Australia, Costa Rica, Ecuador, Germany, Guatemala, Ireland, Kenya, the Netherlands, New Zealand, Paraguay, South Africa, Spain, Tanzania, and Vietnam.

Interinstitutional Programs and Studies
KU participates in a range of graduate programs involving interinstitutional cooperation in the state, in the region, and with other countries. These include

• Cooperative doctoral program in geology with Kansas State University.
• Cooperative master’s program in civil engineering with Kansas State University.
• By joint agreement with the Kansas Board of Regents and the Board of Curators of the University of Missouri, students from one state may enroll in certain selected degree programs in the other state at resident fee rates.
• The Intersearch Degree of Doctor of Philosophy is offered jointly by KU and the Victorian College of Pharmacy, Melbourne, Australia.

For details, see the appropriate chapters of this catalog and the departments and Graduate Divisions.

Fellowships and Scholarships
The Graduate School has available a number of fellowship awards to recognize academic superiority and to assist meritorious students in the timely completion of their degree programs. The number of fellowships awarded each year depends upon available funds. Applicants for admission to the Graduate School who wish to be considered for these awards must supply the required supporting materials to the proposed major department. Graduate students interested in fellowships should consult their departmental or program advisers and request that formal nomination be made to the Graduate School. Nominations must be made on standard forms supplied by the Graduate School, accompanied by letters of recommendation, current official transcripts, and if available, additional evidence of scholastic attainment. Each nominee must prepare a statement describing academic and professional goals and the effect that an award would have in attaining these goals. It is the responsibility of the nominee and department to provide all materials required for evaluation of the nominee’s qualifications. Applications must include Graduate Record Examination aptitude test scores. In some cases, scores from other nationally administered standardized tests for graduate admission may be substituted, but only if the program requires this test for admission. Each department may submit two nominations for each fellowship competition. This includes those with multiple graduate programs in a single department.

The records of award holders who have tenure remaining at the end of each enrollment period are reviewed by departmental and program advisers. A report is submitted to the Graduate School regarding academic progress, along with a recommendation for continuance or discontinuance of the award. Continuation is dependent principally on maintenance of a high level of achievement and satisfactory progress toward the degree, although all appointments are contingent on the availability of funds.

Graduate Teaching Assistantships and Graduate Research Assistantships. See Financial Aid in the General Information chapter of this catalog.

Chancellor’s Fellowships. The Graduate School awards two Chancellor’s Fellowships. In years one and three, the fellowships provide $21,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. The department is expected to offer a graduate teaching or research assistantship in year two, and the Graduate School provides a supplemental scholarship to raise the salary stipend to $21,000. Departments are expected to offer teaching or research assistantships for the fourth year, if needed. These fellowships recruit outstanding students for doctoral programs. Preference is given to departments not eligible for Self Graduate Fellowships. Chancellor’s Fellows must participate in either the Preparing Future Faculty or Preparing Future Professionals program.

Honors Fellowships. Honors Fellowships recruit outstanding students for graduate programs. They provide a stipend of $14,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. Awards are made during the first and fourth or fifth year of study. For students seeking only the master’s degree, the award is for one year of study. Departments are expected to offer a half-time teaching or research assistantship for the two or three intervening years for the doctoral student and for one year for the master’s student, provided the student maintains good academic standing and satisfactory employment performance.

First-year Graduate Fellowships. Students who are nominated but are not awarded Honors Fellowships are eligible for consideration for First-year Graduate Fellowships. Alternates for Honors Fellowships are also eligible. This one-year award includes a stipend of $14,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. The nominat-
ing department must guarantee that the recipient will be supported for at least three succeeding years by teaching or research assistantships for doctoral students and for one year for master’s students, provided the student maintains good academic standing and satisfactory employment performance. Preference is given to nominees who would profit significantly from the released time from teaching or other duties.

**Madison and Lila Self Graduate Fellowships** are four-year doctoral fellowships to support outstanding students in the physical sciences, mathematics, engineering, business, economics, and the biological and pharmaceutical sciences. Self Fellows demonstrate the potential and motivation to become notable leaders and to make significant contributions to their chosen professions and to society as a whole. For academic year 2004-05, the award includes a stipend of $23,000 plus full tuition and fees up to 84 hours over the four years. Self fellows participate in a development program that provides general education and training in communication, management, and leadership to help prepare them for future leadership roles. Self Fellows are selected for their vision, career goals, and achievements to date, and because they have the ability to set and attain goals, leadership motivation and potential, and a strong work ethic. Students must be nominated by their departments. The fellowship is open to U.S. citizens only.

**Dissertation Fellowships.** This one-year award includes a stipend of $14,000 plus payment of tuition for up to 6 graduate credit hours. Factors considered favorably are service as a teaching or research assistant, previous awards or scholarships, superior academic performance, good departmental evaluation, and a clearly stated proposal. Preference is given to students who expect to complete their dissertations during the award year and to those who have completed their comprehensive examinations. Preference is given especially to students who have been supported by teaching assistantships during all or most of their graduate study and to those who would profit significantly from released time from teaching or other duties.

**Melik Graduate Fellowships.** The Melik Fellowship recruits outstanding students who will add diversity to the campus and university. Students must be U.S. citizens or permanent residents. The award provides a stipend of $10,000 plus payment of tuition for up to 9 graduate credit hours in fall and spring semesters. Awards are made during the first and fourth or fifth year of study. For students seeking only the master’s degree, the award is made only for the first year of study. Departments are expected to offer a half-time teaching or research assistantship for the two or three intervening years for the doctoral student and for one year for the master’s student, provided the student maintains good academic standing and satisfactory employment performance. The nominee must self-identify as Asian American, African American/Black, Native American, or Hispanic/Latino and must be a U.S. citizen or permanent resident.

**Melik Graduate Fellowships.** The KU Endowment Association and the Student Senate provide Melik Scholarships for new U.S. citizens or permanent residents. Alternates for the Melik Fellowship are considered for the Melik Scholarship. This one-year award offers a stipend of $3,000. Departments are encouraged to supplement this award with a teaching or research assistantship. Factors for consideration are the same as for the Melik Fellowship above. Important factors are bilingual or multilingual abilities; cultural background; ethnicity; evidence of commitment to diversity; evidence of leadership skills; first-generation college student; geographic diversity; previous career before pursuing higher education; race; service to the community; socio-economic status; urban/rural background; financial, social, family, physical, or educational hardships; or other unique contributions.

**Supplemental Scholarships.** The Graduate School provides scholarship funds for up to five departments to award a new incoming doctoral student a $4,000 supplemental scholarship for three consecutive academic years, or a new incoming professional master’s student $3,000 for two consecutive years. The Graduate School awards these funds directly to the department before the recruitment period to help departments be more competitive and attract top applicants to KU. Departments receiving the awards must give the entire amount to one new incoming student along with a teaching or research assistantship. Departments may submit only one proposal even if the department has multiple degree programs.

**Graduate Teaching Assistantship for Diversity.** These graduate teaching assistantships help KU create a diverse community and achieve its educational mission. In addition to academic requirements the following factors are considered: bilingual or multilingual abilities; cultural background; ethnicity; evidence of commitment to diversity; evidence of leadership skills; first-generation college student; geographic diversity; previous career before pursuing higher education; race; service to the community; socio-economic status; urban/rural background; financial, social, family, physical, or educational hardships; and other unique contributions. Each factor is important, but the decision is not based upon only one factor. These assistantships are for new U.S. citizens and permanent residents. The Graduate School and the departments share in funding a four-year appointment, authorized by the department. The student must maintain good academic standing and satisfactory employment performance to continue. Salaries are at the normal rate for such appointments.

**Dwight Eisenhower/Clifford Roberts Graduate Fellowships.** The Eisenhower Institute has invited KU to screen nominations for Dwight Eisenhower/Clifford Roberts Graduate Fellowships. Awards are made in late April. They help scholars of exceptional leadership to complete work for the doctoral degree in such areas as government, history, economics, business administration, and international affairs. Nominees should be preparing their dissertations. Research topics relating to President Eisenhower, the Eisenhower Administration, and issues that were of major concern to him command special attention. The award carries a stipend of $7,500.

**Harry S. Truman Good Neighbor Awards.** The Harry S. Truman Good Neighbor Award Foundation has invited KU to screen nominations for the Jerry Smith Scholarship for International Studies and the Eddie Jacobsen Memorial Foundation Scholarship. Awards are made in May. Applicants must be KU undergraduate or graduate students pursuing study in international rela-
Graduate Student Travel Funds. Graduate students enrolled at least half-time at KU are eligible to apply for assistance from the Graduate Student Paper Presenter Fund if they meet the other requirements for this fund. Graduate students applying to the fund must be presenting a paper or the disciplinary equivalent at a national or regional meeting of a learned or professional society. Applications are available on the Graduate School’s Web site, www.graduate.ku.edu, or at the Graduate School, Strong Hall, 1450 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7535. They should be completed and submitted at least 28 days in advance of the expected departure. A copy of the abstract of the paper must accompany the application form. The student also must show proof that the paper has been accepted for presentation, although this may be submitted later if it is not available at the time of application. Awards currently are made for travel expenses up to $400, pending availability of funds. Students must show receipts to claim the funds. Depending on funding, each applicant is guaranteed one allocation during his or her graduate studies, with the potential of funding for a second conference as funds are available. The Graduate Student Council contributes about three-fourths of these funds. Remaining funds come from the KU Center for Research, Inc.

Preparing Future Faculty
To support the professional development of graduate students seeking academic positions, the Graduate School offers the Preparing Future Faculty program. It consists of a colloquium each semester on the academic job search process; GS 800 Preparing Future Faculty, a course overview of choosing an academic career; and a program that allows KU doctoral candidates to visit and meet faculty from area colleges and universities. Contact the Graduate School for information.

Graduate Studies Courses
GS 700 Thesis and Dissertation Writing (4). A course focusing on the important principles for writing a thesis or dissertation. Emphasis will be placed on the traits of a thesis/dissertation chapter and the essential elements for each chapter. In tutorials, students will receive feedback on how well the writing reflects the essential chapter elements; they will also receive feedback on their grammar through on-line editing guides. Prerequisite: Permission of instructor. LEC

GS 710 Thesis and Dissertation Tutorials (2-6). These tutorials are designed for graduate students who have already started to write their theses or dissertations. Students will meet with the instructor on a weekly basis to review what they have written. They will also read materials about writing effective dissertation chapters. IND

GS 750 Professional Writing (4). This class is intended for graduate students who are in the early stages of their degree programs and who need to hone their reading and writing skills. It will help students learn the skills they need to read course materials and write papers for graduate courses. Students will read and analyze the structures of texts and do reading practices that focuses on improving reading speed and comprehension. In the work on writing, students will first be asked to write summaries, summary critiques, and comparative critiques of articles they read. In order to accomplish this, they will need to learn first and foremost to paraphrase original texts. Their final papers will be argument style research papers in which they will be asked to integrate material from readings around a central argument, comment on data or ideas, critique primary sources. Emphasis will be placed on learning to cite and quote primary materials, organize the content logically, and improve English grammar and usage. Grammar/editing tutorials will be a required component of the course. LEC

GS 800 Preparing Future Faculty (1). A course covering current issues in teaching, research, and service for graduate students seeking professional careers in academic settings. Prerequisite: Selection for participation in the Graduate School’s Preparing Future Faculty program, or consent of instructor. LEC

Preparing Future Professionals
To support the professional development of graduate students seeking professional careers outside academia, the Graduate School offers the Preparing Future Professionals program. It provides workshops each semester on seeking careers outside academia. Contact the Graduate School for information.
### Research Administration
- KU Center for Research, Inc. (47)
- KUMC Research Institute, Inc. (47)

### Science
- Center for Environmental & Occupational Health (48)
- Center for Environmentally Beneficial Catalysis (48)
- Center on Aging (48)
- Developmental Disabilities Center (48)
- Higuchi Biosciences Centers (49)
- Center for Biomedical Research (49)
- Center for BioAnalytical Research (49)
- Center for Drug Delivery Research (49)
- Center for Neurobiology & Immunology Research (49)
- Kansas Biological Survey (49)
- Water Resources Division (49)
- Land & Wildlife Resources Division (49)
- Information Technologies Division (49)
- Kansas Geological Survey (49)
- Mental Retardation & Human Development Research Center (49)
- Museum of Anthropology (49)
- Natural History Museum & Biodiversity Research Center (50)
- Paleontological Institute (50)

### Technology
- Energy Research Center (50)
- Information & Telecommunication Technology Center (50)
- Bioinformatics & Computational Life-sciences Laboratory (50)
- Computer Systems Design Laboratory (50)
- e-Learning Design Laboratory (50)
- Intelligent Systems Laboratory (50)
- Networking & Wireless Systems Laboratory (50)
- Photonics Technology Laboratory (50)
- Radar Systems & Remote Sensing Laboratory (51)
- Tertiary Oil Recovery Project (51)
- Transportation Center (51)

### Behavioral Sciences
- Center for Research on Learning (51)
- Institute for Effective Instruction (51)
- Division of Adult Studies (51)
- Advanced Learning Technologies (51)
- e-Learning Design Laboratory (51)
- Schiefelbusch Institute for Life Span Studies (51)
- Kansas Mental Retardation & Developmental Disabilities Research Center (51)
- Kansas University Center on Developmental Disabilities (51)
- Juniper Gardens Children’s Project (51)
- Gerontology Center (51)
- Merrill Advanced Studies Center (51)
- Beach Center on Disability (51)
- Research & Training Center for Independent Living (51)
- Life Span Institute at Parsons (51)
- Work Group for Health Promotion & Community Development (52)
- Center for Physical Activity & Weight Management (52)

### Research and Academic Support
- Center for Biobehavioral Neurosciences in Communication Disorders (52)
- Child Language Doctoral Program (52)

### Business & Government
- Center for International Business Education & Research (52)
- Policy Research Institute (52)
- Center for Economic & Business Analysis (52)
- Center for International Political Analysis (52)
- Center for Metropolitan Studies (52)
- Center for Environmental Policy (52)
- Survey Research Center (52)
- Robert J. Dole Institute of Politics (52)

### Visual & Performing Arts
- Spencer Museum of Art (53)
- Joyce & Elizabeth Hall Center for the Humanities (53)
- Humanities Lecture Series (53)

### Humanities
- Biometry & Computer Research Facilities (53)
- Center of Excellence in Chemical Methodologies & Library Development (53)
- Environment, Health, & Safety (54)
- Experimental Program to Stimulate Competitive Research (54)
- Information Technology Services (54)
- Electronic Mail (54)
- KU Web Site (54)
- Shared Computing Resources (54)
- Computer Labs (54)
- Computing Workshops (54)
- Computing Help (54)
- Internet1 & Internet2 (54)
- Kansas Masonic Cancer Research Institute (54)
- Kansas Cancer Registry (55)
- Kansas Research & Education Network (55)
- Microscopy & Electronic Imaging Laboratory (55)
- Molecular Structures Group (55)
- Biochemical Research Service Laboratory (55)
- Mass Spectrometry Laboratory (55)
- Molecular Graphics & Modeling Laboratory (55)
- Nuclear Magnetic Resonance Laboratory (56)
- Protein Structure Laboratory (56)
- X-ray Crystallographic Laboratory (56)
- Regional Libraries & Museums (56)
- Research Animal Programs (56)
- University Libraries (57)
- Clendening History of Medicine Library (57)
- Dykes Library for Health Sciences (57)
- Wheat Law Library (57)
- University of Kansas Field Station & Ecological Reserves (57)
- Nelson Environmental Study Area (57)
- Rockefeller Experimental Tract (57)
- Hall Nature Reserve (57)
- Robinson Tract (57)
- Fitch Natural History Reservation (57)
- Baldwin Woods (57)
- University Press of Kansas (57)
Research and Academic Support

Research is an integral part of the university’s educational process. The University of Kansas has more than 40 special research facilities, in addition to those in individual departments and schools. The National Science Foundation classifies KU as a major university receiving substantial research support. The Carnegie Foundation classifies KU as a research-extensive doctoral institution, a classification given to the top research universities. KU belongs to the Association of American Universities, a select group of higher education institutions in the United States and Canada. Members are chosen on the basis of national significance in graduate studies and research.

The university values the contributions of the entire campus community. Creative products and performances can be the equivalent of a scientist’s journal article. Training grants across many disciplines prepare the researchers of tomorrow. Broadening the scope of knowledge in the humanities enriches the entire population. Important strides in the life sciences improve the quality of life for people with life-threatening medical conditions. Advances in information technology pave the way for improving efficiency in numerous areas. All result from research, though of different types. KU continually seeks to strengthen its research, teaching, and service missions across the disciplines through its support of the varied units of the research enterprise.

KU Center for Research, Inc.

President and Chief Operating Officer:

The Office of the Vice Provost for Research and the KU Center for Research, Inc., oversee administration of Lawrence campus sponsored research projects. The OVPR provides the intellectual leadership for KU’s research community and seeks to enlarge KU’s role as a national and international leader in research and to increase the number of research areas in which KU is prominent. KUCR, a nonprofit corporation, is also the authorized KU office on the Lawrence campus for the submission and negotiation of all proposals for new or continued external support of research, instructional, and service projects.

KUCR’s Administrative and Financial Services unit oversees Proposal Services (proposal preparation, proposal review, preparing budgets, current rates, code and compliance numbers), Sponsored Project Administration (budget summary preparation, sponsored programs assistance, financial report preparation), Compensation and Appointments (oversight of human resource activities), Business Services (deposit of funds, asset management, travel, accounts payable, and equipment and property), and Facilities Management (formal price quotations, contractual business agreement review, leases, purchase order issue, vendor records maintenance). KUCR’s Contract Negotiations and Research Compliance unit handles contract and subcontract negotiation. The Office of Technology Transfer and Intellectual Property manages intellectual property, helps to commercialize KU technologies, assists with financial management for commercialized technologies, and provides technology transfer education and outreach to the Lawrence campus. KUCR makes strategic financial investments in research space and equipment, faculty start-up packages, matching funds on research grants, seed funding for new projects, and research awards.

The OVPR provides financial support and oversight to affiliated centers, institutes, and laboratories that run the gamut of topics studied. This office also oversees research compliance (human subjects, animal care and use, conflict of interest, and scientific misconduct) and educational programs for KU’s research community, including tutorials on the responsible conduct of researchers.

The OVPR also supports strong, interdisciplinary research programs. Investigators are encouraged to think outside the box when seeking collaborative relationships with investigators from other KU units or from other universities around the world. To enhance this effort, the OVPR maintains an extensive catalog of funding opportunity materials including guides, foundation reports, newsletters, and Internet and hard copy reference materials. Strategic partnerships with other major regional research institutions also enhance the goal of large, cross-disciplinary research projects.

KUMC Research Institute, Inc.

Executive Director: Thomas L. Noffsinger
Mail Stop 1039, KUMC, 3901 Rainbow Blvd. Kansas City, KS 66160, www2.kumc.edu/researchinstitute (913) 588-1261, fax: (913) 588-5729

The Research Institute on the KUMC campus is the authorized university representative for the submission and negotiation of all proposals for new or continued external support of research, educational, and service projects. It helps investigators identify possible funding sources and prepare applications for these funds. It announces current and potential funding opportunities, maintains reference materials, notifies investigators of items of interest, and manages all financial matters for extramural grants and contacts.

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The Research Institute supports many research-related committees and functions a service to and resource for KU and its investigators in all aspects of research support. It is responsible for all faculty inventions, patent processes, and the transfer of technologies to the public sector. Additional administrative management of all commercial clinical trials and most clinical research administration is housed in the Research Institute.

Science

Center for Environmental and Occupational Health

Director: H. William Barkman
Breidenthal Bldg., Mail Stop 1018, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www2.kumc.edu/ceoh, (913) 588-7146, fax: (913) 588-7160
This interdisciplinary center evaluates the human health effects of exposure to biological, chemical, and physical hazards in the workplace and in the environment. The process includes clinical examination of individual patients, on-site evaluation of exposed populations and their environments, and toxicological research. The staff includes occupational medicine physicians, nurses, toxicologists, and an industrial hygienist. Center members and staff offer specialized skills in biochemical, clinical, and industrial toxicology; clinical pharmacology; environmental chemistry; environmental medicine; epidemiology; industrial hygiene; metals analysis; occupational health; and risk assessment.

The center coordinates the activities of KU’s mobile medical unit, which allows the Medical Center to bring clinical, preventive, analytical, and educational services to patients in communities throughout the region.

The Department of Occupational Health and Environmental Medicine clinic serves as a resource for evaluation and treatment of illnesses and injuries possibly due to occupational or environmental exposures. Physicians, employers, case managers, and attorneys may refer patients, employees, or clients to this clinic to be evaluated for workplace or environmental exposures.

Center for Environmentally Beneficial Catalysis

Director: Bala Subramaniam
1501 Wakarusa Dr., Suite A110
Lawrence, KS 66047-1803, www.cebc.ku.edu
(785) 330-4360, fax: (785) 330-4455
The Center for Environmentally Beneficial Catalysis is a National Science Foundation Engineering Research Center, whose vision is to generate technologies that will transform the catalytic manufacture and use of chemicals into inherently safe and ecologically responsible processes while retaining their economic viability. Specific goals are elimination of waste and application of the principles of green chemistry and engineering to replace hazardous substances and processes. CEBC is also educating a diverse cohort of future engineers and scientists, uniquely trained in the science and engineering of economically optimized, environmentally beneficial catalytic processes.

CEBC is headquartered at KU, with core partners at the University of Iowa, Washington University in St. Louis, and Prairie View A&M University. Uniquely, in this single interdisciplinary, multiscale center, research progresses from the most fundamental molecular concept to technology transfer. Examples of the many envisioned transformations are processes in which (1) conventional organic and chlorinated solvents are either totally eliminated or significantly replaced by benign solvents such as carbon dioxide or water; (2) liquid acids are replaced by solid acids; (3) biocatalysts (enzymes/microbial cells) replace heavy metal or strong acid/base catalysts; (4) modified enzymes or enzyme mimics are implemented that are smaller, simpler, and more durable than enzymes, yet maintain their powerful selectivity and activity; and (5) raw materials are used efficiently in their conversion to desired products.

The CEBC management team is composed of chemical engineers and chemists. An Industrial Advisory Board and a Scientific Advisory Board provide input on CEBC’s strategic research plan. An Academic Advisory Committee ensures that CEBC’s programs are consistent with the institutions’ policies and coordinates intracampus matters, and a Diversity Advisory Board assists the CEBC in recruiting and training a diverse cadre of students, faculty, and staff.

In the long term, CEBC and parallel industrial developments should transform catalytic technologies, minimizing chemical waste and enhancing process safety and energy efficiency, while improving economic viability. The potential economic benefits to the U.S. chemical industry are many billions of dollars annually and enhanced global competitiveness, accompanied by an equally dramatic ecological impact. Sociopolitical ramifications include an improved public image of the chemicals industries and lower expenditures of public and private funds on regulations and litigations.

Center on Aging

Director: Randolph Nudo, rnudo@kumc.edu
Landon Center on Aging, Mail Stop 1005
KU Medical Center, 3599 Rainbow Blvd.
Kansas City, KS 66160, www2.kumc.edu/coa
(913) 588-1203, fax: (913) 588-1201
This interdisciplinary center provides resources for the development and conduct of aging-related research, coordinates education in geriatrics and the care of older adults, and supports model programs that demonstrate principles of geriatric care. It encourages collaboration among colleagues in the Schools of Allied Health, Medicine, and Nursing, and with affiliated institutions, geriatric and Veterans Affairs centers, and Lawrence units.

Developmental Disabilities Center

Director: Chet Johnson, cjjohnson5@kumc.edu
Mail Stop 4003, KUMC, 3901 Rainbow Blvd.
Kansas City, KS 66160, www.kumc.edu/ddc
(913) 588-5900, fax: (913) 588-5916
The DDC provides service programs and interdisciplinary training for those who work with children who have developmental disabilities. Faculty specialties include audiology, dietetics and nutrition, nursing, occupational therapy, developmental pediatrics, physical therapy, psychology, social work, and speech pathology. Field placements are available for graduate students. Faculty members teach graduate courses. The DDC is part of the KU Center for Excellence in Developmental Disabilities program and has a Maternal Child and Health-funded Leadership Training Grant (LEND).
**Higuchi Biosciences Centers**
Director: Elias K. Michaelis, hbc@ku.edu
Higuchi Biomedical Sciences Research Area
2099 Constant Ave., Lawrence, KS 66047-3729
www.hbc.ku.edu, (785) 864-5140, fax: (785) 864-3578
This complex comprises the Center for Biomedical Research, dedicated to basic research, and the Centers for BioAnalytical Research, Drug Delivery Research, and Neurobiology and Immunology Research, involved in the state’s economic development initiative and oriented to needs of the pharmaceutical and biotechnology industry.

The **Center for Biomedical Research** focuses on understanding the origin and development of disease states and on drug development. Studies concern how the body metabolizes drugs and synthesis and delivery of chemotherapeutic agents to treat Alzheimer’s disease, hypertension, viral and bacterial infections, cancer, and mental illness. Faculty are members of the Departments of Chemistry, Medicinal Chemistry, Pharmaceutical Chemistry, Pharmacology and Toxicology, and the Division of Biological Sciences.

The **Center for BioAnalytical Research** develops methods for ultrasensitive and selective analysis of biological substances. CBAR is part of the KU bioanalytical graduate program of the Departments of Chemistry and Pharmaceutical Chemistry.

The **Center for Drug Delivery Research** studies problems associated with the delivery of drugs and biotechnology products to target sites in the body and methods for overcoming these problems. CDDR faculty are members of graduate training programs in the Departments of Pharmaceutical Chemistry, Medicinal Chemistry, and Molecular Biosciences, and the School of Engineering.

The **Center for Neurobiology and Immunology Research** focuses on the problems of chronic, neurodegenerative diseases and immunological disorders. Scientists perform exploratory research, identify new therapeutic approaches for these diseases, and develop new technologies for related drug testing, diagnostic and pharmaceutical research, and treatment. Faculty are members of the Departments of Pharmacology and Toxicology, Chemistry, and Molecular Biosciences.

**Kansas Biological Survey**
Director: Edward A. Martinko
Takeru Higuchi Hall, 2011 Constant Ave.
Lawrence, KS 66047-3759, www.kbs.ku.edu
(785) 864-1500, fax: (785) 864-1534
The **Water Resources Division**, the **Land and Wildlife Resources Division**, and the **Information Technologies Division** of the survey include programs and centers for basic and applied research that engage survey scientists in interdisciplinary studies with other academic institutions, state and federal agencies, conservation groups, and industry. These focus on the biological diversity of the central United States, the use of animal and plant species as indicators of the health of ecosystems, the ecological relationship between agriculture and the environment, and the use of remotely sensed data and geographic information systems to monitor, assess, and manage natural resources.

Staff members have expertise in ecology, systematics, range management chemistry, statistics, and remote sensing. Most have joint or courtesy appointments in academic units or other research units. The survey provides unique educational and training opportunities for undergraduate and graduate students. It supports a modern water chemistry lab, remote sensing and GIS labs, and a 3,000-acre biological field station. Specimens of plants and animals gathered by survey scientists are deposited in numerous KU collections.

The survey maintains databases of information about statewide land use and land cover features, the nomenclature and distribution of Kansas plants and animals, the location and status of protected and rare species and outstanding natural areas, and nonpoint-source pollution data for more than a dozen watersheds in Kansas, Nebraska, and Iowa. The survey collaborated with the R.L. McGregor Herbarium to develop the Kansas Plant Database, one of the largest specimen-based plant databases in North America.

**Kansas Geological Survey**
Interim Director: William Harrison
Moore Hall, 1930 Constant Ave.
Lawrence, KS 66047-3726, www.kgs.ku.edu
(785) 864-3965, fax: (785) 864-5317
The survey studies earth-related resources and problems in Kansas. Staff members’ investigations focus on energy, including oil, gas, coal, and alternatives; mineral industry development, including mining, reserves, and mineral economics; environmental and engineering analysis relating to land use and geologic hazards; geologic mapping; groundwater resources, with reference to irrigation, domestic water supply, theoretical hydrology, stream/aquifer interaction, and chemical quality; and geophysics of earth materials, particularly in near-surface assessment. Expertise is available in automated cartography, data base development, and dissemination. The survey comprises offices, laboratories, instrumentation, a library, and a branch office in Wichita. It is a source of geologic and topographic maps, publications, well logs, and data files. The KGS also houses the KU Energy Research Center and the Data Access and Support Center.

**Mental Retardation and Human Development Research Center**
Director: Peter G. Smith, ps smith@kumc.edu
Smith Mental Retardation Research Center, Mail Stop 3051
KUMC, 3901 Rainbow Blvd., Kansas City, KS 66160
www2.kumc.edu/mrrc, (913) 588-5970
Research at this center investigates the biological basis of mental retardation and developmental disabilities. Programs are directed toward understanding early developmental processes, neural plasticity and repair, neurological diseases, and nervous system abnormalities underlying mental retardation and impaired cognitive development. The Smith MRRC supports research programs of more than 30 KUMC faculty members and their students, postdoctoral fellows, and staff in 15 departments, centers, and institutes. It promotes enabling technologies including DNA microarrays, bioinformatics, imaging and graphics, research design and analysis, and behavioral testing.

**Museum of Anthropology**
Interim Director: Mary Adair
Scooner Hall, 1340 Jayhawk Blvd.
Lawrence, KS 66045-7550, www.anthro.ku.edu
(785) 864-4245, fax: (785) 864-5243
The museum manages ethnographic and archaeological collections. Ethnographic items are representative of indigenous cultures primarily of North America, Central and South America, Africa, and Australia/New Guinea. The archaeological collections have been recovered from sites in the North American Great Plains and Southwest, Central America, and Europe. The collections are available to support classroom instruction in a number of fields and to support faculty and student research.

**Natural History Museum and Biodiversity Research Center**

Director: Leonard Krishtalka, [krishtalka@ku.edu](mailto:krishtalka@ku.edu)

Dyche Hall, 1345 Jayhawk Blvd.
Lawrence, KS 66045-7561, [http://nhm.ku.edu](http://nhm.ku.edu)

(785) 864-4540, fax: (785) 864-5335

The Natural History Museum and Biodiversity Research Center studies the life of the planet for the benefit of the earth and its inhabitants, documenting the fantastic diversity of life on earth, uncovering its intricate patterns, telling the grand stories that emerge from this research, and educating the next generation of biodiversity scientists.

It annually houses more than 50 million plant and animal specimens in its collections and more research and collection support from the National Science Foundation than any other university biodiversity science institution, it ranks among the top five such institutions in the nation. Collection strengths include the nation’s best bee and scorpionfly collections, the premier herbarium, phylogenetics, biodiversity informatics, biogeography, paleontology, and other fields. The museum’s 18 curators, who have joint faculty appointments in the Departments of Ecology and Evolutionary Biology and of Geology, serve as the students’ major advisors and guide their research and education programs.

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The museum leads the nation in using information technology to harness biodiversity data from research inventories worldwide—the result of 300 years of biological exploration of the planet. This vast storehouse of knowledge previously lay largely untapped. The results include new insights into the evolution of biological diversity and patterns of distribution, better understanding of natural environments, enhanced power to predict environmental phenomena, and knowledge to inform natural resource management.

Public exhibits at Dyche Hall emphasize Kansas and the Great Plains. Graduate students may participate in public programs, including exhibits development and teaching workshops and camp programs for the public and school groups.

**Paleontological Institute**

Director: Roger L. Kaesler, [kaesler@ku.edu](mailto:kaesler@ku.edu)

Lindley Hall, 1475 Jayhawk Blvd., Room 121
Lawrence, KS 66045-7613, [www.ku.edu/~paleo](http://www.ku.edu/~paleo)

(785) 864-3338, fax: (785) 864-3276

The institute is the editorial office and co-publisher of the *Treatise on Invertebrate Paleontology*, publishes *The University of Kansas Paleontological Contributions*, and is developing *PaleoBank*, an electronic, relational database for invertebrate paleontology. The 46 *Treatise* volumes published since 1953 aim to present a comprehensive, authoritative statement of knowledge about a group of invertebrate fossils. Twenty additional *Treatise* volumes are currently in preparation. Contributing authors number more than 200 specialists from some 20 countries. The institute promotes interdepartmental cooperation in research and education of advanced paleontology students.

**Technology**

**Energy Research Center**

Co-directors: Timothy R. Carr and G. Paul Willhite

Executive Director: W. Lynn Watney

Parker Hall, 1930 Constant Ave., Room 108

Lawrence, KS 66047-3724, [www.kgs.ku.edu/ERC](http://www.kgs.ku.edu/ERC)

(785) 864-4445, fax: (785) 864-5035

The center’s primary goal is to develop enhanced energy research programs supporting state, regional, and national energy needs. Interdepartmental projects include petroleum discovery and recovery encompassing technology transfer, energy policy, conservation, economics, and alternative energy. The center helps faculty and staff develop and conduct energy-related research. It disseminates funding information, assists in proposal preparation, and sponsors programs on energy topics.

**Information and Telecommunication Technology Center**

Director: Victor Frost, [info@ittc.ku.edu](mailto:info@ittc.ku.edu)

Nichols Hall, 2335 Irving Hill Rd.

Lawrence, KS 66045-7612, [www.ittc.ku.edu](http://www.ittc.ku.edu)

(785) 864-4896, fax: (785) 864-0387

ITTC researchers specialize in bioinformatics, information technology, telecommunications, radar systems and remote sensing. ITTC-developed technologies foster industry growth and often provide the core for new companies. ITTC does not offer any classes, but a number of graduate students work at the center and gain practical experience under the direction of faculty researchers. ITTC focuses on the following areas:

- **The Bioinformatics and Computational Life-sciences Laboratory** studies key bioinformatics methods and tools for genomics and proteomics data analysis as well as other life-science-related problems.
- **The Computer Systems Design Laboratory** focuses on the design, implementation, and verification of systems whose primary components include computers.
- **The e-Learning Design Laboratory** is creating new solutions to the challenges and opportunities in online education.
- **The Intelligent Systems Laboratory** advances knowledge in artificial intelligence, intelligent agents, information retrieval, data mining, and robotics.
- **The Networking and Wireless Systems Laboratory** advances knowledge of systems interconnected via radio and other technologies and increases the performance and protection of Internet-based systems.
- **The Photonics Technology Laboratory** is working to improve the capacity, flexibility, and reliability of optical systems.
The Radar Systems and Remote Sensing Laboratory applies microwave remote sensing to improve our understanding of the ocean, atmosphere, sea ice, polar ice, vegetation, snow, soil moisture, and subsurface.

**Tertiary Oil Recovery Project**

Co-directors: G. Paul Willhite and Don W. Green

The Center promotes transportation service and research activities for the state and region. Service activities include the Kansas Local Technical Assistance Program, Traffic Assistance Services to Kansas, the Kansas Rural Transit Assistance Program, and the Rural Transit Assistance Program for enabling people to cope. The Institute for Effective Instruction studies underlying factors related to learning disabilities and intervention procedures for enabling people to cope. The Division of Adult Studies conducts research on adult literacy, policy development and implementation, and program design in light of the life-long learning needs of adults with disabilities. The Advanced Learning Technologies group studies ways to improve student performance by integrating advanced technologies and education. The e-Learning Design Laboratory studies and develops online instruction with an underlying commitment to identifying and institutionalizing the elements of online teaching that are inherent in a mature pedagogy. Researchers, faculty members, and doctoral students come primarily from the Departments of Special Education, Teaching and Leadership, Psychology and Research in Education, Speech-Language-Hearing; Sciences and Disorders, Applied Behavioral Science, and Electrical Engineering and Computer Science.

**Schiefelbusch Institute for Life Span Studies**

Director: Steven F. Warren

The Institute promotes life span studies under-lying factors related to learning disabilities and intervention procedures for enabling people to cope. The Division of Adult Studies conducts research on adult literacy, policy development and implementation, and program design in light of the life-long learning needs of adults with disabilities. The Advanced Learning Technologies group studies ways to improve student performance by integrating advanced technologies and education. The e-Learning Design Laboratory studies and develops online instruction with an underlying commitment to identifying and institutionalizing the elements of online teaching that are inherent in a mature pedagogy. Researchers, faculty members, and doctoral students come primarily from the Departments of Special Education, Teaching and Leadership, Psychology and Research in Education, Speech-Language-Hearing; Sciences and Disorders, Applied Behavioral Science, and Electrical Engineering and Computer Science.

**Center for Research on Learning**

Director: Donald D. Deshler

The center conducts research to enhance the learning and performance of individuals in school and non-school settings. It is concerned with validation of assessment and instructional practices that can be used with diverse groups. It translates the validated procedures into instructional materials. The center operates an international professional development network to teach educators to use the products of its research.

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**Center for Research on Learning**

Director: Donald D. Deshler

J.R. Pearson Hall, 1122 West Campus Rd., Room 517
Lawrence, KS 66045-3101, www.kucrl.org
(785) 864-4780, fax: (785) 864-5728

The center conducts research to enhance the learning and performance of individuals in school and non-school settings. It is concerned with validation of assessment and instructional practices that can be used with diverse groups. It translates the validated procedures into instructional materials. The center operates an international professional development network to teach educators to use the products of its research.

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Business and Government

Center for International Business Education and Research

Director: Melissa Birch
Summerfield Hall, 1300 Sunnyside Ave.
Lawrence, KS 66045-7585
www.business.ku.edu/kuciber, (785) 864-3125

The center is one of 30 CIBERs designated by the U.S. Department of Education as national resources in international business. CIBER is responsible for international programs in the School of Business, including developing and providing international business-related courses, internships, and foreign study opportunities; promoting research and overseas experience; and serving as an information and educational resource to the region’s international business community as well as to other colleges and universities.

CIBER collaborates on many research and educational programs with KU’s area studies centers and foreign language departments and the Schools of Engineering, Law, and Journalism and Mass Communications. Students interested in international business have many options including short-term overseas seminars, longer-term study in many countries, business courses on particular world regions and languages, advanced international business seminars, and field projects for credit. An M.B.A. concentration in international business and joint M.B.A./M.A. degrees in Latin American Studies or Russian and East European Studies are offered.

Policy Research Institute

Director: Steven Maynard-Moody
Blake Hall, 1541 Lilac Lane, Room 607
Lawrence, KS 66044-3177, www.ku.edu/pri
(785) 864-3701, fax: (785) 864-3683

The Policy Research Institute brings together university researchers with expertise in economics, environmental studies, health studies, metropolitan studies, international conflict, and other disciplines. PRI links the university; state, local, and national governments; the business community; and the citizens of Kansas. PRI research projects are funded by the federal government, private foundations, corporations, and state and local governments.

The institute has four research centers: the Center for Economic and Business Analysis, the Center for International Political Analysis, the Center for Metropolitan Studies, and the Center for Environmental Policy. The institute has several work groups, including Health Disparities and Law and Society. The institute’s Research Scholars program assists faculty in research pursuits.

PRI’s research infrastructure includes a comprehensive Grant Development Center where faculty members receive help at all stages of their proposals. This includes identifying and researching potential funding sources, developing and refining the proposal, preparing the budget, and finalizing the proposal for submission through KUCR to the funding agency. PRI also provides management for funded projects.

PRI operates the Survey Research Center, which conducts telephone and mail surveys. Other PRI research infrastructure support includes Computing and Data Services; Data Library; and Publications, Conferences, and Seminars. PRI is a founding member of the Academic Data Research Services Alliance.

Robert J. Dole Institute of Politics

Director: William Lacy
2350 Petefish Dr., Lawrence, KS 66045
www.doleinstitute.org, (785) 864-4900, fax: (785) 864-1414

The Robert J. Dole Institute of Politics works with other KU units and the community to offer programs addressing policy issues and encouraging public service. The institute, whose west campus building was dedicated in July 2003, houses extensive public exhibits as well as the papers of former Senator Bob Dole. With 4,000 boxes of documents, the Dole collection is the largest congressional archive in existence, making the institute a major facility for research into the politics and policies of the 1960s through the 1990s. The institute sponsors high-profile events such as the Dole Lecture, the Dole Leadership Prize, and the November Lecture Series.

Visual and Performing Arts

Rand McNally’s Places Rated Almanac ranks Lawrence first in the arts among cities of 100,000 or fewer, and KU’s School of Fine Arts is one of the reasons. Its faculty and students perform or exhibit 300 times a year.

The University Dance Company presents two major programs on campus each year, performing a varied repertoire of ballet, modern, and jazz dance. On the Move spotlights KU dancers on tour. The University Symphony Orchestra furnishes a treasury of aural pleasures. Three university bands perform numerous concerts on campus and on tour. The University Marching Band presents pageantry at football games. There are three jazz ensembles, two jazz choirs, and several jazz combos. The Chamber Choir and the Oread Consort are select groups of singers who perform concerts on campus and on tour. Students also perform in the Concert Choir, University Singers, Women’s Chorale, and Men’s Glee Club. The Collegium Musicum performs early music, both vocal and instrumental, using KU’s collection of replicas of early instruments. The Kansas Chamber Artists, including the Oread Baroque Ensemble, Kansas Brass Quintet, and Kansas Woodwinds, are faculty groups that present numerous concerts. Annual recitals feature KU artists in residence, faculty members, and visiting performers.

Since 1983, the Department of Design has presented the Hallmark Symposium lecture every two weeks throughout the academic year, bringing nationally and internationally prominent designers, artists, art critics, and visual art educators to campus. The Department of
Art presents four nationally known visiting artists each year through Visiting Artists Lectures and Workshops. The department works with Spencer Museum of Art and other departments to sponsor additional visiting scholars, exhibitors, and speakers. Art and design faculty and students, as well as nationally and internationally known artists, exhibit work in the Art and Design Gallery in the Art and Design Building.

The Spencer Museum of Art features 12 to 15 special exhibitions a year and hosts film series, tours, and talks by visiting artists and curators. The Wilcox Classical Museum displays full-scale plaster replicas of Greek and Roman sculpture, such as the Parthenon frieze and the Venus de Milo, and Graeco-Roman antiquities including vases, coins, inscriptions, and architectural terracottas.

The University Theatre stages a dozen works annually at Crafton-Preyer Theatre and in an experimental space named after KU alumnus William Inge. Recent seasons have featured productions of Romeo and Juliet, Lysistrata, You Can't Take It with You, and Candide.

The Lied Center of Kansas houses a 2,020-seat performing arts hall with excellent acoustic quality and technical production capabilities. It offers a venue for Department of Music and Dance productions, Student Union Activities shows, university and community events, and the Lied Center Series, including the Concert Series, Swar throat Chamber Music Series, New Directions Series, World Series, Broadway and Beyond Series, and the Lied Family Series. The Teatro Lirico D’Europa in Carmen, the Prague Philharmonia, Camerata Sweden, and the Vširký Ukrainian National Dance Company flavored a recent season. Styles are equally wide-ranging: from the Brentano String Quartet to the Blind Boys of Alabama; from Ping Chong’s oral history, documentary theatre project Native Voices – Secret History to national tours of Fosse and Miss Saigon.

Web sites for the University Theatre, www.kutheatre.com, the Lied Center of Kansas, www.lied.ku.edu, and the Department of Music and Dance, www.ku.edu/~sfa/mad, have information about upcoming recitals, concerts, and performances.

Spencer Museum of Art
Director: Saralyn Reece Hardy
Spencer Museum, 1301 Mississippi St.
Lawrence, KS 66045-7500, www.spencerart.ku.edu
(785) 864-4710, fax: (785) 864-3112

A comprehensive 24,000-work collection spans the history of European and American art from antiquity to the present and includes broad and significant holdings of East Asian art. Strengths include medieval sculpture, early Renaissance painting, European baroque art, 19th- and 20th-century painting, photography, old master prints, American quilts, small sculpture, Japanese painting and prints of the Edo period, 20th-century Chinese painting, Korean ceramics, and Asian textiles. The museum organizes or sponsors significant exhibitions, for example: The Gilded Age: Treasures from the Smithsonian American Art Museum; Contemporary Art from Cuba; American Indian Traditions Transformed; Remembering the Family Farm: 150 Years of Prints: Ming Painting Through the Eyes of Connoisseurs; and Prints and Drawings by Günter Grass. The exhibitions are supplemented by varied education programs for school children, KU students, and the public.

Humanities
Joyce and Elizabeth Hall Center for the Humanities
Director: Victor Bailey, hallcenter@ku.edu
900 Sunnyside Ave.
Lawrence, KS 66044-6123, www.hallcenter.ku.edu
(785) 864-4798, fax: (785) 864-3884

This center fosters interdisciplinary study in the humanities through lecture series, panel discussions, workshops, and seminars for faculty members and graduate students. Humanities Research Fellowships, travel grants, and other awards are available for faculty members. The Humanities Lecture Series brings three internationally known speakers in the arts and humanities to campus each year. The center helps prepare and administer research grants for faculty members and graduate students. The center publishes KU’s humanities journals, a newsletter, and an annual report.

Research Support
Biometry and Computer Research Facilities
Chair: Khabat M. Hassanein
G034 Olathe Pavilion, Mail Stop 3042, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www3.kumc.edu/biometry
(913) 588-5566, fax: (913) 588-5567

The Department of Biometry assists faculty and staff members and students with the planning, management, analysis, and presentation of research data. Statisticians work with computer specialists to provide a full range of research and computer services. Scientific software and other biostatistical resources are available.

Center of Excellence in Chemical Methodologies and Library Development
Director: Jeffrey Aubé, jaube@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 4070
Lawrence, KS 66045-7582, www.medchem.ku.edu/cmld
(785) 864-4496, fax: (785) 864-5326

The KU-CMLD is dedicated to developing new methodologies for the synthesis of diverse and chemically novel libraries of drug-like molecules. The center’s focus is the preparation of medium libraries (containing from 36 to 200 members) that are applicable to the discovery of new chemotherapeutic agents. Compounds generated through KU-CMLD research will be submitted to testing by a variety of collaborators, including the High-Throughput Screening Center at KU. The center encompasses four scientific lines of inquiry:

• Phase Trafficking. New technologies for separating and purifying combinatorial libraries.
• Biomimetics. The design of new classes of biologically active molecules based on naturally occurring peptides and carbohydrates.
• Combinatorial Organometallic Chemistry. Finding ways to more effectively use palladium-mediated reactions for the synthesis of aromatic libraries.
• Natural Products and Privileged Structures. Heterocyclic libraries based on promising “scaffolds” derived from the worlds of natural product chemistry and classical drug research.
Research Support

The KU-CMLD involves researchers in KU’s Departments of Chemistry and Medicinal Chemistry, the University of Missouri at Kansas City, and Iowa State University.

Environment, Health, and Safety
Director: Michael J. Russell
Burt Hall, 1540 West 15th St., Room 140
Lawrence, KS 66045-7610, www.els.ku.edu
(785) 864-4089, fax: (785) 864-2822
EHS helps faculty, and staff, and students minimize environmental, health, and safety risks associated with their research efforts. EHS monitors campus activities to ensure that applicable federal, state, local, and university environmental, health, and safety laws, regulations, ordinances, and policies are being considered and followed.

KU Web Site. IT develops and maintains KU’s Web site, www.ku.edu, and provides Web page space for departments, students, faculty, and staff. Course Web pages also are supported, including the BlackBoard environment. Individuals can register for personal Web page space at www.ku.edu/computing/services.

Shared Computing Resources. IT provides general-purpose Unix systems supporting Web site development and programming and high-performance Unix systems supporting a full range of statistical and mathematical packages and libraries. See www.technology.ku.edu/hosting for information. IT also has several program options for faculty for hosting computers.

Computer Labs. IT computer labs are open to all KU students. Labs feature Windows and Macintosh computers, laser printing, and a full array of software from Internet and word processing to statistical, digital audio/video, and graphics. Labs are wheel-chair accessible, and one supports systems to assist the visually impaired. Other units operate labs that are restricted to students enrolled in specific courses or programs. For current information and computer lab hours, see www.computerlabs.ku.edu/lablist.

Computing Workshops. IT offers workshops on topics including Outlook, Web site development, multimedia authoring, office, and statistical software. Workshops are free to KU faculty, staff, and students and range from one-hour demonstrations to hands-on workshops that run from two to three hours. New topics and sessions are added each semester. See www.technology.ku.edu/training for information and schedules.

Computing Help. See www.technology.ku.edu for a complete description of the resources available.

Internet1 and Internet2. IT was a founding member of the Kansas Research and Education Network and the Great Plains Network and connects to Internet1 and the Abilene Network, Internet2, through KanREN and GPN.

Kansas Masonic Cancer Research Institute
Director: Roy Jensen, rjensen@kmcri.org
4030 Robinson Hall, Mail Stop 1027, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www2.kumc.edu/kmcri
(913) 588-4700, fax: (913) 588-4701
The institute is committed to finding cures for cancer. Basic research scientists, clinicians, and faculty members have proven track records, both nationally and internationally, and they are dedicated to developing and maintaining programs that focus on research, prevention, education, and patient care. Clinicians at KU Medical Center are engaged in programs that foster early diagnosis of such malignancies as breast and prostate cancer. Others are testing new methods of treating various kinds of tumors.

The institute offers a multidisciplinary environment that nurtures research and educational activities. It promotes a high degree of coordination, interaction, and collaboration among researchers, clinicians, and students. Having cancer scientists and clinicians working together under one roof is unique in Kansas. This setting yields the rapid transfer of the most promising research findings from the lab bench to the bedside via clinical trials.

Lives depend on cancer research, and knowledge—stemming from both basic and clinical research—is part of the cure. The diverse backgrounds and exper-
tise of investigators enable them to apply a multidisciplinary approach. Researchers are learning more about cancer through the development of programs such as hormonal carcinogenesis studies, high-risk breast cancer investigations, clinical trials, pediatric hematology, signal transduction and molecular carcinogenesis research, chemoprevention investigations, skin carcinogenesis research, and gene therapy research.

Nearly all of Kansas’ 133 hospitals now report cancer cases to the center’s **Kansas Cancer Registry**. Case records of more than 300,000 patients are in the files, containing data on site, histology, and stage of cancer at diagnosis, as well as some treatment and quality-of-life information. Information is received from pathology labs, independent radiation centers, and other health care providers, as required by Kansas law. Kansas Cancer Registry also has data exchanges with other neighboring state registries.

**Kansas Research and Education Network**

Executive Director: Doug Heacock
Computer Center, 1001 Sunnyside Ave. (first floor)
Lawrence, KS 66045-7520, www.kanren.net
(785) 864-0422, fax: (785) 864-0485

KANREN is a nonprofit education and research consortium operating as a service unit of the KU Center for Research, Inc. KANREN operates a statewide IP network backbone and provides Internet access for its member institutions, including all Regents universities, most Kansas community colleges, private colleges and universities, and a growing number of public school districts and other Kansas nonprofit organizations. KANREN also provides access to Internet2 (through a connection with the Great Plains Network for Earth Systems Science) for those KANREN member institutions that are also members of the Internet2 consortium.

**Microscopy and Electronic Imaging Laboratory**

Director: Bruce Cutler, butler@ku.edu
Haworth Hall, 1200 Sunnyside Ave., Room 4002
Lawrence, KS 66045-7534, www.ku.edu/~bcmic/emlab
(785) 864-4140

The laboratory provides state-of-the-art scanning and transmission electron microscopes and light microscopes equipped with fluorescence and DIC optics. It provides facilities for computer-assisted image analysis and 35-mm. slide making. Services and equipment are available to all university and community personnel. Major users include researchers from the biological, engineering, geological, and pharmaceutical sciences. The scanning electron microscope is equipped with an energy dispersive X-ray elemental analysis system, a backscatter electron detector, an EBSD detector, and a cathodoluminescence detector. A laser scanning confocal microscope and a microscope equipped for digital image capture and deconvolution microscopy are provided for high-resolution capture and analysis of fluorescently labeled specimens. A microscope equipped for digital capture and analysis of specimens using differential interference contrast imaging is also provided. Staff members assist and train users in appropriate experimental design, specimen preparation, data interpretation, and computer and instrument usage.

**Molecular Structures Group**

[www.msg.ku.edu/~msg](http://www.msg.ku.edu/~msg)

The MSG manages shared instruments and computers used for determining molecular structure. The staff includes specialists in the techniques currently represented and technical personnel. They work collaboratively with faculty members and students, acquire data for users, train users to operate the instruments, help with planning experiments and interpreting the data, and frequently are co-authors on publications and investigators on grant proposals. The laboratories work together closely on solutions to specific technical problems and on planning and setting priorities for future instrument acquisitions. The MSG is overseen by a steering committee of faculty members and laboratory directors. Instrument operation and maintenance are underwritten by user fees.

**Biochemical Research Service Laboratory**

Director: Michail A. Alterman, malterman@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 3006
Lawrence, KS 66045-7582, [www.brs1.ku.edu](http://www.brs1.ku.edu)
(785) 864-4166

BRSL assists KU research groups. The laboratory can culture microorganisms; purify and characterize enzymes and other biological materials; and perform amino acid analysis, MALDI-TOF MS, peptide synthesis, HPLC separations, and phosphorimaging. Staff members consult with research groups and provide training in biochemical techniques.

**Mass Spectrometry Laboratory**

Director: Todd Williams, twilliams@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 3006
Lawrence, KS 66045-7582
(labs: B025 and 3007 Malott Hall), [www.msg.ku.edu/~msg/](http://www.msg.ku.edu/~msg/)
mass.html, (785) 864-3223

The MSL provides chemical analysis by mass spectrometry to researchers, primarily from chemistry-related departments and the Medical Center. Most samples are synthetic compounds, natural products, and small biopolymers. A variety of ionization methods and high performance mass analyzers are used. Staff members consult with users.

**Molecular Graphics and Modeling Laboratory**

Director: Gerry Lushington
Malott Hall, 1251 Wescoe Hall Dr., Room 3021
Lawrence, KS 66045-7582
(labs: 3058 Malott Hall and Room 121, Structural Biology Center), [www.msg.ku.edu/~msg/mgm.htm](http://www.msg.ku.edu/~msg/mgm.htm)
(785) 864-1140, fax: (785) 864-5326

Molecular modeling involves computer simulations of the structure and properties of chemical and biomolecular systems. Interactive graphics and visualization tools allow users to construct and submit such simulations and to analyze complex, often multidimensional results. The MGM laboratories support users through consultation and training in the application of modeling techniques to their specific problems and provide access to high-performance computational tools. Resources include seven SGI workstations, two Dell PCs, seven linux workstations, a 16-processor linux cluster and assorted peripherals (printers, disk, and tape drives). Software includes numerous programs from Tripos Associates (e.g., SYBYL, UNITY, FlexX, etc.), the InsightII/Discover/Biopolymer (and part of the
Cerius2) suites from Accelrys, Inc., the Molecular Operating Environment, Gaussian 98, AMBER, CHARMmm, the Cambridge Crystallographic Database, the JChem informatics suite and numerous freeware packages.

**Nuclear Magnetic Resonance Laboratory**
Director: David Vander Velde, dvandervelde@ku.edu
Mallott Hall, 1251 Wescoe Hall Dr., Room 3001
Lawrence, KS 66045-7582, www.msg.ku.edu/~msg/nmr2.html
(labs: B042 and 3002 Malott, 5 and 148B LSR1, 100 and 104 Structural Biology Center)
Office: (785) 864-4187, Malott labs: (785) 864-4231,
Structural Biology labs: (785) 864-3746,
fax: (785) 864-5326

The NMR laboratory maintains $5 million in NMR hardware; trains users; provides spectra on a service basis; and helps users with design, execution, and interpretation of NMR experiments. The lab’s capabilities extend from small molecules to large proteins. KU has one of the best equipped and most modern NMR facilities in the region.

The most recent additions are a Bruker Avance 800 MHz instrument, housed in KU’s Structural Biology Center along with other instruments for studying protein structure and function, and ultrasonic cold probes for the Varian Inova 600 and Bruker Avance 500 MHz instruments. A cold probe for the 800 is expected in summer 2005. Two Bruker Avance 400 MHz instruments and a General Electric QE Plus 300 MHz are managed principally for self-service access for routine spectra. A third 400 provides flow injection automation bases on 96 well microtiter plates. The 500 is equipped with a robotic sample changer for conventional NMR tubes. Most graduate students whose projects involve chemical synthesis or characterization are trained to use one or more of these instruments during their first year of graduate studies. The lab houses several other Silicon Graphics, Sun, and Linux workstations for offline processing and plotting of NMR data.

**Protein Structure Laboratory**
Director: Weijun Huang, weijun@ku.edu
Structural Biology Center, 2121 Simons Dr., Room 115
Lawrence, KS 66047, www.psl.ku.edu
(785) 864-3772 (O), (785) 864-3787 (L)

The Protein Structure Laboratory hosts and maintains a high-brilliance X-ray generator equipped with Raxis IV++ imaging plate and Xtreme 2000 cryogenic system. It also has a wet lab for crystallization, and computing facilities for three-dimensional structure analysis. The PSL provides investigators with state-of-the-art instrumentation, facilities, and expertise for all the needs in protein X-ray crystallography. PSL personnel perform or assist users in carrying out all the steps toward atomic structure determination including crystallization, data collection, structure solution, and refinement. It is an essential facility for studying the three-dimensional structures of large proteins and their complexes with binding partners, such as other proteins, DNA/RNA molecules, substrates, products, inhibitors, and potential drug molecules.

**X-ray Crystallographic Laboratory**
Director: Douglas Powell, dpowell@ku.edu
Mallott Hall, 1251 Wescoe Hall Dr., Room 6044
Lawrence, KS 66045-7582, www.msg.ku.edu/~xraylab
(785) 864-3437, fax: (785) 864-5396

This laboratory maintains and operates shared X-ray diffractometers, trains users in crystallographic methods, and assists with the interpretation of crystallographic results. Data for small-molecule single-crystal studies are measured on a Bruker diffractometer with an Apex ccd area detector. This instrument can be used to perform both routine crystal structure determinations and charge density analyses. A Bruker D8 Discover powder diffractometer is available for identification and determination of polycrystalline samples.

**Regional Libraries and Museums**
The Nelson-Atkins Museum of Art in Kansas City, Missouri, www.nelson-atkins.org, offers Asian art collections that are among the world’s best, as well as fine collections of contemporary art, American painting, and old master paintings of the 15th, 16th, and 17th centuries. Also in Kansas City is the Linda Hall Library, www.lindahall.org, outstanding for its scientific and technological materials.

In Topeka, resources of the Kansas State Historical Society, www.kshs.org, include the Kansas Museum of History and the Center for Historical Research, which provide early Kansas periodicals and other archival materials. In Lawrence, the Douglas County Historical Society operates the Watkins Community Museum of History, http://watkinsmuseum.org.


**Research Animal Programs**

**Lawrence Campus: Animal Care Unit**
Director: James F. Bresnahan
Malott Hall, 1251 Wescoe Hall Dr., Room B054
Lawrence, KS 66045-7582, www.ku.edu/~acu
(785) 864-5587, fax: (785) 864-5305

**KU Medical Center: Research Support Facility**
Director: David Pinson
Research Support Bldg., Mail Stop 1031
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160, www.kumc.edu/lar
(913) 588-7015, fax (913) 588-7277

Policies concerning animals used in research, teaching, and public education programs are set by animal care committees composed of faculty, staff, and community representatives. All three programs are fully accredited by the American Association for Accreditation of Laboratory Animal Care.
University Libraries
Dean: Stella Bentley
Watson Library, 1425 Jayhawk Blvd., Room 502
Lawrence, KS 66045-7544, www.lib.ku.edu
(785) 864-3956

Library collections at KU contain more than 3.8 million volumes. The University Libraries system maintains more than 33,000 current periodical subscriptions to support the research and teaching needs of the KU community. The libraries hold vast collections of microforms, photographs, maps, manuscripts, sound recordings, and other media. The libraries also provide access to a large array of networked bibliographic databases, full-text resources, and the online catalog.

The University Libraries comprise seven library facilities. Most science and business materials are in the Anschutz Library, which also houses government publications (U.S. and international) and the T.R. Smith Map Collection. Watson Library houses much of KU’s general collections in the social sciences and humanities. The Kenneth Spencer Research Library contains manuscripts, rare books, regional history materials, and KU’s archival records. Spencer Research Library holds outstanding collections in natural history, Irish studies, U.S. radical groups, and many other areas. Other libraries include the Spahr Engineering Library, the Thomas Gorton Music and Dance Library (Murphy Hall), the Murphy Art and Architecture Library (Spencer Museum of Art), and the KU Edwards Campus Library in Overland Park, Kansas.

Materials not owned by KU libraries can be requested from other libraries worldwide through the interlibrary service. The libraries provide services for users with disabilities. For general information, call (785) 864-3956, or visit the Web site above.

Cleneding History of Medicine Library
1020 Robinson Hall, Mail Stop 1024, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.cleneding.kumc.edu, (913) 588-7244

Cleneding library has one of the top collections of rare medical books in the country. Many of its more than 25,000 volumes are first or early editions of important works of medical literature.

Dykes Library for Health Sciences
1004 Dykes Library, Mail Stop 1050, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.library.kumc.edu, (913) 588-7166

Dykes library provides a collection of more than 170,000 books, journals, and microforms with online catalogs and medical abstract databases such as MEDLINE. Reference librarians help students find information, conduct research, formulate research strategies, and use resources.

Wheat Law Library
Green Hall, 1535 West 15th St., Room 200
Lawrence, KS 66045-7577, www.law.ku.edu/library
(785) 864-3025

The Wheat Law Library maintains collections and services geared to the needs of the faculty members and students of the KU School of Law. The library holds more than 370,000 printed volumes and maintains nearly 4,000 journal subscriptions. Law students have access to a number of computerized resources for legal research.

University of Kansas Field Station and Ecological Reserves (KSR)
Director: Edward A. Martinko
Takeru Higuchi Hall, 2101 Constant Ave.
Lawrence, KS 66047-3759, www.ksr.ku.edu
(785) 864-1500, fax: (785) 864-1534

KSR, KU’s biological field station, has about 3,000 acres of tallgrass prairie, oldfield, wetland, forest, successional woods, and land under agricultural management. Research facilities include two laboratories, a workshop, a caretaker residence, a lath house, and irrigated garden areas. Most tracts are within 15 miles of the Lawrence campus, including a 1,500-acre area north of campus. Researchers study population dynamics of plants, insects, fishes, and rodents; genetic variation in populations of plants and animals; landscape ecology; restoration ecology; and effects of manipulations on terrestrial and aquatic ecosystems.

Field headquarters are at the 618-acre Nelson Environmental Study Area, devoted to experimental ecology. NESA researchers use 100 experimental ponds and a small lake and protected watershed to study aquatic ecology. A Biotic Succession/Habitat Fragmentation facility at NESA allows study of secondary succession in a fragmented landscape. The 160-acre Rockefeller Experimental Tract is a long-term study of prairie restoration and conservation. The 116-acre Hall Nature Reserve and the 108-acre Robinson Tract provide additional native and managed habitats for research. The 590-acre Fitch Natural History Reservation is a nature preserve protected from disturbance for more than 50 years. Three KSR tracts comprise a 200-acre block in the Baldwin Woods area of relatively undisturbed oak-hickory forest. Recently acquired tracts adjoining NESA (160 acres) and in Anderson County (1,200 acres) provide areas for additional research in prairie and habitat restoration.

Staff members are based at NESA and manage facilities and help implement research projects. Various databases are maintained, including climate data, species occurrences, publications, and records of land use. Coverages for spatial analyses with geographic information systems are available, as are aerial photographs, synoptic collections, and maps. In a typical year, about 40 faculty members and 30 graduate students from KU and elsewhere use KSR for research. KSR is administered by the Kansas Biological Survey.

University Press of Kansas
Director: Fred M. Woodward, upress@ku.edu
2501 Bob Billings Parkway
Lawrence, KS 66049-3905, www.kansaspress.ku.edu
(785) 864-4154, fax: (785) 864-4586

The University Press of Kansas is a scholarly book publisher operated as a consortium by the six Regents universities in the state. It is one of 120 members of the Association of American University Presses. Since its founding in 1946, the press has published more than 1,100 titles. The press publishes scholarly and regional books that serve both the academic community and society as a whole. It invites submissions from authors. Books are approved for publication by the staff and an editorial board composed of two faculty members from each supporting university. The staff is available to faculty members for consultation on publishing matters.
School of Allied Health

Karen L. Miller, Dean
G040 School of Nursing Bldg., Mail Stop 2007
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160, www.alliedhealth.kumc.edu

Biometry ................................................... 61
    Biometry Courses ........................................ 61
Clinical Laboratory Sciences ...................... 61
    Clinical Laboratory Sciences Course ................. 61
Communicative Disorders:
    Intercampus Program ................................. 61
    Hearing & Speech, KU Medical Center ................. 62
    Speech-Language-Hearing:
        Sciences & Disorders, Lawrence ....................... 62
    Audiology Courses ........................................ 62
Dietetics & Nutrition .................................. 62
    Admission .................................................. 62
    Dietetics & Nutrition Courses ......................... 63
Hearing & Speech ...................................... 64
Nurse Anesthesia ...................................... 64
    Program ...................................................... 64
    Admission Requirements ............................... 64
    Degree Requirements .................................... 65
    Nurse Anesthesia Courses .............................. 65
Occupational Therapy ................................ 67
    Master of Occupational Therapy ..................... 67
    Admission .................................................. 67
    Master of Occupational Therapy Degree
        Requirements ........................................... 67
    Typical Course Sequence .............................. 67
    Master of Science in Occupational Therapy ....... 68
        General Admission Requirements .................. 68
        M.S. Degree Requirements .......................... 68
    Ph.D. in Therapeutic Science ......................... 68
        Admission ................................................ 68
        Curriculum .............................................. 68
    Master of Occupational Therapy Courses .......... 69
    M.S. in Occupational Therapy Courses ............... 70
    Therapeutic Science Courses ......................... 70
    Physical Therapy & Rehabilitation Sciences . 70
        Doctor of Physical Therapy ......................... 70
            General Admission Requirements ............... 70
            Degree Requirements: Professional Program .. 71
            Transitional D.P.T. ................................ 71
            Admission Requirements ......................... 71
            Degree Requirements ............................... 71
            Ph.D. in Rehabilitation Sciences ............... 71
            Admission Requirements ......................... 71
            Degree Requirements ............................... 71
            D.P.T./Ph.D. Joint Degree Program ............... 72
            Physical Therapy & Rehabilitation Sciences Courses . 72

Photo, page 58:
Audiology students demonstrate Otoacoustic Emissions (OAE) testing in the Audiology Clinic at KUMC.
School of Allied Health

Karen L. Miller, Senior Vice Chancellor for Academic and Student Affairs and Dean
G040 School of Nursing Bldg., Mail Stop 2007
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160
www.alliedhealth.kumc.edu
Phone: (913) 588-5235, Fax: (913) 588-1605

Academic programs at the University of Kansas Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. Graduate programs are components of KU’s Graduate School. The Office of the Dean of Graduate Studies at KUMC handles matters related to graduate programs in Allied Health, Medicine, and Nursing.

Graduate programs in dietetics and nutrition, hearing and speech, nurse anesthesia, occupational therapy, physical therapy, rehabilitation sciences, and therapeutic science are offered in Kansas City. Graduate programs in hearing and speech are offered cooperatively with the Lawrence campus. The school also offers courses in such supportive and related fields as biometry.

Basic admission requirements are the general requirements of the Graduate School. Individual graduate programs have specific requirements including prerequisite undergraduate courses. These are listed or referenced in program descriptions.

The KU School of Allied Health offers a Dietetic Internship graduate certificate and the following graduate degrees, in cooperation with other academic units:
- Master of Arts
- Master of Occupational Therapy
- Master of Science
- Doctor of Audiology
- Doctor of Philosophy
- Doctor of Physical Therapy

For online information about graduate programs, see www.alliedhealth.kumc.edu.

Biometry

Chair: K. Hassanein
G034 Olathe Pavilion, Mail Stop 3042, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www3.kumc.edu/biometry, (913) 588-5566

Professor: K. Hassanein
Professor Emeritus: R. Hassanein

No graduate program is offered in biometry, but the following courses may be taken for graduate credit.

- **Biometry Courses**
  - BMTR 801 Analysis of Variance (3). Methods for designed experiments including one-way analysis of variance (ANOVA), two-way ANOVA, repeated measures ANOVA, and analysis of covariance are emphasized. Post-ANOVA tests, power and testing assumptions required in ANOVA are discussed and applied. Outlier detection using robust estimators also are incorporated. Boxplots, histograms and scatterplots are used to display data. Prerequisite: PRE 710, PRE 711 or equivalent. Knowledge of statistical software, basic statistical plotting methods, p-value, two-sample t-test and simple linear regression is assumed. Cross listed with NRSG 801. LEC
  - BMTR 811 Principles of Statistical Inference (3). A graduate level introductory course in biostatistics. Measures of central tendency and dispersion; probability distributions: binomial, poisson, normal. Confidence intervals and testing of one and two sample hypotheses. Non-parametric methods, correlation, regression, categorical data analysis and analysis of variance. LEC
  - BMTR 812 Research Methodology and Statistical Application (3). Research considered from a statistical point of view, including definition and types of research, strengthening nonexperimental hypotheses, and special considerations for clinical studies. Reliability and validity. Vital statistics techniques, hypothesis construction, statistical significance and power. Basic statistical techniques, introduction to multivariate applications: factor analysis, multiple linear and logistic regression; Cox models. Relating research data to computer. Course content available to students via computer-aided instruction. Second part of course involves student presentations of draft research proposals to class, emphasizing research design and statistics. Prerequisite: BMTR 811 or equivalent, or permission of instructor. LEC

Clinical Laboratory Sciences

Chair: Venus Ward
1014 KU Hospital, Mail Stop 4049, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.cls.kumc.edu, (913) 588-5220

The department is seeking approval for an M.S. degree in Molecular Biotechnology. Please contact the department for an update on the status of the degree. The following course can be taken for graduate credit.

- **Clinical Laboratory Sciences Course**
  - CLLS 705 Fundamentals of Pathophysiology (3-4). Review of integrative human physiology with an emphasis upon homeostatic mechanisms and etiologies of disease. The interrelationships of function and dysfunction at the molecular, cellular, and tissue level (pathology), organ and systemic level (impairment), and to the total human body (functional limitations) will be applied in each of the body systems. Discussions and applied materials will be tailored to the professional student population. Prerequisite: Admission to the Dietetics and Nutrition Program or Physical Therapy Program or permission of the instructor(s). LEC

Communicative Disorders: Intercampus Program

The Intercampus Program in Communicative Disorders comprises the Department of Speech-Language-Hearing; Sciences and Disorders on the Lawrence campus and the Department of Hearing and Speech on the KU Medical Center campus. Speech-Language Pathology courses are listed under Communicative Disorders: Intercampus Program in the College of
Liberal Arts and Sciences chapter of this catalog. Audiology courses are listed in this chapter.

The intercampus program offers Master of Arts and Doctor of Philosophy degrees in speech-language pathology and audiology, as well as the Doctor of Audiology. The M.A. program in speech-language pathology and the Au.D. program in audiology are fully accredited by the American Speech-Language-Hearing Association.

**Hearing and Speech, KU Medical Center:**
Chair: John Ferraro, jjerraro@kumc.edu
3031 H.C. Miller Building, Mail Stop 3039, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.aliedhealth.kumc.edu/programs/hearing
(913) 588-5937

**Speech-Language-Hearing: Sciences and Disorders, Lawrence:**
Chair: Hugh Catts, catts@ku.edu
Dole Center, 1000 Sunnyside Ave., Room 3001
Lawrence, KS 66045-7555
www.ku.edu/~splh

**KU’s audiology program ranked fifth in the nation in the 2006 edition of U.S. News’ “America’s Best Graduate Schools.”**

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### Audiology Courses

For Speech-Language Pathology courses, see Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter.

- **AUD 550** Beginning Clinical Practice in Audiology (1-3).  
- **AUD 697** Audiology I (3).
- **AUD 803** Communication Problems of the Acoustically Handicapped (3). The development and application of the principles of language learning as they affect the child with a mild to severe hearing loss. LEC
- **AUD 810** Diagnostic Audiology (4). Audiometric calibration, pure tone and speech testing, analysis of audiograms, middle ear testing. Prerequisite: AUD 697. LAB
- **AUD 811** Hearing Disorders (3). A study of disorders of the auditory system including anatomical, physiological, perceptual, and audiological manifestations of pathologies affecting hearing. Prerequisite: AUD 810 and AUD 829. LAB
- **AUD 813** Psychoacoustics and Theories of Hearing (3). A study of relations between common acoustic stimuli and the responses they elicit; consideration of sensory scales, noise phenomena, and speech intelligibility. Prerequisite: AUD 697 and AUD 829. LAB
- **AUD 814** Hearing Conservation (3). A study of the major components of hearing conservation programs in industrial, educational, and military settings. Forensic audiology issues related to occupational hearing loss are included. Prerequisite: AUD 697 and AUD 829. LAB
- **AUD 817** Pediatric Audiology (3). Normal and pathological development of the auditory system; pediatric audiometric testing; auditory and communication aspects in the habilitation of hearing-impaired children. Prerequisite: AUD 697 and AUD 810. LAB
- **AUD 818** Vestibular Systems and Disorders (2). Study of the anatomy and physiology of the normal peripheral and central vestibular system; clinical assessment of vestibular disorders; vestibular rehabilitation. LEC
- **AUD 819** Hearing Aids I (3). Study of the components, function, fitting, and performance characteristics of hearing aids, applications of amplification in rehabilitative audiology. Prerequisite: AUD 697 and AUD 810. LEC
- **AUD 820** Rehabilitative Audiology (3). Principles and methods of auditory, communication, and social assessment and intervention with hard of hearing and deaf adults, children, and their families. Prerequisite: AUD 810 and AUD 819 or equivalent. LEC
- **AUD 821** Hearing Aids II (3). The advanced study of the theoretical bases, techniques, and clinical application of hearing aids and their applications. Participants will review, present, and discuss contemporary issues in hearing aid literature and research. Prerequisite: AUD 819. LEC
- **AUD 822** Electro-Acoustics and Instrumentation (3). A study of the generation, control and measurement of the simple and complex sounds essential to clinical audiology and hearing research. LAB
- **AUD 829** Anatomy and Physiology of the Hearing and Vestibular Mechanisms (3). Advanced study of the anatomical and physiological properties of the human hearing and vestibular mechanisms. LEC
- **AUD 843** Clinical Practice in Audiology (1-4). Supervised clinical work at the University and/or University Medical Center audiology clinics, or affiliated, off-campus practicum sites. Prerequisite: Permission of instructor. FLD
- **AUD 846** Independent Study in Problems in Audiology (1-10). THE
- **AUD 849** Clinical Practice with the Hearing Impaired (1-3). Students provide rehabilitative services, language, and educational evaluations for children and adults with all types of hearing disorders under the supervision of certified staff. Group and individual conference with staff required. Prerequisite: AUD 793, AUD 842, and permission of instructor. FLD
- **AUD 851** Auditory Evoked Potentials (3). Theoretical bases, techniques, and clinical applications for auditory evoked potentials including electrocochleography, auditory brainstem response, middle and late latency and cognitive responses. Prerequisite: AUD 810, AUD 822, AUD 829, or permission of instructor. LEC
- **AUD 899** Thesis (1-10). THE
- **AUD 940** Seminar in Audiology: ... (1-4). Advanced study of selected topics in audiology such as (but not limited to): cochlear microphonics and other physiological processes; psychoacoustics, speech perception, cochlear implants, etc. Prerequisite: Enrollment in the Audiology Ph.D. program or permission of instructor. LEC
- **AUD 944** Advanced Clinical and Experimental Techniques in Audiology (1-6). FLD
- **AUD 947** Seminar in the Clinical Process in Speech Pathology and Audiology (3). This course will be concerned with the advanced study of the clinical process in the diagnosis and rehabilitation of individuals with speech and hearing problems. The course will focus on the critical evaluation of clinical literature and practices. Prerequisite: SPLH 860. LEC
- **AUD 999** Doctoral Dissertation (1-12). THE

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### Dietetics and Nutrition

Chair: Debra Sullivan
4019 Delp Pavilion, Mail Stop 4013, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.dietetics.kumc.edu or sjones.kumc.edu
(913) 588-5355

Graduate Adviser: Pete Beyer, pbeyer@kumc.edu
4019 Delp Pavilion, (913) 588-5358

Dietetic Internship Director: Rachel Barkley, rbarkley@kumc.edu, 4065 Delp Pavilion, (913) 588-7683

Professor: Carlson
Professor Emeritus: Frakes
Associate Professors: Barkley, Beyer, Sullivan
Assistant Professor: Hise

The department offers two programs. The Dietetic Internship Graduate Certificate Program is fully accredited and includes graduate credit that can be applied to an M.S. degree. The M.S. degree in dietetics and nutrition includes thesis and nonthesis options.

**Admission**

In addition to requirements under Admission in General Information, the Graduate Record Examination is required for both programs. The institutional copy of the applicant’s scores on the GRE must be submitted to the department. It is recommended that the applicant achieve a combined score of at least 1000 for the...
verbal and quantitative sections of the general test and a score of 3.5 on the analytic section.

An applicant to the dietetic internship must have a bachelor’s degree and course work from a didactic program in dietetics approved by the American Dietetic Association. Applicants follow the national computer-matching procedure mandated by the American Dietetic Association for application to internships. Sixteen students are admitted annually. Successful completion of the internship allows the student to take the examination to become a Registered Dietitian.

An applicant to the M.S. program must be a Registered Dietitian, be registry eligible, or have a bachelor’s degree from a regionally accredited university or college with at least one 3-credit-hour course each in biochemistry, physiology, and nutrition.

● Dietetics and Nutrition Courses


DIET 660 Management of Human Resources in Dietetics (6).

DIET 661 Management of Food Processing and Service (6).

DIET 662 Special Problems in Food Service Management (3).

DIET 670 Applied Normal Nutrition (3).

DIET 673 Nutrition in Medical Science (6).

DIET 672 Nutrition Care of Patients (6).

DIET 675 Seminar in Dietetics and Nutrition (1).

DN 796 Social and Cultural Aspects of Dietetics and Nutrition (2-4). A study of the aspects of society, culture and personality related diet, food habits, and nutrition. The role of the community and its agencies will be considered. Includes field work. Prerequisite: Consent of instructor. LEC

DN 800 Selected Topics in Clinical Dietetics (1-6). A learner-centered, self-paced study of topics in applied clinical dietetics. Independent modules are offered to address the science and art of nutritional care relating to specific issues to clinical dietetics. Topics will be grouped in various combinations to provide flexibility of choice. Students may enroll in one or more topics for a total of six credit hours. Prerequisite: By permission of instructor only. LEC

DN 803 Selected Topics in Resource Management for Nutrition Care Delivery Systems (1-3). Topics will address the efficiency and effectiveness of the use of dietetic resources to accomplish organizational objectives. Students may enroll in one or more topics for a total of 3 credit hours. Prerequisite: Consent of instructor. LEC

DN 817 Seminar in Dietetics and Nutrition (1). Seminar designed to promote effectiveness of professional written and oral communication, increase knowledge of research, and review content information in selected topics in dietetics. LEC

DN 822 Nutrition Care Management (2-4). An intermediate level course in which students develop skills involving communication, education, and management related to dietetics and nutrition practice. Students may typically be enrolled in DN 827 (applied practicum) associated with the Dietetic Internship. Consent of instructor is recommended without concurrent enrollment in DN 827. Prerequisite: Undergraduate course work in food service systems, management theory, or commensurate practical experience. Lectures, management experience simulations, student presentations, and tours of food service operations are educational methods used in this course. LEC

DN 826 Applied Clinical Nutrition (1-3). An intermediate level graduate course in which students learn the appropriate processes involved in the assessment and delivery of nutrition care for patients in ambulatory, acute, and long-term care settings. Students also learn current nutrition theory and practices involved in evaluation, prevention and treatment of common health problems such as obesity, heart disease, diabetes, cancer, renal disease, gastrointestinal disease and hypertension. Elements of pathology and biochemistry of the nutrition related problems are integrated into course topics. Students are typically also enrolled in the clinical nutrition component of DN 827 (applied practicum) associated with the dietetic internship. The DN 827 clinical nutrition experience is part of the supervised experience (internship) in which nutrition practitioners guide the student in the nutrition assessment and care of hospitalized patients and ambulatory clients. However, DN 826 may be taken without DN 827 with permission of the instructor. Prerequisite: Undergraduate course work in Nutrition, diet therapy, foods, biochemistry and physiology. LEC

DN 827 Practicum: Process in Clinical Dietetics (1-7). Supervised practice experience for graduate level students to fulfill the requirements for the Dietetic Internship. Experiences take place in hospitals, clinics, community health care agencies, and other practice settings in which dietetics and nutrition services are provided. Prerequisite: Admission to the graduate program, permission of dietetic internship director or course instructor. LEC

DN 828 Clinical Education in Dietetics (2-3). A study of teaching methods appropriate for use in a clinical setting. Emphasis on development of instructional objectives, learning situations, and methodology for the design of instruction with emphasis in clinical teaching in dietetics. Prerequisite: Consent of instructor. LEC

DN 829 Nutrition and Aging (2). An overview of nutrition and the aging process. Physiological, psychological, and sociological aspects of aging, theories of aging, internal and external factors related to nutrient intake, and nutrient needs will be considered.

DN 830 Food Technology (2-3). Consideration of current food processing methods and the factors affecting the palatability and nutritive values of human foods. Course includes pertinent information regarding the protection of the food supply. LEC

DN 832 Studies in Nutrition Care Program and Facility Design (2). A planning team approach to the structuring of a nutrition care program or food service system. Emphasis is given to decision alternatives regarding space, work patterns, structural features, construction materials, and relationships with other disciplines. Prerequisite: Consent of instructor. LEC

DN 834 Methods of Research in Nutrition (3). A study of basic research terminology and designs commonly used in nutrition research. Topics include: research on animals, tissue culture and human subjects; qualitative, quantitative and outcomes research; ethical issues in research; dissemination of research findings; and appropriate use of research findings. Prerequisite: Consent of instructor. LEC

DN 835 Biochemical, Physiological, and Genetic Aspects of Human Nutrition (1-3). The topics covered will deal with the interrelationships of biochemistry, physiology, genetics, and nutrition. Emphasis will be placed on developing an understanding of how the coordination of structure and function is related to the metabolic needs of the cell and its response to the environment. This integrated approach will form a basis for evaluating nutritional needs in humans. Prerequisite: Consent of instructor. LEC

DN 838 Advanced Clinical Dietetics (2-4). An in-depth study of the pathophysiology of nutritional diseases. Those functional disorders which result in nutritional disease or those nutritional diseases which affect physiological function will be explored. The emphasis will be in the following areas: endocrinology, metabolism, gastroenterology, and hematology. Clinical experience will be integrated into the course to provide opportunities for practice in clinical dietetic specialties. Prerequisite: Consent of instructor. LEC


DN 840 Advanced Topics in Nutrition (1-2). Reading and preparation of a paper and/or oral presentation on a selected subject in nutrition. Prerequisite: Consent of instructor. LEC

DN 843 Public Health Nutrition (1-3). Introduction to public health nutrition concerns, assessment of nutritional status of populations, nutrition education and counseling of individuals and groups, and nutrition services in the community. Discussion of the roles of dietitians, nutritionists, and others in providing community nutrition services. Prerequisite: Consent of instructor.

DN 844 Management of Nutrition Care Personnel (2). A study of the application of management theories and functions to personnel management. Includes a study of the role of professional, technical, and supportive personnel in the dietetic field. Emphasis is on problems through case study and directed readings. Prerequisite: Consent of instructor. LEC

DN 850 Administration of Nutrition Care Delivery Systems (2-4). The course emphasizes the role and responsibilities of a program department administrator. It focuses on long range planning and policy making which takes into consideration the various legal, political, and economic issues which impact on dietetics. Emphasis will be placed on the role of the dietetic administrator in achievement of department goals in the health care delivery system. Prerequisite: DN 822, DN 823, or consent of instructor. LEC

DN 851 Practicum: Administration of Nutrition Care Delivery Systems (1-2). Application of planning, policy making, legal, political, and economic issues provided the student through active participation in administration of a nutrition care delivery program. Concurrent enrollment in DN 850 is required. Prerequisite: DN 822 and DN 823 or consent of instructor: Corequisite: DN 850, LEC

DN 854 Special Problems in Dietetics and Nutrition (1-4). Directed study of special problems in nutrition or nutrition care. This course provides for the individual or group study of special problems. Through directed readings, investigations, and projects, the student acquires information with reference to questions in dietetics and nutrition not covered in organized courses. LEC

DN 857 Motivational Interviewing in Public Health Settings (1). The course is designed to introduce participants to Motivational Interviewing, its concepts, and to the subsequent skills required for helping people to change. This course will be cross-listed with PRM 557.

DN 860 Collaboration Strategies in Health Care (1). Persuasion and negotiation techniques: skills to evaluate and promote collaboration and goal achievement in a multidisciplinary health care team; analysis of communication styles and strategies to achieve mutual beneficial outcomes. LEC

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
Employment opportunities are significantly increasing in all allied health professions.

Programs in the School of Allied Health integrate formal instruction with practical experience.

Some departments do not offer all courses in any one semester. See www.registrar.ku.edu/timetable for current course offerings.

See pages 14 and 15 for admission procedures.

DN 865 Nutrition in Sports and Exercise (3). Exercise physiology and nutrient requirements in sports and exercise: macronutrient, micronutrient and fluid needs of athletes engaged in specific sports, pre/post exercise meals, gender specific requirements, role of ergogenic aids, eating disorders, and role of exercise in weight management and chronic disease. Prerequisite: Biochemistry and/or exercise physiology class or permission of the instructor. LEC

DN 870 Health Behavior Counseling (3). Theoretical and applied issues in health behavior counseling. Students will learn the theories of behavior change and how to apply these to health care issues. Specific health behaviors (i.e., dietary changes, smoking cessation, exercise adherence) will be discussed in the context of chronic disease for children, adults, and the elderly. Effective methods of counseling patients and promoting changes on an individual and small group basis will be presented. LEC

DN 880 Dietary and Herbal Supplements (1-2). Designed to develop the health professional's skills in partnering with patients to make dietary supplement decisions. Students will investigate the use of botanicals and dietary supplements in nutritional support of aging, maternal health, and wellness. Discussions on supplementation in the prevention and treatment of chronic disease will include: arthritis, cancer, cardiovascular, diabetes, digestive, liver and renal disorders, memory deficits, and ophthalmic dysfunctions. Prerequisite is an undergraduate degree. Completion of a course in human physiology is advisable. Lectures, journal readings, web enhanced course work and self study of recommended resources on dietary and herbal supplements are educational methods used in this course. To be eligible for 2 hours credit, the student will also complete an investigation of a dietary or herbal supplement and present their findings to classmates on-line or in person. LEC

DN 890 Graduate Research (1-4). Individual investigation of special problems in dietetics and nutrition or hospital dietary administration approved by the student’s advisor or advisory committee. Investigation involves original research. RSH

DN 899 Thesis (1-6). Scholarly essay based on research, written under the guidance of the student’s advisor. Credit given upon meeting thesis requirements for the master's degree. Prerequisite: Consent of advisor. THE

Hearing and Speech

For a description of master’s and doctoral degree programs, see Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter of this catalog.

For Speech-Language Pathology courses, see Communicative Disorders: Intercampus Program in the College of Liberal Arts and Sciences chapter. For Audiology courses, see Communicative Disorders: Intercampus Program earlier in this chapter.

Nurse Anesthesia

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3901 Rainbow Blvd., Kansas City, KS 66160
www.na.kumc.edu, (913) 588-6612
Associate Professor: Gordon
Assistant Professors: Elliott, Goodyear-Bruch, Weber
Instructors: Arndt, Nyght

Program

The Master of Science in Nurse Anesthesia prepares the registered nurse to become a Certified Registered Nurse Anesthetist (C.R.N.A.). It is a comprehensive 36-month program that provides students with the most up-to-date knowledge and skills required for success in nurse anesthesia practice. Graduates are able to function independently or in a group practice setting after successful completion of the program.

The program’s dedication to excellence is reflected in its ranking among the top nurse anesthesia programs in the country by U.S. News’ 2006 edition of “America’s Best Graduate Schools.” The program draws on the extraordinary intellectual and clinical resources offered by the KU Medical Center and several outstanding clinical affiliate sites to enhance the student’s learning opportunities in all anesthesia techniques. Students have experiences in neurosurgery, orthopedics, urology, ophthalmology, burns, pediatric, regional anesthesia, obstetrics/gynecology, cardiothoracic surgery, otolaryngology, general surgery, outpatient surgery, radiologic procedures, critical care, trauma, and emergency surgery.

The program offers the curriculum in an innovative contemporary education model. The first year consists of basic sciences and the foundations of anesthesia practice with a phased introduction to clinical practice. The second and third years provide extensive clinical practice while continuing didactic education through Web-based classes and research.

The program is offered at three primary clinical sites:
• The University of Kansas Medical Center, Kansas City, Kansas
• Overland Park Regional Medical Center, Overland Park, Kansas
• Mt. Carmel Medical Center, Pittsburg, Kansas

The curriculum is identical at the three sites. Clinical experiences are similar at the three sites, but actual experience depends on the availability of surgical cases.

The application deadline is September 15, and new students begin the program in the summer session.

Upon graduation students receive an M.S. in Nurse Anesthesia degree and are eligible for certification from the Council on Certification of Nurse Anesthetists. The program is fully accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs, the Kansas State Board of Nursing, and the North Central Accrediting Association.

Admission Requirements

Applicants must meet the admission requirements set by the American Association of Nurse Anesthetists’ Councils on Accreditation and Certification, the Department of Nurse Anesthesia, and the University of Kansas Graduate School. In full support of university policies, the nurse anesthesia program seeks a culturally diverse student body and does not discriminate against any group protected by law.

The departmental admission requirements include:
1. The applicant must hold a license as a professional Registered Nurse (R.N.) in Kansas and Missouri, or be eligible for licensure in those states.
2. The applicant must hold a bachelor’s degree in an appropriate discipline.
3. The applicant must have at least two years of experience as a registered professional nurse with a minimum of one year of recent, full-time experience in an intensive care setting.
4. The following courses or their equivalents must be eligible for transfer to KU as college/university credit. All courses required for admission must have been completed with a minimum grade of C and cannot be credit by examination. A Pass grade is not accepted unless the applicant provides written verification from the university that the Pass designation is equivalent to a grade of C or higher.

Statistics: one course containing both parametric and nonparametric content.

Basic Sciences: the following five science classes are required; an overall grade-point average of 3.0 on a 4.0 scale is required in these courses:
• Chemistry (two courses that have covered the topics of inorganic, organic, and biochemistry)
• Microbiology (one course)
• Anatomy* (one course)
5. The applicant must have achieved an overall grade-point average of 3.0 on a 4.0 scale for all cumulative college work.

6. The applicant must have writing skills appropriate to graduate-level education.

7. The applicant must provide three recommendations from individuals who can accurately evaluate the applicant’s clinical skills, experience, and ability to pursue graduate study. One reference is required from the applicant’s supervisor/nurse manager and two from any of the following: current or former instructor, C.R.N.A., doctor, or peer/coworker.

8. The applicant must submit a one-page typed letter outlining his or her educational and professional goals.

9. Once all application materials have been received, applicants meeting the above criteria are invited to attend a personal interview. Only applicants who attend the personal interview are considered for admission.

10. Before matriculation, all students admitted to the program must:

   • Complete ACLS and PALS and maintain their currency throughout the program at the student’s expense
   • Submit to a background check at the student’s expense

Degree Requirements

In addition to departmental requirements, the applicant must meet the requirements of the Graduate School and the Council on Accreditation of Nurse Anesthesia Educational Programs, as well as the Council on Certification of Nurse Anesthetists’ requirements for eligibility to write the certification examination. Departmental requirements include satisfactory completion of admission requirements, curriculum requirements, a written comprehensive examination, a thesis or field project with defense, and supervised clinical practice.

The program curriculum requirement includes

- Chemistry/Physics .................................................. 3
- Clinical Anatomy ................................................. 4
- Anesthetic Pharmacology ................................. 6
- Advanced Physiology ........................................ 6
- Advanced Pathophysiology ................................ 2
- Basic Principles of Anesthesia ......................... 2
- Introduction to Clinical Practicum ................. 2
- Regional Pain Management .............................. 2
- Monitoring in Nurse Anesthesia ................... 2
- Advanced Theory/Practice I ............................... 2
- Advanced Theory/Practice II ......................... 2
- Advanced Theory/Practice III ....................... 2
- Advanced Theory/Practice IV ....................... 2
- Advanced Theory/Practice V ....................... 2
- Advanced Theory/Practice VI ..................... 2
- Professionalism: Issues and Roles ................. 4
- Introduction to Research ................................. 2
- Health Care Research ..................................... 3
- Thesis/Field Project ........................................ 6

Nurse Anesthesia Courses

NURA 800 Professional Aspects of Anesthesia (3). This course includes orientation to the profession of nurse anesthesia. The student will gain an understanding of the anesthesia department management and organization. The history of anesthesia will be discussed. Ethical, psychological, professional adjustments and legal responsibilities of the nurse anesthetist will be presented. LEC

NURA 801 Introduction to Clinical Practicum (2). Students will engage in clinical experiences as an introduction to basic anesthesia skills. Emphasis is given to patient assessment, anesthetic planning and management of the patient population of low risk categories. The course includes an in-depth exploration of clinical problem solving and “call” experiences that address the trauma patient and emergency surgical/anesthetic interventions for pathological states. Prerequisite: Permission of instructor. LEC

NURA 805 Clinical Anatomy (4). An intensive study of the major anatomical systems and regions of the body which have clinical significance for anesthetists and others. Particular attention devoted to the respiratory, cardiovascular, and nervous systems. Regional topics include the anatomy of the head, neck, vertebral column, thorax, axilla, and femoral triangle. Involves both lectures and cadaver dissection, plus appropriate models, x-ray films, and audiovisual materials. Prerequisite: Admission to the Nurse Anesthesia Program or permission of instructor. LEC

NURA 806 Advanced Physiology (4). A course designed to lead to an advanced comprehension of the physiology of organ systems in the human in both cellular and organ processes. Physiology subject matter relevant to clinical health sciences include muscle, cardiovascular, respiratory, renal, water and electrolyte balance, gastrointestinal, and endocrine physiology as well as neurophysiology. Cellular mechanisms include the structure and function of ion channels and pumps, mechanisms of calcium regulation, excitation-contraction coupling and mechanisms of oxidative cell damage and apoptosis. Prerequisite: Permission of instructor. LEC

NURA 807 Advanced Pathophysiology (4). This course is an analysis of complex interrelationships and interdependence of organ systems in health and disease. The focus will be on the central concepts of pathophysiology at the cellular, tissue, and system levels. Selected content relating to pulmonary, cardiovascular, renal, gastrointestinal, neurological, immunologic, and endocrine systems is included. Prerequisite: Permission of the instructor. LEC

NURA 810 Foundations of Anesthesia Practice (4). The course introduces the student to the basic foundations of nurse anesthesiology. Principles of anesthesia and anesthetic techniques provide the theoretical foundation relative to the art and science of practice. The fundamentals of didactic knowledge acquired during the clinical environment are addressed. The course is designed to provide students with the basic understanding of fundamental content and principles of the practice of anesthesia, allowing the student to engage in critical thinking to provide safe anesthesia care. Prerequisite: Admission to the program of nurse anesthetist. Corequisite: NURA 801. LEC

NURA 811 Advanced Theory in Anesthesia I (2). This is the first of six courses relative to the didactic study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of obstetrical and pediatric patients. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor. Prerequisite: Permission of instructor. LEC

NURA 812 Advanced Theory in Anesthesia II (2). This is the second of six courses relative to the study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of otolaryngologic procedures and the fluid and electrolyte needs of patients during surgical interventions. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor. In addition, students will be required to engage in analysis of currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 813 Advanced Theory in Anesthesia III (3). This is the third of six courses relative to the study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the comprehensive anesthetic management of urological, ophthalmologic and otolaryngologic procedures. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor. In addition, students will be required to engage in analysis of currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 814 Advanced Theory in Anesthesia IV (3). This is the fourth of six courses relative to the study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of the geriatric population and patient’s with alterations in the endocrine system. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor. In addition, students will be required to engage in analysis of currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 815 Advanced Theory in Anesthesia V (3). This is the fifth of six courses relative to the study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of the neurosurgical patient’s and the critically ill or injured. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor. In addition, students will be required to engage in analysis of currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 816 Advanced Theory in Anesthesia VI (3). This is the sixth of six courses relative to the study of the art and science of nurse anesthesiology. Students will acquire the knowledge base pertinent to the perioperative anesthetic management of the orthopedic patient’s and patient’s with alterations in the renal system. Students will participate in case scenarios and threaded discussions via the Internet to enhance their critical thinking, problem-solving skills and ability to synthesize didactic information to the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor. In addition, students will be required to engage in analysis of currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC
THE UNIVERSITY OF KANSAS  •  2005-07 GRADUATE SCHOOL CATALOG

The Master of Occupational Therapy is an entry-level professional degree. During the first year, students enroll in undergraduate courses to earn a B.S. in Occupational Studies. During the second and third years, students take graduate-level courses that lead to the M.O.T.

The Master of Science degree in Occupational Therapy is for professionals interested in disability issues.

Nurse Anesthesia

the clinical environment. Online threaded discussions will be provided, allowing interaction between students, and between students and the instructor in addition, students will be required to engage in analysis of currently published research to identify “best practices” based on research evidence. Prerequisite: Permission of instructor. LEC

NURA 816 Advanced Theory in Anesthesia VI (3). This is the sixth of six courses relative to the study of the art and science of nurse anesthesia. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 838 Advanced Principles of Anesthesia Practice (4). Detailed review of disease states of major body systems (cardiovascular, respiratory, endocrine, and neuromuscular systems. Lecture format addressing topics relative to specialized or advanced management techniques for specific physiologic and pathologic states encountered in the surgical and critical care setting. Prerequisite: NURA 851 or permission of instructor. LEC

NURA 840 Advanced Topics: Acute Care (0-4). Special study allowing a student to pursue a particular subject through self-assigned readings, student presentations, and conferences with a faculty member. Prerequisite: Consent of instructor. LEC

NURA 845 Advanced Practicum in Anesthesia V (3). This is the fifth of six courses relative to the application of the art and science of nurse anesthesia. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 852 Advanced Practicum in Anesthesia III (3). This is the third of six courses relative to the application of the art and science of nurse anesthesia. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 822 Advanced Practicum in Anesthesia II (3). This is the second of six courses relative to the application of the art and science of nurse anesthesia. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 821 Advanced Practicum in Anesthesia I (2). This is the first of six courses relative to the application of the art and science of nurse anesthesia. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 824 Advanced Practicum in Anesthesia IV (2). This is the fourth of six courses relative to the application of the art and science of nurse anesthesia. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 826 Advanced Practicum in Anesthesia VI (3). This is the sixth of six courses relative to the application of the art and science of nurse anesthesia. Each section is designed to address specific surgical categories and the relevant patient care needs and risks. Completion of each course requires acquisition and refinement of clinical skills. Students will demonstrate progression in cognitive, psychomotor and affective skills appropriate to a professional nurse anesthetist. Prerequisite: Permission of instructor. LEC

NURA 831 Chemistry and Physics of Anesthesia (3). Physical and chemical principles involved in anesthesia including states and properties of matter, laws governing the behavior of gases, flow and vaporization, oxidation and combustion; principles of electricity and electrical safety; chemical properties and structure-activity relationships for anesthetic accessory and therapeutic drugs. Course will also cover pertinent areas of biochemistry relevant to anesthesia practice. Prerequisite: Permission of instructor. LEC

NURA 833 Principles of Anesthesia Practice (4). This course introduces students to the principles and theories of anesthesia practice. Students will develop a conceptual model for practice of anesthesia based upon a strong foundation in physical assessment, physiologic monitoring, applications of pharmacology, anesthesia systems and physical/chemical sciences. Prerequisite: Permission of instructor. LEC

NURA 834 Advanced Assessment and Monitoring in Anesthesia and Acute Care (2). Systems approach to advanced assessment, analysis of hemodynamic monitoring, electrocardiography, neuromuscular monitoring and neuromuscular in the evaluation patients. Emphasis will be on the cardiovascular, pulmonary, and neurologic systems and their relation to the assessment and monitoring of patients in the acute care or anesthesia setting. Prerequisite: Permission of instructor. LEC

NURA 838 Advanced Principles of Anesthesia Practice (4). Detailed review of disease states of major body systems (cardiovascular, respiratory, endocrine, and neuromuscular systems. Lecture format addressing topics relative to specialized or advanced management techniques for specific physiologic and pathologic states encountered in the surgical and critical care setting. Prerequisite: NURA 851 or permission of instructor. LEC

NURA 839 Regional Anesthesia/Pain Management (2). Includes study of conductive anesthesia techniques, pharmacokinetics of local anesthetics, anatomical placement, and physiologic response. The course is in changing of acute and chronic pain management techniques. LEC

NURA 850 Basic Anesthesia Pharmacology (3). Principles of anesthetic drugs/agents common to clinical practice. Content includes pharmacodynamic and pharmacokinetic study of drugs affecting the autonomic nervous system and central nervous system, theories of anesthesia, uptake and distribution, conductive agents, toxicology and therapeutics of anesthetic accessory drugs. Prerequisite: Permission of instructor. LEC

NURA 851 Advanced Anesthesia Pharmacology (3). General principles, autonomic, cardiovascular, autacoids, pulmonary, renal and gastrointestinal topical topics, advanced pharmacology with emphasis on anesthetic implications. Web-based course with each section containing the following components: content guided practice (questions with feedback), clinical cases, and practice exams. On-line threaded discussions will be provided, allowing interaction between students, and between students and the instructor. Prerequisite: NURA 850 or permission of instructor. LEC

NURA 880 Advanced Topics: Acute Care (1-6). Special study allowing a student to pursue a particular subject through self-assigned readings, student presentations, and conferences with a faculty member. Prerequisite: Consent of instructor. LEC

NURA 898 Graduate Research (1-3). Research leading to the submission of a Master’ s thesis. Proctor and field project for Master of Science in Nurse Anesthesia. Independent scientific investigation in nurse anesthesia. Must be approved by and under the supervision of the student’s research adviser. In partial fulfillment of the requirements for the degree. Prerequisite: Consent of adviser. LEC

NURA 891 Introduction to Research (2). Students are introduced to thesis development. The student will become increasingly competent in the reading and critical analysis of anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Outside readings, student presentations and class discussion are utilized in achieving course objectives. LEC

NURA 892 Research Seminar II (1). This is the second of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 893 Research Seminar III (1). This is the third of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 894 Research Seminar IV (1). This is the fourth of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Each semester case studies, outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 895 Research Seminar V (1). This is the fifth of five (5) consecutive semester courses. The student will become increasingly competent in the reading and critical analysis of the anesthesia research literature. Considerable attention is placed upon study design and execution relative to the question at hand. Each semester case studies, outside readings, student presentations, and class discussion are utilized in achieving course objectives. LEC

NURA 896 Field Project (1-6). Restricted to the writing of a research project, usually based on applied research associated with field experience in nurse anesthesia. In partial fulfillment of requirement for the Master of Science in Nurse Anesthesia. Graduate training in practice methods and issues of anesthesia summarized as a major field research project in lieu of thesis. Projects must be defended prior to degree completion. Prerequisite: Consent of adviser. LEC

NURA 899 Thesis (1-3). Restricted to the writing, preparation of the formal thesis, based upon independent research leading to partial fulfillment of the requirements for the Master of Science in Nurse Anesthesia. Thesis must be defended prior to degree completion. Prerequisite: Consent of adviser and NURA 890. THE
Occupational Therapy

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Professors: Dunn, McCadow
Associate Professors: Brown, Radel
Assistant Professors: Ahmad, Grobe

Master of Occupational Therapy
www.ot.kumc.edu/mot

The Master of Occupational Therapy is an entry-level professional degree for occupational therapists. Occupational therapists use occupation (i.e., purposeful activity that is meaningful to the person and is aimed at achieving a goal) to support people to develop or regain skills they need to learn, play, earn a living, and take care of themselves and others. The occupational therapist provides services to persons of all ages who want and need to participate as active members of society, but for whom physical, developmental, cognitive, or emotional issues interfere. Occupational therapists also provide services to well populations, communities, and individuals to facilitate maximum health and quality of life and to prevent injury and disability. Occupational therapy maximizes the quality of life for the individual, the family, and caregivers and keeps health care costs down. Occupational therapists are employed in schools, mental health facilities, hospitals, rehabilitation centers, home health agencies, government and community agencies, private practices, and industry. They may provide direct intervention services; act as consultants, administrators, researchers; teach at a college or university; or any combination of these.

The program is accredited by the Accreditation Council for Occupational Therapy Education of the American Occupational Therapy Association, 4720 Montgomery Lane, F.O. Box 31220, Bethesda, MD 20824-1220, (301) 652-AOTA. Graduates may sit for the national certification examination for occupational therapists administered by the National Board for Certification in Occupational Therapy. After completion of this examination, the individual is an Occupational Therapist, Registered. Most states require licensure to practice. Initial state licensure is based on the successful completion of the NBCOT certification examination.

Admission. Students are eligible for admission after completing a minimum of 90 credit hours of preparatory course work, which may be taken on the Lawrence campus or at another university; up to 64 hours can be taken at a community college. Students must earn a minimum grade-point average of 3.0 on a 4.0 scale in prerequisites. Contact the OT education program office at KU Medical Center for information on other eligibility requirements and for current information.

Eligible students should begin the application process by submitting the School of Allied Health application and fee on or before December 15. Complete the application process by submitting other application forms (available from the OT office) and two official college transcripts on or before February 1. If accepted, the student begins the three-year program in the summer at KUMC.

The occupational therapy admission committee reviews applications. Students who meet all eligibility criteria by the deadlines are invited to complete an interview and writing sample. Selection is based on the applicant’s strength in eligibility criteria as well as performance in the interview and writing sample.

Students for whom English is a second language should contact the department for additional information about scores on the Test of English as a Foreign Language or the Lawrence campus Applied English Center’s English Language Proficiency Test or both.

All prospective students should obtain advising from the OT education program office at KUMC or should schedule an appointment through the Freshman-Sophomore Advising Center to meet with an OT adviser on the Lawrence campus.

Application procedures are subject to change. Check the Web site or contact the department for updates.

An introductory course open to all students, OT 101, is offered on the Lawrence campus to acquaint students with the profession.

Master of Occupational Therapy Degree Requirements.

The Master of Occupational Therapy is a three-year, full-time program starting each summer session. During the first year, students enroll in undergraduate courses focusing on occupational studies. Students who successfully complete these courses earn a B.S. in Occupational Studies. During the second and third years, students take graduate-level courses that lead to the M.O.T. Completion of both levels allows the individual to sit for the national certification examination. Courses include basic science, occupational therapy theory and application, clinical reasoning, and practice. The student must complete a research project carried out with a group of students and a faculty mentor. Students must complete

- 90 credit hours of prerequisite course work.
- 39 hours of undergraduate academic courses and part-time practice in the occupational therapy department.
- 44-51 graduate hours in occupational therapy courses and fieldwork. The academic portion of the program is punctuated with full-time Level II fieldwork experiences, giving students ample opportunity to integrate practical experience with classroom learning.
- 12 hours of Fieldwork Level II.

Fieldwork Level II. FW II is a vital part of an occupational therapy education and a degree requirement. FW II courses are full-time practicum experiences carried out in service delivery settings. Students take FW II during the Spring 2a and Fall 3b semesters. An optional FW II experience may be scheduled during the Fall 3a semester. At least one FW II experience is to be completed in Kansas but outside the greater Kansas City area (as defined by the OT education department.) FW II may only be scheduled and arranged through the academic fieldwork coordinator or the fieldwork assistant.

Students are responsible for transportation to and from fieldwork centers, living arrangements and expenses, tuition and fees for 12 to 18 credit hours, and any other expense. Both undergraduate and graduate courses for the entry-level M.O.T. degree are outlined below.

Typical Course Sequence

**Summer 1** (9 credit hours)
- OCTH 388 Human Anatomy ......................................................... 6
- OCTH 395 Orientation to the Occupational Therapy Profession .......... 3

**Fall 1** (16 credit hours)
- OCTH 401 Theory and Practice in Occupational Therapy .................. 2
- OCTH 415 Communication and Professional Relations .................... 1

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
Occupational Therapy

OTTH 422 Analysis and Adaptation of Occupations I .......................... 4
OTTH 430 Practicum I ................................................................. 4
OTTH 435 Lifespan Development from an Occupational Perspective ....... 4
OTTH 455 Neuroscience Analysis of Occupational Performance ............. 3

Spring 1 (14 credit hours)
OTTH 445 Contexts of Occupations ............................................. 2
OTTH 462 Physical Considerations in Facilitating Occupational Performance .... 3
OTTH 468 Facilitating Physical Performance Lab ................................... 1
OTTH 470 Practicum II ................................................................. 1
OTTH 472 Psychiatric Considerations in Facilitating Occupational Performance .... 3
OTTH 482 Analysis and Adaptation of Occupations II ....................... 2
OTTH 490 Evaluation and Assessment of Occupational Performance ............ 2

Fall 2 (14 credit hours)
OTTH 704 Planning and Intervention in Occupational Therapy ............... 2
OTTH 710 Service Management: Delivery Systems ............................ 1
OTTH 723 Professional Theoretical Perspectives .................................. 7
OTTH 730 Practicum III ............................................................... 2
OTTH 783 Evidence-based Practice ............................................... 2

Spring 2a (6 credit hours–January through March)
OTTH 770 Level II Fieldwork, Part I ............................................... 6

Spring 2b (6-credit hours–April and May)
OTTH 715 Supervision, Team Relations, and Management Communication ... 1
OTTH 725 The Research Process .................................................... 1
OTTH 738 Special Topics in Practice ............................................. 1-2
OTTH 750 Case-based Clinical Reasoning ........................................ 2

Fall 3a (6 credit hours–July through September)
OTTH 780 Elective Level II Fieldwork, Special Topics (optional) ............... 6

Fall 3b (6 credit hours–October through December)
OTTH 775 Level II Fieldwork, Part 2 ............................................. 6

Spring 3 (12 credit hours)
OTTH 727 Professional and Technical Writing .................................... 2
OTTH 755 Issues and Trends Seminar ........................................... 1
OTTH 760 Professional Development and Leadership in Service Management .... 1
OTTH 763 Family and Community Service Systems ............................ 2
OTTH 776 Population-based Health Care ........................................ 2
OTTH 790 Research Practicum ..................................................... 2

Master of Science in Occupational Therapy

www.ot.kumc.edu/msot

This program is for professionals interested in disability issues. These professionals include, but are not limited to, practicing occupational therapists. The curriculum recognizes the importance of interdisciplinary dialogue in the development of research, teaching, and administrative skills and knowledge of relevant theory. Most course work is offered in the evenings for the convenience of those who hold jobs.

General Admission Requirements. Applicants must meet Graduate School general entrance requirements. Departmental admission requirements include
1. The applicant must have a bachelor's degree.
2. Three letters of recommendation are required.
3. The applicant must submit a brief statement of career goals and research interests (100 to 300 words).
4. Preference is given to applicants who can document a history of professional leadership.
5. Application materials must be received by April 1 for fall admission.

M.S. Degree Requirements. The student must complete a minimum of 12 hours of core course work related to theory and disability issues, a 3-hour graduate neuroscience course, 12 hours of research courses (including thesis hours), and 9 elective hours, with an overall grade-point average of 3.0 or higher on a 4.0 scale. The student must pass a final oral examination that includes defense of the thesis.

Core Courses Offered in the M.S. in Occupational Therapy Program
OTMS 701 Professional Development ............................................. 3
OTMS 705 Multidisciplinary Theoretical Perspectives .......................... 3

OTMS 735 Practice Models for Applied Science ............................... 3
OTMS 800 Research Proseminar .................................................... 1
OTMS 801 Applied Neuroscience .................................................... 3
OTMS 835 Interpreting Research for Applied Science ....................... 3
OTMS 880 Special Topics in Occupational Therapy .......................... 1-6
(requires consent of faculty member)
OTMS 890 Graduate Research ..................................................... 1-6
(requires consent of faculty member)
OTMS 899 Thesis (requires consent of faculty member) ..................... 1-6

Elective Options. Each student selects three, 3-credit-hour general graduate-level courses to complement his or her program. These selections must be approved by the student’s advisor.

Ph.D. in Therapeutic Science

www.ot.kumc.edu/therapeutic

The Therapeutic Science doctoral program is designed for students whose interests in disability and quality of life require an integrated, interdisciplinary course of study that cannot be provided by existing programs. The program attracts students who may already have obtained academic or professional master’s degrees and have a professional credential or identity (e.g., occupational therapist, speech-language pathologist, licensed clinical social worker, clinical psychologist, special educator). Many who are already working with disability issues may wish to generate knowledge for understanding disability and improving quality of life for individuals with disabilities.

Admission. Only students seeking the Ph.D. degree are admitted. The interdisciplinary program committee reviews each applicant’s preparation. Acceptable preparation must include basic training in statistics and design and completion of an empirical research study or thesis. If an applicant does not have adequate preparation for doctoral-level work, he or she must develop satisfactory research skills before formally entering the program. The program committee may recommend a range of options, from requiring the student to take at least 6 hours of basic statistics and methods courses and complete an independent research project, to requiring the student to obtain a master’s degree.

The admission review also considers the fit between the student’s research interests and the design and goals of the program. Applicants who qualify for admission must investigate discipline-specific programs with which their interests intersect and submit a rationale for why their research and career goals can only be met by this program. The applicant’s leadership experience and potential to contribute to knowledge generation and transfer through research, teaching, or service and the extent to which the applicants’ interests and goals correspond to those of available faculty also are considered. All applicants must submit a personal statement of career goals and professional development, three letters of recommendation, and two copies of all graduate and undergraduate transcripts. Application materials must be received by March 1 for fall admission.

Curriculum. The program includes a core curriculum for all students and also gives each student the opportunity to create a course of study to meet her or his professional objectives. Students receive a foundation of basic knowledge as well as multidisciplinary perspectives on issues and problems related to individuals with disabilities. On completion of this program, students are prepared for academic, research, and leadership careers with institutions and agencies serving individuals with disabilities and their families.
The University of Kansas • 2005-07 Graduate School Catalog

OCCULT 704 Planning and Intervention in Occupational Therapy (2).

Using a problem-based clinical reasoning approach this course examines the delivery of services in occupational therapy practice. Students will have opportunities to provide assessment and intervention techniques specific to different practice models. Theoretical background and interventions approaches common to each model are described. The lab component of this class consists of two parts: 1) learning of assessment and intervention techniques specific to different practice models and 2) practice in selecting and applying appropriate practice models for different occupational performance problems. LEC

OCCULT 725 The Research Process (1-2). An introduction to the research design methodology, sampling, measurement, and research ethics. Qualitative and quantitative research are discussed. Research consumer skills are emphasized. LEC

OCCULT 727 Professional and Technical Writing (2). Students will achieve competency in scientific writing and use of the American Psychological Association (APA) style. LEC

OCCULT 730 Practicum III (2). Selected field experiences provide opportunities for critical thinking and problem solving in a variety of contexts and service provision modules where occupational therapy is provided to persons with disabilities. Students will have opportunities to provide assessment and intervention to at least one individual with a psychosocial dysfunction and one individual with a physical disability under the supervision of an occupational therapy mentor. Students will determine the relevancy of intervention, work collaboratively with others within the setting and analyze and reflect upon their experience. LEC

OCCULT 738 Special Topics in Practice (1-2). Focused study of theory application, professional topics and skills, and emerging practice questions. Level III courses must represent entry level skills and interventions approaches common to each model. The lab component of this class consists of two parts: 1) learning of assessment and intervention techniques specific to different practice models and 2) practice in selecting and applying appropriate practice models for different occupational performance problems. LEC

OCCULT 745 Seminar I: _________________. (3). This course will address areas of special interest in occupational therapy. Issues and trends related to advanced application of theory, assessment, and intervention are presented in lecture and discussion. Special projects will emphasize the student's special interests. Although faculty directed, student presentations will be emphasized. LEC

OCCULT 750 Case-based Clinical Reasoning (2). Students will apply the clinical reasoning process to individuals with occupational performance needs. Cases will be presented from the student's Level II fieldwork experience. In a problem solving format, students will evaluate services received by the individual and discuss alternatives given a variety of situations. LEC

OCCULT 755 Issues and Trends Seminar (1). Students will analyze current professional, political, and cultural issues and trends that impact service provision and the populations served by occupational therapists. LEC

OCCULT 756 Interdisciplinary Wellness Promotion for People with Psychiatric Disabilities (2). Emphasizes development of wellness programs built on recovery philosophy and health promotion models. Factors relevant to the adoption of healthy behaviors in individuals with psychiatric disabilities are explored. Students will have opportunities to participate with interdisciplinary groups including students with psychiatric disabilities in designing health promotion programs that meet the needs of the population. Graduates will be expected to act as discussion leaders while undergraduates will not. (same as NRSG 569). LEC

OCCULT 760 Professional Development and Leadership in Service Management (3). Exploration of professional responsibilities, professional development opportunities and preparations for employment. Service management content will build on previous service management courses, and will develop an understanding of leadership, administration, and management of occupational therapy services. LEC

OCCULT 765 Family and Community Service Delivery Systems (2). Through lecture and a community project, student will examine various systems that impact service delivery with individuals. Students will complete a semester long project with an individual centered on facilitating occupational performance needs. LEC

OCCULT 770 Level II Fieldwork, Part I (6). A required full-time, three-month supervised experience in a facility meeting specified criteria. Qualified occupational therapists supervise the experience. Students will be exposed to a variety of age ranges and disabilities within different service delivery systems. LEC

OCCULT 775 Level II Fieldwork, Part II (6). A required full-time, three-month supervised experience in a facility meeting specified criteria. Qualified occupational therapists supervise the experience. Students will be exposed to a variety of age ranges and disabilities within different service delivery systems. LEC

OCCULT 780 Elective Level II Fieldwork, Special Topics (8). An elective (optional) full-time, three month, supervised experience in a facility meeting specific criteria. Qualified occupational therapist will supervise this experience. This fieldwork would allow students to pursue areas of special interest. Prerequisite: Satisfactory completion of required academic course work. LEC

OCCULT 783 Evidence-based Practice (2). This course will address the parameters and criteria for evidence-based practice. Students will evaluate the status, beliefs, and practice of the profession, and will develop skills at synthesizing and presenting evidence to service recipients. Students will also formulate a decision-making paradigm for their future practice decisions. LEC

OCCULT 790 Research Practicum (2). Students in this course will carry out a research project under the guidance of a faculty mentor and write a research paper reporting the results of their study. LEC

OCCULT 801 Applied Neuroscience (3). This course will address the major functions of the systems within the central nervous system and how they interact to produce responses to environmental demands. Sensory input, central processing, and output mechanisms will be analyzed. The student will then appraise human behavior in relation to function and dysfunction of the nervous system, both in formulating potential behavioral signs when a specific neurological site is presented, and in hypothesizing about neurological involvement when analyzing a particular individual's problems. Prerequisite: Undergraduate neuroscience course or permission of instructor. LEC

OCCULT 810 Kinesiology (3). This course is designed to move beyond the clinical application of biomechanical principles in evaluation and treatment to the analysis of particular movement problems and to creative problem solving. Following core content of advanced kinesiology and exercise physiology, students will select a particular kinesiological issue or problem for more in depth guided study. Prerequisite: Permission of instructor. LEC

OCCULT 845 Advanced Study in: _________________. (3). This course will focus on directed readings, discussion, and the interpretation of data based literature in an identified specialty area. Although faculty directed, student presentations will be emphasized. Student directed research topics will be explored. Prerequisite: OCCULT 745 or equivalent course work with permission of instructor. LEC

OCCULT 890 Graduate Research (1-6). Students investigate on empirical question relevant to occupational therapy and write a literature review and a research proposal under the guidance of a faculty adviser. Pending approval of the proposal, the student will carry out initial phases of the project, including materials preparation and date collection. LEC
A three-year
Doctor of Physical
Therapy degree is
replacing the
current two-year
M.S. degree.
Please check with
the department
about the status
of this program.

The Ph.D. degree
in rehabilitation
science prepares
leaders in
research and
academia.

KU’s physical
therapy graduate
program was tied
for 10th in the
nation in the 2006
edition of U.S.
News’ “America’s
Best Graduate
Schools.”

M.S. in Occupational Therapy Courses

OTMS 699 Special Projects (1-6).
OTMS 703 Professional Development (3). With an emphasis on leadership skills and professionalism, this course will include mentoring, supervising, managing, organizing presentations, and teaching, writing, and contributing through professional organizations (interdisciplinary and occupational therapy). Students will have the opportunity to present their research findings to a diverse audience.

OTMS 705 Multidisciplinary Theoretical Perspectives (3). Students will explore the key theories in occupational therapy and those more specific to their emphasis area with an emphasis on those currently influencing clinical reasoning. Students will demonstrate an understanding of current theories and be able to compare and contrast key theories. Students will develop rationales for theory and evidence.

Furthermore, they will develop an impact summary in their identified emphasis area. Prerequisite: Permission of instructor. LEC

OTMS 735 Practice Models for Applied Science (3). Issues and trends relative to advanced application of theory, assessment and intervention with emphasis on pediatrics will be presented in lecture and discussion. Special projects will emphasize the student’s special interests. Although faculty directed, student presentation will be emphasized. LEC

OTMS 800 Research Proseminar (1). A proseminar conducted by the core graduate faculty in Occupational Therapy and Therapeutic Science. Twice-monthly meeting will involve student and faculty presentations of their current research, as well as provide more opportunities to obtain feedback on research proposals. May be taken more than once for a total of four credits. Cross-listed with TS 800. RSH

OTMS 801 Applied Neuroscience (3). The course will address the major functions of the systems within the central nervous system and how they interact to produce responses to environmental stimuli. Sensory input, central processing, and output mechanisms will be analyzed. The student will then appraise human behavior in relation to function and dysfunction of the nervous system, both in formulating potential behavioral signs when a specific neurological site is presented, and in hypothesizing about neurological involvement when analyzing a particular individuals problems. Prerequisite: Undergraduate neuroscience course or permission of instructor. LEC

OTMS 835 Interpreting Research for Applied Science (3). Research relevant to therapeutic intervention comes from a variety of disciplines involving varied research designs and analysis strategies. Students in this course will examine selected research studies and gain skill in analyzing methods and results as well as in applying research findings to practical problems. Students will also design their own research projects reflecting their area of interest. LEC

OTMS 880 Special Topics in Occupational Therapy (1-6). This course will focus on directed readings, discussion, and the interpretation of data-based literature with a targeted emphasis as determined by the student and the faculty mentor(s) together. Although faculty will participate in the mentoring process, student presentations will be emphasized and student-directed research topics explored. LEC

OTMS 890 Graduate Research (1-6). Students investigate an empirical question relevant to occupational therapy and write a literature review and a research proposal under the guidance of a faculty advisor. Before receiving approval of the proposal, the student will carry out initial phases of the project, including materials preparation and data collection. RSH

OTMS 899 Thesis (1-6). Course requires data analyses, interpretation, and scholarly writing based on individual original research carried out under the guidance of the student’s advisor. These activities, along with an oral presentation of research, must meet with approval of the student’s advisory committee to complete thesis requirements. Prerequisite: OTMS 900. THE

Therapeutic Science Courses

TS 800 Research Proseminar (1). A proseminar conducted by the core graduate faculty in Occupational Therapy and Therapeutic Science. Twice-monthly meetings will involve student and faculty presentations of their current research, as well as provide more opportunities to obtain feedback on research proposals. May be taken more than once for a total of four credits. (Same as OCHT 900.) LEC

TS 850 Multidisciplinary Theoretical Perspectives (3). Students will identify and explore key theories in behavioral and social science with an emphasis on those currently influencing clinical reasoning. Students will demonstrate an understanding of contemporary theories and be able to compare and contrast key theories, while also developing knowledge about theory guided research and interventions. (Same as OCHT 705.) LEC

TS 850 From Beliefs to Evidence (1). Analysis of the role of beliefs about practice in professional culture and how beliefs are affected by the accumulation of research evidence. Topics include the nature of science and beliefs, the nature of evidence, and the debate over evidence-based practice. Students will use topics from their own professional interests for class presentations and written assignments. May be taken more than once for a total of two credits. LEC

TS 880 Special Topics (1-6). An elective course to allow student investigation of special issues or problems related to applied research and/or practice, under the direction of a faculty member chosen by the student. Systematic coverage of current issues may include a research investigation or study related to pertinent sociocultural trends, practice factors, or emerging issues in service provision. Students will complete special projects such as oral presentations, written papers, or case analysis as negotiated with the faculty member. May be repeated for credit. Prerequisite: Permission of instructor, IND

TS 900 Evolving Interdisciplinary Views of Disablement (1). Assessment of how our social and cultural context defines notions of disability and disablement in our society. Topics include historical constructs of disability, public policy related to disability, and social paradigms of disability. Students will evaluate views of disablement from the perspective of their own discipline. May be taken more than once for a total of two credits. LEC

TS 950 Designing Effective Knowledge Transfer (1). Examination of the principles of knowledge transfer and diffusion of innovation as they relate to practices in therapeutic professions. Topics include the diffusion process, change agents, innovation adoption, and current diffusion methods. Students will evaluate diffusion processes that have occurred within their own professions. May be taken more than once for a total of two credits. LEC

TS 980 Advanced Study in Therapeutic Science (1-6). Students engage in advanced study of a topic of their interest, guided by an appropriate mentor. Methods include directed readings, interpretation of evidence, discussions, and written syntheses of existing literature. Course culminates in a written proposal for original research and an oral defense of that proposal. Credit is given only after the dissertation proposal is accepted by the student’s advisory committee. Prerequisite: Permission of instructor, IND

TS 990 Dissertation in Therapeutic Science (1-9). Research experience leading to dissertation for doctoral students in Therapeutic Science. LEC

Physical Therapy and Rehabilitation Sciences

Chair: Lisa Stehno-Bittel, lstadmmiss@kumc.edu 3056 Robinson Hall Mail Stop 2002, KU Medical Center 3901 Rainbow Blvd., Kansas City, KS 66160 www.ptrs.kumc.edu, (913) 588-6799

Associate Professors: Loudon, Pohl, Stehno-Bittel Assistant Professors: Boyd, Khuding, Liu, Searls, Smirnova

The department offers four programs: (1) a professional Doctor of Physical Therapy degree for students who plan to become physical therapists; (2) a Doctor of Philosophy degree in rehabilitation science to prepare qualified individuals for university teaching, research, service, and leadership positions in rehabilitation; (3) a rapid-transition D.PT./Ph.D. joint degree for students with B.S. degrees in health-related sciences who wish to become physical therapists and Ph.D.-educated rehabilitation scientists; and (4) a transitional D.PT. for physical therapists who wish to update their education and work toward the Doctor of Physical Therapy degree.

Doctor of Physical Therapy

The Doctor of Physical Therapy program provides opportunities for students to learn the application of basic science principles to the practice of physical therapy. The practice of physical therapy includes delivery of clinical physical therapy services, consumer education on wellness, research, and management.

The graduate may apply for licensure or registration to the state in which he or she will be working. The program is accredited by the Commission on Accreditation in Physical Therapy Education.

General Admission Requirements. To be admitted to the professional degree program in physical therapy, an applicant must meet the general entrance requirements of the Graduate School. Departmental admis-
Admission Requirements. The applicant must meet
certain criteria to be considered for admission. These include
1. A baccalaureate degree from an approved college or university.
2. The following academic prerequisites:
   - Humanities
     - 2 courses in English composition
     - 1 course in speech
   - Social Sciences
     - 1 course in general psychology
     - 1 course in advanced psychology
     - 1 course in sociology
     - 1 course in normal development
   - Basic Sciences
     - 2 semesters or equivalent of chemistry with laboratory
     - 2 semesters or equivalent of physics with laboratory
     - 1 semester or equivalent of anatomy with laboratory (may be
       human or mammalian)
     - 1 semester or equivalent of human physiology with laboratory
   - Mathematics
     - 1 course in college algebra and trigonometry or precalculus math-
       ematics or calculus
   - Recommended
     - Computer literacy
     - 1 course in ethics
     - 1 semester or equivalent of exercise physiology
     - 1 semester or equivalent of kinesiology
   - *A course may only be used once toward fulfillment of prerequisites.
   - *Note: All science prerequisites must have been taken within 10 years
     of application deadline. For prerequisite courses taken more than once
     (within the last 10 years), an average of all grades received will be
     used for grade-point average calculation.
3. Three letters of recommendation.
4. Grade-point average of 3.0 or higher on a 4.0
   scale in each of the following:
   - Required mathematics and science courses
   - *All prerequisite courses
   - *Overall grade-point average
5. Graduate Record Examination scores.
6. Clinical experience in physical therapy. A mini-
mum of 32 hours in observation, volunteer, or work
under the supervision of a physical therapist. Sixteen
of those hours must be in a hospital setting.
7. For international applicants, a satisfactory score
   on the Test of English as a Foreign Language.

Degree Requirements: Professional Program. The pro-
fessional program is a 36-month, full-time program be-
ingin each summer session. Courses include basic
science, clinical science, clinical procedures, and clinical
practica. Additionally, the student must complete a
comprehensive examination and a research project.

Transitional D.P.T.
The transitional Doctor of Physical therapy degree gives
practicing physical therapists the opportunity to advance
their knowledge in physical therapy. The program fo-
cusses on differential diagnosis, medical imaging, and evi-
dence-based practice. Students choose one of three spe-
cialties (orthopedics, neurology, or administration).

Admission Requirements. The applicant must meet the
general entrance requirements of the Graduate School.
Departmental admission requirements include
1. A baccalaureate or master’s degree in physical therapy.
2. A résumé detailing work history, formal educa-
tion, continuing education, professional organizations,
honors and awards, publications and presentations.
3. Three letters of recommendation.
4. A personal essay.

Degree Requirements. In addition to the general re-
quirements of the Graduate School, the basic require-
ments for the transitional D.P.T. degree include suc-
cessful completion of 27 credit hours of studies, includ-
ing 18 hours of core courses, 6 hours of advanced core
courses from a specialty area, and 3 hours of elective.

Ph.D. in Rehabilitation Sciences
The Ph.D. degree in rehabilitation sciences prepares
qualified individuals for leadership positions in re-
search and academia. The program focuses on advanc-
ing the science of medical rehabilitation and elucidat-
ing the scientific basis for the procedures and pro-
cesses used in clinical practice. Research includes
human and animal studies that promote an understand-
ing of the pathophysiology of injury, disease, functional
impairment, and associated disabilities and espouse the
rationale for therapies that alleviate impaired human
function and related physical and mental disabilities.

Admission Requirements. The program is open to stu-
dents with the B.S. degree or its equivalent in any of
the relevant sciences. Applicants do not have to be
physical therapists; however, each candidate is encour-
aged to have a broad background in the biological sci-
cences (including anatomy, physiology, neuroscience,
organic chemistry, biochemistry, microbiology, genet-
ics, and molecular biology), calculus, and statistics.

Other admission requirements include
1. A minimum grade-point average of 3.0 on a 4.0 scale in the last 60 credit hours of course work.
2. A satisfactory score on the Graduate Record Ex-
amination within the previous five years.
3. For international applicants, a satisfactory score
   on the Test of English as a Foreign Language within
   the previous two years.
4. Three letters of reference from persons familiar
   with the applicant's professional and academic abilities.
5. A curriculum vitae detailing work history, formal
   education, continuing education, licensing and certifi-
   cation, professional organizations, honors, and awards,
   publications, presentations, and grants, etc.
6. Transcripts from all colleges attended.
7. A written educational plan describing the appli-
cant's goals and objectives.

Degree Requirements. In addition to the general re-
quirements of the Graduate School, the basic require-
ments for the Ph.D. degree include
1. Successful completion of a minimum of 51 credit
   hours of studies, comprising at least 21 hours of core
   courses, 8 hours of research tools, one course in a For-
   eign Language or Other Research Skills (FLORS), 12
   hours of doctoral dissertation research, and 6 hours of
   cognate-elective courses.
2. Demonstration of competence in the core areas of
   study and FLORS, by successfully completing the
   comprehensive examination that qualifies the student
   for candidacy for the Ph.D.
3. Satisfactory completion of a dissertation based on
   original research.
4. Successful oral presentation and defense of the
dissertation.

It is expected that the equivalent of at least three
years of full-time study will be needed to fulfill these requirements.
Physical Therapy & Rehabilitation Sciences

D.P.T./Ph.D. Joint Degree Program

The joint degree program integrates the professional D.P.T. degree in physical therapy with the Ph.D. degree in rehabilitation sciences and clinical work experience. It offers outstanding nonclinician applicants the opportunity to pursue both degrees simultaneously. This accelerated program prepares highly motivated individuals for leadership positions in research and academia. Qualified students must declare their desire to be considered for the joint degree during the admission process. To receive both degrees, students must meet the requirements for each degree. Credit hours earned in the professional D.P.T. degree program cannot be transferred toward requirements for the Ph.D. degree, although satisfactory performance in some Ph.D. courses may be recognized and credited in formulating the student's professional D.P.T. curriculum. It is expected that the equivalent of four to five years of full-time study will be needed to fulfill the requirements for both degrees.

- **Physical Therapy and Rehabilitation Sciences Courses**
  - **PTRS 701 Professional Interactions** (1). Introduces the student to the physical therapy profession and professional role expectations. The history of physical therapy as it relates to the professionalization process, including ethical and legal obligations, as well as student responsibilities. It also addresses the development of effective communication and interpersonal skills and appreciation for individual and cultural differences within clinical settings. Prerequisite: Admission to the D.P.T. program or permission of instructor.
  - **PTRS 702 Physical Therapy Documentation** (1). Emphasizes the development of written and electronic documentation skills in the student's professional D.P.T. curriculum. Prerequisite: Successful completion of semester 1 of the DPT curriculum or permission of instructor.
  - **PTRS 703 Physical Therapy Tests and Measures** (2). Students will be introduced to some of the tests and measures used by physical therapists as a means to gather information about the patient/client. The tests and measures covered include: vital signs, goniometry, manual muscle tests, psychological testing, palpation of soft tissues, and subjective examination skills for all peripheral joints, abnormal gait, and therapeutic interventions. Prerequisite: Successful completion of two semesters of the physical therapy curriculum or permission of the instructor.
  - **PTRS 704 Basics of Acute Care Physical Therapy** (3). Skills required by the physical therapist in the generalist acute care environment. A series of patient care related lectures, demonstrations, videotapes and laboratories are integrated to teach proper body mechanics, infection control and sterile technique, basic assessment, transfers, positioning, tubes, bandages, clinic safety procedures, tilt table usage, prescribing proper WC, and sterile technique, basic assessment, transfers, positioning, tubes, bandages, etc. Prerequisite: Admission to the DPT program or permission of instructor.
  - **PTRS 705 Physical Therapy Interventions** (4). Students will apply the skills obtained in Physical Therapy Test and Measures, Physical Ther.-Doc. and Documentation, Basics of Acute Care Physical Therapy and begin clinical problem-solving using common physical therapy treatment interventions. Topics include interventional management with an emphasis on wound healing interventions, therapeutic modalities with an emphasis on the healing process, with an emphasis on PT-specific diagnoses. Learning opportunities include: lecture, laboratory, demonstration and patient interaction. Prerequisite: Admission to the DPT program or permission of instructor.
  - **PTRS 710 Advanced Human Anatomy** (4). The student will obtain a basic understanding of human gross anatomy with specific knowledge of upper and lower extremities, head and neck, and back. At the end of this course the student will be able to apply this knowledge of anatomy to functional and clinical situations. Prerequisite: Admission into the DPT program, Department of Physical Therapy and Rehabilitation Sciences or permission of instructor.
  - **PTRS 711 Applied Kinesiology and Biomechanics** (3). The course involves a study of joint structure, joint function, and the biomechanical principles underlying the kinetics and kinematics of human motion, including normal gait and selected pathological gait patterns. Emphasis is placed on the interaction between biomechanical and physiological factors in musculoskeletal function and neuromuscular control. Prerequisite: Successful completion of one of the two DPT curriculum or permission of instructor.
  - **PTRS 712 Pathophysiology and the Physical Therapy Diagnosis** (4). Review of integrative human physiology and pathophysiology with an emphasis upon homeostatic mechanisms and etiologies of disease. The interrelationships of function and dysfunction at the molecular, cellular and tissue level (pathology), organ and systemic level (impaired) and to the total human body (functional limitations) will be applied in each of the body systems. Discussions and applied materials will be tailored to the physical therapist with an emphasis on PT-specific diagnoses. Prerequisite: Successful completion of semester 1 of the DPT curriculum or permission of instructor.
  - **PTRS 715 Applied Musculoskeletal Anatomy** (3). This course involves a study of joint structure, joint function, and the biomechanical principles underlying human motion. All major peripheral joints and the spine will be studied. Application of functional anatomy to clinical physical therapy situations will be emphasized.
  - **PTRS 720 Clinical Education I** (1.50). Comprised of a three week clinical practicum at an assigned facility. Students will be exposed to a clinical setting and preliminary opportunities for application of didactic course work. Emphasis will be placed on the development of communication and interpersonal skills and procedures that have been introduced in classes. Prerequisite: Admission into the DPT program or successful completion of semester one of the curriculum.
  - **PTRS 730 Clinical Education II** (1.50). This course is comprised of a three week clinical practicum at an assigned facility. Students will be exposed to a clinical setting and continuing opportunities for application of didactic course work. Emphasis will continue to be placed on the development of communication and interpersonal skills in the clinical setting, as well as documentation and physical therapy skills and procedures that have been introduced in classes. Prerequisite: Successful completion of two semesters of the physical therapy curriculum (including Clinical Education I) or permission of instructor.
  - **PTRS 740 Evidence-based Orthopedic Rehab** (3). Students will apply the concepts taught in Applied Musculoskeletal Anatomy and skills obtained in their individual clinical practice. This course will include discussion related to musculoskeletal dysfunctions affecting peripheral and spinal joints. The course activities include review of the current evidence-based scientific literature related to orthopedic conditions, web-based discussion related to individual patient case scenarios and lab activities related to assessment and treatment techniques including mobilization/manipulation.
  - **PTRS 745 Musculoskeletal Physical Therapy I** (4). Builds on the foundation laid with PTRS 701: Advanced Human Anatomy. PTRS 703: Physical Therapy Tests and Measures, PTRS 711: Applied Kinesiology and Biomechanics. Examination skills and treatment interventions that apply specifically to musculoskeletal pathology. Basic examination skills for gait and transfers. Prerequisite: Successful completion of semester 1 and 2 of the DPT curriculum or permission of instructor.
  - **PTRS 746 Orthopedic Medicine** (3). Mastery of physical therapy subject and objective examination and treatment intervention for patients of all ages who present with a musculoskeletal disorder with emphasis on amputation, prosthetics, upper and lower extremity orthoses, fracture management and connective tissue disorders. Emphasis will be placed on the most common clinical problems and physical therapy diagnoses. Prerequisite: Successful completion of semesters 1 and 2 of the DPT curriculum or permission of instructor.
  - **PTRS 750 Research in Evidence-based Physical Therapy Practice** (3). An introduction to research in the evidence-based physical therapy practice including the Scientific Method, library and multimedia resources, research process, measurement theory (reliability and validity), research design, and general statistical design. Emphasis is placed on ethical research, critical review and analysis of research publications, statistical concepts, and writing of a research report and/or research proposal. Throughout, emphasis is placed on clinical research pertinent to physical therapy. Prerequisite: Successful completion of one and two of the DPT curriculum or permission of instructor.
  - **PTRS 760 Introduction to Matlab Programming** (1). Introduction: matlab windows, input-output, file types, general commands; interactive computation; matrices and vectors, matrix and array operations, scripts and functions applications, graphics. Prerequisite: None

New PTRS courses will be introduced in spring and fall 2006. Please check with the department for details.

A joint D.P.T./Ph.D. degree in physical therapy and rehabilitation science is offered.

The Archie R. Dykes Library for Health Sciences provides a comprehensive health sciences collection of more than 170,000 books, journals, and microforms. www.library.kumc.edu.
PTRS 805 Seminar in Rehabilitation Research (0.50-3). Students will be instructed in the planning and presentation of a 45 minute scientific seminar or thesis area seminar. Students will learn how to design and produce effective poster presentations. Prerequisite: Entrance in the Ph.D. program in Rehabilitation Science or consent of instructor. SEM

PTRS 812 Case Studies in PT Diagnosis (2). This course will provide students with the applied knowledge to medically screen patients for symptoms and signs that require the expertise of other health care professionals. Patient cases currently treated by the practicing physical therapist will be used to compare diagnostic tests and values. The course will focus on comorbidities and their implications in diagnosis and treatment. The course will be delivered via the web. Prerequisite includes admission into the DPT program or approval by the instructor. LEC

PTRS 813 Pathophysiology (2). Physical therapists need skills to relate human pathophysiology to its clinical presentation. The interrelationships of function and dysfunction at the molecular, cellular and tissue level (pathology), organ and systemic level (impaired function), and the terminology of these will be covered. The course will be delivered via the web. Prerequisites include admission to the DPT program or permission of instructor. LEC

PTRS 820 Clinical Education I (2). Comprised of a four week clinical practicum at an assigned facility. Students will be exposed to all patients in that facility and will develop skills in patient assessment, treatment, and evaluation. Students will be supervised and evaluated under the direction of a licensed professional physical therapist. Prerequisite: Successful completion of 3 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 821 Clinical Education II (2). This course will provide exposure to clinical education in the first 4 semesters of the DPT curriculum including Clinical Education I, II and III. LEC

PTRS 823 Clinical Education III (2). This course will provide clinical education in the final 2 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 824 Clinical Education IV (2). This course will provide directed experiences in conducting evidence-based research activities. The student will be supervised by a member of the faculty. This is a two-semester course. Prerequisite: Successful completion of the first 5 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 825 Exercise Physiology (3). This course will provide entry-level and higher level knowledge of the physiological functions and adaptations of the human body with exercise. Emphasis will be placed on familiarizing students with sound medical rationale and the basis for treatment considering the immediate and long-term effects of exercise. Prerequisite: Acceptance in the DPT program or permission of the instructor. LEC

PTRS 830 Clinical Education IV (1.5). This course is comprised of a four week clinical practicum at an assigned facility. Students will be exposed to continuing opportunities for application of didactic course work. Emphasis will be placed on the development of communication and interpersonal skills (701), the application of general physical therapy evaluation and treatment skills (711, 712, 745, 746, 750, 855, 875), preliminary documentation (702), differential diagnosis of general medical conditions (880), evidence based physical therapy practice (750) and basic physical therapy evaluation and treatment skills (711, 712, 745, 746, 750, 855, 875), preliminary documentation (702), differential diagnosis of general medical conditions (880), evidence based physical therapy practice (750) and basic physical therapy skills and procedures in the clinical setting (703, 704, 705). Prerequisite: Successful completion of the first 4 semesters of the DPT curriculum including Clinical Education I, II and III. LEC

PTRS 832 Health Promotion through the Life Span (3). Focuses on the role of the physical therapist in health promotion across the lifespan. Emphasis is placed on familiarizing the students with the concept of wellness, health/fitness screening methods, nutrition, education health promotion programs in the community and the overall role well-being plays in the individual’s life. Prerequisite: Successful completion of the first 4 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 835 Pharmacology for Physical Therapists (3). Pharmacological background for the clinical treatment of patients referred to physical therapy. Fundamental actions of drugs including mechanisms of therapeutic and adverse effects. Prerequisites: Successful completion of 3 semesters of the DPT program or permission of instructor. LEC

PTRS 850 Neuroscience (3). This course will introduce the principles of neuroscience and describe their application as relevant to rehabilitation scientists. The course will begin with the fundamentals of the nervous system, then cover the major functions of the peripheral, autonomic and central nervous systems. The manner in which these systems interact to produce appropriate responses to external demands will be discussed. The behavioral consequences of damage to each system will be integrated throughout. Particular emphasis will be placed on the sensorimotor role in perception and the control of movement. Lecture and Lab. Prerequisite: Successful completion of 4 semesters of the DPT curriculum or permission of the instructor. LEC

PTRS 851 Control of Human Movement (4). Will combine the physiological, neurological and psychological factors that contribute to the control of voluntary movement and the learning of motor skills. Changes over the life span as well as changes secondary to pathology will be covered with the emphasis on the effects of brain damage. The development of the control of movement, neuromuscular plasticity and the effects of practice will be discussed. The course will focus on the relationship of our scientific knowledge in motor control and motor learning to the practice of physical therapy. Prerequisite: Successful completion of 4 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 852 Neurologic Physical Therapy I (4). Will integrate neurophysiology and neuroanatomy into the clinical presentation of adults with neurologic pathology. Students will learn the etiology, epidemiology and signs and symptoms of selected neurologic conditions and the medical management of patients with central and peripheral nervous system disorders will be presented in relationship to the practice of physical therapy. The course will introduce examination and treatment of impairments for persons with neuromuscular pathologies. Students will be presented with simple case studies and progress to more complex patient problems. Prerequisite: Successful completion of the first 3 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 853 Neurologic Physical Therapy II (4). This course will explore functional mobility deficits in patients with neuromotor pathology. Building upon previous coursework, students will acquire the skills to hypothesize about the relationship of pathology, impairments and involvement of other systems to functional deficits for adults with neuromotor pathology. Contemporary motor control and motor learning theories and research evidence will be emphasized in the development of appropriate intervention programs. Psychosocial factors will also be considered in the discussion of complex patient cases. Prerequisite: Successful completion of 6 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 854 Musculoskeletal Physical Therapy I (2). Incorporates concepts from PTRS 710: Advanced Human Anatomy, PTRS 703: Physical Therapy Tests and Measures, PTRS 711: Applied Kinesiology and Biomechanics and PTRS. Musculoskeletal Physical Therapy I, Terminology, examination, evaluation, development of a treatment plan, treatment techniques and advanced differential diagnosis skills for the Temporomandibular Joint (TMJ) complex and complex peripheral and/or spinal disorders are taught through lecture, demonstration and student participation. Prerequisites: Successful completion of 4 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 855 Musculoskeletal Physical Therapy II (3). Incorporates concepts from PTRS 710: Advanced Human Anatomy, PTRS 703: Physical Therapy Tests and Measures, PTRS 711: Applied Kinesiology and Biomechanics and PTRS. Musculoskeletal Physical Therapy I, Terminology, examination, evaluation, development of a treatment plan, treatment techniques and advanced differential diagnosis skills for the Temporomandibular Joint (TMJ) complex and complex peripheral and/or spinal disorders are taught through lecture, demonstration and student participation. Prerequisites: Successful completion of 4 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 856 Musculoskeletal Physical Therapy III (4). Incorporates concepts from PTRS 710: Advanced Human Anatomy, PTRS 703: Physical Therapy Tests and Measures, PTRS 711: Applied Kinesiology and Biomechanics and PTRS. Musculoskeletal Physical Therapy I, Terminology, examination, evaluation, development of a treatment plan, treatment techniques and advanced differential diagnosis skills for the Temporomandibular Joint (TMJ) complex and complex peripheral and/or spinal disorders are taught through lecture, demonstration and student participation. Prerequisites: Successful completion of 4 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 857 Musculoskeletal Physical Therapy IV (4). Incorporates concepts from PTRS 710: Advanced Human Anatomy, PTRS 703: Physical Therapy Tests and Measures, PTRS 711: Applied Kinesiology and Biomechanics and PTRS. Musculoskeletal Physical Therapy I, Terminology, examination, evaluation, development of a treatment plan, treatment techniques and advanced differential diagnosis skills for the Temporomandibular Joint (TMJ) complex and complex peripheral and/or spinal disorders are taught through lecture, demonstration and student participation. Prerequisites: Successful completion of 4 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 858 Evidence-based Rehabilitation of Patients Post-CVA (3). This course will provide students with the applied knowledge to medically screen patients for symptoms and signs that require the expertise of other health care professionals. Patient cases currently treated by the practicing physical therapist will be used to compare diagnostic tests and values. The course will focus on comorbidities and their implications in diagnosis and treatment. The course will be delivered through the web. Prerequisite includes admission into the DPT program or approval of the instructor. LEC

PTRS 859 Evidence-based Research Practicum I (1). Supervised and directed experiences in conducting evidence-based research activities. The research activities involved in this course are broadly defined with emphasis on the enhancement of evidence-based physical therapy practice. The student will be supervised by a member of the faculty. This is a two-semester course. Prerequisite: Successful completion of the first 5 semesters of the DPT curriculum or permission of instructor. RSH

PTRS 862 Pathobiology of Human Function I (4). The study of the biology of pathological processes that impair human function with emphasis on 1) the mechanisms by which cells and tissues adapt to injury, 2) skeletal and cardiac muscle pathobiology, including skeletal muscle adaptation in health and disease and congenital muscle abnormalities, 3) pathophisiology of skin, tendons, ligaments, cartilage, and other connective tissues, 4) bone pathobiology, including osteoporosis, osteoarthritis, and fractures, and 5) pathophisiology of cardiorespiratory function. Emphasis will be placed on the functional impairments resulting from the pathological condition. Prerequisite: Entrance in the DPT program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 863 Pathobiology of Human Function II (4). A study of biology and pathological processes that impair human function with emphasis on neuromuscular diseases, injury and diseases of the central and peripheral nervous systems, and neurological disorders associated with...
needed for successful practice as a physical therapist. The student will work under the supervision of an experienced physical therapist in clinical settings affiliated with the program. Prerequisite: Successful completion of 7 semesters of the DPT program including Clinical Education I, II, III, IV and V. LEC

PTRS 865 Independent Study in Physical Therapy (1-3). Individually negotiated learning experiences appropriate to the interests and background of the student. The student will be supervised by a PT faculty member. Prerequisite: Admission to the Post-Professional Program or permission of instructor. IND

PTRS 870 Teaching Practicum (1-3). Directed experiences in a planned instructional activity. Student will write course objectives, plan and deliver lectures, produce practical and written exams and assign grades. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or consent of instructor. LEC

PTRS 873 Research Practicum (1-3). This course is designed to provide supervised research experience in various laboratories in the department. Prerequisite: Entry in the Ph.D. program in Rehabilitation Sciences or consent of instructor. RSH

PTRS 875 Clinical Practicum (1-3). Specialized clinical training in a highly specific area of specialization. The primary purpose of this course is for the student to develop advanced clinical skills in his/her area of specialization. Prerequisite: Admission to the post professional program or consent of instructor. CLN

PTRS 880 Differential Diagnosis of General Medical Conditions (3). Designed to provide students with the knowledge and clinical tools to medically screen patients for the presence of symptoms and signs that require the expertise of other health care professionals. It will focus on diagnoses that are not covered by common PT practice including diseases of the endocrine system, the immune system, GI system, and neoplasias. Prerequisite: Successful completion of the first 3 semesters of the DPT curriculum or permission of instructor. LEC

PTRS 899 Master's Thesis (1-3). Preparation of the formal thesis based on independent research and in partial fulfillment of the requirements for the Master’s degree. THE

PTRS 920 Clinical Education VI (9). Eighteen weeks of clinical practice in either of two different practice settings for nine weeks, or three different practice settings for six weeks. During these clinical rotations the student will have the opportunity to develop the patient care skills needed for successful practice as a physical therapist. The student will work under the supervision of an experienced physical therapist in clinical settings affiliated with the program. Prerequisite: Successful completion of 7 semesters of the DPT program including Clinical Education I, II, III, IV and V. LEC

PTRS 960 Advanced Studies in Musculoskeletal Rehabilitation (3). The student will study the biomechanical principles related to normal human joint motion. The factors that predispose abnormal motion will be evaluated. Current scientific literature will be investigated to determine the optimal rehabilitation techniques for functional musculoskeletal rehabilitation. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 961 Advanced Studies in Neurorehabilitation (3). Rehabilitation of adults with brain damage rests on the premise that new skills can be learned despite central nervous system pathology. This course will explore the science of neurorehabilitation. We will investigate the literature concerning the following questions: Can rehabilitation affect change that leads to skill learning, who will benefit from rehabilitation, how should outcomes be evaluated, what optimizes rehabilitation success, when should rehabilitation be undertaken, and how much rehabilitation is necessary to facilitate skill learning? Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or consent of instructor. LEC

PTRS 970 Instrumentational Analysis of Human Function (3). An in-depth study that provides critical analysis of equipment and other resources used in analyzing human motion, balance, strength, electro-physiological responses, and cardiorespiratory function. Students will be required to conduct a preliminary study, including design, methodology and data collection using one or more of these instruments. Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or the consent of the instructor. LEC

PTRS 971 Advanced Studies in Neurorehabilitation (3). Rehabilitation of adults with brain damage rests on the premise that new skills can be learned despite central nervous system pathology. This course will explore the science of neurorehabilitation. We will investigate the literature concerning the following questions: Can rehabilitation affect change that leads to skill learning, who will benefit from rehabilitation, how should outcomes be evaluated, what optimizes rehabilitation success, when should rehabilitation be undertaken, and how much rehabilitation is necessary to facilitate skill learning? Prerequisite: Entry in the Ph.D. program in Rehabilitation Science or consent of instructor. LEC

PTRS 980 Graduate Research (1-10). Original Laboratory investigation conducted under the supervision of a senior staff member. Prerequisite: Consent of instructor. RSH

PTRS 990 Dissertation in Rehabilitation Research (1-10). For students in advanced standing enrolled in the doctoral program in Rehabilitation Science. THE
School of Architecture and Urban Design

John C. Gaunt, Dean
Marvin Hall, 1465 Jayhawk Blvd., Room 206
Lawrence, KS 66045-7614, www.saud.ku.edu

Architecture .............................................. 77
  The Program .................................................... 77
    Professional .................................................. 77
    Academic ....................................................... 77
    Architectural Management Post-professional .... 77
  Facilities .......................................................... 77
    Marvin Hall .................................................... 77
    Architectural Resource Center ........................ 77
  Admission .......................................................... 78
  1. Professional Master of Architecture .......... 78
     Year One: Upper-level Undergraduate
     and Entry-level Graduate Curriculum ........... 78
     Year Two: Professional Graduate Curriculum ... 78
     Year Three: Advanced Professional Graduate
     Curriculum .................................................... 79
  2. Academic Master of Architecture ............. 79
  3. Post-professional Master of Architecture .... 79
     Architecture Courses ....................................... 80

Architectural Engineering ......................... 81

Joint Professional M.Arch./B.S. in
Architectural Engineering Option .............. 81

Urban Planning ......................................... 82
  Admission ......................................................... 82
  Baccalaureate Preparation ............................ 82
  M.U.P. Degree Program & Requirements ........ 82
     Concentrations ............................................. 82
     Free Electives .............................................. 83
     Thesis Option ............................................... 83
     Nonthesis Option ......................................... 83
     Urban Planning Courses ............................... 83

Joint Degree Programs .............................. 84
  M.U.P. & M.Arch. ............................................ 84
  M.U.P. & M.A. in American Studies ................. 84
  M.U.P. & M.A. in Geography ............................ 85
  M.U.P. & M.P.A. .............................................. 85
  M.U.P. & J.D. .................................................. 85
School of Architecture
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Professors: Diaz, Grabow, Lesnikowski, Major, Mayo, Newton, Pran, Rockhill, Sprechelmeier
Professors Emeriti: Griffin, Kahn, McCoy
Associate Professors: Barrière, Carswell, Criss, Gore, Jackson, Luckey, Padget, Richardson, Sander, Sanguinetti, Swann
Assistant Professors: Chang, Corser, Huppert, l’Heureux, Ramaswami

The School of Architecture and Urban Design is anticipating changes to graduate studies in architecture. For information about current degree programs, contact www.saud.ku.edu or (785) 864-4281.

The Program
Graduate study in architecture at KU leads to the Master of Architecture (M.Arch.) degree. There are three distinct plans of study, depending on the student's educational background:

1. A professional degree for a student with an undergraduate degree in any field, including architecture.
2. An academic degree for a student with an undergraduate degree in architecture or a related discipline.
3. A post-professional degree for a student with an undergraduate degree in architecture or a related discipline and some construction industry experience.

The first course of study leads to a professional degree that prepares the student to enter an architectural apprenticeship in the office of a licensed architect. A student with any undergraduate degree including architecture may enter this program. This degree is accredited by the National Architectural Accrediting Board. To receive the accredited degree, each student must complete seven semesters, over three years, in an approved sequence of architectural design studios, each of which is accompanied by associated professional courses.

According to the National Architectural Accrediting Board, "In the United States, most state registration boards require a degree from an accredited professional program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards.

"Master's degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree."

The second course of study is an academic program on the Lawrence campus. It is for the student who is interested in exploring various approaches in analyzing the built environment. A student with an undergraduate degree in architecture or a related discipline may enter this course of study. To receive the master's degree, each student must complete an academic or design-related project or must take a comprehensive exam at the end of the plan of study.

The third course of study is the architectural management post-professional program, on the KU Edwards Campus in Kansas City. This course of study gives the practitioner an understanding of management issues in the design process. It is structured to be completed on a part-time basis.

Facilities
The School of Architecture and Urban Design is housed in Marvin Hall on the central KU campus in Lawrence. First built in 1907, Marvin Hall was completely renovated and remodeled in 1979-80 and has received design awards from the Kansas City Chapter of the American Institute of Architects and the Kansas Preservation Alliance. Marvin Hall houses a Building Technology Laboratory, an Illumination Laboratory, Computer Laboratories, an Acoustics Laboratory, a Construction Management Research Laboratory, a Wood and Metal Shop, and a Photographic Laboratory. The Architectural Resource Center in Marvin Hall consists of a reading room and a slide library. The reading room contains architectural references, subscriptions to domestic and foreign journals, two periodical indices, and approximately 1,000 back issues of various periodicals. The slide library contains more than 85,000 architectural slides. The privately financed reading room provides a quiet study space and ready

Photo, page 76: Second-year M.Arch. students work on a project that rethinks domestic environments based on movement and use. Photo by Cynthia Muckey.
Admission

Students who wish to practice as licensed architects should apply to the professional, NAAB-accredited Master of Architecture program.

Students who do not have an accredited first professional degree in architecture and do not intend to become licensed architects but are interested in the study of architecture at the graduate level (either for academic or related professional reasons) may apply for admission to either the academic or post-professional program. Depending on the student's previous background, he or she may, at the discretion of the faculty, be required to take basic skill courses in addition to the regular plan of study.

Regardless of background or career goals, a person whose previous records indicate the ability to succeed with advanced work may be admitted to the Graduate School through one of the graduate programs. Admission requires a bachelor's degree and a grade-point average of 3.0 from KU or another accredited institution or foreign university with substantially equivalent requirements for the bachelor's degree. The Graduate School reviews the student's academic background before admitting a student without a bachelor's degree as a degree-seeking graduate student at KU. A complete application for admission consists of the following materials:

1. Graduate School application form.
2. Two copies of official transcripts from all colleges or universities attended, showing receipt of a bachelor's degree.
3. Three letters of recommendation from persons qualified to comment on the applicant's intellectual abilities and probable success in graduate study.
4. Application fee, nonrefundable check or money order payable to the University of Kansas. See Admission in the General Information chapter of this catalog for further information.
5. Evidence of language proficiency if the native tongue is not English, including:
   a. A degree from an English-language college or university
   b. A Test of English as a Foreign Language score of 600 (paper-based) or 250 (computer-based) or higher, with no less than 57 on each part.
6. A statement of interest indicating the applicant's career goals and the relationship of these goals to the specific option chosen.
7. A brochure of design work if the applicant's previous degree was in a design discipline or samples of written work if the previous degree was outside the design discipline.

In most cases, candidates are interviewed by telephone or in person as part of the application process.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
School of Architecture and Urban Design
Marvin Hall, 1465 Jayhawk Blvd., Room 206
Lawrence, KS 66045-7614

The Master of Architecture degree offers options on the Lawrence campus and on the KU Edwards Campus:

The University of Kansas Edwards Campus
12600 Quivira Rd.
Overland Park, KS 66213-2402

Telephone (from Lawrence): 864-8400 or (913) 897-8400, http://edwardscampus.ku.edu

1. Professional Master of Architecture

A student who wishes to pursue a professional career as a licensed architect may apply for admission to this program. Degree requirements conform to the standards established by the National Architectural Accrediting Board, and students who have successfully completed course work in an approved NAAB curriculum may achieve advanced standing. All requests for advanced standing are evaluated using the minimum qualifications for graduate study at KU, curricular standards established by the NAAB, and procedures approved by the architecture program graduate studies committee. This degree requires a sequence of seven semesters of architectural design studio, each of which is accompanied by associated professional graduate courses. One semester of architectural design must be taken in an approved studio setting in a foreign country. Currently, students in this program spend a summer session in Siena, Italy, and Berlin, Germany.

The curriculum is divided into three distinct year levels. Minimum standards for admission and the approved course work for each level are as follows:

Year One: Upper-level Undergraduate and Entry-level Graduate Curriculum. Open to graduates with bachelor's degrees who have completed college course work in physics and calculus and meet the minimum standards set by the Graduate School for admission as graduate students.

Fall Semester: Technology (15 hours)
ARCH 604 Graduate Design Studio I .............................................. 6
ARCH 613 Visual Thinking Studio I ................................................. 3
ARCH 626 Building Technology I .................................................... 3
ARCH 640 History of Architecture I: Ancient and Medieval ......... 3

Spring Semester: Technology (19 hours)
ARCH 604 Graduate Design Studio II ............................................ 6
ARCH 627 Building Technology II ................................................... 3
ARCH 641 History of Architecture II: Renaissance to Age of Reason .................................................. 3
ARCH 629 Statics for Architects ....................................................... 3
ARCH 621 Strength of Materials for Architects ................................ 2
Architectural elective .................................................................. 3

Year Two: Professional Graduate Curriculum. Open to (1) students who have completed all requirements in Year One and meet the standards set by the Graduate School and the architecture program for continuation as graduate students, or (2) graduates with bachelor's
degrees who meet the minimum standards outlined in (1) of this paragraph and who have been approved by the graduate coordinator to advance to this level.

**Fall Semester: Site Design (18 hours)**
- ARCH 705 Graduate Design Studio III ........................................ 6
- ARCH 760 Architecture History/Theory IV ................................. 3
- ARCH 764 Site Planning ............................................................... 3
- ARCH 624 Structural Systems for Architects ................................. 3
- ARCH 526 Building Power Systems for Architects ....................... 1
- ARCH 527 Building Interior Lighting for Architects ....................... 1
- ARCH 528 Building Acoustical Systems for Architects .................... 1

**Spring Semester: Human Use (18 hours)**
- ARCH 704 Graduate Design Studio IV .......................................... 6
- ARCH 652 History of Urban Design ............................................. 3
- ARCH 625 Analysis and Design of Structures for Architects .......... 3
- ARCE 561 Building Mechanical Systems for Architects ............... 3
- Architectural elective ..................................................................... 3

**Year Three: Advanced Professional Graduate Curriculum.** Open to (1) students who have completed all requirements in Year Two and who meet the standards set by the Graduate School for continuation as graduate students, or (2) graduates with NAAB 5-year bachelor of architecture degrees who meet the standards outlined in (1) of this paragraph and who have been approved by the graduate coordinator to advance to this level.

**Summer Session: Urban Space, Siena, Italy; and Berlin, Germany (9 hours)**
- ARCH 705 Graduate Design Studio V ............................................ 6
- Architectural elective ..................................................................... 3

**Fall Semester: Practice (15 hours)**
- ARCH 803 Graduate Design Studio VI ......................................... 6
- ARCH 858 Architectural Management Systems .............................. 3
- Architectural elective ..................................................................... 3

**Spring Semester: Design Integration (15 hours)**
- ARCH 804 Graduate Design Studio VII ......................................... 6
- ARCH 852 Professional Practice ................................................. 3
- Architectural electives .................................................................... 6

**Note:** Architectural electives in the above curriculum are chosen from the nonrequired courses listed in the four concentrations described in the Academic Graduate program. Students must elect a minimum of one course in each of the four areas.

### 2. Academic Master of Architecture

This program is offered on the Lawrence campus for the student who is interested in the study of architecture from an academic and scholarly perspective. A student who wishes to pursue graduate study in architecture at KU must submit a statement of intent detailing academic interests and career goals. Because admission depends on the student's objectives and the faculty's matching research interests, potential applicants should contact the coordinator before submitting applications. Students from this program have established a strong academic tradition and won honors in national research competitions. The key to their success has been the careful selection of research topics and the ways these topics have paralleled the academic and professional interests of the architecture faculty.

For students admitted to the program at the master's level in architecture in Lawrence, a total of 36 credit hours of course work is required. Each student must enroll in a 3-hour introductory course dealing with research methods and theory and must complete an additional 12-hour core of course work that addresses each of the four areas: (1) history/theory, (2) technology/practice, (3) design/methods, and (4) urban/social issues. In addition to the core courses, each student must complete a minimum of 15 graduate credit hours in a sequence of courses in one of the four concentrations listed above. A minimum of 6 of these hours must be taken in one of the established concentrations. With the consent of the student's adviser and the approval of the graduate studies committee, the student may take a maximum of 12 hours of graduate credit in course work outside the School of Architecture and Urban Design. Six hours in the 36-hour course of study are composed of course work in which the student prepares a written project or thesis, or in additional course work in the student's concentration to prepare for a final written examination.

The following list describes the four concentrations and provides a sample of courses offered in the recent past in each area. Students should consult the most current course listing provided by the Architecture Program each academic year to determine which courses will be offered each semester.

**History/Theory**
- Architectural History
- Theory and Context of Architecture
- Readings in Classical Architecture
- Architecture and the Cosmos
- Introduction to Historic Preservation
- Special Topics in Historic Preservation
- American Landscape
- Architecture, Art, and Science
- Current Directions in Architecture

**Technology/Practice**
- Building Mechanical and Energy Systems
- Construction and Project Management
- Structural Systems
- Architectural Management courses

**Design/Methods**
- Computer Applications
- Architectural Photography
- Advanced Architectural Presentation Techniques

**Urban/Social**
- Homeplaces
- History of Urban Design
- Environmental and Land Use Planning
- Housing and Development Planning
- Physical Development Planning
- Transportation Planning

### 3. Post-professional Master of Architecture

The architectural management program is oriented to the administration and practice of architecture and related disciplines. It is offered on KU’s Edwards Campus in Overland Park. Studies in this program are intended to:

1. Provide skills and knowledge necessary to become effective participants in the management of an organization;
2. Provide information about the management of planning, design, and construction projects; and
3. Expose students to management issues facing the design professions.

The curriculum draws on the disciplines of business management, planning, computer science, law, and architecture to expose students to fundamental concepts of management as they relate to the business of architecture. A total of 36 credit hours of course work is required. The curriculum consists of required courses in Financial and Economic Issues, Organizational Issues, Computer and Research Methods, Project Delivery, Law and the Design Profession, Marketing, and Contemporary Issues Seminars. Students may enroll in 9 to 12 hours of graduate credit outside the required courses in the architectural management curriculum. Three to 6 hours in the 36-hour course of study are in the preparation of a written project or thesis, or in additional course work in an area of management to prepare for a final written examination.
### Architecture Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARCH 500</td>
<td>Architectural Design VII</td>
<td>(6)</td>
</tr>
<tr>
<td>ARCH 501</td>
<td>Architectural Design VIII</td>
<td>(6)</td>
</tr>
<tr>
<td>ARCH 510</td>
<td>Problems in Computer Applications</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 526</td>
<td>Building Power Systems for Architects</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 527</td>
<td>Building Interior Lighting for Architects</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 528</td>
<td>Building Acoustical Systems for Architects</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 552</td>
<td>Professional Practice</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 570</td>
<td>Contemporary Issues Seminar I</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 571</td>
<td>Contemporary Issues Seminar II</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 572</td>
<td>Contemporary Issues Seminar III</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 573</td>
<td>Financial and Economic Issues in Architecture Management</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 574</td>
<td>Organizational Issues in Architecture Management</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 575</td>
<td>Architecture Management: Managing a CAD System</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 576</td>
<td>Project Delivery in Architecture Management</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 577</td>
<td>Marketing Architectural Services</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 578</td>
<td>Legal Issues in Architectural Management</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 600</td>
<td>Special Topics in Architecture</td>
<td>_____</td>
</tr>
<tr>
<td>ARCH 602</td>
<td>Accelerated Architectural Design</td>
<td>(6)</td>
</tr>
<tr>
<td>ARCH 603</td>
<td>Graduate Design Studio I</td>
<td>(6)</td>
</tr>
<tr>
<td>ARCH 604</td>
<td>Graduate Design Studio II</td>
<td>(6)</td>
</tr>
<tr>
<td>ARCH 610</td>
<td>Computers and Project Development</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 613</td>
<td>Visual Thinking Studio I</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 615</td>
<td>Intensive Graphics II</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 616</td>
<td>Advanced Architectural Presentation Techniques</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 617</td>
<td>Principles of Architectural Composition</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 618</td>
<td>Architectural Photography</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 619</td>
<td>Advanced Architectural Photography</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 620</td>
<td>Statics for Architects</td>
<td>(2)</td>
</tr>
<tr>
<td>ARCH 621</td>
<td>Strength of Materials for Architects</td>
<td>(2)</td>
</tr>
<tr>
<td>ARCH 622</td>
<td>Material Investigations</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 623</td>
<td>Building Practicum</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 624</td>
<td>Structural Systems for Architects</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 625</td>
<td>Analysis and Design of Structures for Architects</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 626</td>
<td>Building Technology I</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 627</td>
<td>Building Technology II</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 628</td>
<td>Structure in Nature and Architecture</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 629</td>
<td>Listening to Architecture</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 630</td>
<td>Recording and Representing Historic Structures</td>
<td>(3-6)</td>
</tr>
<tr>
<td>ARCH 631</td>
<td>Issues in Contemporary Architecture</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 632</td>
<td>Contemporary French Architecture</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 633</td>
<td>Readings in Classical Architecture</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 634</td>
<td>Analysis and Design of Structures for Architects</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 636</td>
<td>Art of Architectural Machines</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 637</td>
<td>Architecture and Cosmos</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 638</td>
<td>Architecture, Art and Science</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 639</td>
<td>Current/Historical Directions in Architecture</td>
<td>(2-3)</td>
</tr>
<tr>
<td>ARCH 640</td>
<td>History of Architecture I: Ancient and Medieval</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 641</td>
<td>History of Architecture II: Renaissance to Age of Reason</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 642</td>
<td>History of Architecture III: Modern</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 648</td>
<td>Historic Preservation</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 650</td>
<td>Architect-Led Design-Build</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 651</td>
<td>Advanced Design-Build for Architects</td>
<td>(2)</td>
</tr>
<tr>
<td>ARCH 652</td>
<td>Architect-Client Relations</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 653</td>
<td>Nontraditional Careers in Architecture</td>
<td>(1)</td>
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<tr>
<td>ARCH 654</td>
<td>Ethics in Architectural Practice</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 656</td>
<td>Architectural Programming I</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 658</td>
<td>Programming and Pre-design Issues</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 661</td>
<td>Eighteenth- to Twentieth-century American Landscape Design</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 662</td>
<td>Twentieth-century American Landscape</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 663</td>
<td>Darwin, Humboldt, and Changing Ideas in Landscape Architecture</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 665</td>
<td>History of Urban Design</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 666</td>
<td>Cities and Towns of the Great Plains</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 670</td>
<td>Spreadsheet Applications</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 671</td>
<td>Database Management</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 672</td>
<td>Project Management Software</td>
<td>(1)</td>
</tr>
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<td>ARCH 673</td>
<td>Presentation Tools</td>
<td>(1)</td>
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<td>ARCH 674</td>
<td>Electronic Communication</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 675</td>
<td>Graphics Packages</td>
<td>(1)</td>
</tr>
<tr>
<td>ARCH 676</td>
<td>Facility Management: Tools and Techniques</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 677</td>
<td>Construction Cost Estimating for Architects</td>
<td>(1)</td>
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<tr>
<td>ARCH 678</td>
<td>Construction Project Management for Architects</td>
<td>(1)</td>
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<tr>
<td>ARCH 680</td>
<td>Building with Intelligence</td>
<td>(3)</td>
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<tr>
<td>ARCH 681</td>
<td>Defining Community</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 693</td>
<td>Workplaces</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 694</td>
<td>Homeplaces</td>
<td>(3)</td>
</tr>
<tr>
<td>ARCH 700</td>
<td>Directed Readings in Architecture</td>
<td>(1-3)</td>
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<tr>
<td>ARCH 701</td>
<td>Introduction to Graduate Studies</td>
<td>(9)</td>
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</table>

*Graduate students in architecture have the opportunity to participate in the school’s nationally recognized Historic American Buildings Survey courses.*

**Students in architecture work closely with faculty members in design studios and are encouraged to seek as many different design critics as possible during their studies.**

### KU’s Edwards Campus

- **Address:** 12600 Quivira Rd., Overland Park, KS 66213-2402, phone (913) 897-8400, [http://edwards.ku.edu](http://edwards.ku.edu)
- **Location:** Lawrence
- **Running:** 864-8400 or 913-897-8400

**Course Options:**
- **ARCH 673 Presentation Tools** (1)
- **ARCH 674 Electronic Communication** (1)
- **ARCH 675 Graphics Packages** (1)
- **ARCH 676 Facility Management: Tools and Techniques** (3)
- **ARCH 677 Construction Cost Estimating for Architects** (1)
- **ARCH 678 Construction Project Management for Architects** (1)
- **ARCH 680 Building with Intelligence** (3)
- **ARCH 681 Defining Community** (3)
- **ARCH 693 Workplaces** (3)
- **ARCH 694 Homeplaces** (3)
- **ARCH 700 Directed Readings in Architecture** (1-3)
- **ARCH 701 Introduction to Graduate Studies** (9)
- **ARCH 703 Graduate Design Studio III** (6) A continuation of ARCH 604 with an increased emphasis on design problems of increasing scale and complexity.
- **ARCH 704 Graduate Design Studio IV** (6) A continuation of ARCH 703 with an increased emphasis on environmental factors, including the integration of environmental systems. Graduate level course that supplements the core syllabus of ARCH 401 with weekly seminars, expanded reading lists, and additional classroom assignments.
- **ARCH 705 Graduate Design Studio V** (6) Graduate course that emphasizes urban context and design theories. Students will undertake specialized research projects. Prerequisite: Completion of second-year graduate requirements.
- **ARCH 706 Thesis or Project Definition** (1) Seminar oriented to the clarification of the thesis or project problem and to the development of the thesis or project proposal. Prerequisite: Graduate standing.
- **ARCH 707 Furniture Design and Production** (3) The object of this course is an intensive examination of the aesthetic problems of perceiving and making quality objects. Students will be expected to engage in a series of short-term, limited scope design exercises and experiments of an architectural nature.
- **ARCH 732 Environmental Pattern Languages** (3) An introduction to the theory of pattern languages with particular emphasis on the work of Christopher Alexander; analysis of its relationships to other architectural theories; exploration of its implications for architectural practice.
- **ARCH 733 Analogous Thinking in Design** (3) This seminar will seek analogs in psychology, medicine, biology, anthropology, and other disciplines; analogs that can serve to develop problem-solving and problem-solving skills in design. Practice sessions in morphological analysis, synectics, bisociation, and triadization will link rigorous research to methods of application.
- **ARCH 740 Architecture History/Theory IV** (3) An examination of architectural theories through the analysis of several important or paradigmatic buildings. Graduate level course that supplements the core syllabus of ARCH 440 with weekly seminars, expanded reading lists, and additional classroom assignments.
- **ARCH 754 Design Ethics** (3) This seminar will explore both Western and Eastern concepts of ethics and morality through readings, papers, discussion, and guest speakers. The role of ethics in providing guidelines for social and societal responsibility in design will be developed.
- **ARCH 762 Urban Design Studies** (3) Seminar concerned with the factors, processes, techniques, and current issues in urban design practice.
- **ARCH 764 Site Planning** (3) Graduate course that investigates issues of site planning in an urban context, design and management of urban spaces, and strategies for integrating nature and built environments.
- **ARCH 770 Contemporary Issues Seminar I** (1) A series of Saturday morning seminars on contemporary issues facing the profession.
- **ARCH 771 Contemporary Issues Seminar II** (1) These seminars will consist of three to four guest lecturers each semester. All students en
rolled in this course will attend the same lecture as ARCH 772. Topics will be selected to reflect major issues covered in the course work, or contemporary issues facing the profession. LEC

ARCH 772 Contemporary Issues Seminar III (1). These seminars will consist of three to four guest lecturers each semester. All students enrolled in this course will attend the same lecture with ARCH 771. Topics will be selected to reflect major issues covered in the course work, or contemporary issues facing the profession. This course will be graded Satisfactory/Unsatisfactory. LEC

ARCH 773 Financial and Economic Issues in Architecture Management (3). This course will focus on the fundamentals of accounting, macroeconomics, and the construction industry, and concepts related to the development and implementation of a strategic business plan. LEC

ARCH 774 Organizational Issues in Architecture Management (3). Topics that will be covered in this course include the organization of a professional practice, personnel management, and the development of effective communication skills. LEC

ARCH 775 Architecture Management: Managing a CAD System (3). This course covers the various procedures involved in managing a CAD system within a design organization. It also explores the different applications and uses of current CAD technology. Topics to be addressed include: selecting a system; billing CAD services; support services and personnel; marketing CAD; customization of file management; menus and script files; AutoLisp Programming; and integrating CAD with other programs. Prerequisite: An introductory CAD class or permission of the instructor. LEC

ARCH 776 Project Delivery in Architecture Management (3). Conventional methods for project delivery will be reviewed along with design/build and fast-track, and other techniques. The relationship of the architect and development will also be explored, as will the relationship of project development to urban design concepts. LEC

ARCH 777 Marketing Architectural Services (3). The emphasis of this course will be on the development and implementation of a marketing plan, techniques related to the marketing of specific projects, and the relationship of marketing to other components of a firm. LEC

ARCH 778 Legal Issues in Architecture Management (3). A course designed to familiarize the student with legal concepts related to professional practice. Case studies and selected readings will serve as the basis for discussion of registration, contracts, business formation, taxes, employment practices, copyright, and patent law. In addition, the course will draw upon the knowledge and experience of members of the professional community. LEC

ARCH 790 Architectural Study Abroad: (1-3). Organized field visits and study of selected architectural and urban sites abroad. Pre- and post-travel readings on themes selected to supplement and reinforce visits and study of selected architectural and urban sites abroad. Prerequisite: Graduate standing and permission of instructor. FLD

ARCH 800 Special Topics in Architecture: (1-3). Advanced or experimental courses on specialized topics. Course topics are selected to reflect major issues covered in the course work. LEC

ARCH 803 Graduate Design Studio VI (6). A continuation of previous design studio with emphasis given to specific student and faculty interests and to design development. Graduate level course that supplements the core syllabus of ARCH 500 with weekly seminars, expanded reading lists, and additional classroom assignments. Prerequisite: Completion of second-year graduate requirements (see studio grading policy). LAB

ARCH 804 Graduate Design Studio VII (6). A continuation of all previous design studies with emphasis given to the synthesis of all formal and conceptual development. Graduate level course that supplements the core syllabus of ARCH 500 with weekly seminars, expanded reading lists, and additional classroom assignments. Prerequisite: ARCH 803 (see studio grading policy). LAB

ARCH 806 Thesis or Project Research (1-6). Independent study, research, and project work leading to the submission of a master's thesis or master's project. May be repeated for credit. Note: In some cases a Comprehensive Examination Option may be substituted. Prerequisite: ARCH 757 and consent of instructor. THE

ARCH 810 Computer Aided Design (3). Graduate course that introduces the design student to fundamental principles of data-processing theories and techniques, computer-aided design technologies, and information management systems. Prerequisite: Second-year graduate standing. LEC

ARCH 850 Special Topics in Management/Practice: (2-3). Advanced or experimental courses on specialized topics representing unique or changing needs and resources in the management/practice option. IND

ARCH 852 Professional Practice (3). The essentials of office practice, including an analysis of the principal divisions of service, office procedures, and review of the Standard General Conditions of the American Institute of Architects contract. Guest lecturers and papers on specialized subjects. Graduate level course that supplements the core syllabus of ARCH 552 with weekly seminars, expanded reading lists, and additional classroom assignments. LEC

ARCH 858 Architectural Management Systems (3). Graduate course that investigates current issues in construction technologies and management techniques. LEC

Architectural Engineering

Architectural engineering at KU is administered by the School of Engineering. For program requirements and course descriptions, see Civil, Environmental, and Architectural Engineering in the School of Engineering chapter of this catalog or online at www.arce.ku.edu.

Joint Professional M.Arch./B.S. in Architectural Engineering Option

This program is for students who have completed all requirements for the Bachelor of Science (B.S.) degree in architectural engineering. (See specific degree requirements in the School of Engineering chapter of The University of Kansas Undergraduate Catalog.) The B.S. in Architectural Engineering degree is an ABET-accredited professional degree that requires a minimum of five years and 164 credit hours to complete. The Joint Professional M.Arch./B.S. in Architectural Engineering option allows a student to receive the NAAB-accredited M.Arch. with a minimum of 45 graduate credit hours after the completion of the B.S. degree. The minimum time required to complete the two degrees is six and one-half years of full-time study. Substitutions in the prescribed curriculum may be made only with the approval of the architectural program graduate studies committee and architecture chair.

Admission to the joint professional M.Arch. program is based on the following criteria:

1. Minimum academic background for admission to the Graduate School as outlined under Admission in the General Information chapter of this catalog.
2. Completion of 9 credit hours in architectural graphics (ARCH 113 and ARCH 114), 24 credit hours in architectural design (ARCH 200, ARCH 201, ARCH 300, and ARCH 301), 12 credit hours in architectural engineering design (ARCE 680 and ARCE 681), 9 credit hours in architectural history (ARCH 460, ARCH 461, and ARCH 462), and 6 credit hours in building technology and programming (ARCH 626 and ARCH 658).
3. Completion of all other course requirements to receive the B.S. degree.
4. Portfolio review by the architecture program graduate studies committee to determine the quality of the student's previous academic and design work.

After the portfolio review, the graduate studies committee may recommend that the student complete additional design courses and/or additional architectural elective courses to receive the Professional M.Arch. degree. This may result in additional semesters of academic study.

The minimum requirements for the NAAB-accredited degree are the same as those of Year Three of the Professional M.Arch. Program listed above (39 graduate credit hours) and an additional 6 graduate credit hours in the courses ARCH 740 and ARCH 665. Up to 6 hours of architectural course work at the 600 level or above from the B.S. degree may be substituted for required courses in the professional M.Arch. if these hours are in excess of the 164 total credit hours required for graduation from the B.S. in Architectural Engineering Program.
Urban Planning
Chair: James M. Mayo, ubpl@ku.edu
Marvin Hall, 1465 Jayhawk Blvd., Room 317
Lawrence, KS 66045-7614, www.saua.ku.edu
(785) 864-1841
Professors: Black, Mayo
Associate Professors: Ellis, Luckey, McClure
Assistant Professors: Serda, White
Lecturers: Crawford, Dow, Englehart, Enslinger, Henderson, Nimz, Palos, Prem

The Master of Urban Planning (M.U.P.) is a graduate professional degree directed toward competence in practice in urban planning. It is the normal academic qualification for various planning and planning-related positions. The M.U.P. degree is accredited by the Planning Accreditation Board. The program places strong emphasis on policy planning and analysis in the context of urban or urbanizing environments. The program is geared toward meeting the need for planning policy on urban issues at any level of government—federal, state, regional, and local—or outside the governmental arena.

Three major areas of knowledge are necessary for competence in policy planning. These areas are (1) history and theory, which provide the conceptual framework of social, economic, and political environments within which public policy is formed; (2) quantitative methods, which provide the skills necessary to define and analyze problems through data manipulation; and (3) specialty areas, which provide focused information and skills in housing and development planning, land use and environmental planning, transportation planning, and urban design concentrations.

Admission

Persons whose previous records indicate ability to succeed with advanced work may be admitted to the Graduate School through the Graduate Program in Urban Planning. Ordinarily, admission requires a bachelor’s degree and a grade-point average of approximately B from KU or another institution with substantially equivalent requirements for the bachelor’s degree. The Graduate School reviews the student’s academic background before an applicant without a bachelor’s degree is admitted as a degree-seeking student at KU. Admission decisions are based on the information supplied in the application materials described below.

Graduate Record Examination scores are not required. However, it is recommended that a student with a grade-point average below 3.0 and/or low (below C) grades in courses with economics and mathematical content, or lack of undergraduate courses in these areas, submit GRE scores. Thus, the faculty may be better equipped to evaluate the student’s prospects for graduate study in planning at KU.

A complete application consists of:
1. A completed application form;
2. A statement of the applicant’s career goals and substantive interests in urban planning and rationale for undertaking graduate study in urban planning at KU;
3. Two copies of official transcripts from all colleges or universities attended;
4. Three reference forms or letters of recommendation from persons qualified to comment on the applicant’s academic abilities and probable success in graduate study;
5. Scores from Graduate Record Examinations, if available;
6. Test of English as a Foreign Language scores, if the student’s native language is not English; and
7. Application fee: nonrefundable check or money order payable to the University of Kansas (see Admissions in the General Information chapter of this catalog).

There is no specific deadline for receiving applications, but candidates are urged to submit them as early as possible. It can take considerable time to complete and process an application file, especially if materials are being sent from abroad. Students wishing to be considered for Graduate School Fellowships should submit application materials by January 15.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to
The University of Kansas
Urban Planning Program
Marvin Hall, 1465 Jayhawk Blvd., Room 317
Lawrence, KS 66045-7614

Baccalaureate Preparation

A good undergraduate education in almost any discipline is acceptable preparation. Undergraduate preparation in the social sciences, engineering, business, or architecture is closely related to the direction and content of the M.U.P. program at KU.

M.U.P. Degree Program and Requirements

All students must complete 48 credit hours, which normally involves four semesters of full-time study. The required courses are

General

UBPL 736 Planning Institutions ............................................ 3
UBPL 763 Professional Practice ............................................. 3

Techniques:

Required courses (9 hours)
UBPL 705 Economic Analysis for Planners ......................... 3
UBPL 741 Quantitative Methods I ....................................... 3
UBPL 742 Quantitative Methods II ..................................... 3

Theory

UBPL 815 History and Theory of the Planning Process .......... 3
UBPL 850 Urban and Regional Theory ................................ 3

Concentrations. The curriculum requires each student to specialize in one substantive area from the following: housing and development planning, land use and environmental planning, transportation planning, and urban design. The student should declare the major area by the second semester of the course of study. The minimum number of credit hours for the major area depends on whether the student pursues the thesis or the nonthesis option. For the thesis option, the student takes at least 9 hours in the major area. For the nonthesis option, the student takes at least 12 hours in the major area.
The specialty courses are as follows:

**Environmental and Land Use Planning**
- UBPL 730 Introduction to Land Use Planning ........................................... 3
- UBPL 735 Site Planning ........................................................................... 3
- UBPL 738 Introduction to Environmental Planning II ............................. 3
- UBPL 739 Issues in Growth Management ................................................. 3
- UBPL 765 Planning and the Natural Environment .................................... 3

**Housing and Development Planning**
- UBPL 710 Introduction to Housing Policy ................................................ 3
- UBPL 714 Local Economic Development Planning ................................... 3
- UBPL 716 Community and Neighborhood Revitalization .......................... 3
- UBPL 718 Downtown Planning ................................................................. 3
- UBPL 764 Real Estate Development I ....................................................... 3

**Physical Development Planning**
- UBPL 730 Introduction to Land Use Planning ........................................... 3
- UBPL 735 Site Planning ........................................................................... 3
- UBPL 764 Real Estate Development I ....................................................... 3
- UBPL 766 Urban Design Implementation .................................................. 3
- ARCH 662/UBPL 662 Twentieth-century American Landscape .................. 3

**Transportation Planning**
- UBPL 750 Introduction to Transportation Planning ................................... 3
- UBPL 756 Advanced Seminar in Urban Transportation Planning .............. 3
- UBPL 758 Urban Mass Transportation ...................................................... 3

**Free Electives.** Besides the specialty courses, thesis students must take 3 additional credit hours, and non-thesis students must take 9 additional credit hours of elective courses, either in or outside the Graduate Program in Urban Planning.

**Thesis Option.** The thesis provides an opportunity for the student to apply individual research skills in the context of her or his interest. Thus, the thesis is a continuation of the student’s course of study, rather than a separate academic effort. The format, medium, and focus of the thesis vary with the problem addressed. Six hours of academic credit are given for the thesis. A student desiring to prepare a thesis must develop, with the assistance of a faculty advisor, a thesis proposal, which must be submitted to the faculty thesis committee no later than the first day of classes of the semester before the semester in which the student plans to graduate. The committee’s approval is required before the student may pursue the thesis option. A final general examination on the thesis and course work is held.

**Nonthesis Option.** The comprehensive examination may be taken as an alternative to the thesis. The examination provides a learning experience that encourages the student to synthesize the knowledge gained through course work and tests the student’s competence as a generalist/specialist planner. The examination includes five questions, as follows: one question each on Planning Theory, Urban and Regional Theory, and Planning Methods, two questions in the student’s concentration. No academic credit is given for the examination.

### Urban Planning Courses

- **UBPL 500 Planning the American City** (3).
- **UBPL 502 Special Topics in Urban Planning:** (1-6).
- **UBPL 522 History of the American City I** (3).
- **UBPL 538 Introduction to Environmental Planning I** (3).
- **UBPL 565 Planning and Environmental Values** (3).
- **UBPL 662 Twentieth-century American Landscape** (3).
- **UBPL 701 Directed Readings** (1-6). Designed to meet the needs of students whose study in urban planning cannot be met with the prescribed courses. Prerequisite: Consent of instructor. RSH
- **UBPL 705 Economic Analysis for Planners** (3). An introduction to the concepts and analytical techniques of economics that are most relevant to urban planners. The first part of the course is devoted to microeconomics, the principles of demand and supply, and the role of the government in the economy. The remainder covers public finance, investment analysis, and methods of determining the allocation of public resources (such as benefit-cost analysis). LEC
- **UBPL 710 Introduction to Housing Policy** (3). Designed to provide an introduction to the various methods used by the public sector in order to intervene in the housing market. Many different programs are used by governments at all levels to serve many different housing goals. This course will examine many of these programs in an effort to understand what they are supposed to accomplish and how well they work. In all cases, the objective of the course is to train planners so that they have a firm understanding of housing programs that exist now as well as how the methods used by the public sector to revitalize neighborhoods when they fail to generate sufficient social and economic activity on their own. Topics covered include deterioration and reinvestment. Policy approaches covered include neighborhood development organizations, enterprise zones and development grant programs. Prerequisite: UBPL 764 or consent of instructor. LEC
- **UBPL 715 “Community” in Neighborhood Planning and Design** (3). This course provides a place-centered approach for understanding and applying the idea of community to local neighborhood planning. The course explores social theories of community and how these have influenced prescriptive models for neighborhood development and design. The course also evaluates the interplay of social, environmental, and economic forces at the neighborhood level and their relationship to community development and well-being. LEC
- **UBPL 716 Community and Neighborhood Revitalization** (3). Cities are composed of neighborhoods which cycle through stages of development, decline and revitalization. The focus of this course is on both the theory of how and why neighborhoods change as well as the methods used by the public sector to revitalize neighborhoods when they fail to generate sufficient social and economic activity on their own. Topics covered include deterioration and reinvestment. Policy approaches covered include neighborhood development organizations, enterprise zones and development grant programs. Prerequisite: UBPL 764 or consent of instructor. LEC
- **UBPL 718 Downtown Planning** (3). This course provides a broad overview of downtown planning. Emphasis is on the role and evolution of downtown and the factors that affect its development. The course should prepare the student to participate in downtown studies and planning. The course will also introduce the student with other aspects of commercial development including shopping malls and commercial strips. LEC
- **UBPL 720 History of the American City II** (3). This course examines the evolution of American cities from their European antecedents through the late 20th Century, from the urban planning perspective. It focuses on the changing spatial forms and functions of American cities and how these changes relate to socioeconomic and political aspects of urbanization as well as changes in technology. Emphasis is placed on analyzing the relationships between historical development patterns and the current range of problems facing most U. S. cities. (Same as UBPL 522 but gives graduate credit.) LEC
- **UBPL 730 Introduction to Land Use Planning** (3). Introduction to land use planning as a specialist activity. Emphasis is on determining land use, micro and macro approaches to land use planning; external effects of the use of land; environmental and fiscal impact analysis; general policy issues and approaches to land use at the national, state, and local levels. Creation of a plan for a hypothetical growing community. LEC
- **UBPL 735 Site Planning** (3). Site Planning is an essential component of the development process. This class is intended to provide students with an understanding of site analysis, land use analysis, geology, soils, grading, drainage, utility planning, street layout and design, cost estimating, and surveying which are all part of the site plan submittal process for rezoning and platting. Students should complete this class with a clear understanding of the required elements of site plan submittals and the approval process. LEC
- **UBPL 736 Planning Institutions** (3). This course approaches planning law from the perspective of a non-lawyer. An introduction to the legal system is accomplished by reading actual court opinions. The following topics are covered: zoning, subdivision law, growth management, capital improvement programming, tax incentives and other methods to regulate the implementation of planning knowledge in each concentration. Emphasis is on the impact of the law on planning rather than on specific content of individual cases. LEC
- **UBPL 738 Introduction to Environmental Planning II** (3). This course seeks to unify two broad themes in environmental planning: policy formation and physical design. These are interrelated and depend upon each other for meaning. Laws and governmental policies set the framework for...
defining appropriate environmental goals or ends. The means of environ-
mental planning require understanding of natural processes, which can-
not be ignored. The subject matter in the course draws from a variety of disciplines, including law, political science, soil science, biology, and geography. Same as UBPL 588 but gives graduate credit. LEC

UBPL 739 Issues in Growth Management (3). This seminar deals with the ability of state and local governments to make decisions concern-
ing growth and to use planning and regulation to guide develop-
ment. The emphasis in this course is to create policy documents for both urban and rural contexts. Various techniques such as impact fees, urban limit lines, agricultural lands protection and adequate public fa-
cilities will be analyzed and outlined by students. LEC

UBPL 741 Quantitative Methods I (3). Introduction to quantitative tech-
niques utilized in planning analysis. Introduction to inferential statistics, computer programming, and the use of statistical packages. LEC

UBPL 742 Quantitative Methods II (3). Advanced study in planning tech-
niques in the areas of population forecasting, analysis of variance, and regression. The course makes extensive use of microcomputers. Instructor: UBPL 741 or consent of instructor. LEC

UBPL 746 GIS Applications for Design and Planning (3). This course will explore a range of Geographic Information Systems (GIS) applica-
tions for students in architecture and planning. It will be structured as a workshop, starting with a review of basic GIS concepts and proce-
dures. Different digital data sources will be explored, along with file-
sharing (import and export) capabilities. The focus will be on applica-
tions at different scales using projects in architecture, site planning, environ-
mental planning, urban analysis, and regional analysis. The dimensional analysis will also be introduced. Each student will develop a final project as a synthesis of earlier exercises and as an application relevant to their individual professional interests. LEC

UBPL 750 Introduction to Transportation Planning (3). Introduction to transportation as a specialist planning activity. Basic issues in urban high-
way and mass transit planning. The physical characteristics of urban transportation systems. Transportation planning according to travel demand. Evaluation of alternative transportation plans. Environmental and community impacts of plans. Institutional as-
pects of transportation and transportation legislation. LEC

UBPL 756 Advanced Seminar in Urban Transportation Planning (3). The course is divided into two parts. The first part covers the area of land use planning and its mathematical foundations: it includes linear pro-
gramming, models of residential location and certain maximum entropy models. In the second part, the Urban Transportation Planning System (UTPS) is discussed. Students obtain a working knowledge of certain mi-
crocomputer packages used for short-term as well as large scale trans-
portation planning. Prerequisite: UBPL 750 or consent of instructor. LEC

UBPL 758 Urban Mass Transportation (3). An overview of urban mass transportation in the United States today. Emphasis is on general planning of transit systems rather than details of engineering or hard-
ware. Covers history of urban transit, federal transit programs, com-
parison of conventional and non-conventional technologies, operations, ridership characteristics, impacts on urban development, and eco-

UBPL 760 Historic Preservation Planning (3). In addition to studying the history of the movement in the United States, the course will discuss preservation at the state and local level, preserva-
tion at the private level, ordinance creation, legal aspects of preserva-
tion, technical issues and contemporary issues and controversies in the field of preservation. Projects will deal with philosophic and cur-
rent issues in preservation. LEC

UBPL 763 Professional Practice (3). An examination of social rela-
tionships that the urban planner encounters in professional practice. Study of various planning roles in relation to the client and community within private and public domains. Emphasis is placed on the qualita-
tive aspects of role taking with regard to bureaucratic organizational life. Prerequisite: UBPL 815 or consent of instructor. LEC

UBPL 764 Real Estate Development I (3). This course is designed to pro-
vide a working knowledge of the mechanics of real estate investment analysis. As a planning course, the emphasis is placed upon the process as performed by the practicing planner working with the public sector. This means that the course covers much of the same material that is normally included in a real estate development course in a business school. However, this material is augmented with the study of tech-
niques used to achieve public sector goals. Among the topics covered in the course are: the calculation of return on investment in real estate; the financing of real estate development; the various forms of property own-
nership; and the implications of tax laws upon the rehabilitation of historic proper ties and the provision of low-income housing. Prerequisite: Knowledge of spreadsheet software on a personal computer. LEC

UBPL 765 Planning and the Natural Environment (3). The course traces the development of the theory and practice of environmental planning from its roots in traditional planning theory, to its applications in contemporary environmental management, and through current ef-
forts to encourage sustainability. LEC

UBPL 766 Urban Design Implementation (3). Urban design is studied from the perspective of planning through Ferries, zoning and zoning, sign regulation, circulation control, administration, fi-
cance, downtown revitalization, and historic preservation. LEC

UBPL 768 Real Estate Development II (3). This course extends the stu-
dy of real estate development planning begun in UBPL 764: Real Es-
tate Development Planning I. The course will examine various forms of public-private participation in the real estate development process. Ad-
vanced study of various public sector programs to guide and direct the real estate development process will be undertaken, including the use of tax credits for affordable housing and for historic preservation. Pro-
jects developed within the region will be examined to illustrate the ap-
lication of these techniques. Prerequisite: Successful completion of UBPL 764 or permission of instructor. LEC

UBPL 802 Special Topics:________ (1-6). This course is intended to af-
ford the opportunity for individual or group projects/research in an urban planning topic. RSH

UBPL 806 Thesis – Graduate Research (1-6). Independent study and research related to the master’s thesis. Prerequisite: Consent of in-
tuctor; THE

UBPL 815 History and Theory of the Planning Process (3). The course examines development of the planning function in the United States and the role of planning in the decision-making process. The first part covers the evolution of the planning profession in the past century. The second presents the major alternative theories of the planning process. The third deals with how these theories are applied in practice and the major issues that arise. LEC

UBPL 850 Urban and Regional Theory (3). The course covers the main topics in economic and ecological theory and regional analysis. The part dealing with urban theory covers topics of urban growth, sec-
toral interdependencies, Von Thunen theory, market failures and pub-
lic policy issues. Inter-urban and intra-urban ecology are also dis-
cussed. The regional part of the course examines different regional ge-
ographic structures and their evolutionary patterns, including theories of Weber, Hotelling, Christaller, Losch, and extensions. Input-output and export base theory are also presented. LEC

Joint Degree Programs

M.U.P. and Master of Architecture

This joint degree combines in a four-year program the normal two-year M.U.P. degree and the three-year M.Arch. degree, both offered through the School of Architecture and Urban Design. The program is intended for students interested in careers in urban design. A total of 135 credit hours is required, comprising 39 hours in urban planning and 94 hours in architecture. Applicants must meet admission requirements of both the School of Architecture and Urban Design and the Graduate Program in Urban Planning. Students pursuing the M.Arch. may apply to the joint degree program, but not after, the second year of study. Students pursuing the M.U.P. may apply to the joint degree program during, but not after, the first year of study.

M.U.P. and M.A. in American Studies

This joint degree combines in a two-and-one-half-year program the normal two-year M.U.P. degree offered through the School of Architecture and Urban Design and the normal one-year M.A. degree in American studies offered through the College of Liberal Arts and Sciences. The program is designed for students inter-
ested in careers in policy planning and research involving the arts, social planning, cultural activities and facili-
ties, and historic preservation.

For further information on the combined program, consult the respective program chairs.

See also American Studies in the College of Liberal Arts and Sciences chapter of this catalog.
M.U.P. and M.A. in Geography
This joint degree combines in a three-year program the two-year M.U.P. degree offered through the School of Architecture and Urban Design and the normal one-and-a-half-year M.A. degree in geography offered through the College of Liberal Arts and Sciences. The program is designed for students interested in careers in policy planning and research involving GIS cartography, environmental planning, and land use planning.
For further information on the combined program, consult the respective program chairs.
See also Geography in the College of Liberal Arts and Sciences chapter of this catalog.

M.U.P. and M.P.A.
This joint degree combines in a three-year program the M.U.P. degree offered in the School of Architecture and Urban Design and the Master of Public Administration degree offered through the College of Liberal Arts and Sciences. The program is designed for students interested in careers in urban policy planning and urban management.
Contact the Department of Public Administration or the Graduate Program in Urban Planning for information about degree requirements.
See also Government: Public Administration in the College of Liberal Arts and Sciences chapter.

M.U.P. and J.D.
The joint J.D./M.U.P. program is open to those who have earned baccalaureate degrees and whose undergraduate records indicate that they have the capacity to complete the law and urban planning programs. Applicants for the program must meet the admission requirements of the School of Law and of the Graduate Program in Urban Planning. Applicants should apply and be admitted to each school separately before they enter the first year of the program. The Law School Admission Test is the only required entrance examination. A student who decides to enter the program while enrolled in the first year of the J.D. or M.U.P. curriculum must obtain approval from the School of Law and the Graduate Program in Urban Planning as soon as possible. No student may enter the joint degree program after completing more than four full semesters in the law school or three full semesters in the Graduate Program in Urban Planning.
A total of 115 credit hours is required for the joint degree, comprising 39 hours in urban planning and 76 hours in law. The joint degree program can be completed in four years. To pursue the degrees separately would require five years. For information on the combined program, consult the program chairs.
See also the School of Law Catalog.
School of Business

William Fuerst, Dean
Summerfield Hall, 1300 Sunnyside Ave., Room 203
Lawrence, KS 66045-7585, www.business.ku.edu

Admission ................................................. 89
Student Services ....................................... 90
Advising ......................................................... 90
Library Resources ......................................... 90
Wagnon Computer Laboratory .................... 90
Harper Computing Classroom ...................... 90

Employment Opportunities & the Business
Career Services Center ............................. 90

Baccalaureate Preparation ......................... 90

Master of Business Administration ............. 90
M.B.A. Admission Requirements .................. 90
In-residence M.B.A. Degree Program .......... 91
Degree Requirements .................................. 91
Evening Professional M.B.A. Degree Program .. 91
Degree Requirements .................................. 91

Master of Accounting & Information Systems ...
 Degree Requirements ................................. 92
 M.A.I.S. Requirements ............................... 92

Master of Science with a Major in Business ...
 Degree Requirements ................................. 92
 Finance & Information Systems Concentrations .. 92

Combined M.B.A. & J.D. ............................. 93
Admission Requirements ............................ 93
Combined Degree Requirements ................. 93
 Specific Course Requirements ..................... 93

Combined M.B.A. & Ph.D. in Nursing .......... 94
Combined M.B.A. & M.A. in Area Studies .... 94
M.B.A. with a Concentration in Petroleum Management ................. 94
Doctor of Philosophy .................................. 94
Admission ................................................... 94
Ph.D. Degree Requirements ........................ 94
Concentration ............................................ 95
Supporting Areas ....................................... 95
Research Methodology ............................... 95
Teaching .................................................. 95
Examinations ............................................ 95
Financial Aid ............................................. 95
Assistantships ......................................... 95
Fellowships & Grants ................................. 95

Business Courses ...................................... 95
Accounting Courses ................................... 95
Business Courses ....................................... 95
Business Law Courses ............................... 102
Decision Sciences Course ......................... 102
Finance Courses ....................................... 102
Information Systems Technology Courses .... 102
International Business Courses ................. 102
Management Courses ............................... 102
Marketing Courses ................................. 102

Photo, page 86:
Victor and Helen Regnier Hall opened in fall 2004 on KU’s Edwards Campus in Overland Park, Kansas, in the metropolitan Kansas City area.
School of Business

The University of Kansas School of Business is accredited by the Association for the Advancement of Collegiate Schools of Business–International. Four graduate degree programs are offered: the Master of Business Administration, Master of Science, Master of Accounting and Information Systems, and Doctor of Philosophy. Four degree programs are offered jointly with other departments: the combined M.B.A./J.D. with the School of Law, the combined M.B.A./Ph.D. in Nursing with the School of Nursing, the combined M.B.A./Master of Health Services Administration with the Department of Health Policy and Management, the combined M.B.A./Area Studies M.A. with Russian and East European Studies or Latin American Studies, and the M.B.A. with a concentration in petroleum management with the School of Engineering. General admission requirements and the content of each of these programs are discussed below. Graduate students frequently take some elective classes on KU’s Edwards Campus.

Admission

All graduate programs are open to those who have earned baccalaureate degrees from accredited colleges or universities and whose undergraduate academic records, scores on the required standardized examination, and prior work experience indicate that they have the capability to complete the program. Admission to all programs in business is limited on the basis of space, facilities, faculty, and other resources.

Applicants for all graduate programs must take the Graduate Management Admission Test given by Pearson VUE, www.vue.com. The GMAT is administered in most foreign countries and by appointment at designated testing centers throughout the United States. The test typically is taken during the academic year before the term for which admission is sought. M.B.A./J.D. applicants must take the GMAT; the Law School Admission Test is not accepted in lieu of the GMAT. Students whose native language is not English or who have not completed a degree from a college or university in the United States, Great Britain, Canada, or Australia must also have a score of at least 570 (600 for the M.B.A. program) on the Test of English as a Foreign Language. A minimum score of 57 on each of the three sections of the TOEFL is required. For students taking the computerized version of the TOEFL, an overall score of 230 is required (250 for the M.B.A. program), with a minimum score of 23 on each of the three sections of the test.

All applications for admission to the M.B.A., M.S, or M.A.I.S. programs must include (1) a Graduate School application form, (2) three essays, (3) two official transcripts of each college and university record, (4) two letters of recommendation from faculty members and/or employers, (5) scores on the GMAT and scores on the TOEFL if required, (6) a $60 nonrefundable application fee for online applications or a $65 nonrefundable application fee for applications on paper, payable to the University of Kansas, (7) a current résumé, and (8) a signed academic honor code statement.

Completed applications are reviewed by committee, and action is taken on them periodically throughout the year. Each applicant is notified by letter of the action taken on his or her application.
Admission; Student Services; Employment; Baccalaureate Preparation; M.B.A.

All admissions to any graduate program in business are subject to and in accordance with all the basic rules and regulations of the Graduate School as described in this catalog. See Admission in the General Information chapter of this catalog for more information.

Student Services

Advising
The Graduate Advising Center in 206 Summerfield Hall coordinates advising for graduate students. The directors of the programs and their assistants are available to give advice about program requirements, course prerequisites, and program planning. A graduate faculty adviser is designated for each concentration and is available to help the student develop the most effective program for attaining her or his educational and career goals.

Library Resources
The Anschutz Library offers a closed reserve service and reference services including a small print collection. The large collection in Watson Library offers additional reference and research materials. The Business/Economics Bibliographer in the reference department can help business students use the library system. Spencer Research Library has an excellent collection on the history of economic thought and a special collection of business papers and records.

Wagnon Computer Laboratory
The Wagnon Laboratory in Summerfield Hall is available to business undergraduate and graduate students for classroom assignments and individual research projects. About 40 computers and 65 software programs are available.

Harper Computing Classroom
Equipped with 34 PCs, the Harper room is intended for teaching classes that make heavy use of computers.

Employment Opportunities and the Business Career Services Center
The School of Business maintains a career services center in Summerfield Hall. The faculty and career services staff are committed to providing a strong student-oriented career services program to help students develop career objectives and target job opportunities.

The Business Career Services Center cannot guarantee jobs, but it will make every effort to bring together the job-seeking candidate and potential employers in accordance with their needs, abilities, and interests. Business graduates have been successful in finding employment in their areas of interest. Positions have been available nationwide, regardless of academic concentration or undergraduate degree.

Students are encouraged to register with the BCSC as early as possible. As the job market tightens, employer recruiting increases. An early start can mean wider access to potential employment opportunities. Registrants' résumés are placed on a Web-based computer database, allowing access by the BCSC, employers, and students. This allows the BCSC to perform résumé referrals quickly and companies to conduct their own résumé searches. Students can update their résumés at any time from any Internet-linked computer.

Additional services include Web job listings, career counseling, résumé consultation, a company library, and links on our home page, as well as extensive career development and job search resources.

Statistics on graduates are collected each semester. Information on the number of degrees granted, percentage of graduates employed, and average starting salaries can be found online at www.business.ku.edu.

Baccalaureate Preparation
The Master of Business Administration program is for graduates from areas other than business administration. It also provides an opportunity for continued study in management for graduates from a school or department of business. The only prerequisite course work is college algebra or its equivalent.

The Master of Science in business requires a baccalaureate degree in business equivalent to that required for accreditation by the American Assembly of Collegiate Schools of Business. Deficiencies in the undergraduate program result in additional hours being required for the degree. Concentrations currently are offered in finance and information systems.

The Master of Accounting and Information Systems program offers a one-year degree for students with baccalaureate degrees in business or accounting equivalent to that required for accreditation by the AACSB. Deficiencies in the undergraduate program result in additional hours being required for the degree.

The Ph.D. program in business requires no specific college work in business administration.

Master of Business Administration
The Master of Business Administration degree program meets the educational needs of persons seeking positions with managerial responsibilities in both the public and the private sectors. KU’s program emphasizes broad concepts of business administration but provides an option for concentration within a specific area of business management.

KU offers the M.B.A. program for in-residence (full-time) students, who take much of their course work on the Lawrence campus, and for working professional students, who take course work in the evenings on the KU Edwards Campus in Overland Park. The two versions of the program are tailored to meet the differing needs of students. In-residence students typically are committed to a career change. The evening professional students generally seek to enhance their career paths while remaining employed. Although the two versions of the program have some differences in the way that a student progresses, the philosophy, course content, and faculty are the same for both.

M.B.A. Admission Requirements
1. Baccalaureate degree from an accredited college or university or the equivalent. No specific course work in business administration is required.
2. Two years of work experience are preferred.
3. Proficiency in math at the college algebra level.
4. Selection is based on high promise of success in graduate study in business administration, as indicated by a combination of:
   (a) Prior academic performance.
   (b) Scores on Graduate Management Admission Test.
   (c) Scores on Test of English as a Foreign Language, if appropriate.
   (d) Prior work experience.
   (e) Two letters of recommendation from employers or faculty members.
   (f) A current résumé.

5. A $60 nonrefundable application fee for online applications or a $65 nonrefundable application fee for applications on paper, payable to the University of Kansas, must accompany all applications.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas School of Business
Master’s Applications
1300 Sunnyside Ave.
Lawrence, KS 66045-7585

In-residence M.B.A. Degree Program

The in-residence M.B.A. program features an emphasis on team-building that begins with M.B.A. Jump-Start and is integrated throughout the program. The degree requires a minimum of 52 graduate credit hours. Courses are sequenced to be completed on a full-time basis in three to four semesters. The specific requirements are designed for a person holding a baccalaureate degree in any field, with no specific course requirements in business and related areas.

Degree Requirements. A minimum of 52 credit hours, satisfying the following:

Business Course Requirements:
1. Required Courses (24 credit hours).

   Foundation Courses: Required of All Students (16 credit hours):
   - BUS 701 Organizational Behavior ........................................ 2
   - BUS 702 Managerial Economics ......................................... 2
   - BUS 705 Financial Accounting ......................................... 2
   - BUS 704 Statistical Decision Making .................................. 2
   - BUS 709 Financial Management ........................................ 2
   - BUS 711 Marketing Management ....................................... 2
   - BUS 710 Managerial Accounting ...................................... 2
   - BUS 719 Operations Management ...................................... 6

2. Advanced Business Elective Courses (28 hours).

Electives .................................................................................. 28

Designation of a Concentration:
1. A concentration is optional. Concentrations available with the M.B.A. degree are finance, human resources management, information technology, international business, management, and marketing.

2. A concentration consists of electives, selected from a list of designated courses in the concentration, totalling 8 or 9 credit hours for a minor concentration and 11 or 12 hours for a major concentration in most areas.

3. The intent to pursue a concentration usually is designated in writing before completion of enrollment for the last semester in the program. The area adviser must approve the concentration plan and any subsequent changes in that plan.

4. A graduate course related to the study of business administration offered by another division of the university may be substituted for a specific concentration course requirement with the approval of the area adviser and the Director of Master’s Programs.

Evening Professional M.B.A. Degree Program

The KU Edwards Campus, 12600 Quivira Rd., Overland Park, KS 66213-2402, serves students in the Kansas City area. The program for working professionals requires the same curriculum as the in-residence program. The same faculty members teach the courses, and the concentration options described above are available for evening students. Edwards Campus courses are offered evenings Monday through Thursday (one session per class per week) and occasionally on Saturday mornings. Each required course is offered once a semester, and elective courses from each functional area normally are offered each semester. In the summer, some core and elective courses are offered.

For admission information, see M.B.A. Admission Requirements, in the text above.

Degree Requirements. A total of 52 hours is required, consisting of 24 core and 28 elective hours. See the requirements for the in-residence M.B.A. degree program.

Master of Accounting and Information Systems

The Master of Accounting and Information Systems at KU offers students an opportunity to study accounting and information systems topics in greater detail than at the undergraduate level. M.A.I.S. students must earn a concentration in one of three areas:

- Accounting/Auditing
- Tax
- Information Systems

To receive a well-rounded business education, students take electives in other business areas such as business law, marketing, finance, and organizational behavior. In addition, the program gives students the opportunity to improve writing, oral presentation, and interpersonal skills needed for a successful career in accounting and information systems.

A $60 nonrefundable application fee for online applications or a $65 nonrefundable application fee for applications on paper, payable to the University of Kansas, must accompany all applications.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to
The University of Kansas School of Business
Master's Applications
1300 Sunnyside Ave.
Lawrence, KS 66045-7585

Degree Requirements
1. Candidates for the M.A.I.S. degree who have undergraduate degrees in accounting from KU or other schools with equivalent undergraduate accounting programs must complete at least 30 semester credit hours of course work. This includes 15 to 18 hours of accounting and information systems classes, depending on which electives are chosen. At least 24 hours of course work must be numbered 700 or above.

2. Candidates with undergraduate degrees in business without an accounting major must complete 18 hours of undergraduate accounting classes, of which only 6 hours may count toward their master’s degree, for a total of 42 hours.

3. Candidates without undergraduate degrees in business must complete 15 hours of undergraduate accounting classes, 37 hours of business foundation courses, and 12 hours of graduate accounting and information systems courses, for a total of 64 hours. They must already have taken introductory courses in financial accounting and managerial accounting (BUS 240 and BUS 241 or equivalent). Both courses can be taken during the summer before beginning the M.A.I.S. program. Admission is contingent on completing these courses.

M.A.I.S. Requirements. Required for students with undergraduate accounting or business degrees:

Concentration. Students must choose a concentration from one of the following areas: ................................................................. 9-10
Auditing/Accounting (choose any three)
BUS 739 Advanced Managerial Accounting: Quantitative and Economic Topics (3)
BUS 740 Accounting Theory (3)
BUS 741 Advanced Accounting Problems (3)
BUS 744 Advanced Auditing (3)

Tax
BUS 745 Tax Research (3)
BUS 746 Taxation for Business Entities (4)
BUS 747 Tax Planning (3)
*The tax concentration requires 10 hours. One less hour of business or accounting elective credit is required. The total remains 30 hours.

Information Systems
BUS 735 Systems Analysis and Design (3) and one of the following IS electives:
BUS 738 Database Management (3)
BUS 734 E-Commerce: An Integrative Perspective (3)
BUS 736 Strategic Information Systems Planning (3)
BUS 737 Systems Development (3)
BUS 748 Business Computer Networking (3)
BUS 749 Developments in Software Technology (3)

Total credit hours required for students with undergraduate accounting degrees ........................................ 30

Accounting Undergraduate Classes (15 credit hours required for students with undergraduate business degrees)
ACCT 320 (BUS 510) Financial Accounting II ........................................... 3
ACCT 325 (BUS 517) Managerial Accounting II .......................................... 3
IST 311 (BUS 605) Information Systems for Accountants .......................... 3
ACCT 330 (BUS 609) Introduction to Taxation ........................................... 3
ACCT 410 (BUS 510) Financial Accounting III .......................................... 3
Total credit hours in undergraduate accounting courses ................................ 15

Total credit hours required for students with undergraduate business degrees ........................................ 45

Master of Science with a Major in Business

The Master of Science degree program is for students who have completed a baccalaureate degree in business as prescribed by the American Assembly of Collegiate Schools of Business and want to do concentrated study in a specific business area. Deficiencies in a student’s undergraduate program result in additional hours being required for the degree. These are determined before or at the time of initial enrollment.

Concentrations are offered in finance and information systems. Availability of a concentration depends on sufficient demand for that concentration, as determined by the School of Business.

It is possible for students who satisfy all entrance requirements and specific course prerequisites to complete all requirements for the degree in two semesters and a summer session. However, before they begin study, they should meet with an adviser to decide which semester to enter.

A $60 nonrefundable application fee for online applications or a $65 nonrefundable application fee for applications on paper, payable to the University of Kansas, must accompany all applications.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all completed college and university course work to

The University of Kansas
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1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to
The University of Kansas School of Business
Master’s Applications
1300 Sunnyside Ave.
Lawrence, KS 66045-7585

Degree Requirements
Candidates must complete a minimum of 30 semester hours of graduate credit with a maximum of 6 hours in courses numbered below 700. Students must fulfill the following requirements:

1. Earn credit in required courses in a concentration.
2. Complete BUS 720 Strategic Management (2 hours) unless a substitution is allowed.
3. Pass a comprehensive examination in the concentration, prepared and evaluated by at least three graduate faculty members in the area.

Undergraduate prerequisites that were not completed during the undergraduate program must be taken during initial enrollment and do not count toward fulfillment of the degree requirement of 30 hours.

Finance and Information Systems Concentrations. For information, contact the Director of Master’s Programs, School of Business.
Combined M.B.A. and J.D.

This program combines in four years of study the three-year J.D. program offered by the School of Law and the two-year M.B.A. program offered by the School of Business. It is for students who plan to engage in corporate law practice or enter business using law training as background. It offers training in the convergent fields of business management and law.

Admission Requirements

Students must meet the admission requirements of each school and should be admitted by both the School of Law and the School of Business before entering the first year. The Law School Admission Test and the Graduate Management Admission Test are required. A student who elects to enter the program after beginning the first year in the School of Law or in the M.B.A. program should discuss the plan with the associate dean or program director of each school as early as possible. No student may enter the joint program after completing more than two full semesters in either the J.D. or the M.B.A. curriculum. Diplomas are awarded concurrently by each school at the conclusion of the joint degree program requirements.

The joint M.B.A./J.D. is open to those who have earned baccalaureate degrees from accredited colleges or universities and whose undergraduate academic records indicate that they have the capability to complete both programs. Although the M.B.A. curriculum assumes that the applicant has had no prior college work in business, graduates from schools or departments of business may enter the program. All students in the combined program must complete a minimum of 40 credit hours of graduate work in business.

The School of Business follows Graduate School regulations in requiring a 3.0 cumulative grade-point average for all course work to count toward any master’s degree. The School of Law requires a minimum cumulative grade-point average of 2.0 (C) in all law school work. Grades received in any law courses credited toward fulfillment of the M.B.A. degree requirements are incorporated into the M.B.A. grade-point average, which ultimately must be 3.0 for the awarding of the M.B.A. degree.

Combined Degree Requirements

A typical enrollment pattern for the candidate for the two degrees under the combined program would be

<table>
<thead>
<tr>
<th></th>
<th>Business</th>
<th>Law</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td>0</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>Second Year</td>
<td>34</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>Third Year</td>
<td>6</td>
<td>30</td>
<td>36</td>
</tr>
<tr>
<td>Fourth Year</td>
<td>0</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total Credit Earned</strong></td>
<td>40</td>
<td>76</td>
<td><strong>116</strong></td>
</tr>
<tr>
<td><strong>Credit Earned</strong></td>
<td>12</td>
<td>14</td>
<td>26</td>
</tr>
<tr>
<td><strong>Total Credit Required</strong></td>
<td>52</td>
<td>90</td>
<td><strong>142</strong></td>
</tr>
</tbody>
</table>

*Must include Professional Responsibility

Specific Course Requirements. Law Courses Required of All J.D. Candidates (44 credit hours):

First-year Courses (32 credit hours)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAW 804 and LAW 805 Civil Procedure I and II</td>
<td>6</td>
</tr>
<tr>
<td>LAW 809 and LAW 810 Contracts I and II</td>
<td>6</td>
</tr>
<tr>
<td>LAW 814 Criminal Law</td>
<td>2</td>
</tr>
<tr>
<td>LAW 818 Criminal Procedure</td>
<td>3</td>
</tr>
<tr>
<td>LAW 820 and LAW 821 Lawyering I and II</td>
<td>5</td>
</tr>
<tr>
<td>LAW 826 and LAW 827 Property I and II</td>
<td>5</td>
</tr>
<tr>
<td>LAW 831 Torts I</td>
<td>4</td>
</tr>
</tbody>
</table>

Second- and Third-year Courses (12 credit hours)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAW 873 Commercial Law: Secured Transactions</td>
<td>3</td>
</tr>
<tr>
<td>LAW 882 Constitutional Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 908 Evidence</td>
<td>3</td>
</tr>
<tr>
<td>LAW 972 Professional Responsibility</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: In addition to all J.D./M.B.A. program course requirements, students must satisfy the upper-level writing requirement in the School of Law. See the current School of Law Catalog for details.

Law Courses Required of All Joint Degree Candidates

(for a total of at least 21 credit hours)

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAW 855 Taxation of Business Enterprises</td>
<td>3</td>
</tr>
<tr>
<td>LAW 865 and LAW 866 Business Associations I and II</td>
<td>6</td>
</tr>
<tr>
<td>LAW 874 Commercial Law: Payment Systems</td>
<td>3</td>
</tr>
<tr>
<td>LAW 913 Federal Income Taxation</td>
<td>3</td>
</tr>
<tr>
<td>and two of the following:</td>
<td>6</td>
</tr>
<tr>
<td>LAW 850 Administrative Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 858 Agriculture Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 863 Antitrust Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 864 Advanced International Trade Regulation</td>
<td>3</td>
</tr>
<tr>
<td>LAW 888 Business Planning Seminar</td>
<td>3</td>
</tr>
<tr>
<td>LAW 889 Capital Raising by Privately Held Business Firms</td>
<td>3</td>
</tr>
<tr>
<td>LAW 872 Commercial Arbitration</td>
<td>3</td>
</tr>
<tr>
<td>LAW 878 Advanced Topics in Labor and Employment Law (2-3)</td>
<td>3</td>
</tr>
<tr>
<td>LAW 888 Copyright Law and Digital Works</td>
<td>3</td>
</tr>
<tr>
<td>LAW 889 Bankruptcy</td>
<td>3</td>
</tr>
<tr>
<td>LAW 897 Qualified Retirement Plans</td>
<td>3</td>
</tr>
<tr>
<td>LAW 903 Employment Discrimination</td>
<td>3</td>
</tr>
<tr>
<td>LAW 996 Estate Planning: Principles</td>
<td>3</td>
</tr>
<tr>
<td>LAW 907 Estate Planning: Practice</td>
<td>3</td>
</tr>
<tr>
<td>LAW 915 Federal Tax Procedure</td>
<td>2</td>
</tr>
<tr>
<td>LAW 917 Governmental Control of Land Development (2-3)</td>
<td>3</td>
</tr>
<tr>
<td>LAW 925 Employment Law</td>
<td>3</td>
</tr>
<tr>
<td>LAW 926 Insurance</td>
<td>3</td>
</tr>
<tr>
<td>LAW 936 International Economic Law and Development</td>
<td>3</td>
</tr>
<tr>
<td>LAW 939 Labor Law I</td>
<td>3</td>
</tr>
<tr>
<td>LAW 941 Land Transactions</td>
<td>3</td>
</tr>
<tr>
<td>LAW 944 International Trade Regulation</td>
<td>3</td>
</tr>
<tr>
<td>LAW 945 International Commerce and Investment</td>
<td>3</td>
</tr>
<tr>
<td>LAW 938 Intellectual Property</td>
<td>3</td>
</tr>
<tr>
<td>LAW 971 Product Liability</td>
<td>3</td>
</tr>
<tr>
<td>LAW 980 Regulation of Air and Water Pollution</td>
<td>3</td>
</tr>
<tr>
<td>LAW 981 Regulation of Toxic Substances and Hazardous Waste (2-3)</td>
<td>3</td>
</tr>
<tr>
<td>LAW 982 Regulatory Law and Policy</td>
<td>3</td>
</tr>
<tr>
<td>LAW 986 Securities Regulation</td>
<td>3</td>
</tr>
<tr>
<td>LAW 989 Tax Policy</td>
<td>3</td>
</tr>
<tr>
<td>LAW 990 Taxation of Mergers and Acquisitions</td>
<td>3</td>
</tr>
<tr>
<td>LAW 991 Corporate Taxation</td>
<td>3</td>
</tr>
<tr>
<td>LAW 992 Tax Policy</td>
<td>3</td>
</tr>
</tbody>
</table>

Note: If a student elects either Securities Regulation or any two of the above courses with combined credit of 5, the total required law school credit is reduced to 20 hours and law school electives are increased to 12 hours.

Law School Electives (11 credit hours)

Business Courses Required of All Joint Degree Candidates (40 credit hours):

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Courses: Required of All Students (18 credit hours)</td>
<td></td>
</tr>
<tr>
<td>BUS 701 Organizational Behavior</td>
<td>2</td>
</tr>
<tr>
<td>BUS 702 Managerial Economics</td>
<td>2</td>
</tr>
<tr>
<td>BUS 703 Financial Accounting</td>
<td>2</td>
</tr>
<tr>
<td>BUS 704 Statistical Decision Making</td>
<td>2</td>
</tr>
<tr>
<td>BUS 705 Global Economic Environment of Business</td>
<td>2</td>
</tr>
<tr>
<td>BUS 709 Financial Management</td>
<td>2</td>
</tr>
<tr>
<td>BUS 711 Marketing Management</td>
<td>2</td>
</tr>
<tr>
<td>BUS 715 Managing in a Global Environment</td>
<td>2</td>
</tr>
<tr>
<td>BUS 720 Strategic Management</td>
<td>2</td>
</tr>
<tr>
<td>BUS 723 Professional Development Skills I</td>
<td>2</td>
</tr>
<tr>
<td>Business Electives</td>
<td>16</td>
</tr>
<tr>
<td>Breadth Courses (6 credit hours, choose three of four courses):</td>
<td></td>
</tr>
<tr>
<td>BUS 705 Human Resources Management</td>
<td>2</td>
</tr>
<tr>
<td>BUS 706 Managerial Information Systems</td>
<td>2</td>
</tr>
<tr>
<td>BUS 710 Managerial Accounting</td>
<td>2</td>
</tr>
<tr>
<td>BUS 719 Operations Management</td>
<td>2</td>
</tr>
</tbody>
</table>

Business Electives

For more information, review the materials on the regular programs in the School of Law Catalog and the M.B.A. section of this chapter of the catalog, or contact the University of Kansas, Associate Dean, School of Law, Green Hall, 1535 West 15th St., Lawrence, KS 66045-7577, or the University of Kansas, Director of Master’s Programs, School of Business, Summerfield Hall, 1300 Sunnyside Ave., Lawrence, KS 66045-7585.
Combined M.B.A. and Ph.D. in Nursing

The School of Business and the School of Nursing offer a combined M.B.A. and Ph.D. in Nursing degree program, consisting of 40 hours of graduate business courses and 54 hours of doctoral nursing courses. The combined program takes four years to complete and results in separate M.B.A. and Ph.D. in Nursing degrees. Contact the Nursing Student Affairs Office, Mail Stop 2029, KU Medical Center, 3901 Rainbow Blvd., Kansas City, KS 66160; (913) 588-1621; or the Director of Master's Programs, School of Business, Summerfield Hall, 1300 Sunnyside Ave., Lawrence, KS 66045-7585.

See the School of Nursing chapter for information about the combined M.B.A./Ph.D. in Nursing degree.

Combined M.B.A. and M.A. in Area Studies

To respond to the need for business graduates who also have foreign language and geographic area expertise, the School of Business and the College of Liberal Arts and Sciences developed a joint M.B.A./MA program. The School of Business now offers a joint degree program with KU’s nationally recognized area studies programs in Latin American Area Studies and Russian, East European, and Eurasian Studies – both Title VI Comprehensive National Resource Centers. The program requires completion of 64 hours of course work. After all degree requirements for the joint program have been met, a Master of Arts degree in either REES or LAAS and a Master of Business Administration degree are awarded.

Prospective students must submit applications to the School of Business and follow the application procedures for the business master’s programs. To be admitted, students must meet the prerequisites of and be accepted by the School of Business and either the LAAS or REES area studies program. The School of Business is the administrative home of the joint degree program. However, the school and the LAAS and REES programs share advising duties and jointly certify the completion of degree requirements.

M.B.A. with a Concentration in Petroleum Management

The M.B.A. with a concentration in petroleum management program offers a cutting-edge curriculum for those seeking positions with managerial responsibilities in the public and private sectors. KU’s program emphasizes broad concepts of business administration that progress to specific areas in petroleum management. KU offers the program full time on the Lawrence campus in addition to evening courses available on the KU Edwards Campus. This is a specially designed course of study. The program meets the requirements of active-duty U.S. Naval Supply Corps officers and Air Force officers who usually are assigned to billets requiring this training upon completion of study at KU.

Doctor of Philosophy

The program is designed for students who wish to become scholar-teachers. It develops the capacity for effective teaching and original research by providing mastery of the knowledge in a particular field, a thorough understanding of research methodology, the ability to communicate effectively, and the motivation for continuing self-education. Students must specialize in a concentration and develop a broad knowledge of other areas of business and their interrelationships in the management function.

As of spring 2005, 26 students were enrolled in the Ph.D. program. The program will continue to be limited in size so each student can work closely with faculty to receive substantial individual attention.

Admission

The applicant must hold at least a bachelor’s degree from an accredited college or university. No specific undergraduate preparation in business is required.

The applicant must demonstrate competence as a scholar through a high level of previous academic performance and high percentile scores on the Graduate Management Admission Test. Scores may not be older than five years at the time of application. In addition, international applicants must present high scores on the Test of English as a Foreign Language.

Finally, the applicant must demonstrate the ability for doctoral study in business, either by a record of achievement in previous professional or academic experience, including research and scholarship, or through letters of recommendation and a personal interview.

These requirements are intended only as suggestions for minimum admission standards. They should not be construed as a guarantee of admission to the Ph.D. program.

A $60 nonrefundable application fee for online applications or a $65 nonrefundable application fee for applications on paper, payable to the University of Kansas, must accompany all applications.

Submit your application to the Graduate School online at www.graduated.ku.edu. Send original transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas School of Business
Doctoral Applications
1300 Sunnyside Ave.
Lawrence, KS 66045-7585

Ph.D. Degree Requirements

By the end of the third semester of the aspirant’s program (excluding summer sessions), an aspirant must complete the following qualifier requirements. All aspirants must demonstrate some proficiency in doing original research of publishable quality, must demonstrate some proficiency in teaching, and must successfully complete the following six tool area courses: BUS 915 Seminar in Organization Behavior, BUS 916 Seminar in Organization Theory, ECON 700 Survey of Microeconomics, ECON 701 Survey of Macroeconomics, BUS 920 Probability for Business Research, and BUS 921 Statistics for Business Research. If an aspirant is already proficient in some of these courses, they can be replaced by advanced courses in the same area. The timing of the six tool area courses is determined by the
aspirant’s faculty adviser in consultation with the area faculty and depends on the aspirant’s background and research interests. At or before the end of the aspirant’s third semester in the program, a qualifier assessment team, composed of five faculty members, holistically determines whether or not a student continues in the program.

The aspirant for the Ph.D. in business administration must have a concentration, supporting areas, and preparation in research methodology.

**Concentration.** Each aspirant, with the help of her or his faculty adviser and the faculty, selects a concentration from the traditional business disciplines of accounting or information systems, finance, human resources, decision sciences, marketing, organizational behavior, and strategic management. An aspirant also may propose an interdisciplinary concentration that is a combination of these disciplines, or may include emphases such as international business, information systems, law, and economics. The aspirant must take at least five advanced courses in the concentration. These courses may include those offered outside the School of Business.

**Supporting Areas.** Course work in the concentration is supplemented and strengthened by study in one or two supporting areas. A supporting area is one that supplements and complements the concentration. The aspirant satisfies the supporting area requirement by taking at least four advanced courses in the supporting areas (at least two courses in each of two supporting areas or at least four courses in one supporting area). Courses recommended for preparation for the qualifier assessment may not be included in satisfying the supporting area requirement.

**Research Methodology.** The aspirant must demonstrate adequate preparation in research methodology beyond that required for the qualifier assessment. At least one research methodology course must be taken beyond courses forming the concentration. This requirement may be satisfied as part of the supporting area courses.

**Teaching.** To prepare themselves for future teaching duties, students attend a teaching seminar early in the program. They gain teaching experience through teaching one course each of two semesters.

**Examinations.** To advance to candidacy, the student must pass a written-oral comprehensive examination in the concentration. Before completion of the written-oral comprehensive, students enroll in a Ph.D. seminar for each of four semesters. In this seminar, students and faculty present original research.

Finally, the student must pass an oral defense of the dissertation research proposal and the dissertation.

**Financial Aid**

Most students admitted to the Ph.D. program receive financial assistance. Contingent on satisfactory progress and availability of funds, the school provides financial assistance to most students for the first four years of their programs. Financial assistance is available in varying degrees through assistantships, fellowships, grants, loans, and employment.

**Assistantships.** During the first year, most doctoral students are appointed as research assistants. Subsequently, most doctoral students are appointed as graduate teaching assistants. Many doctoral students also receive dissertation fellowships while writing their theses. During 2004-05, a 50-percent-time graduate research assistantship paid about $1,480 per month plus tuition and fees. Appointment as a graduate teaching assistant at 40-percent time or more entitles the student to a 100 percent tuition waiver. For non-native speakers of English, appointment as a graduate teaching assistant is only made after the student passes the Test of Spoken English administered by the Applied English Center at KU. During 2004-05, a graduate teaching assistantship paid about $1,480 per month. See also Financial Aid in the General Information chapter of this catalog.

**Fellowships and Grants.** The School of Business has been successful in nominating doctoral students for fellowships and grants from sources outside the school. Business students have received awards from the Richard D. Irwin Foundation, the American Institute of Certified Public Accountants, Beta Gamma Sigma, the American Accounting Association, and the University of Kansas Graduate School. Several dissertation fellowships normally are awarded annually. These awards are approximately equal to the amount the student would receive as a research assistant and allow the student to receive support for a semester while working on his or her dissertation.

The School of Business maintains active files on these and other sources of fellowships and grants, recommends qualified students for the awards, and works closely with students in submitting application materials. Assistance in the form of loans or employment is available through the University of Kansas Office of Student Financial Aid, Strong Hall, 1450 Jayhawk Blvd., Room 50, Lawrence, KS 66045-7535.

### Business Courses

- **Accounting Courses**
  - ACCT 500 Individual Research in Accounting: ____ (1-5).
  - ACCT 543 Introduction to Auditing (3).
  - ACCT 599 Internship in Accounting (1-3).

- **Business Courses**
  - BUS 500 Individual Research in Business (1-5).
  - BUS 599 Internship in Business Administration (1-3).
  - BUS 701 Organizational Behavior (2). This course focuses on human behavior in organizations. It helps the student learn to think systematically and critically about organizations, to appreciate knowledge building in the organization sciences, and to apply that knowledge in the work setting. Topics covered may include: individual differences and motivation, work and group design, leading and decision making, organization design and culture, and organization change and development. LEC
  - BUS 702 Managerial Economics (2). This course uses economic theory and methodology to understand and improve managerial decision making. The focus is on the role of markets in determining business and individual opportunities to create value, the behavior of individual markets reacting to supply and demand forces, and the consequences of alternative market structures and business policies. Course content includes demand, production, cost analysis, supply and demand analysis, price and non-price modes of competition, market structure, and economic efficiency. LEC
  - BUS 703 Financial Accounting (2). Financial accounting provides information to decision-makers external to the business, such as investors and lenders. The course describes the process through which economic information is captured, validated, and distributed externally

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
BUS 704 Statistical Decision Making (2). (FS) An introduction to data gathering and analysis with an emphasis on problem solving for decision making and process improvement in a business setting. The role of numerical data in the understanding of business problems and in the evaluation of planned improvements is studied, along with the study of variation commonly occurring in business processes and methods of reducing this variation. Statistical software is used to supplement data analysis and aid in the problem solving. Topics covered may include statistical methods such as exploratory data analysis, graphical analysis, Pareto analysis, stratification analysis, confidence intervals, hypothesis testing, correlation, linear regression, and control charts. LEC

BUS 705 Human Resources Management (2). The purpose of this course is to equip managers to create a sustainable competitive advantage through and strategic investment in its human resources - people and their human capital - approached from the perspective of the practicing manager as opposed to that of the human resources specialist. The major topics covered include staffing, training and development, performance management, compensation, and employee (labor-management) relations. These topics are examined within the context in which an organization operates. Recommended background in BUS 704. LEC

BUS 706 Managerial Information Systems (2). This course provides a broad, managerial level introduction to fundamental information technology concepts and terminology and the application of those concepts in business organizations. Topics include: the Internet, intranets, and extranets; relational database theory; hardware, software, and networking concepts; the system development life cycle, project management; eBusiness/eCommerce; knowledge management; enterprise resource planning; ethical considerations related to information technology advances; and organizational considerations related to information systems. The course focuses on the knowledge and expertise required for managers to successfully leverage information systems assets in a business setting. LEC

BUS 707 Global Economic Environment of Business (2). This course uses economic theory to explain how business functions in a global context. Through the course, the impact of the global economic environment on business decision making and performance is emphasized. Students will learn the ways in which government monetary and fiscal and regulatory policies affect global markets and firm performance. LEC

BUS 708 Introduction to the Legal Environment of Business (2-3). A course focused on understanding legal rights and duties and ethical responsibilities in the business environment and identifying and addressing legal risks in business decision making. This is an introductory course which includes an overview of several foundational areas of law that are highly relevant to business. LEC

BUS 709 Financial Management (2-3). (FS) This course provides an overview of the problems associated with the financial management of business firms. The focus is on the practices followed by managers in raising and investing capital so as to maximize value. Prerequisite: BUS 703. LEC

BUS 710 Managerial Accounting (2). Managerial accounting provides information to decision-makers within the business, such as supervisors and executives. The course describes the process through which economic information is captured and distributed internally as budgets and other measures of performance. It also covers various uses of managerial accounting information for internal decision-making. These uses include planning for profitable operations, determining costs of products and services, and evaluating performance within an organization. Prerequisite: BUS 703. Enrollment restricted. LEC

BUS 711 Marketing Management (2). This course examines the marketing function of the firm, primarily from a managerial perspective. The topics examined include: marketing concepts, segmentation, and decisions related to positioning, products, pricing, distribution, and promotion. LEC

BUS 712 Total Quality Management Immersion Week (1). LEC

BUS 713 Market Based Management Immersion Week (1). LEC

BUS 714 Entrepreneurship Immersion Week (1). LEC

BUS 715 Managing in a Global Environment (1). This course focuses on economic, social, and political trends in the global environment and examines their implications for national and regional competitiveness. Extensive use will be made of guest speakers from other departments and local companies. Flexibility is required to accommodate instructional methods that will include lectures, discussions, cases, and simulations. Graded on a satisfactory/unsatisfactory basis. LEC

BUS 716 Technology Management and Internet Operations Immersion Week (1). This immersion week is designed to introduce students to the Internet and train them to be proficient in electronic mail, groupware, file transfer, agent technology, web browsing, and home page development. These skills will be used in student consultations in the course work. This course will also introduce students to the field of technology management and technology transfer which is crucial for the introduction, user acceptance, and marketing of technology. This week will also help students understand and develop new career areas developing in MIS and in the intersection of MIS and other areas, such as the electronic commerce field, which is an intersection of MIS, marketing, and finance. LEC

BUS 719 Operations Management (2). This course examines the business from an operations mindset. Topics covered include supplier relationships, JIT and OIT, quality, customer-focus, and manufacturing as a competitive advantage. A systems integration view will be stressed instead of a functional view. Prerequisite: BUS 704. LEC

BUS 720 Strategic Management (2). Strategic Management has as its primary objective the development of an understanding of the role of general management from both a conceptual and operating standpoint. The course is based on the strategic management framework emphasizing the evaluation of an organization’s strategic situation and the formulation of viable alternative strategies required to deal with the challenges facing the organization. Attention will be given to the development of organizational objectives and the formulation of strategies at the corporate, business, and operating levels. In addition, the course will address the various issues related to the effective implementation of such strategies. Prerequisite: BUS 701, BUS 709, and BUS 710 or BUS 711. LEC

BUS 723 Professional Development Skills I (1). A series of workshops for graduate business students which provide foundation and supplemental skills in such areas as time management, business writing, career development, communications, presentations, negotiations, ethical behavior, and market-based thinking. Graded on satisfactory/unsatisfactory basis. LEC

BUS 724 Professional Development Skills II (1). A continuation of Professional Development Skills I. Graded on satisfactory/unsatisfactory basis. LEC

BUS 730 Management Accounting for Advanced Technology (2). An extended analysis of issues related to the impact of advanced technologies on management information needs for the effective, efficient, and profitable operation of the business. The course emphasizes the impact of technology on both the creation and use of information for managerial decisions. Prerequisite: ACCT 203 or BUS 710. Enrollment restricted. LEC

BUS 731 Financial Statement Presentation and Analysis I (2). This course covers topics in intermediate-level financial accounting and financial statement analysis. Accounting topics are taught from an external decision-maker’s perspective. Not open to students who have credit in BUS 510, BUS 610, BUS 740, or BUS 741. Prerequisite: BUS 703. LEC

BUS 732 Financial Statement Presentation and Analysis II (2). This course covers topics in intermediate-level financial accounting and financial statement analysis. Accounting topics are taught from an external decision-maker’s perspective. Not open to students who have credit in BUS 510, BUS 610, BUS 740, or BUS 741. Prerequisite: BUS 703. LEC

BUS 733 Business Taxation (3). An introduction to basic concepts of income tax law with emphasis on business taxation. The factors to consider when conducting a business as a single proprietorship, corporation, S corporation, or partnership are analyzed. Prerequisite: BUS 703 or equivalent. LEC

BUS 734 E-commerce: An Integrative Perspective (3). This course examines how organizations and individuals exploit the Internet and other emerging information technology to conduct business in an information era. This course combines practice and theory to examine successes, failures, and common practices when using information technology for e-commerce activities. Prerequisite: BUS 706 or IST 301. Enrollment restricted. LEC

BUS 735 Systems Analysis and Design (3). (S) This course develops skills with regard to the Analysis and Design activities typically encountered in an organizational software development environment. It emphasizes structured analysis and design techniques, including Data Flow Diagrams, Structure Charts, Entity-Relationship Diagrams, and the application of CASE (Computer-Aided Software Engineering) Tools. The teaching methods will combine classroom experience with an analysis and design case study using role-play techniques to simulate an actual analysis and design scenario. Prerequisite: BUS 706 or IST 301. Enrollment restricted. LEC

BUS 736 Strategic Information Systems Planning (3). This course has two objectives. The first objective is to give graduate students an understanding of strategic information systems for high level IT strategy in organizations. This is accomplished through case analysis, the experiential learning of strategic concepts and through interaction with IT executives. IT strategy is explored at the executive, strategic level and the role of IT in strategic planning and business management. The second objective of the course is to give students experience working on projects/research and presenting materials as is done in developing IT
strategy for real organizations. Prerequisite: BUS 706 or IST 301. Enrollment restricted. LEC

BUS 737 Systems Development (3). This course focuses on the practical aspects of systems development. A main objective of the course is to teach students system development through programming projects. In addition, the course examines the software engineering issues involved in system development, including usability and design issues. To enhance the theoretical development of the system, students will be required to design and implement software testing and evaluation issues. Prerequisite: BUS 706 or concurrent enrollment in BUS 706, or IST 301. Enrollment restricted. LEC

BUS 738 Database Management (3). This course provides insight into the management of databases. Students will undertake a project that allows them to experience the database management process while learning and practicing the modern data modeling techniques. Students will also study the value that databases have to the organization and the impact that databases have on decision-making processes. Students will also study strategic issues that impact database development. Furthermore, students will research the latest advances in database management systems and other emerging technologies to gain insight on how these advances will impact the future of database development. Prerequisite: BUS 706 or IST 301. Enrollment restricted. LEC

BUS 739 Advanced Managerial Accounting: Quantitative and Economic Topics (3). (V) Through judicious use of quantitative methods including statistical decision theory, this course provides a conceptual analysis of several prominent managerial accounting topics. The course is intended to assist both public accountants and management accountants to understand management decision-making processes and information requirements. Prerequisite: BUS 733. LEC

BUS 740 Accounting Theory (3). (S) The development of an understanding of accounting concepts and standards as a basis for the evaluation of current problems of reporting to stakeholders, regulatory bodies, management, and other users of financial data. Topics will include accounting theory development, alternative valuation models, an introduction to market model research, the theory of accounting standard formulation, and human information processing of accounting data. Prerequisite: BUS 710. LEC

BUS 741 Advanced Accounting Problems (3). (S) Advanced problems in bankruptcy, estates and trusts, installment and consignment sales, insurance settlements, consolidated statements and other areas of importance to the practice of public accounting. Prerequisite: ACCT 410. Enrollment restricted. LEC

BUS 742 Applied Accounting Theory (3). (S) This course develops an understanding of the roles of accounting theory, economics, and politics in the national and international standard setting process. The course also focuses on using research tools to address contemporary questions in financial reporting for corporations. Case studies are often used for these purposes. The specific topics that are addressed will change over time, but typically will include a number of controversial and problematic current or recent reporting issues. Prerequisite: ACCT 410. Enrollment restricted. LEC

BUS 744 Advanced Auditing (3). (V) Current auditing philosophy, standards, techniques, and professional judgment are extensively investigated and related to auditing activities. Special emphasis is given to the design of audit programs in relation to the client’s system of internal control and the factors affecting such procedures and risk. Other topics include auditors’ legal liability, professional ethics, the impact of electronic data processing and statistical techniques, and the preparation of auditors’ reports and qualifications therein. Prerequisite: ACCT 543. Enrollment restricted. LEC

BUS 745 Tax Research (3). (V) A course designed to develop one’s ability to use the research tools available and provide comprehensive coverage of the various aspects of tax research. Emphasis is placed on locating authorities, solving tax problems, and communicating the results. Prerequisite: ACCT 320 or ACCT 325, or BUS 733. Enrollment restricted. LEC

BUS 746 Taxation for Business Entities (4). (F) A study of federal indirect taxes for corporations, partnerships and limited liability companies, and pass-through entities. The topics to be covered include taxation of estates and trusts, and the various aspects of the federal income tax. The course will provide one’s ability to research and construct a comprehensive tax plan in a family context. Prerequisite: BUS 745. Enrollment restricted. LEC

BUS 747 Tax Planning (3). A study of the fundamentals of Federal estate and gift taxation, the income taxation of estates and trusts, and the various aspects of federal tax planning. The course will provide one’s ability to research and construct a comprehensive tax plan in a family context. Prerequisite: ACCT 330 or ACCT 335, or BUS 735. Enrollment restricted. LEC

BUS 748 Business Computer Networking (3). This course exposes graduate business students to the technical and managerial aspects of business computer networking. The course will provide students with a foundation in network theory and technology. Business network administration and operation will be a major component of the course. The course will use cases and outside readings to focus on key network management issues and to present emerging network technologies. Prerequisite: BUS 706 or IST 301. LEC

BUS 749 Developments in Software Technology (3). This course is an introduction to object-oriented (OO) technology and the object paradigm. We will explore the object paradigm, its benefits and limitations. Specifically, we will study a state-of-the-art technique for OO modeling. We will apply this technique to the design and development of a system, and implement the concepts with OO programming. Students will gain practical experience in OO analysis design, and implementation through projects with an OO programming language. Prerequisite: BUS 706; BUS 737. LEC

BUS 751 Investment Theory (2). (V) This course provides a framework for describing the nature of securities markets. The focus is on efficient markets, capital markets, and portfolio theory. Through the use of theoretical models, students gain an understanding of the methods and techniques utilized by the professional investor and portfolio manager. Not open to students with credit in BUS 622. Prerequisite: BUS 709 or consent of instructor. LEC

BUS 752 Investment Analysis (2). (V) This course emphasizes the applications aspects of investments. Various valuation methods are applied to securities of different types with emphasis on bonds, common stocks, options and futures. Case studies are often used to convey key concepts and strategies. Not open to students with credit in BUS 622. Prerequisite: BUS 751 or consent of instructor. LEC

BUS 753 Analysis of Financial Intermediaries (2). (V) This course focuses on the principal elements of the financial sector and the role of financial institutions. Contemporary issues facing these institutions in conjunction with historical and evolutionary developments are a hallmark of the course. Not open to students with credit in BUS 623. Prerequisite: BUS 709. LEC

BUS 755 Real Estate Investment Analysis (2). (V) This course stresses the practical applications of real estate analysis that can be drawn from theoretical foundations to assist the real estate manager in long-range planning. Particular emphasis is placed on real estate valuation, financing, conveyance, tax consequences of ownership and the role of government in real estate. Prerequisite: BUS 709. LEC

BUS 756 Financial Risk Management (2). (V) This course examines the use of forwards, futures, options, and other financial derivatives for hedging, arbitrage, and speculative purposes. The course focuses on how firms can hedge interest rate risk, exchange rate risk and commodity price risk using derivatives. The emphasis is on understanding the issues and techniques of financial engineering with derivatives as practiced by firms and individuals. Prerequisite: BUS 709 or consent of instructor. LEC

BUS 757 Business Valuation (3). This course applies financial valuation concepts to firms, divisions and product lines. Concepts explored in the course include free cash flow, economic value added, internal and external restructuring, and valuation. Prerequisite: BUS 750 or BUS 751, or BUS 754. LEC

BUS 758 Applied Portfolio Management (4). (V) This course provides the student with practical portfolio experience. Students actually and collectively manage funds in an endowment account for the benefit of the University and the School of Business. Experienced instructors, speakers, and financial analysts from Wall Street give the class a hands-on real life experience in analyzing and managing securities. The student will be familiarized with many different applied valuation procedures such as cash flows and growth models in an event driven context, as well as market capitalization techniques. Individual securities and stock options are analyzed on a continuing basis for inclusion or exclusion in the portfolio. Prerequisite: BUS 751 or equivalent, or consent of instructor. Enrollment restricted. LEC

BUS 759 International Finance (2-3). (V) The economic determinants of exchange rates are discussed. This is followed by an examination of the financing problems faced by the multinational corporation and the international portfolio manager, arising from the international nature of their environment. Topics can include split, forward, futures, and options markets in foreign currency, international risk management, purchasing power parity, interest rate parity, covered interest arbitrage, and contemporary issues in international financial management. Prerequisite: BUS 709 and BUS 707 or ECON 522 or ECON 523 or permission of instructor. LEC

BUS 760 Global Financial Risk Management I – Forwards, Futures, and Swaps (2). This course examines the use of forwards, futures, and swaps, and related financial derivatives for hedging, arbitrage, and speculative purposes in the global environment. The course focuses on understanding how firms can manage interest rate risk, exchange rate risk, and commodity price risk using these derivatives. The emphasis is on understanding the motivation, mechanics, valuation, and management techniques behind financial engineering with these derivatives, as practiced by firms and individuals to maximize value in global markets. Prerequisite: BUS 709, LEC

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG

Business Courses (BUS)
BUS 761 Global Financial Risk Management II – Options (2). This course examines the use of options and related financial derivatives for hedging, arbitrage, and speculation purposes in the global environment. Important topics are: cash flow analysis, estimation of required rates of return, risk analysis, and long-term investment analysis. Not open to students with credit in BUS 624/FIN 415, BUS 754, or equivalents. Prerequisite: BUS 709 and BUS 761, or consent of instructor. LEC

BUS 762 Business Investment (2). The focus of this course is on the evaluation of fixed asset investment opportunities. Important topics are: methods and techniques used to assess the viability of a new service. The emphasis is on "learning by doing." The course will focus on the enhancement of innovative thinking, the identification and development of marketing opportunities, entry strategies; and developing the marketing mix for the new product. Prerequisite: BUS 710 or BUS 711 or permission of instructor. LEC

BUS 763 Business Financing (2). The focus of this course is on the theory and practice of how businesses raise funds. Important topics are: long-term capital markets and sources of long-term financing, optimal capital structure, financial planning and analysis, and a variety of new problems. Not open to students with credit in BUS 624/FIN 415, BUS 750, or equivalents. Prerequisite: BUS 702 or consent of instructor. LEC

BUS 765 New Product Management (3). (V) This course is designed to help students understand how to develop an understanding for the need for a disciplined process of development, and to follow the basic steps of opportunity identification, testing, and implementation. It deals with the strategies, techniques, and methods used to introduce a new product or service. The emphasis is on "learning by doing." The course will focus on the enhancement of innovative thinking, the identification and development of marketing opportunities, entry strategies; and developing the marketing mix for the new product. Prerequisite: BUS 710 or BUS 711 or permission of instructor. LEC

BUS 766 Consumer Behavior (3). (V) This course is designed to review behavioral science concepts applicable to understanding the buyer’s behavior, (2) to investigate the specific processes of consumer decision-making and purchasing, and (3) to discuss the research applications of behavioral science concepts to marketing problems. Topics include: environmental influences on the consumer’s evaluation, perception, information processing, attitude, purchasing processes, post-purchase evaluation and related theories. Not open to students with credit in BUS 658. Prerequisite: BUS 710 or BUS 711. LEC

BUS 767 Marketing Research (3). (V) This course can act either as a survey course for the graduate student interested in an introduction to marketing research or as a first course for the student planning to take additional work in marketing research and analysis. Topics include: questionnaire design, data sources, measurement and scaling, sampling, experimentation, and statistical analysis of data. Not open to students with credit in BUS 639. Prerequisite: BUS 710 or BUS 711. LEC

BUS 768 Marketing Communications (3). (S) This course investigates the marketing communications system primarily from a managerial perspective. The course operates from the premise that the development of any persuasive communication strategy - be it advertising mass communications or personal sales - is best accomplished after an understanding of the basic elements of the behavioral and communication process. Consequently, a good part of the course will be spent examining the communications process, the nature of the receiver and how information is processed, communications research, and the determination of communications budgets and objectives. Prerequisite: BUS 710 or BUS 711. LEC

BUS 769 Strategic Marketing Planning and Decision-making (3). This course is a capstone marketing course designed around a strategic marketing planning agency, and a variety of emphasis upon how to develop strategic analysis and planning. Methods for the strategic analysis of business units, product-market definition, segmentation, positioning, and new product planning are examples of topics that will be covered. However, the primary course objective is to integrate the various methods and topics into a strategic planning framework which should enable participants to formulate alternative marketing strategies; to translate these strategies into the marketing mix; and to conceptualize the formulation, integration, implementation, and control of long-range and short-range planning. Prerequisite: BUS 710 or BUS 711. LEC

BUS 770 Metrics and Statistics in Marketing Research (3). (S) An analysis of selected statistical and mathematical techniques that are currently being applied or are potentially applicable to the solution of marketing problems. Extensive use is made of actual studies that have utilized these techniques. Prerequisite: BUS 639 or BUS 710 or BUS 711. LEC

BUS 771 Global Marketing (3). (V) This course is designed to provide a set of conceptual and managerial tools to students for undertaking marketing strategies and decisions on a global scale. The topics covered in the course include economic and financial dimensions in global marketing, social and cultural aspects of the global market environment, regional market characteristics, international trade theories, political and legal issues in global marketing. A significant portion of the course is devoted to the study of competitive analysis and competitive strategy for global markets, marketing mix decisions (product, price, promotion, and distribution) in a global setting. Prerequisite: BUS 709 or BUS 710, or consent of instructor. LEC

BUS 772 Sales Force Management (3). (V) In many industries, the sales force is the primary vehicle for taking the product to market. The main objective of this course is to expose students to the concepts, tools, and techniques required to effectively manage this important function. Since the use of personal selling is generally more pronounced within industrial markets, this course will first analyze issues unique to industrial marketing. Topics here include industrial buying behavior, segmentation strategies for industrial markets, life cycle strategies, and managing the pricing function for industrial products. Using this foundation, the next part of the course will cover issues specific to the management of the sales force such as structuring the sales force, sizing the sales force, demand estimation, quota setting, and sales force compensation. Finally, the last part of the course will focus on skills required for professional selling such as handling objections and closing the sales call. LEC

BUS 774 Internet Marketing (2-3). (V) This course examines how the power of today's digital technologies can be harnessed to enhance and deploy the marketing function. The course begins with an overview of the key forces shaping the digital environment. It introduces several topical areas that define and characterize marketing in this new environment. Illustrative topics include web business models, traffic driving strategies, e-commerce marketing, site optimization, online support, dynamic pricing, direct channel redesign, and m-commerce. Throughout, emphasis is placed on linking key concepts to best practices in the field. Prerequisite: BUS 711. LEC

BUS 780 Legal Aspects of Business Transactions: Contracts and Torts (2). A course focused primarily on principles of contract and tort law. Contract law and tort law serve as the foundation for many other areas of law that are relevant in the business environment. Prerequisite: BUS 708. LEC

BUS 781 Legal Aspects of Business Organizations (3). A course focused on the legal attributes of different forms of business organizations, such as partnerships and corporations. This course includes a study of the basic principles of agency law, partnerships, and business organizations. Additional topics include the law of business organizations and the responsibilities of entities (such as those, partners, stockholders, directors, officers, contractors, employers, and employees) functioning in the organizational environment. Also considered are the interests of third parties, including the public, which brings into focus related topics, such as securities regulations, ethics, and corporate social responsibility. Not open to students with credit in BUS 642. Prerequisite: BUS 708. LEC

BUS 786 Business Forecasting Methods and Applications (4). A survey of forecasting methods and applications. Essential concepts underlying these methods are discussed, including cost and performance characteristics. Criteria for selection of appropriate methods are developed. Issues concerning effective utilization for forecasting in several corporate planning situations are considered. Prerequisite: BUS 706. LEC

BUS 787 Managing for Quality Improvement (3). (V) This course will cover topics of decision making under uncertainty and competition. Examples of topics that may be covered include decision theory, game theory, habitual domain theory for forming winning strategies and effective decision making. Automated aids for decision making such as expert systems may also be covered. Prerequisite: BUS 709 or BUS 711, or consent of instructor. LEC

BUS 788 Seminar in Decision Sciences: _____ (3). (V) An introduction to the methodology of management science, namely model formulation, analysis, interpretation, and sensitivity analysis. Topics covered may include decision making under uncertainty, resource allocation models, and probabilistic models. Applications will be emphasized. Prerequisite: BUS 704. LEC

BUS 789 Statistical Process Control and Improvement (3). A survey of various statistical process control tools and techniques. The course covers theories of decision making under uncertainty and competition. Examples of topics that may be covered include decision theory, game theory, habitual domain theory for forming winning strategies and effective decision making. Automated aids for decision making such as expert systems may also be covered. Prerequisite: BUS 709 or BUS 711, or consent of instructor. LEC

BUS 790 Statistical Process Control and Improvement (3). (V) This course deals with process improvement through the reduction and control of variation in business organizations. The result of re-
dudced variation is an improvement of integral organizational functions, a reduction of costs, and a minimization of defects in the market place. Data driven decisions are emphasized and include an advanced discussion of using control charts for process improvement, and the use of designed experiments in process improvement. Particular emphasis will be given to methods used to analyze a given process, to the use of statistical tools to stabilize an entire process, to understand the natural variability in process output and to reducing process variation. Prerequisite: Bus 704. LEC

BUS 790 Contemporary Issues in Operations Management (3). This course will discuss the major manufacturing and operating strategies used by firms today. A partial list of these strategies include quality improvement, theory of constraints, just-in-time, and manufacturing planning and control systems. Pros and cons of each strategy will be critically considered and the operating issues will also be discussed. Prerequisite: BUS 718 or BUS 719. LEC

BUS 791. Managing Customer Focused Enterprises (2-3). An introduction to management principles supporting the concept that a primary goal of a business is to meet the needs of its customers. To accomplish this goal, organizations must design, build, and deliver products and services that meet customer needs in a resource effective manner. Topics covered include the role of the customer, the nature of process improvement in meeting customer needs in a cost effective manner, the view of the organization as a system, the reduction of variation in all organizational processes, the nature of continuous organizational learning, and the responsibilities of management in this approach. LEC

BUS 795 Special Topics in Business: (2-5). A variable-topic course open to graduate and selected undergraduate students meeting the requirements established by faculty members teaching the course. Prerequisite: Determined by the instructor. Enrollment restricted. LEC

BUS 800 Management of Organizations (3). This course examines the evolving concept of management and explores various theories and methods for managing organizations. This course has three purposes: (1) to provide access to important ideas and issues facing general managers, (2) to help students integrate their knowledge and expand their vision about managing organizations, and (3) to provide a forum for discussing the issues, challenges, and opportunities lying ahead in a career in management. Prerequisite: BUS 701 or equivalent for non-business majors. LEC

BUS 801. Organizational Change and Development (3). This course examines the mechanisms the organization uses to respond to and initiate changes in its internal and external environments. Specific processes include organization development (OD), intervention theory and research, organizational effectiveness, a variety of proactive change strategies, and the role of the change agent. Prerequisite: BUS 701. LEC

BUS 802 Organizational Problem Solving (3). This course presents theories and methods for understanding and managing the processes of organizational problem solving. Organizational problem solving is viewed in terms of five interdependent stages: (1) problem finding, (2) problem formulation, (3) choosing among alternatives, (4) implementing the solution, and (5) audit and review of results. While the emphasis is on the substantive issues, the use of qualitative research methods is covered. Some important topics in decision theory. Prerequisite: BUS 701 or equivalent for non-business majors. LEC

BUS 803 Organizational Design (3). Organizations are viewed as interdependent environments. They struggle to achieve congruence among their strategic direction, their implementation of organizational technologies, and their results. Organizations must examine the bonding of their members with the organization and how achieving bonding both affects and is affected by the organizational design, rewards systems, and meeting customer requirements. This course surveys current issues in the theory and practice of organizational design and discusses, in depth, how to perform an organizational design. Prerequisite: BUS 701 or equivalent for non-business majors. LEC

BUS 804 Behavioral Research Methods (4). This course is designed to develop in students an ability to analyze research reports critically and to provide skills in designing, performing, and reporting original behavioral research. Methodologies ranging from naturalistic field studies to laboratory experiments are reviewed along with various data collection strategies. Students prepare and defend an original research proposal. Recommended to be taken early in the program for Organization and Administration doctoral and masters students. LEC

BUS 805 Comparative and Cross Cultural Management (3). This course focuses on differences and similarities of organizational behavior and in the values and expectations of organization members from one society to another. A primary goal is to construct a model for understanding the complex linkage among the cultural, social, economic, and political environments. The course also considers the problems and accommodations that occur when people of different national or cultural backgrounds work together, either within the boundaries of an organization or in business negotiations. The emphasis is on the necessary skills for managing multicultural diversity in both domestic and international settings. Mandatory destinations are Japan, the People’s Republic of China, Latin America, the Middle East, and the United States. Prerequisite: BUS 701. LEC

BUS 806 Management of Workforce Diversity (3). The focus of this course is on understanding the increasing diversity of the U.S. workforce and implications of that diversity for human resource management. Theoretical and empirical research on workforce diversity will be covered and students will gain experience in understanding cultural differences through experiential exercises and visits to new environments. Topics covered include demographic trends in the United States, the changing composition of the workforce, the legal context of workforce diversity, cultural differences for major demographic groups, and strategies for effectively managing a diverse workforce. Prerequisite: BUS 701. LEC

BUS 807 Ethics, Values, and Success in Business (3). This course will cover several different ethical frameworks useful in making business decisions and help students identify and articulate their own personal value systems and recognize them in the context of these ethical frameworks. It will develop their capacity for discovering the ethical dimension of business decisions and actions and provide opportunities to apply the skills and knowledge learned to business situations. The course uses readings, lectures, and discussions of basic moral philosophy, covering ethical frameworks including religious-based frameworks, utilitarianism, universalism, and distributive justice. Visual media and guest lecturers from the business world will make occasional appearances. Students will be asked to interview business executives and report on those interviews. LEC

BUS 809 Advanced Topics in Management of Organizations: (2-5). A study of advanced topics in the theory and practice of the management of organizations. The course focuses, content, and approach will depend upon the particular topics to be covered. Repeatable for different topics. Prerequisite: Variable. LEC

BUS 810 International Business (2). This introductory course aims at providing a framework for understanding the basic concepts, practices, and issues involved in international business and economic relations. Focus is placed on (1) the evolution of the present international monetary and trade systems, with emphasis on the role of the IMF and GATT; (2) the nature and current transition of formerly centrally planned economies; (3) the nature and prospects of less developed countries; and (4) the interdependence of the major industrialized nations (with coverage also of regional integration initiatives). LEC

BUS 811 Competitive Analysis and Strategy (2). Competitive Analysis and Strategy deals with issues and the formulation of competitive strategy towards creating long-term economic value. This course develops a framework for evaluating industry structures and understanding the dynamics of competition, combining rigor with relevance and applicability. Topics covered include nature of markets and competition, economic value creation, analysis of industries, customers and competitors, identification of capabilities and core competencies, alternative positioning strategies that create value in different environments and factors that lead to the erosion of competitive advantage. In addition, discussion will center around how firms can achieve “dynamic fit,” developing a self-renewing organization that encourages entrepreneurial behavior critical to the formulation and implementation of value creating strategies. LEC

BUS 812 Management of Technology I: Technology and Strategy (2). Management of Technology I will focus on the role played by technology in the strategic management of firms, both in high technology and low technology industries. The use of technology as a major source of competitive advantages, both in terms of new products and processes, and the impact of technology on organizational forms will be discussed. The concept of technology strategy and the role of value creation will be elaborated. The course will make extensive use of cases to illustrate the key concepts. Topics covered include: Technological environment; Schumpeterian competition and creative destruction; innovation and diffusion; Industry evolution and market development triggered by technological developments; Technology-induced organizational changes: from craft production to mass customization; Technology strategy: acquisition, deployment, and utilization, new venture development. LEC

BUS 813 Management of Technology II: Technology and Operations (2). Management of Technology II will focus on the role of technology in management of operations of a company. Research and Development, New Product Development, Operations and the linkages among them will be detailed. Key organizational issues such as business processes, core process designs, and organization of R&D and scientific laboratories will be discussed. Information technology as a source of organizational change and adaptation will be summarized. Topics covered include: R&D strategy, alliances and management; new product development; QFD, benchmarking, and manufacturing involvement; methods to speed up cycle time, concurrent engineering, outsourcing and lead user analysis; manufacturing

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
M.B.A. students may choose a concentration option in an area of business that fits their own interests and goals.

The Wagon Microcomputer Laboratory offers 40 computers and 65 software programs to business students.
age includes Equal Employment Opportunity legislation, the Americans with Disabilities Act, the National Labor Relations Act, the Occupational Safety and Health Act, and the Fair Labor Standards Act. LEC

BUS 837 Managing Human Resources in a Union Environment (2). This course examines managing employees in the context of a labor union. The focus is on the creation of mutual gains and the avoidance of an adversary relationship. A major issue is how human resources can be used for a firm’s competitive advantage in a union context. Topics covered include strategies for dealing with unions, the negotiation of agreements, productivity enhancement, contract administration, and dispute resolution. LEC

BUS 838 Advanced Seminar in Human Resources: ______ (2-5). A study of advanced topics in various subfields of Human Resources. The course focus, content, and approach will depend upon the particular topics to be covered. Repeatable for different topics. Prerequisite: To be determined by instructor. LEC

BUS 840 Global Business Environment (2). This course examines the global economic environment and international political economy in which modern enterprises operate. National economics from Europe, Pacific Rim, and Latin America will be selected for study with respect to structure, performance and policy, and important political-economic interrelationships between countries examined. Implications will be derived for the management of modern firms. Prerequisite: BUS 707. LEC

BUS 846 Political Strategies for Managers (2). Managers act within the context of markets and “non-markets” that are composed of laws, regulations, and guidelines. This course first analyzes business strategies that operate the firm within the national economy and then applies this strategic framework in working through selected cases. Cases will involve both mature business regulation and emerging policy issues. The course also will examine media influences and political strategies applicable to international markets. Prerequisite: BUS 702 or consent of instructor. LEC

BUS 847 Public Policy toward Business (2). This course examines justifications for government interventions in business practice and structure. It examines the implications of various regulatory schemes as well as those of deregulation. Topics such as environmental regulations, direct economic regulation of industries, antitrust law, subsidization of firms and industries, and privatization will be considered. Prerequisite: BUS 702 or consent of instructor. LEC

BUS 848 Negotiation and Dispute Resolution (3). This course will include a study of the theory and practice of negotiation and dispute resolution in business contexts. It will focus on the use of alternatives to litigation, such as various forms of arbitration, mediation, and, especially, negotiation. In addition to emphasizing negotiation as a means of resolving disputes, attention will be directed at negotiation of transactions. Appreciation of concepts will be promoted through role play simulations. LEC

BUS 849 Organizational Economics (2). This course applies the insights of the economic theory of the firm to the management of organization. Topics covered include the organizational design and organizational structure; separation of ownership and control; the theory of the firm; the economics of property rights; corporate governance; the market for corporate control; the role of corporate law in the theory of the firm; contracts; corporate finance; agency costs; structure and managerial incentives; conflicts between shareholders, bondholders, and stakeholders; vertical integration through ownership or control; Uniform Code of Corporate Procedure; and introduction to market-based management. Prerequisite: BUS 702 or ECON 520 or consent of instructor. LEC

BUS 850 Market-based Management (3). This course demonstrates the practical use of economics as the overall framework for organizing economic activity within the firm. Market-based Management is a management philosophy and methodology that uses the insights of free market economics to bring the power of free enterprise inside a business to discover, capture and use employee’s local knowledge; to spur entrepreneurial zeal for wealth maximization; to allocate resources and decision rights to where they create the most wealth; and to provide value to customers. The Market-Based Management framework is practiced in a traditional business paradigm of strategy, structure (or organizational design), and processes (or behavior). In the strategy area, MBM is influenced by Austrian economics and a dynamic view of the market competition. With respect to organizational design and management processes, MBM is influenced by the powerful lessons of Adam Smith. Prerequisite: BUS 702 or ECON 520 or consent of instructor. LEC

BUS 895 Student Directed Seminar in Business: ______ (0.5-5). (V) A variable-topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of Area Director. Enrollment restricted. LEC

BUS 896 Special Problems in Business Administration (1-6). (V) Individual study of selected current problems in the field of business management to be adapted to the special interests and objectives of the students and conducted through extensive reading and research. Students must have at least a 3.0 grade point average and be in good academic standing in a graduate business program and must submit a written statement of the proposed project approved by a supervisory faculty member prior to enrollment. RSH

BUS 899 Master’s Thesis (1-6). (V) Individual research work. Approval of faculty supervisor required. THE

BUS 901 Research Issues in Business Administration (2). (F-S) A core course for Ph.D. students majoring in business administration. Provides a workshop format for discussion of the currently prevalent research methodologies and problems being addressed in the areas of accounting, finance, labor relations, marketing, operations research, and organization and administration. All Ph.D. students are encouraged to attend workshops of interest; however, each Ph.D. student must enroll in the course in each of the first four consecutive semesters in the program. Prerequisite: Admission to the Ph.D. program. LEC

BUS 902 Teaching Seminar (1). (F) The objective of this course is to improve the teaching effectiveness of the participants. Highly effective teachers demonstrate their teaching techniques and discuss the reasons underlying their actions. School of Business Ph.D. students are required to take this seminar during the first semester in which they are the instructor of record for a course. LEC

BUS 915 Seminar in Organization Behavior (4). (F) This course provides a critical analysis of the field of organizational behavior, with the individual as the unit of analysis, and is designed for doctoral students in business. The wide range of topics covered include work motivation, leadership, goal setting, and job design. Prerequisites: Doctoral standing or masters and at least one undergraduate or M.B.A. level behavioral science course or consent of instructor. LEC

BUS 916 Seminar in Organization Theory (3). (S) This course provides an advanced survey of theories about organizations as entities, their properties, and major processes. Topics include structures, structural change, organizational forms, decentralization, effectiveness, adoption and diffusion processes, concepts and theories of processes, interdependence and recent organizational design into and change. Major organization theories are also covered. Students are expected to write a serious research paper. This course is primarily for School of Business Ph.D. students, but other advanced graduate students may enroll with the permission of the instructor. Prerequisite: Doctoral standing or masters students with at least one undergraduate or M.B.A. level behavioral science course or consent of instructor. LEC

BUS 917 Advanced Managerial Economics (3). (F) This course is designed primarily for doctoral candidates in business administration. It will provide a rigorous analytical approach to developing and understanding an integrated economic model of the business firm and its environment. The student will be expected to learn the theory and understand how it can be applied to solve problems in business. Upon completion of the course the student should also possess an understanding of how economic analysis relates to and can be used in his/her own field of research. Masters students may enroll with consent of instructor. LEC

BUS 918 Macroeconomics for Research in Business (3). (S) This course is designed primarily for doctoral candidates in business administration. The basic Classical and Keynesian macroeconomic models are explored, along with extensions of these models. The emphasis is placed on the role of monetary, fiscal, and trade policies, and the dialogue concerning stabilization policy, the unemployment-inflation tradeoff, wealth effects, rational expectations and international policy issues. The focus is on a comparative static analysis of equilibrium, and the stability of equilibrium. Prerequisite: ECON 522 and MATH 115 and (MATH 116 or MATH 121), or consent of instructor. LEC

BUS 920 Probability for Business Research (4). (F) This course covers the basic theory of probability and its use for research in the business discipline. The course is designed primarily for Ph.D. students in the business school. Prerequisite: Doctoral standing and two semesters of calculus, or consent of instructor. LEC

BUS 921 Statistics for Business Research (4). (S) This course covers the basic theory of statistics and its use for research in the business disciplines. The course is designed primarily for Ph.D. students in the School of Business. Prerequisite: BUS 920. LEC

BUS 922 Advanced Regression (3). This course presents various statistical tools for undertaking quantitative research in business. The regression model under the full ideal conditions is discussed, along with methodological issues that arise when these ideal conditions are violated, as often occurs in business research. A high degree of statistical rigor is maintained, along with an emphasis on practical applications through the use of assignments that require data analysis. Prerequisite: BUS 921 or consent of instructor. LEC

BUS 925 Seminar in Contemporary Accounting Theory II (3). (S) Continuation of BUS 740 with emphasis upon the economic and social factors affecting the development of accounting thought. Each student will make both oral and written presentations of his/her original investigation and analysis of contemporary controversial issues. Prerequisite: Consent of Ph.D. adviser. LEC
BUS 927 Seminar in Management Accounting (3). (V) The objective of this course is to foster a student's conception and resolution of substantive issues in the management accounting area. Thus, the course will provide exposure to selected contemporary research topics. Representative topics that will be discussed are: concept of information, information economics, accounting information for planning and control, design of accounting information systems, variance analysis, and cost allocations. Prerequisite: Consent of Ph.D. adviser. LEC

BUS 934 Seminar in Probability and Statistics: (3). (V) This course will cover advanced topics in probability and statistics with application to various business disciplines. Topics covered may vary and will depend on the instructor. Examples of topics that may be covered are time series models, stochastic processes, uncertainty in artificial intelligence, multivariate statistics, etc. Prerequisite: BUS 920 and BUS 921, or consent of instructor. LEC

BUS 935 Seminar in Optimization: (3). (V) This course will cover basic and advanced topics in optimization theory and applications. Examples of topics that may be covered are linear programming, nonlinear programming, dynamic programming, multiple-criteria decision making, habitual domain theory for forming winning strategies and effective decision making and game theory. Prerequisite: Linear algebra and real analysis or consent of instructor. LEC

BUS 936 Management Science Research Seminar (1). (FS) The seminar will discuss current research in management science topics such as artificial intelligence, statistics, optimization, decision making, decision support systems, and production/operations management. Topics covered will reflect the research interests of the instructor and participants. Participants are required to lead the discussion for at least one paper of their choice. LEC

BUS 937 Seminar in Business Finance (3). (S) This course is designed to develop the students' analytical abilities. Course material is of a theoretical and empirical nature. Advanced topics in financial management of business firms are covered. Special emphasis is given to long-term financing topics. Prerequisite: BUS 751 and BUS 752. LEC

BUS 938 Seminar in Investments (3). (F) A study of advanced topics in investments, capital markets, and portfolio theory. Special emphasis is given to the theory of efficient markets. The course is designed to cover recent analytical and empirical literature in the investment area. Prerequisite: BUS 753. LEC

BUS 942 Human Resources Management Systems and Employee Development (4). (V) This seminar provides a rigorous review of the current theory and empirical research in selected areas of human resources management (e.g., staffing, training and development, compensation). Specific topics may include: job analysis, human resources planning, recruitment, selection, orientation, training, performance evaluation, compensation, career management, safety and health, and cost-benefit (utility) analysis of human resources programs. Emphasis on particular topics will vary. Prerequisite: Doctoral student standing or consent of instructor and knowledge generally acquired through the completion of the following basic courses or their equivalents: BUS 701, BUS 705, and BUS 704. LEC

BUS 943 Labor Markets and Labor Relations (4). (V) This seminar provides a rigorous review of the current body of theory and empirical research in labor economics and labor relations. Labor supply and demand, human capital, the economics of the firm human resource decisions including the incentive effects of compensation systems, the economics of unions and collective bargaining, and the legal environment of employment are among the topics covered. Emphasis on particular topics will vary. Prerequisite: BUS 917, BUS 920, and BUS 921, or equivalent courses, and doctoral student standing or consent of instructor. LEC

BUS 995 Doctoral Seminar in Business: (2-5). A variable topic seminar open only to graduate students meeting the requirements established by faculty members offering the course. Prerequisite: Consent of instructor. LEC

BUS 997 Directed Research in Business Administration (1-5). Students will research selected topics in the field of business administration under the direction of a graduate faculty member. Students are expected to report the results of their research by writing a publishable-quality scholarly article. Graded on satisfactory/unsatisfactory basis. Prerequisite: Approval required from supervising graduate faculty member. RSH

BUS 998 Independent Study for Doctoral Students (1-5). Individual study of selected current problems in the field of business management to be adapted to the special interests and objectives of the student and conducted through extensive reading and research. Student must submit written statement of proposed project approved by supervising faculty member and Director, Doctoral Program prior to enrollment. Prerequisite: Approval required from supervising faculty member and Director, Doctoral Program. RSH

BUS 999 Doctoral Dissertation (1-12). (V) Individual research work. THE

● Business Law Courses
BLAW 500 Individual Research in Business Law (1-5).
BLAW 505 Legal Aspects of the Management Process (3).
BLAW 510 Legal Aspects of Real Property Transactions (3).
BLAW 515 Commercial Law (3).
BLAW 520 Negotiation and Conflict Resolution (3).

● Decision Sciences Course
DSCI 500 Individual Research in Decision Sciences (1-5).

● Finance Courses
FIN 500 Individual Research in Finance (1-5).
FIN 599 Internship in Finance (1-3).

● Information Systems Technology Courses
IST 500 Individual Research in Information Systems Technology (1-5).
IST 599 Internship in Information Systems (1-5).

● International Business Courses
IBUS 500 Individual Research in International Business (1-5).
IBUS 599 Internship in International Business (1-5).

● Management Courses
MGMT 500 Individual Research in Management (1-5).
MGMT 599 Internship in Human Resources (1-3).

● Marketing Courses
MKTG 500 Individual Research in Marketing (1-5).
MKTG 599 Internship in Marketing (1-5).
School of Education

Rick Ginsberg, Dean
J.R. Pearson Hall, 1122 W. Campus Rd., Room 214K
Lawrence, KS 66045-3101, www.soec.ksu.edu

Admission .................................................. 105

Special Programs & Facilities ............... 105
Applied Physiology Laboratory & Fitness
Evaluation Clinic .................................. 105
Beach Center on Disability ..................... 105
Center for Economic Education .............. 105
Center for Educational Testing & Evaluation 105
Center for Psychoeducational Services ...... 105
Center for Research on Learning ............. 106
Kinesiology/Biomechanics Laboratory ....... 106
Learning Resource & Technology Center ... 106
Microcomputer Laboratories .................. 106
South Central Regional Technology
in Education Consortia ......................... 106
Special Education Clinical Programs ....... 106

Program Areas ........................................... 106

Master's Degree Programs ..................... 106
Master of Arts ........................................ 107
Master of Science .................................. 107
Master of Science in Education .............. 107

Specialist in Education ......................... 107

Doctoral Degree Admission Policies ...... 107

Doctor of Education ............................. 108
Advisory Committee .............................. 108
Requirements ........................................ 108
1. Time Limit ............................................. 108
2. Period of Continuous Study ................. 108
3. Hours Beyond Master's Degree ............ 108
4. Core Requirement ................................. 109
5. Research Skills .................................... 109
6. Doctoral Practicum Enrollment .......... 109
7. Comprehensive Examination .............. 109
8. Dissertation Committee & Proposal ...... 109
9. Continuous Enrollment ....................... 109
10. Dissertation .......................................... 110
11. Final Oral Examination ..................... 110
12. Dissertation Copies .......................... 110

Ph.D. with a Major in Education .......... 110
Advisory Committee .............................. 110
Requirements ........................................ 111
1. Time Limit ............................................. 111
2. Resident Study .................................... 111
3. Program Area ...................................... 111
4. Core Requirement ................................. 111
5. Teaching Experience ........................... 111
6. Research Skills .................................... 112
7. Comprehensive Examination .............. 112
8. Dissertation Committee & Proposal ...... 112
9. Continuous Enrollment ....................... 112
10. Dissertation .......................................... 113
11. Final Oral Examination ..................... 113
12. Dissertation Copies .......................... 113

Licensure: Added Endorsements .......... 113


Health, Sport, & Exercise Sciences ...... 113
Master of Science in Education Program ........ 113
Doctoral Degree Programs ...................... 114
Research Skills ...................................... 114
Laboratories & Facilities ...................... 114
Health, Sport, & Exercise Science Courses 114

Psychology & Research in Education ...... 118
Prerequisites for Regular Admission .... 118
Counseling Psychology Programs ........... 118
M.S. in Counseling Psychology ............... 118
Admission .............................................. 118
Program Requirements ......................... 118
Ph.D. in Counseling Psychology ............. 118
Admission .............................................. 118
Review of Graduate Status .................... 119
Course Work Requirements ................... 119
Comprehensive Examination ............... 119
Internship ............................................. 119
Dissertation .......................................... 119
Educational Psychology & Research Programs 120
Admission .............................................. 120
M.S.Ed. in Educational Psychology & Research 120
Program Requirements ......................... 120
Ph.D. in Educational Psychology & Research 120
Course Work Requirements ................... 120
Research Skills ...................................... 120
Comprehensive Examination ............... 120
Dissertation .......................................... 120
School Psychology Programs ................. 120
Admission .............................................. 121
Ed.S. in School Psychology .................... 121
Program Requirements ......................... 121
Ph.D. in School Psychology .................... 121
Research Skills ...................................... 121
Comprehensive Examination ............... 121
Internship ............................................. 121
Dissertation .......................................... 121
Course Work Requirements ................... 121
Psychology & Research in Education Courses 122

Special Education ................................. 125
M.S. in Education Degree ....................... 126
Doctoral Degrees ................................. 126
Doctor of Education .............................. 126
Doctor of Philosophy ......................... 126
Special Education Courses .................. 126

Teaching & Leadership ......................... 131
Curriculum & Instruction Programs ....... 131
Admission .............................................. 131
Educational Policy & Leadership Programs 132
Admission .............................................. 132
Master's Degree Programs in EPL .......... 132
Doctoral Programs in EPL ...................... 132
Educational Administration .................. 132
Foundations of Education .................... 132
Higher Education ................................. 132
Teaching & Leadership Courses ........... 133
School of Education

Admission

Graduate programs in education are open to students with acceptable baccalaureate degrees, as specified by the admitting departments, with academic records indicating that applicants can do successful work at the graduate level. Regular admission requires a grade-point average of at least 3.0 on a 4.0 scale; probationary admission requires a grade-point average of at least 2.75. Individual departments may require additional information and may have more stringent admission and retention requirements. Special provisional admission categories are available to students who may not qualify under traditional admission criteria but can provide evidence of ability to work successfully at the graduate level, including experience and commitment to the profession. Exceptions to established policies must be sought individually by petition to the Graduate Division of the School of Education.

See Admission in the General Information chapter of this catalog for more information.

Ordinarily, complete application materials should be received by July 1 for fall admission, December 1 for the spring semester, and May 1 for the summer session. Prospective students should contact their departments for admission deadlines.

Note: The School of Education is considering changes to its graduate studies requirements and expectations. Degree requirements may have changed. Prospective and current students should obtain current degree requirements from their departments.

Special Programs and Facilities

The School of Education provides these programs and facilities for students, faculty, and, in many cases, the public. Most facilities offer graduate students opportunities for assistantship, laboratory, and research experiences related to their programs of study. Contact the individual programs for information.

Applied Physiology Laboratory and Fitness Evaluation Clinic

This teaching and research laboratory in stress physiology, Robinson Center, 1301 Sunnyside Ave., Room 101, Lawrence, KS 66045-7567, assesses physical function through physiological tests. Fitness parameters of physical education majors and students in health, sport, and exercise sciences classes are assessed routinely. Demonstrations of physiological and biochemical concepts are performed for exercise physiology classes. Research on the physiological ramifications of exercise stress is conducted. Graduate and undergraduate students assist in service and research projects.

Center for Economic Education

The Center for Economic Education, 331 Joseph R. Pearson Hall, works to increase the economic literacy of pre-service and in-service teachers through credit and noncredit teaching and consultation in economic education. It maintains a library of current materials on economic/consumer education.

Center for Educational Testing and Evaluation

The Center for Educational Testing and Evaluation, 735 Joseph R. Pearson Hall, engages in research and service in educational assessment and program evaluation. Issues in educational testing are studied and projects are designed and carried out to examine school effectiveness, personnel/student evaluation, and policy implications of educational testing and assessment. There are opportunities for assistantships for interested and qualified students.

Center for Psychoeducational Services

CPS, 130 Joseph R. Pearson Hall, is a training site for students in the Department of Psychology and Research in Education. CPS is staffed by student clinicians in school psychology and counseling psychology who earn credit
while they gain practical experience working directly with clients. CPS is a self-sustaining, nonprofit agency.

**Center for Research on Learning**
The center, 517 Joseph R. Pearson Hall, conducts research to enhance learning and performance in school and nonschool settings. It translates the validated procedures into instructional materials that practitioners can use. The center’s international network trains educators to use the products of its research. It serves as the parent organization for four research institutes: the Institute for Effective Instruction, the Division of Adult Studies, the Advanced Learning Technologies group, and the e-Learning Design Laboratory. See also the Research and Academic Support chapter of this catalog.

**Kinesiology/Biomechanics Laboratory**
The Kinesiology/Biomechanics Laboratory, Robinson Center, 1301 Sunnyside Ave., Room 101, Lawrence, KS 66045-7567, analyzes human motion. The primary emphasis is on computer-aided cinematographic analysis, but other research tools such as electromyography (EMG), electrogoniometry, stroboscopy, and force plates are used. Major attention is given to the study of efficient movement techniques, equipment design, strength, flexibility, and body types.

**Learning Resource and Technology Center**
The Learning Resource Center, 110 Joseph R. Pearson Hall, serves faculty and students of the school and the public. Its resources include the Curriculum Laboratory, professional books and journals, K-12 textbooks, curriculum guides and course outlines from school districts throughout the country, selected reference and reserve materials, and mediated instructional packages for pre-service and in-service teacher education. It supports teaching, research, and service involving educational applications of media and microcomputers. Teacher education students develop skills in operating media equipment and producing materials to support their teaching. A representative cross section of instructional equipment found in schools is available, along with emerging technologies used in distance learning and interactive video instruction. The center offers production support for instructional materials and research support for design, evaluation, use, and dissemination of instructional technology.

**Microcomputer Laboratories**
Microcomputer Laboratories in Joseph R. Pearson Hall and Robinson and Dole Centers prepare students to use computers in administrative, instructional, and research applications. The laboratories offer a range of equipment found in schools, including PC-compatible and Macintosh computers. Computers are networked to KU’s backbone and resources such as scanners, laser printers, CD-ROM, CD, and DVD players. The laboratories contain application, programming, data management, data analysis, and instructional software that can be used for all grade levels and disciplines.

**South Central Regional Technology in Education Consortia**
SCR*TEC is one of six federally funded R*TEC’s with the mission of improving student performance by integrating advanced technologies into educational activities. It serves 6 million students and nearly 400,000 teachers in the five-state region. It addresses issues of learning through Web-based resources, tools, and activities for teachers and students. SCR*TEC is part of the Advanced Learning Technologies group, a division of the Center for Research on Learning.

**Special Education Clinical Programs**
The Department of Special Education in Lawrence, Joseph R. Pearson Hall, 1122 West Campus Rd., Room 521, Lawrence, KS 66045-3101, gives students the opportunity to observe and participate in instructional and research activities. Staff and students from such professional areas as psychology, human development, social work, speech, music therapy, occupational therapy, and physical therapy offer a rich multidisciplinary opportunity for special education and other students.

**Program Areas**
To facilitate preparation for specific types of professional service and teaching, graduate study in education has been organized into the program areas encompassed by the four departments of the school:

- **Teaching and Leadership** includes programs in Curriculum and Instruction (including the fields relating to elementary and secondary education) and Educational Policy and Leadership (comprising the program areas of educational administration, foundations, and higher education).
- **Psychology and Research in Education** offers programs in Counseling Psychology, School Psychology, and Educational Psychology and Research.
- **Health, Sport, and Exercise Sciences** offers various areas of study including exercise science, health science, pedagogy, and sports studies.
- **Special Education** conducts graduate degree programs on the Lawrence campus and selected programs on the KU Edwards Campus in Overland Park.

Further information on graduate study may be found in departmental sections of this catalog. For information about programs in visual art education, music education, and music therapy, see the School of Fine Arts chapter of this catalog.

Most graduate students are expected to complete work in education areas other than their program areas, as well as in liberal arts or other noneducation areas. The amount of such work depends on the degree sought and the major area involved. A student must be enrolled for the period during which the comprehensive or final examination is taken. Full-time graduate student enrollment in the School of Education is 9 graduate credit hours or the equivalent.

**Master’s Degree Programs**
Master’s degrees are granted on satisfactory completion of not less than one academic year, or its equivalent, of graduate study. The school provides three options for the master’s degree: the thesis option, the project option, and a minimum 36-graduate-credit-hour study option. At least 20 of the credit hours required for master’s programs must be in regular course work, as contrasted with independent study and similar enrollments. All master’s programs require a graduate class in research and evaluation methods, successfully completed during the first 12 hours. As part of the requirement for
the degree, the candidate must pass a final oral or written examination. A candidate's adviser and two additional members of the Graduate Faculty constitute the examining committee for the thesis or project options. The department prepares and evaluates the written examination for the credit-hour degree option.

To ensure continuity of progress and currency of knowledge, there is a seven-year time limit for completion of master's degree requirements. The Graduate Division has the authority to grant a one-year extension for compelling reasons, on recommendation of the department/committee. If more than eight years are requested, the appropriate appeals body of the school considers petitions for further extensions and, where evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant further extensions.

Note: Because substantive and procedural differences exist among the program areas, some may have more stringent policies on time extensions. Students should inquire about the specific policies in effect in the department or program in which they intend to study.

Note: To be eligible for degree conferral, the student must deposit unbound thesis copies for the thesis option and complete all other requirements before the due date for submission of degree candidate grades. The Graduate School establishes and announces deadlines each year.

**Master of Arts**

A candidate for the Master of Arts degree completes work both in education and in a teaching area (other than physical education). For students who choose the thesis or project option, a minimum of 30 hours of graduate credit is required for this degree, of which no fewer than 10 and no more than 15 hours must be earned in the teaching area. Some work must be elected in at least two of the approved graduate program areas in the School of Education. The candidate must complete a thesis related to the teaching area (6 hours maximum credit applicable to degree requirements) or complete the nonthesis option by enrolling in Master's Project (4 hours applicable to degree requirements). While enrolled, the candidate submits a research paper related to the specialization to the adviser. Check with the department for specific course requirements for the 30-hour master's degree option.

**Master of Science**

A candidate for the degree of Master of Science in Counseling Psychology earns a concentration in mental health counseling. A minimum of 30 credit hours is required for this degree, of which no fewer than 10 hours must be in the concentration. In most cases, additional credit hours are required.

**Master of Science in Education**

A candidate for the degree of Master of Science in Education selects one of the program areas as a concentration for graduate study. A minimum of 30 credit hours is required, of which no fewer than 10 hours must be in the concentration. Credit in Thesis or Master's Project may not be included in these 10 hours. The candidate must elect course work in at least two graduate program areas outside the major concentration. Normally, these courses would be in the School of Education. The candidate must complete a thesis in the concentration (6 hours maximum credit applicable to degree requirements) or complete the nonthesis option by enrolling in Master's Project (4 hours applicable to degree requirements). While enrolled, the candidate submits a research paper related to the specialization to the adviser. Check with the department for specific course requirements for the 36-hour master's degree option.

**Specialist in Education**

The Specialist in Education program consists of two years of full-time graduate study (about 70 semester credit hours) followed by a third year of internship. Students completing the program are licensed for early childhood through grade 12 if they obtain 100 hours of applied experience with young children and their families in practica or internship.

**Doctoral Degree Admission Policies**

The application for admission to the Graduate School and the Graduate Division of the School of Education for doctoral study must specify the major program area. Materials included with the application form usually consist of (1) official transcripts of undergraduate- and graduate-level courses indicating grade-point average, (2) letters of recommendation and/or survey-type evaluation forms from previous instructors and professional colleagues, (3) personal statements about professional goals, (4) representative writings and/or other media samples related to the proposed area, (5) a résumé of professional experience, and (6) scores from the verbal, quantitative and writing sections of the Graduate Record Examination. Each department in the Graduate Division has determined the specific information required for admission. Contact the graduate adviser of the department that offers the major for instructions about completion of the application for admission.

In general, applicants with 3.5 grade-point averages on a 4.0 scale for the first 30 graduate-level hours (e.g., master's degree), scores of 500 on the verbal and quantitative sections of the GRE, and validated strengths on the additional indicators have been admitted as regular graduate students to doctoral programs. However, this profile is intended only as an example and should not be construed as a guarantee of admission to a doctoral program. Several programs have limited student admissions because of the need to balance faculty resources with the demands of maintaining high-quality teaching, scholarship, and professional service activities.

Departments offering approved doctoral programs may recommend provisional admission of a student who has not met the criteria or prerequisites to do advanced graduate-level work. Provisional admission requires the satisfactory completion (e.g., with a 3.5 grade-point average) of 12 or more hours in regularly scheduled graduate courses, at least half of which must come from core areas. After the completion of the provisional program, the department recommends to the Graduate Division that the student (1) be transferred to regular status or (2) be allowed to continue for another 9 hours or (3) be dropped from the program. Full-time graduate student enrollment in the School of Education is 9 graduate credit hours or the equivalent.
Doctor of Education

The Doctor of Education, a professional degree primarily for practitioners in education, is awarded upon completion of three years of advanced training in both the theory and the practice of education. The Ed.D. is offered in the following program areas: curriculum and instruction; educational administration; health, sport, and exercise sciences; higher education; and special education.

Advisory Committee

A student admitted to the Graduate School to study for the Ed.D. is known as an aspirant for the degree until the comprehensive examination has been passed. After passing this examination, the student is known as a candidate for the degree.

Each student must have an advisory committee of at least three members of the Graduate Faculty. One member of the committee serves as the chair. The student meets with this committee before completing 12 hours of course work to plan and approve formally an appropriate program leading to the Ed.D. The approved program, signed by members of the committee and the student, is placed in the student's file in the School of Education Graduate Division Office.

Requirements

Students must acquaint themselves thoroughly with departmental requirements for the degree, which may be in addition to those of the Graduate School and the School of Education stated below.

1. Time Limit. To ensure continuity of progress and currency of knowledge, doctoral degree students normally complete all requirements for the degree in eight years after first enrollment in a doctoral program leading directly to a doctoral degree. Except for the core requirement, course work submitted to complete doctoral degree requirements must be completed within school or departmental time limits or extensions thereto. The Graduate Division has the authority to grant a one-year extension of the normal eight-year time limit for compelling reasons, on the written advice of the dissertation committee. If more than nine years are requested, the appropriate appeals body of the school considers petitions for extensions and, where evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant further extensions. Graduate School policy requires a 10-year limit on combined master’s and doctoral degree programs.

Note: Because substantive and procedural differences exist among the various program areas, some may have more stringent policies regarding time extensions. Students should inquire about the specific policies in effect in the department or program in which they intend to study.

A student may petition the School of Education Graduate Division through the department for a leave of absence during either the pre- or post-comprehensive period to pursue full-time professional activities related to the student’s doctoral program and long-range professional goals. Leaves of absence also may be granted because of illness or other emergency. Ordinarily a leave of absence is granted for one or at most two years, with the possibility of extension on request. After an absence of five years, however, a doctoral aspirant or candidate loses status as such and, in order to continue, must apply for readmission to the program and to the Graduate Division.

2. Period of Continuous Study. The student must spend the equivalent of three academic years, including the time spent in attaining the master’s degree, in a period of continuous study at this or another approved university. During the time the student is engaged in the Ed.D. program at KU, one of the following options must be satisfied:

(a) Two consecutive semesters, one of which may be a summer session, of full-time enrollment in regularly scheduled courses normally at the program’s home campus. (Full time equals 9 hours in fall or spring and 6 hours in summer.)

(b) Two consecutive semesters of at least 6 hours and an adjacent summer session of at least 3 hours, all in regularly scheduled courses at the program’s home campus.

(c) Three consecutive semester enrollments (excluding summer session) of at least 6 hours each in regularly scheduled courses at the program’s home campus.

(d) Eighteen (18) hours taken during the period encompassed by two consecutive summer sessions with enrollment in each of the four semesters: summer, fall, spring, summer.

(e) Twenty-seven (27) hours taken during any five consecutive semesters (including summer sessions) with enrollment in each semester. During this period, the student must be employed full-time in a field directly related to the student’s academic major.

These options include the following stipulations:

- Only course work taken after the first year of graduate study, that is, after the master’s degree or its equivalent, may satisfy the period of continuous study requirement.

- Dissertation, individual study, field experience, and off-campus practicum hours may not be included in the stated minimal requirements.

- For all enrollments of 8 hours or more, one course per semester. During this period, the student must be employed full-time in a field directly related to the student’s academic major.

- Only course work taken after the first year of graduate study, that is, after the master’s degree or its equivalent, may satisfy the period of continuous study requirement.

- The period of continuous study is not merely a requirement measured in hours of enrollment or of credit in courses counted toward a degree, but may include other academic and professional activities appropriate to the field of study.

- The student, with the help of the advisory committee, must file with the Graduate Division Office a period of continuous study plan congruent with School of Education requirements before the beginning of the formal period of continuous study. This plan may be filed as a part of the overall program plan.

- The period of continuous study requirement for the Ed.D. ensures a minimum period of bona fide on-campus study and related academic and professional involvement. It is not merely a requirement measured in hours of enrollment or of credit in courses toward the degree. Because of the particular professional nature of the degree, appropriately related professional endeavors may include off-campus activities. However, the credit-hour elements of the requirement must be fulfilled by course work at the program’s home campus. (Note the stated exceptions above.) Exceptional circumstances or plans must be approved in advance on an individual basis by petition to the Graduate Division of the School of Education.

3. Hours Beyond Master’s Degree. All candidates for the Ed.D. must complete a minimum of 48 semester credit hours above the master’s degree level or its equivalent at KU. Credit for the dissertation may be part of these hours. The candidate’s committee deter-
mines the total number of hours required. Candidates for the Doctor of Education degree do not specify a minor area of study. The concentration must contain a minimum of 40 semester hours of appropriate and related course work and may include appropriate work taken for the master’s degree or its equivalent. Credit for the dissertation is considered part of the concentration. Upon admission to doctoral study, students who have not completed a research and evaluation methods course for the education master’s degree must take the course during the first doctoral enrollment. The course does not count toward any doctoral requirements.

4. Core Requirement. Doctoral students must have on their graduate records the following common core of course work:

(a) At least one course in statistics or research.
(b) At least one course in human learning or development.
(c) At least one course in the history or philosophy of education.
(d) At least one course in general curriculum or general instructional strategies.

The core requirement should be completed before the comprehensive examination is scheduled or by the end of the semester in which it is scheduled.

5. Research Skills. Before being admitted to the comprehensive examination, students must present satisfactory evidence that they possess the professional research skills of advanced practitioners in their concentrations by meeting the following research skills requirements:

- Complete a minimum of 12 hours of graduate study in one or more supporting areas that develop skills relevant to understanding, promoting, and evaluating professional practice.
- Supporting areas may include statistics, assessment and evaluation, qualitative methods, or historical or philosophical methods.

For all programs, students must take at least one course in evaluation. Up to 6 hours may be waived using prior B-level or higher graduate course work. Research skills requirements vary among programs to meet the individual needs of students. The student must secure the most recent information on research skills requirements from the appropriate department.

The research skills requirements chosen by the student must be approved and passed upon by the advisory committee. The chair must file the results in the School of Education Graduate Division Office on a Do-all form so that they may be recorded on the student’s permanent record.

6. Doctoral Practicum Enrollment. Ed.D. aspirants must complete at least one structured 3-credit-hour practicum in a supervised internship setting. A description of the practicum prepared by the student and approved by the advisory committee must be filed with the department and the graduate records office. Specific requirements for this practicum experience are available from students’ departments.

7. Comprehensive Examination. The comprehensive examination should be scheduled after the student has completed the research skills requirements and all, or a major portion, of the course work for the concentration. The department must request the School of Education Graduate Division Office to schedule the comprehensive examination. This request is to be made at least two weeks before the date of the written portion of the examination. The written portion should be taken during an established one-week period near the midpoint of each semester and early in the summer session. The dates for each academic year are available from the Graduate Division Office early in the spring semester. The student must be enrolled when the examination is taken.

The examining committee must consist of at least five members (usually including the advisory committee), all of whom are on the Graduate Faculty. One member is designated the Graduate School representative and must be from a department other than the department of the concentration.

The student passes the comprehensive examination if a majority of the official examining committee (including the chair) approves the student’s performance. The grade on this examination is Honors, Satisfactory, or Unsatisfactory. If the aspirant fails the comprehensive examination, he or she may be allowed, upon the department’s recommendation, to repeat it, but it may not be taken more than three times. In any case, the student may not repeat the examination until at least 90 days have elapsed since the last unsuccessful attempt.

Note: Students in Ed.D. programs must pass both written and oral components of the comprehensive examination. Satisfactory performance on the written component must be attained before the oral component may be attempted. To fail either component is to fail the examination. All members of the student’s comprehensive examination committee are involved in the evaluation process. The written component of the comprehensive examination, like the oral, focuses on advanced knowledge in the major and any appropriately related areas. The focus of the examination is the ability to relate this knowledge to tasks and problems faced by practitioners. The duration of the entire written component of the comprehensive examination is to be a minimum of 16 hours. If a student passes the written component but fails the oral, the examining committee determines whether both components or only the oral need be repeated, after the minimal 90-day interim period.

8. Dissertation Committee and Proposal. Doctoral aspirants may begin work on the dissertation after they complete the equivalent of one full-time semester of doctoral study in regular student status and may use their research practicum experience in preparation for the dissertation. However, students may first enroll in dissertation credit hours only during the semester in which they take their comprehensive examinations. Dissertation hours taken during that semester count toward the minimum of 18 hours of dissertation credit only if the examinations are passed during that same semester.

Upon passing the comprehensive examination, the aspirant becomes a candidate for the Doctor of Education degree. Based on recommendations of the candidate’s department, the Graduate Division designates the candidate’s dissertation committee at this time. This committee must consist of at least three members (usually including the advisory committee) and may include members from other departments and, on occasion, from outside the university. All committee members are to be members of the Graduate Faculty. A committee member from outside the university becomes an ad hoc member of the Graduate Faculty.

The dissertation proposal is to be read by all members of the dissertation committee. One (1) copy of the approved dissertation proposal, signed by all members of the dissertation committee, is to be submitted (with a Do-all form) to the School of Education Graduate Division Office for deposit in the reserve section of the Learning Resources Center.

9. Continuous Enrollment. After passing the comprehensive examination, the candidate must be continuously enrolled, including summer sessions, until the degree is...
Doctor of Education; Doctor of Philosophy with a Major in Education

Completed. Each enrollment must reflect as accurately as possible the candidate’s demands on faculty time and university facilities. A student must be continuously enrolled in accordance with the following schedule: Until the degree is completed or until 18 post-comprehensive hours have been completed (whichever comes first), the student must enroll for a minimum of 6 hours a semester and 3 hours a summer session. Students who have not completed the degree after completing 18 hours of post-comprehensive enrollment must continue to enroll for the amount of credit that best reflects their demands on faculty time and university resources each semester and each summer session until they pass the final oral examination. Post-comprehensive enrollment may include enrollment during the semester or summer session in which the comprehensive examination has been passed. Students may enroll for dissertation hours as well as other courses when the examination is taken. Students who do not pass the examination cannot apply dissertation hours to degree requirements. The candidate may petition the School of Education Graduate Division for a leave of absence during the period between the comprehensive examination and the final oral examination. Again, specific degree programs may have more stringent rules than the Graduate School.

10. Dissertation. The candidate must present a dissertation that exhibits the application of existing knowledge in the major field of professional study. Ed.D. candidates may satisfy the dissertation requirement by completing a comprehensive, critical assessment of the relevant literature on a major educational issue or problem. This study should demonstrate the application of existing knowledge to the author’s area of professional practice. Various styles and formats for theses and dissertations are acceptable. The format and style of a student’s thesis or dissertation is left to the discretion of the student and the adviser, but format and style options may be constrained or dictated by the policy of the department from which the student is to receive the degree. The dissertation is prepared under the direction of the dissertation committee. The norm for dissertation enrollment is about 24 credit hours. The minimum number of dissertation hours for any degree program is 18. Instructions regarding the proper form of the final document may be obtained from the School of Education Graduate Division Office.

11. Final Oral Examination. When the dissertation has been tentatively accepted by the dissertation committee, the chair of the dissertation committee may request the School of Education Graduate Division Office to schedule the final oral examination. This request is to be made at least two weeks before the desired examination date. At least five months must elapse between the successful completion of the comprehensive examination and the date of the final oral examination. Upon approval by the Graduate Division, the final oral examination is scheduled at the time and the place designated in the request and publicly announced by the Graduate School. Although the dissertation committee is responsible for the certification of the candidate, any member of the Graduate Faculty may be present at the examination and may participate in the questioning. The official examining committee consists of at least five members, including the dissertation committee. At least one member must be from a department other than the candidate’s major department. This member represents the Graduate School.

The final examination must be partly oral and may be wholly so. The examination covers the dissertation and the concentration. The candidate passes the final examination if a majority of the official examining committee (including the chair) approves the candidate’s performance. When the final oral examination has been passed, the dissertation committee reports a grade of Honors, Satisfactory, or Unsatisfactory. If the candidate fails the final oral examination, she or he may be allowed to repeat it upon the recommendation of the dissertation committee.

12. Dissertation Copies. When the final oral examination has been passed and the dissertation has been signed by the members of the dissertation committee, two unbound copies are to be deposited at the School of Education Graduate Division Office by the deadline set by the Graduate School. In addition, the candidate must (a) Submit to the School of Education Graduate Division Office an abstract of the dissertation (no more than 350 words) to be published in “Dissertation Abstracts.” A basic charge is made for this service, as it is for dissertation binding. Further instructions are available in the Graduate Division Office. (b) Make arrangements with the Graduate School office to have the dissertation microfilmed or meet one of the publication options offered by the Graduate School.

Note: To be eligible for a degree, the student must complete all requirements, including depositing unbound dissertation copies. The Graduate School establishes and announces exact deadlines each year.

Doctor of Philosophy with a Major in Education

The Doctor of Philosophy degree is awarded for mastering a field of scholarship, learning the methods of investigation appropriate to that field, and completing a substantial piece of original research. The Ph.D. is offered in all education graduate program areas.

Although the courses and the research leading to the Ph.D. are necessarily specialized, the attainment of this degree should not be an isolated event in the enterprise of learning. The aspirant for the Ph.D. is expected to be a well-educated person and should have acquired a broad base of general knowledge, both as preparation for more advanced work and as a means of knowing how the concentration is related to other fields of human thought.

Advisory Committee

A student admitted to the Graduate School to study for the Ph.D. is known as an aspirant for the degree until the comprehensive examination has been passed. After passing this examination, the student is known as a candidate for the degree.

Each student must have an advisory committee consisting of at least three members of the Graduate Faculty. One member of the committee serves as the chair. One member must be from the graduate department representing the student’s minor area. The student meets with this committee before completing 12 hours of course work to plan and approve formally an appropriate program leading to the Ph.D. The approved program, signed by members of the committee and the student, is placed in the student’s file in the School of Education Graduate Division Office.
Requirements

Students must acquaint themselves thoroughly with departmental requirements for the degree, which may be in addition to those of the Graduate School and the School of Education stated below.

1. Time Limit. To ensure continuity of progress and currency of knowledge, doctoral degree students normally complete all requirements for the degree in eight years after first enrollment in a doctoral program leading directly to a doctoral degree. Except for the core requirement, course work submitted to complete doctoral degree requirements must be completed within school or departmental time limits or extensions there-to. The Graduate Division has the authority to grant a one-year extension of the normal eight-year time limit for compelling reasons, on the written advice of the dissertation committee. If more than nine years are requested, the appropriate appeals body of the school considers petitions for extensions and, where evidence of continuous progress, currency of knowledge, and other reasons are compelling, may grant further extensions. Graduate School policy requires a 10-year limit on combined master’s and doctoral degree programs.

Note: Because substantive and procedural differences exist among the program areas, some may have more stringent policies about time extensions. Students should inquire about the specific policies in effect in the department or program in which they intend to study.

A student may petition the School of Education Graduate Division through the department for a leave of absence during either the pre- or post-comprehensive period to pursue full-time professional activities related to the student's doctoral program and long-range professional goals. Leaves of absence also may be granted because of illness or other emergency. Ordinarily, a leave of absence is granted for one or at most two years, with the possibility of extension upon request. After an absence of five years, however, a doctoral aspirant or candidate loses status as such and, in order to continue, must apply for readmission to the program and the Graduate Division.

2. Resident Study. The student must spend the equivalent of three academic years, including the time spent attaining the master's degree, in resident study at this or another approved university. Because the Graduate School does not prescribe a minimum number of hours for the degree, no transfer of credits is appropriate. Departments do, however, consider relevant prior graduate work in setting up programs of study leading to the doctorate.

Residence Requirement. Two semesters (which may include one summer session), usually consecutive, at any time beginning with the first semester of doctoral study must be spent in resident study at KU. Residence is not merely a period measured in hours. During this period the student must be involved full-time in academic pursuits, which may include up to half-time on-campus teaching or research, or under certain circumstances, a greater percentage of research if it is directed specifically toward the student’s degree objectives. Such activities permit commensurate decreases in the hourly enrollment minimum. The student must continue to be enrolled in at least 6 hours per semester. Increased research involvement must be fully supported and documented by the dissertation adviser as contributing to the student’s dissertation. The research work must be performed under the direct supervision of the student’s adviser, if on campus, or with adequate liaison, if off campus. Special circumstances such as internal employment for more than half time as a teaching or research assistant, or as another type of university employee, must have advance approval on an individual basis by petition to the Graduate Division of the School of Education. The student, with the assistance of the advisory committee, must file in the Graduate Division Office a residence plan congruent with School of Education requirements before the beginning of the formal residence period. The residence plan may be filed as a part of the overall program plan. Because residence is not merely a requirement measured in hours of enrollment or of credit in courses toward a degree, the plan may include other academic and professional activities appropriate to the field of study.

Note: Hourly enrollment requirements must be met through courses at the program's home campus, and if appropriate internal employment is not involved, at least 9 hours must be in regularly scheduled courses. Exceptions: One course each period may be taken away from the home campus, e.g., on the KU Edwards Campus, provided that scheduling needs can be demonstrated.

3. Program Area. In applying for doctoral study, the student specifies a program area in which formal classes and research work are to be done and in which she or he expects to become a scholar. An area must contain a minimum of 40 credit hours of course work and may include work completed for the master’s degree or its equivalent, provided it meets currency and relevancy criteria as determined by the advisory committee and the Graduate Division. Credit for the dissertation is part of the area. A student working for the Ph.D. specifies a minor outside the program in which the area is completed. The minor must contain at least 12 hours of courses, and it should be related to and supportive of the area. A minor including courses in more than one area may be allowed upon petition by the advisory committee to the Graduate Division. Upon admission to doctoral study, students who have not completed a research and evaluation methods course for the education master’s degree must take the course during the first doctoral enrollment. The course does not count toward any doctoral requirements.

4. Core Requirement. Doctoral students must have on their graduate record the following common core of course work:

(a) At least one course in statistics or research.
(b) At least one course in human learning or development.
(c) At least one course in the history or philosophy of education.
(d) At least one course in general curriculum or general instructional strategies.

The core requirement should be completed before the comprehensive examination is scheduled or by the end of the semester in which the comprehensive examination is scheduled.

5. Teaching Experience. In addition to the requirements above, the student must satisfactorily complete course 996 College Teaching Experience for 2 hours of credit. In this course, the candidate assists a major professor for one semester. The course may be completed during the semester in which the student takes the comprehensive examination, but ordinarily it should be completed before admission to the comprehensive examination. The course may be waived with written documentation of prior successful teaching experience.
HSES offers the Master of Science in Education with emphases in exercise science, health science, pedagogy, and sports studies. and the approval of the appropriate program or departmental committee.

6. Research Skills. Before being admitted to the comprehensive examination, the student must present satisfactory evidence of research skills. Specific research skills requirements vary with department and program, but all reflect the Graduate School expectation of a significant research skills component distinct from the dissertation but strongly supportive of it. The Ph.D. research skills requirement includes completion of at least 12 graduate hours representing at least two of the following areas relevant to the aspirant’s research area: statistics, measurement and assessment, qualitative methods, historical and philosophical methods, or foreign language (a reading knowledge in one foreign language is equivalent to 6 hours of credit). Up to 6 hours may be waived using prior B-level or higher graduate course work. A statement concerning specific research skills should be secured from the student’s major department.

When the student has met the requirements for research skills, the committee chair must report this to the Graduate Division on the appropriate form, certifying that the student is prepared to proceed to the comprehensive oral examination. If a program requires research skills that are tested separately rather than integrally with the program, the completion of each requirement should be reported immediately to the Graduate Division so that it may be recorded on the student’s permanent record.

Some commonly used skills are listed under Research Skills, Doctor of Philosophy in the General Information chapter of this catalog.

7. Comprehensive Examination. When a Ph.D. aspirant has completed the major portion of the course work at a level satisfactory to the department in which the work is done and to the Graduate School and has completed the research skills requirement and all other departmental requirements prerequisite to the comprehensive examination, the department asks the School of Education Graduate Division Office to schedule the comprehensive examination. This request is to be made at least two weeks before the date of the written portion of the examination. The written portion of the comprehensive examination must be taken during an established one-week period near the midpoint of each semester and early in the summer session. Exact dates for the ensuing academic year are available from the Graduate Division Office early in the spring semester. Students must be enrolled when they take the examination.

The committee for the comprehensive examination must consist of at least five members, all members of the Graduate Faculty. This committee is usually the advisory committee, including the minor area member. At least one member must be from a department other than the aspirant’s major department. This member represents the Graduate School.

The comprehensive examination consists of both written and oral parts and covers the major and minor areas pursued by the student. The student passes the comprehensive examination if a majority of the official examining committee (including the chair) approves the student’s performance. The grade on this examination is Honors, Satisfactory, or Unsatisfactory. An aspirant who receives a grade of Unsatisfactory may be allowed, upon the recommendation of the department, to repeat it, but it may not be taken more than three times. The aspirant may not repeat the examination until at least 90 days have elapsed since the last unsuccessful attempt.

Note: Students in Ph.D. education programs must pass both written and oral components of the comprehensive examination. Satisfactory performance on the written component must be attained before the oral component may be attempted. To fail either component is to fail the examination. All five members of the student’s comprehensive examination committee are involved in the evaluation process. The written component of the comprehensive examination, like the oral, focuses on advanced knowledge in the major and any appropriate related areas, including the minor. To pass, the student must be evaluated as having responded satisfactorily to questions in both the major and minor areas. If a student fails either the major or the minor portion of the written comprehensive component, the examining committee determines if the entire written component of the examination, or only the failed portion(s), must be retaken. The entire written component lasts a minimum of 18 hours. If a student passes the written component but fails the oral, the examining committee determines if both components or only the oral need be repeated, after the minimal 90-day interim period.

8. Dissertation Committee and Proposal. Doctoral aspirants may begin work on the dissertation upon completion of the equivalent of one full-time semester of doctoral study in regular student status and may use their research practicum experience in preparation for the dissertation. However, students may first enroll in dissertation credit hours only during the semester in which they take their comprehensive examinations. Dissertation hours taken during that semester count toward the minimum of 18 hours of dissertation credit only if the examinations are passed during that same semester.

Upon passing the comprehensive examination, the aspirant becomes a candidate for the Ph.D. The Graduate Division, using the recommendations of the candidate’s department, designates the dissertation committee at this time. The dissertation committee consists of at least three members (usually including the advisory committee) and may include members from outside the university. All committee members are to be members of the Graduate Faculty. A committee member from outside the university becomes an ad hoc member of the Graduate Faculty.

The dissertation proposal must be read by all members of the dissertation committee. One (1) copy of the approved dissertation proposal, signed by all members of the dissertation committee, plus one (1) copy typed (with a Do-all form) to the School of Education Graduate Division Office for subsequent deposit in the reserve section of the Curriculum Laboratory.

9. Continuous Enrollment. After passing the comprehensive examination, the candidate must be continuously enrolled, including summer sessions, until the degree is completed. A student must be continuously enrolled in accordance with the following schedule: Until the degree is completed or until 18 post-comprehensive hours have been completed (whichever comes first), the student must enroll for at least 6 hours a semester and 3 hours a summer session. Students who have not completed the degree after completing 18 hours of post-comprehensive enrollment must continue to enroll for the amount of credit that best reflects their demands on faculty time and university resources each semester and each summer session until they pass the final oral examination. Post-comprehensive enrollment may include enrollment during the semester or summer session in which the comprehensive examination has been passed. Students may enroll for dissertation hours as well as other courses when the examination is taken. Students who do not pass the examination cannot apply...
dissertation hours to degree requirements. Under certain conditions, the candidate may petition the School of Education Graduate Division for a leave of absence during the period between the comprehensive examination and the final oral examination.

10. Dissertation. The candidate must present a dissertation showing the results of original research. The dissertation for the Ph.D. considers applied or basic concerns and results in conclusions that have broad theoretical implications. Various styles and formats for theses and dissertations are acceptable. The format and style of a student’s thesis or dissertation is left to the discretion of the student and the adviser, but format and style options may be constrained or dictated by the policy of the department from which the student is to receive the degree. The dissertation is prepared under the direction of the dissertation committee. The norm for dissertation enrollment is about 24 credit hours. The minimal number of dissertation hours in any degree program is 18. Instructions regarding the proper form of the final document may be obtained from the School of Education Graduate Division Office.

11. Final Oral Examination. When the dissertation has been tentatively accepted by the dissertation committee, the chair of the dissertation committee may request the School of Education Graduate Division Office to schedule the final oral examination. This request must be made at least two weeks before the desired examination date. At least five months must elapse between the successful completion of the comprehensive examination and the date of the final oral examination.

The committee for the final oral examination consists of at least five members, including the dissertation committee plus other members of the Graduate Faculty recommended by the chair of the dissertation committee and/or the department and appointed by the Graduate Division. At least one member must be from a department other than the candidate’s major department. This member represents the Graduate School. Upon approval by the Graduate Division, the final oral examination is scheduled at the time and the place designated in the request and publicly announced by the Graduate School. Although the dissertation committee is responsible for the certification of the candidate, any member of the Graduate Faculty may be present at the examination and may participate in the questioning.

The final examination must be partly oral and may be wholly so. The examination covers the dissertation and the candidate’s concentration and minor area. The candidate passes the final examination if a majority of the official examining committee members (including the chair) approves the candidate’s performance. When the final oral examination has been passed, the dissertation committee reports a grade of Honors, Satisfactory, or Unsatisfactory. Candidates who fail the final oral examination may be allowed to repeat it upon the recommendation of the dissertation committee.

12. Dissertation Copies. When the final oral examination has been passed and the dissertation has been signed by the members of the dissertation committee, two unbound copies are to be deposited at the School of Education Graduate Division Office by the deadline set by the Graduate School. In addition, the candidate must (a) submit to the School of Education Graduate Division Office an abstract of the dissertation (no more than 350 words) to be published in “Dissertation Abstracts.” A basic charge is made for this service, as it is for dissertation binding. Further instructions are available in the Graduate Division Office.

(b) Make arrangements with the Graduate Division Office to have the dissertation microfilmed or meet one of the publication options offered by the Graduate School.

Note: To be eligible for degree conferral, the student must complete all requirements, including the depositing of unbound dissertation copies. The Graduate School establishes and announces exact deadlines each year.

Licensure: Added Endorsements

At least 8 hours of the required course work must be completed at KU if it is to be the recommending institution for adding endorsements to the teaching license. For specific information about adding endorsements, contact the School of Education at (785) 864-3726.

Health, Sport, and Exercise Sciences

Chair: L. Keith Tennant
Graduate Coordinator: James D. LaPoint
Robinson Center, 1301 Sunnyside Ave., Room 104 Lawrence, KS 66045-7567, www.soec.ku.edu/kises
(785) 864-3371
Professors: Donnelly, Lumpkin, Tennant
Professors Emeriti: Osness, Zebas
Associate Professors: Greene, King, LaPoint
Associate Professor Emeritus: Huntsinger
Assistant Professors: Akagi, Frederick, Gallagher, Godard, Gregory, Thompson

Graduate work in health, sport, and exercise sciences includes an offering of courses leading to the Master of Science in Education (M.S.Ed.) and the Doctor of Philosophy (Ph.D.) degrees. Entrance requirements include completion of an undergraduate program equivalent to programs offered by the Department of Health, Sport, and Exercise Sciences at KU and admission to the Graduate School through the Graduate Division of the School of Education.

Note: The department is considering changes to its graduate studies requirements and expectations. Degree requirements may have changed. Prospective and current students should obtain the current degree requirements from the department.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Health, Sport, and Exercise Sciences
Robinson Center, 1301 Sunnyside Ave., Room 104
Lawrence, KS 66045-7567

Master of Science in Education Programs

The Master of Science in Education is offered with emphases in exercise science, health science, pedagogy, and sports studies. The degree program requires 30 hours for the thesis option or 36 hours for the nonthesis option.

All master’s students must take the Graduate Record Examination to be considered for admission to
Health, Sport, & Exercise Sciences

either a thesis or a nonthesis master’s program. Students must score about 500 on both the verbal and quantitative sections and about 4.0 on the written analytical section. Admission is selective and is determined by the selection committee for the discipline to which the student is applying. The selection committee assigns an adviser/mentor to each admitted master’s student (thesis and nonthesis).

Any admitted master’s student who does not have a minimum grade-point average of 3.0 but has at least a 2.75 or who has GRE scores below the requirement may be admitted on probationary status. These students must earn a minimum of a B in the first three courses they take (assigned by the adviser/mentor). Failure to achieve this level will result in dismissal.

Doctoral Degree Programs

The Doctor of Philosophy degree is offered with emphases in exercise science, health science, and sports studies. Students must interview with a faculty adviser in the intended emphasis before enrollment.

Regular doctoral admission requires GRE scores of about 600 on both the verbal and quantitative sections and about 4.5 on the written analytical section. A minimum grade-point average of 3.5 in master’s degree work is required. Doctoral applicants must score about 500 on both the verbal and quantitative sections of the GRE and about 4.0 on the written analytical section. Preparatory status requires the prospective doctoral student to earn a grade-point average of at least 3.5 in the first 12 credit hours.

With the adviser, each student develops a course of study consistent with the student’s needs and the faculty’s expertise. This includes doctoral core requirements, emphasis area courses in HSES, supportive courses outside of HSES, and a field experience.

Research Skills. Research skills in the doctoral program must be completed before the aspirant is admitted to the comprehensive examinations. Twelve hours of statistical methods and demonstration of statistical application techniques in a research problem are required as evidence of research skills. The Ph.D. requires competence in two of the following three research skills: (1) reading knowledge of a foreign language, (2) computer programming, analysis, and processing skills, or (3) additional statistics including multivariate or nonparametric techniques.

Students should obtain specific instructions and guidelines for graduate degrees from the department.

Laboratories and Facilities

The department maintains excellent laboratories for student and faculty research, including biomechanics, motor development/adaptive, and applied physiology.

Health, Sport, and Exercise Sciences Courses

HSES 500 Student Teaching in: _____ (1-4).
HSES 501 Seminar in Teaching Health and Physical Education (2).
HSES 502 Camp Leadership and Counseling (2).
HSES 515 Assessment of Motor Development and Motor Control of Exceptional Children (3).
HSES 528 Techniques of Athletic Training I – Lower Extremity (3).
HSES 529 Techniques of Athletic Training II – Upper Extremity (3).
HSES 558 Creative Movement and Dance Appreciation (3).
HSES 565 Methods and Materials in Health Education (3).
HSES 573 Introduction to School and Community Health (3).
HSES 580 Internship in: _____ (2-16).

Doctor of Philosophy degree with emphases in exercise science, health science, and sports studies.

HSES offers the Doctor of Philosophy degree with emphases in exercise science, health science, and sports studies.

HSES 582 Athletic Training Practicum II: Management and Treatment (4).
HSES 583 Athletic Training Practicum III: Rehabilitation (4).
HSES 584 Athletic Training Practicum IV: Senior Sport Experience (4).
HSES 598 Special Course: _____ (1-5).
HSES 605 Administering Health Related Programs (3).
HSES 608 Pool and Spa Management (3).
HSES 618 Health Aspects of Aging (3).
HSES 625 Marketing Sports and Fitness Programs (3).
HSES 630 Sport Law (3).
HSES 640 Applied Sport and Performance Psychology (3).
HSES 654 Management and Treatment Techniques of Athletic Training (3).
HSES 656 Rehabilitation Techniques of Athletic Training (3).
HSES 658 Organization and Administration Techniques of Athletic Training (2).
HSES 670 Introduction to Biomechanics (3).
HSES 671 Applied Biomechanics (3).
HSES 672 Exercise Physiology (3).
HSES 673 Clinical Fitness Evaluation Techniques (3).
HSES 675 Administration of Health, Physical Education, and Sport Studies (3).
HSES 678 Introduction to Energy Balance and Weight Management (3).
HSES 680 Adaptive Physical Education and Recreation (3).
HSES 690 Sociology of Sport (3).
HSES 704 Principles of Physical Education (2). A study of the contemporary philosophies of physical education and the application of these philosophies in the formulation of underlying principles used by the teacher or administrator in the development of the physical education program. Prerequisite: Ten hours of Health, Sport, and Exercise Sciences.
HSES 707 Educational Conference in: _____ (1-3). Developed to cover educational conferences and workshops. Prerequisite: Sixty hours of college work. LEC.
HSES 713 AIDS and STDs: Facts of Life (3). This course is designed to inform students that acquired immune deficiency syndrome and other sexually transmitted diseases are indeed, facts of life. Some of the facts that will be presented include: the diseases that are in epidemic proportions, the diseases that are incurable, and most importantly, the technique for preventing the spread of AIDS and STD’s. The course will explore current issues with regard to a number of sexually transmitted diseases, but the majority of the course will be devoted to acquired immune deficiency syndrome. In the study of AIDS, students will learn about the sociological, physiological, economic, spiritual, and legal ramifications that are raised by the various issues. There will be an in-depth study of the AIDS virus and its action at the cell level. The course will conclude with educational implications including a study of the state mandate for AIDS and Sexuality Education, curriculum development, teaching techniques, and policy making procedures. Prerequisite: A course in sexuality or permission of instructor. LEC.
HSES 714 Motor Development During Growth (3). Motor development in childhood and adolescence and its relationship to physical growth. Factors influencing motor learning and development will be explored. This course provides basic understanding of the neuromuscular changes and abilities of children and adolescents. Prerequisite: A course in kinesiology and anatomy. LEC.
HSES 715 Understanding Research in HSES (3). This course introduces the concepts and skills involved in understanding and analyzing research in education and related areas. The course provides an overview of basic, general knowledge of various research methodologies. Students should expect to study much of this material in greater depth through additional work before being fully prepared to conduct independent research. However, this course should enhance their ability to locate, read, comprehend, and critically analyze research articles and reports. Topics in the course include quantitative and qualitative methods and designs, historical and descriptive research, and program evaluation. (This course fulfills the requirement of a research methods course in the first 12 hours of graduate study.) Prerequisite: Must be an admitted HSES graduate student. LEC.
HSES 719 Tests and Measurements in Physical Education (3). A study of motor testing including tests, procedures, and analysis and interpretation of results. Areas to be included are such skills as fitness, motor ability, perceptual-motor and anthropometric, actual practice with tests and their administration is provided. Prerequisite: Ten hours of Health, Sport, and Exercise Sciences. LEC.
HSES 720 Financing and Marketing Leisure Services (3). Financing and Marketing Leisure Services examines the financing and marketing of leisure service agencies. This is done through examination of current legislative revisions in tax laws, lobbying efforts of professional organizations, and the application of current technology. Strategies for cutback management, economic analyses, funding sources, and con-

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tract services are a few of the selected topics. Prerequisite: Six hours of approved recreation course work or consent of instructor. LEC

HSES 730 Advanced Concepts in Nutrition (3). A study of the nutritional factors associated with public health. Specific nutritional needs and effects of deficiency states on health will also be addressed. The course will also include the physiological and biochemical mechanisms involved in the use of nutrients for human growth and development as well as the production of metabolic processes. Prerequisite: HSES 330 or equivalent experience and permission of instructor. LEC

HSES 732 Applied Nutrition Laboratory (2-4). This course will include the study of the principles of planning programs of food experiences and development of research techniques for measuring the effectiveness of such programs. Prerequisite: HSES 730. LAB

HSES 743 Management of Recreation Areas and Facilities (3). The course is an in-depth examination of various theories and techniques in managing areas and facilities that constitute the responsibilities of a recreation administrator. Special attention is given to the development of maintenance schedules, theories and concepts of preventive maintenance, management responsibilities for parks, for community buildings, for multi-purpose centers, for golf courses, and other outdoor recreation facilities. Prerequisite: A course in recreation administration or planning health, physical education and recreation facilities. LEC

HSES 750 Physiological Education of the Physically Retarded Populations (3). A study of physical characteristics, limitations, and movement potential of profound, trainable, and educable mental retardates. Emphasis is placed on techniques of evaluating motor performance, analyzing and sequencing motor skills, alternatives of teaching retarded individuals, and curriculum development. LEC

HSES 760 Perceptual Motor Dysfunction (2). A study of incidence, classifications, and etiology of perceptual-motor dysfunction in children. Content includes contemporary motor theory and motor dysfunction, methods, and materials available for remedial programs. LEC

HSES 769 Clinical Treatment of Perceptual Motor Dysfunction Cases (1-3). Clinical work with children who are classified as complex perceptual-motor dysfunction cases. Instruction and practice with techniques of remediation will be provided. Prerequisite: Consent of instructor. LEC

HSES 770 Practicum in Motor Development of Exceptional Children (1-3). Supervised practice in the evaluation and teaching of motor skills for exceptional children. Prerequisite: A course in adaptive physical education or consent of instructor. LEC

HSES 771 Internship in Exercise Science (6). A supervised internship experience in an approved exercise science setting. Students will gain experience through a hands-on approach via clinical and/or research settings. Specific internship experiences will be agreed upon by the student and their academic advisor. Prerequisite: Successful completion of at least 24 graduate credit hours. LEC

HSES 772 Practicum in Human Motion Analysis (1-3). This course is designed to provide practical experiences in laboratory techniques for the assessment of efficiency in human movement patterns. Areas typically studied in the laboratory are the assessment of skill technique in specific populations, gait analysis, flexibility, muscle strength and muscle power, posture, and attitudes. Specific technique will become familiarization and the interpretation of data in human motion analysis. Prerequisite: A course in kinesiology or biomechanics and permission of instructor. LEC

HSES 774 Practicum in Stress Physiology (1-3). Practical experience in laboratory physiology research. Topics relate to specific interest areas of the student. Examples of such areas include electrocardiography, percent body fat, stress testing, specific populations, maximal testing, blood chemistry, stress reduction. Students will have the opportunity to use specific physiological instruments in assessing human performance under physical and/or emotional stress. Prerequisite: A course in physiology or consent of instructor. LAB

HSES 775 Health Planning and Assessment (3). This course is designed to explore the concepts and methods involved in the determination of health needs and the planning of appropriate programs designed to improve health status in the school and community setting. Specific areas to be included are: the effectiveness of current educational programs for preventing injury and illness, and evaluation and reporting of findings. Prerequisite: A course in health education or consent of instructor. LAB

HSES 777 Practicum in Health Education and Wellness Promotion (1-3). This course is designed to provide practical experiences in health education and wellness promotion, including: assessment, planning, implementation and program evaluation. With approval of the instructor, students may choose their practicum focus from any of the ten content areas of health: mental and emotional, family living, growth and development, nutrition, personal health, alcohol tobacco and other drugs, communicable and chronic diseases, injury prevention and safety, consumer health, and environmental health. Prerequisite: Enrolled in graduate school and consent of the instructor. LAB

HSES 778 Respiratory Physiology (3). Structure, function, and regulation of respiratory systems of birds and mammals. Lectures will discuss the mechanics of respiration, chemical and neural control of breathing, pulmonary blood flow, and the transport of oxygen and carbon dioxide in the blood. The response of the respiratory system to stresses such as exercise, hypoxia, and pulmonary disease will also be discussed. (Same as BIOL 778.) Prerequisite: BIOL 724 or BIOL 720 or HSES 710. LEC

HSES 779 Physiology of Functional Aging (3). The course is designed to address issues and concepts relating to the biological aging process as a foundation for physical performance, general fitness, and health status. The biological concepts are applied to the human physiological process and the systems involved as well as the possible interventions that may effect that process. The several theories associated with physiological aging are addressed as related to the physiological systems and current research that may impact the understanding of these theories. Prerequisite: A course in basic biology. LEC

HSES 780 Internship in Teaching Physical Education: _____ (1-16). A supervised internship experience leading to initial physical education teacher certification. The student assumes the total professional role as a teacher of physical education in an approved school setting. FLD

HSES 781 Internship in Teaching Health Education (1-16). A supervised internship experience leading to initial health education teacher certification. The student assumes the total professional role as a teacher of health education in an approved school setting. FLD

HSES 800 Applied Movement Analysis (3). A course designed to observe, evaluate, and diagnose movement with an emphasis on the relationships of mechanics to movement. Prerequisite: Consent of instructor. LEC

HSES 801 Sport Facilities (3). The purpose of this course is to study sport facility design, construction and maintenance of facilities for intercollegiate athletics and professional sports. Prerequisite: Admitted to graduate school. A course in the administration/management of sport or consent of the instructor. LEC

HSES 802 Injury Prevention in Exercise and Sport (3). A course designed to explore the causes and prevention of sport and exercise related injuries. Students will investigate the anatomical and biomechanical principles underlying the causes in sport and exercise injuries and developing strategies for preventing injuries from occurring. Prerequisite: A course in anatomy/biomechanics, or consent of instructor. LEC

HSES 803 Comparative Physical Education (3). A comparison of physical education and sport's programs around the world. Emphasis on historical background, educational philosophy, teacher preparation, administration, programs and facilities in representative countries in Africa, Asia, Africa, Asia, Europe, South and North America. Prerequisite: Nine hours of education including educational philosophy. LAB

HSES 804 Psychological Effects of Sport and Physical Activity (3). This course will be primarily concerned with the psychological effects of physical activity. Particular attention will be paid to the influence of exercise on behavioral manifestations such as state anxiety, depression, aggression. Reference will be made to the athlete of all ages, the normal adult, and the psychiatric patient. Methodological considerations involved in the assessment of psychological effects resulting from sport and physical activity will be reviewed. Prerequisite: A course in anatomy/biomechanics, or consent of instructor. LEC

HSES 805 Laboratory Experiments and Analysis – Exercise Physiolog (3). Students will learn the techniques of operating various types of laboratory equipment and will conduct laboratory experiments in areas such as respiration, circulation, metabolism, strength, neuro-muscular function, cardiac function, and body composition. Special emphasis will be placed on laboratory techniques of assessing physical fitness. Prerequisite: A course in exercise physiology. LAB

HSES 806 Stress Management (3). The long range objectives of this course are to assist students in gaining stress management knowledge; to help them to formulate improved perspectives on various stress management techniques; and to enable them to develop techniques and strategies that can be used in their lives with a sense of purpose and self-responsibility. Prerequisite: Two courses in health education or consent of instructor. LEC

HSES 807 Current Literature in Exercise Physiology (2). A wide range of topics from the exercise physiology literature will be dis- cussed. Instructor and students will present reports to the group centered on current research findings with discussion aimed at application of these results to physical exercise and sport. Prerequisite: A basic course in exercise physiology or consent of instructor. LEC
HSES 808 Biomechanics of Human Movement (3). This course will examine the movements and the structure and function of human beings by means of the methods of biomechanics. An emphasis will be placed on the two primary goals of biomechanics: performance improvement and injury prevention and rehabilitation. Topics to be covered include the kinematics and kinetics of human movement, muscle mechanism and injury mechanisms, and the biomechanics of musculoskeletal injury. Prerequisite: Courses in calculus, physics, anatomy, and biomechanics, or consent of instructor. LEC

HSES 809 Laboratory Experiences in Biomechanics (3). This course will examine the instruments of data collection used for data acquisition and analysis in biomechanics. Instrumentation used for three-dimensional analysis of human movement will be covered, such as motion capture systems, force measurement devices, electrogoniometry, and isokinetics. By the end of the course students will learn computer programming techniques used to collect and analyze biomechanical and kinesiological data. Prerequisite: One course in biomechanics, or consent of instructor. LAB

HSES 810 Advanced Exercise Physiology (3). An advanced study of the physiological and biomechanical aspects of muscular, cardiovascular, and respiratory function as the human is engaging in exercise. The topics of energy metabolism, hormones, and nutrition as related to exercise are also presented. Prerequisite: A basic course in exercise physiology. LEC

HSES 811 Current Research Literature in Leisure Behavior (3). This course is designed to analyze critically the literature in health education. The range of topics for research is broad, as there is a significant influence from literature in psychology, sociology, and biology. Specific topics will be determined based on the research literature in health education. Prerequisite: A basic course in exercise physiology. LEC

HSES 812 Current Issues in Health Education (3). This course is designed to analyze critically the literature in health education. The range of topics for research is broad, as there is a significant influence from literature in psychology, sociology, and biology. Specific topics will be determined based on the research literature in health education. Prerequisite: A basic course in exercise physiology. LEC

HSES 813 Motor Control of Human Movement (3). This course will examine the neurophysiological basis of movement as well as the basic principles of the control of human voluntary movement. Students will learn not only how to look at the individual but also the task and the environment, and clearly understand the factors affecting movement across the life span and in movement disorders. Students will be shown how to apply the principles of motor control in a variety of contexts: counseling, coaching, rehabilitation science, and human factors engineering. Prerequisite: Courses in human anatomy, human physiology, and biomechanics, or consent of instructor. LEC

HSES 814 The Implementation of Health Education Programs (3). The content of this course is designed to assist elementary and secondary school personnel with the implementation of health education programs. Specific topics to be discussed will include: the concepts of health, principles of curriculum development, content selection, organization of the health program, current issues, actual practices, teaching in cultural areas, the implementation of effective health instruction, and legislation. Prerequisite: A course in methods and materials in health education. LEC

HSES 815 Assessing Motor Development of Exceptional Children (3). Standardized motor assessment instruments may be used with exceptional children with motor problems will be critiqued. A battery of tests to measure specific developmental aspects will be selected, administered to exceptional children, and the results interpreted. Prerequisite: Courses in educational measurements and motor development of the exceptional child. LEC

HSES 816 Health Education for the School Nurse (3). A course especially designed for the nurse in a school setting. Emphasis will be placed on improving and updating the school nurse’s ability to promote and maintain students’ health. Specific needs, interests, and comprehensive abilities of school age young persons will be considered with regard to personal fitness, nutrition, chemical substance use, misuse, and abuse, communicable disease control, and peer relationships. FLD

HSES 817 Practical Aspects of Aerobic and Resistance Training (3). This course will be a discussion of various concepts related to aerobic and resistance training. By the end of the semester, the student should be able to demonstrate an understanding of information presented. Use in this course by achieving satisfactory evaluations of presentations, papers, and an examination of the following topics: energy metabolism, general adaptations of aerobic and resistance training, exercise techniques for aerobic and resistance training, periodization of training, testing and evaluation of aerobic and resistance training performance, and exercise prescription for aerobic and resistance training. Prerequisite: Undergraduate course in exercise physiology or consent of instructor. LEC

HSES 818 Legal Aspects of Public Health Education (3). This course is designed to enhance understanding of the variety of legal issues which affect health educators and their audiences. Specifically, this course will cover health policy at the federal, state, and local public health laws and regulations which may prescribe health education content and the health educator’s actions. Legislation will be analyzed and the practical impact of the health educator upon the legislative process will be emphasized. Prerequisite: A course in Sociology of Health, Sport, and Exercise Sciences, with particular interest in the design, critique, and writing of original research in Health, Sport, and Exercise Sciences. LEC

HSES 819 Clinical Evaluation, Exercise Prescription, and Electrocardiography (3). This course is designed to review clinical evaluation techniques including diagnostic exercise stress tests and the physiologic changes that relate to certain kinds of pathology. It will also address individualized exercise prescription and exercise protocols used to prepare the exercise prescription for given populations. The components of the exercise prescription will be discussed in detail and applied to exercise prescription. The fundamentals of electrocardiography and the fundamentals of electrocardiogram analysis will be also studied during rest conditions and during exercise conditions. The course will apply physiologic principles to a clinical setting to demonstrate practical procedures. Prerequisite: A basic course in exercise physiology with a laboratory. LEC

HSES 820 Current Literature Review in Biomechanics (2). An overview of current kinesiological/biomechanical literature in such areas as skill techniques, equipment design, sport safety, and research tools and techniques. Readings will be critiqued and discussed. Emphasis will be given to the implications of research findings for the researcher, teacher, or coach. Prerequisite: A course in kinesiology with biomechanics emphasis or permission of instructor. LEC

HSES 821 Program Development in Physical Education and Sport (3). A study of the systematic process used to develop programs in physical education and related areas. A variety of modeling plans will be presented and practiced for both short and long-term planning in health and exercise programs. Prerequisite: Six hours in physical education or consent of instructor. LEC

HSES 822 Thesis Design and Writing in Health, Sport, and Exercise Science (3). A study of the systematic process used to develop programs in physical education and related areas. A variety of modeling plans will be presented and practiced for both short and long-term planning in health and exercise programs. Prerequisite: Six hours in physical education or consent of instructor. LEC

HSES 823 Behavior Modification in Health and Exercise (3). This course will examine the behavioral principles of health and exercise practices. Theories of human behavior, reinforcement theory, and models of self-esteem will serve as the foundation for studying behavior change. The course will be strongly emphasized. Content will include exercise determinants, motivation, media representation, negative behaviors, self-efficacy, social support, and effective promotion strategies. Prerequisite: Admitted to Graduate School or consent of instructor. LEC

HSES 824 Epidemiology and Concepts of Disease Causation (3). This course involves the study of the etiologic and natural history of infectious and non-infectious diseases including vector control, host defenses and resistance. Investigation of disease outbreaks, mental health and public health. The course deals with detailed analytic and descriptive epidemiology and their implications for improving our understanding of health and diseases; epidemiologic consequences of nuclear war and retrospective and prospective approaches in epidemiological research. Contemporary developmental methods for disease prevention will be critically reviewed. Prerequisite: HSES 873, or equivalent, or consent of instructor. LEC

HSES 825 Skeletal Muscle Physiology (3). This course will provide the student with an in-depth study of the structure, function, contractile mechanics, and neuromuscular system as it relates to the skeletal musculature. Structure and Development - muscle fiber, motor neuron, neuromuscular junction, muscle innervation. Exercise, development of muscle innervation. Putting Muscles to Work - ion of muscles to work, force, moment, and action potentials, neuromuscular transmission, muscle contraction, motor units, exercise, muscle metabolism. The Adaptable Neuromuscular System - fatigue, loss of muscle innervation, recovery of muscle innervation, neurotrophism, disuse, muscle training, injury and repair, aging. Prerequisite: HSES 810 or equivalent. LEC

HSES 828 Sport Finance (3). A study of the principles and applications of finance and economics in the sport industry. Strategic financial planning as a part of management responsibilities is highlighted. Prerequisite: Admitted to Graduate School. LEC

HSES 830 Sociocultural Dimensions of Sport (3). Current literature concerning the impact of American social values and cultural patterns of sport and physical activity will be studied. Critiques of related research involving sport and social institutions, and socio-cultural groups in sport will be evaluated. Prerequisite: A course in Sociology of Sport or consent of instructor. LEC

HSES 831 Ethics in the Sport Industry (3). Study of the history, theory, models, and application as they relate to the decision-making responsibilities of sport participation and management. Prerequisite: Admitted to Graduate School. LEC

HSES 832 Assessment of Fitness, Skills, and Programs for Grades K-12 (3). The study of techniques for the assessment of fitness and sports skills among K-12 students. The use of test assessment tools will be emphasized. Students will also discuss evaluative techniques for physical education curricula and programs. Prerequisite: 15 hours of physical education. LEC
School of Education degree requirements are subject to change.

Current requirements are available from department offices.

The Center for Psychoeducational Services is staffed by student clinicians in school psychology and counseling psychology who earn credit while they gain practical experience working directly with clients.

Music Education and Music Therapy
See the School of Fine Arts chapter of this catalog.

Psychology and Research in Education
Chair: Karen D. Multon
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 621
Lawrence, KS 66045-3101, www.soed.ku.edu/pre
Admissions Clerk: Loretta Warren: preadmit@ku.edu,
621 J.R. Pearson, (785) 864-3931
Professors: Harrington, Hohn, Kriehok, Lichtenberg, Multon, Poggio, Salkind
Research Professor: Glasnapp
Professors Emeriti: Borgers, Fine, Heck, Johnson, Price, Tracy
Associate Professors: Lee, Lopez, McDermott
Assistant Professors: Frey, Lowe, O’Byrne, Peyton, Skorupski

The Department of Psychology and Research in Education offers graduate training programs in counseling psychology, educational psychology and research, and school psychology.

Note: The department may change its graduate studies requirements and expectations. Prospective and current students should obtain the current degree requirements from the department.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send two copies of all original transcripts to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send the PRE departmental application and all other requested supporting application materials to:

The University of Kansas
Department of Psychology and Research in Education, Joseph R. Pearson Hall
1122 West Campus Road, Room 621
Lawrence, KS 66045-3101

Prerequisites for Regular Admission
Prerequisites include:
• Undergraduate grade-point average of 3.0 or higher on a 4.0 scale.
• Graduate grade-point average of 3.5 or higher on a 4.0 scale.
• Graduate Record Examination general test scores.
• Completed bachelor’s or master’s degree in counseling, psychology, or a related area. An applicant who does not have an undergraduate degree in education or psychology should have a minimum of 14 undergraduate credit hours in the behavioral sciences.

At the first enrollment, a doctoral student reviews any previous graduate work with an adviser to identify any course work in which the student is deficient. Students holding master’s degrees in other areas should recognize that such course work may require up to a year to complete and, in some instances, must be taken before the actual doctoral course requirements.

Counseling Psychology Programs
Degrees offered include the Master of Science in counseling psychology (mental health concentration) and Doctor of Philosophy in counseling psychology.

M.S. in Counseling Psychology
Training Director: Diane McDermott, dmcd@ku.edu, 614 J.R. Pearson, (785) 864-3931
For the M.S. degree, students have a concentration in mental health counseling.

Admission. The admission deadline is January 15 to begin course work in the following summer or fall.

Required Admission Materials:
1. KU Graduate School Application Form, www.graduate.ku.edu, and application fee. See Admissions in the General Information chapter of this catalog.
3. Two copies of official transcripts of all previous college work, sent directly to the Graduate School. One of the original transcripts is forwarded to the School of Education to complete licensing and/or certification paperwork.
4. GRE (general test) scores: Institution code of 86871, Department code of 2005.
5. Letter of intent.
6. Resume.
7. Three letters of recommendation from people who can assess the applicant’s prospects for completing the program.

Program Requirements. The mental health concentration requires about 40 to 44 credit hours of course work. Individuals wishing to become licensed professional counselors in Kansas need to meet additional requirements, as described online at www.ksbsrb.org. You may also wish to consult the American Counseling Association’s Web site, www.counseling.org, for additional information. Besides a core of work in counseling psychology (including counseling theory, career development, interviewing, assessment, group counseling, professional issues, and practicum), work is required in developmental psychology, research, and an elective area. All students complete either a thesis, a research project, or a comprehensive examination. After entering the program, students should meet with an adviser to plan a schedule for completing the degree requirements. Students in the Kansas City area may complete a portion of the work on the KU Edwards Campus in Overland Park.

Ph.D. in Counseling Psychology
Training Director: Thomas Kriehok, tkriehok@ku.edu, 618 J.R. Pearson, (785) 864-3931
Admission. The admission deadline is January 15 to begin course work in the following summer or fall.

Required Admission Materials:
1. KU Graduate School Application Form, www.graduate.ku.edu, and application fee. See Admissions in the General Information chapter of this catalog.
3. Two copies of official transcripts of all previous college work, sent directly to the Graduate School. One of the original transcripts is forwarded to the School of Education to complete licensing and/or certification paperwork.
4. GRE (general test) scores: Institution code of 68871, Department code of 2065.
5. Letter of intent.
6. Résumé.
7. Three letters of recommendation from people who can assess the applicant’s prospects for completing the program.

Additional Admission Materials:
8. If the applicant has completed a practicum in counseling or a related area, one recommendation should be completed by the practicum supervisor. A practicum form is included in the PRE departmental application.

Review of Graduate Status. At the beginning of each fall semester, the department formally evaluates the progress and status of all students in the program.

Course Work Requirements. In addition to any background competency deficiencies, each student must complete the following course work. This constitutes the minimal substantive requirement of the program.

Psychological Foundations (12-15 hours). Students must take at least one course in each of five general psychology core areas. These serve as the minor area requirement for the doctoral degree program. Course equivalencies that have been met during the student’s master’s program can be waived as required doctoral course work.

1. Biological Bases of Behavior. Select one:
   - PSYC 764 Clinical Neuropsychology
   - PSYC 961 Biological Foundations of Psychopathology

2. Cognitive/Affective Bases of Behavior. Select one:
   - PSYC 723 Advanced Cognitive Psychology
   - PSYC 757 Theories of Perception
   - PRE 807 Theories and Research in Human Learning
   - PSYC 831 Advanced Human Learning and Memory

3. Social Bases of Behavior. Select one:
   - PSYC 774 Advanced Social Psychology I
   - PSYC 775 Advanced Social Psychology II
   - PSYC 777 Social Psychology: Theory, Research, and Clinical Applications

4. Individual Bases of Behavior. Select one:
   - PSYC 900 Advanced Psychopathology
   - PSYC 962 Advanced Personality
   - PRE 890 Diagnosis and Psychopathology

5. History and Systems of Psychology.
   - PSYC 805 History of Psychology

Professional Core
   - PRE 740 Counseling and Interviewing Skills
   - PRE 742 Counseling Theory and Techniques
   - PRE 842 Counseling Practicum
   - PRE 844 Theory of Group Counseling
   - PRE 846 Career Development
   - PRE 875 Cross Cultural Counseling
   - PRE 900 Legal, Ethical, and Professional Issues in Professional Psychology
   - PRE 943 Supervision in Counseling
   - PRE 948 Advanced Practicum I
   - PRE 949 Advanced Practicum II (two semesters)
   - PRE 952 Advanced Counseling Theory and Research
   - PRE 954 Vocational Psychology

2. Assessment.
   - PRE 725 Educational Measurement
   - PRE 850 Individual and Group Assessment
   - PRE 951 Psychodiagnostic Assessment

Human Development (3 hours). One 3-hour graduate course in life span developmental psychology is required. See offerings in PRE, Psychology, or Applied Behavioral Science. PRE 705 Development Through the Life Span is encouraged but not required.

Research Core
1. Required Courses.
   - PRE 710 Introduction to Statistical Analysis
   - PRE 711 Lab for Introduction to Statistical Analysis
   - Concurrent enrollment in PRE 710 and PRE 711 is required.
   - PRE 715 Understanding Research in Education
   - PRE 811 Analysis of Variance
   - PRE 904 Regression Analysis
   - PRE 902 Research Methodology in Education or
   - PSYC 968 Research Methods in Clinical Psychology or
   - PSYC 815 Design and Analysis for Developmental Research.

2. Research Practicum.
   - PRE 901 Research Practicum in (Counseling Psychology) (3 credit hours) Must be completed within two years of the first enrollment for students entering with the master’s degree or within three years of the first enrollment for students entering with the bachelor’s degree.

3. Research Elective. Select one:
   - PRE 814 Nonparametric Statistics
   - PRE 816 Evaluating School Programs
   - PRE 822 Educational Scales, Questionnaires, and Sampling
   - PRE 903 Computer Applications for Statistical Analyses
   - PRE 905 Multivariate Analysis
   - PRE 921 Theory and Applications of Educational Measurement
   - PSYC 991 Structural Equation Analysis
   - PSYC 992 Analysis of Categorical Data
   - T&L 871 Introduction to Qualitative Research

Education Core. One course from each area (may be satisfied by course work completed elsewhere in the program):

Learning or Development
- Statistics
- History or Philosophy of Education (from list of approved courses)
- Curriculum or Instruction (satisfied by PRE 945 Supervision in Counseling)

Elective Area. Fifteen credit hours from PRE or any related field, 3 of which may be from independent study or field experience enrollments.

College Teaching Experience (minimum of 2 credit hours).
- PRE 906 College Teaching Experience in: (Supervision)

Internship in Counseling Psychology (2 credit hours for three consecutive terms).
- PRE 990 Internship in Counseling Psychology

Dissertation (minimum of 18 credit hours; the average is 20 to 22 hours).
- PRE 999 Doctoral Dissertation

Students entering from the bachelor’s level have two options. They may complete PRE 715, PRE 740, PRE 742, PRE 830, PRE 842, PRE 844, PRE 846, PRE 875, PRE 900, PRE 710/PRE 711, a course in human development, and PRE 899, PRE 898, or a written comprehensive examination to receive an M.S. degree. If they choose not to receive an M.S., their status will be changed to aspirant after they complete PRE 715, PRE 740, PRE 742, PRE 830, PRE 842, PRE 844, PRE 875, PRE 900, PRE 811, and a course in human development with a 3.5 grade-point average and upon faculty recommendation.

Comprehensive Examination. After completing course work, the student must pass a written comprehensive examination based on the curricular requirements of the counseling psychology program. After satisfactory completion of the written examination, the student must pass a comprehensive oral examination. The program defines the nature of this examination.

Internship. The primary criteria for internship placement are appropriate professional opportunities, adequate supervision by a qualified counseling psychologist, student financial support by the agency offering the internship, and accreditation of the internship site by the American Psychological Association. A student may initiate contacts to find internship settings. A student is not permitted to begin the internship until the comprehensive examination has been completed and the internship setting has the endorsement of the program. The internship is completed in one year.

Dissertation. Upon passing the written and oral portions of the comprehensive examination, the candidate, in consultation with his or her adviser, assembles a dissertation committee of three members. For information on post-comprehensive enrollment and general information about doctoral programs, consult the pertinent chapters of this catalog.
Ph.D. in Educational Psychology and Research

Doctoral study passes through three stages. In the introductory stage, the emphasis is on the general content of educational psychology and research and the fundamental measurement, evaluation, and research skills needed by scholars. In the professional specialization stage, the emphasis is on advanced knowledge and skills in specific areas of study, application of evaluation and research skills, and production and identification of formal, researchable hypotheses. In the doctoral research stage, emphasis turns to the ability to conduct research independently on original problems, to disseminate research findings, and to participate in professional activities.

Course Work Requirements

Educational Psychology and Research Core Areas. A student must take at least one course at or above the 800 level in each of the following areas. This course work must be in addition to that required for the educational psychology and research master’s degree.

1. Learning and Instruction. Typical courses include
   - PRE 807 Theories and Research in Human Learning
   - PRE 907 The Psychology of Instruction and Human Learning

2. Applied Human Development. Typical courses include
   - PRE 800 Development During Youth and Adulthood
   - PRE 806 Issues in Human Growth and Development

3. Measurement and Assessment. Typical courses include
   - PRE 822 Educational Scales, Questionnaires, and Sampling
   - PRE 921 Theory and Applications of Educational Measurement

4. Statistics. Typical courses include
   - PRE 811 Analysis of Variance
   - PRE 814 Nonparametric Statistics
   - PRE 904 Regression Analysis
   - PRE 905 Multivariate Analysis

5. Research and Evaluation. Typical courses include
   - PRE 816 Evaluating School Programs
   - PRE 916 Educational Evaluation: Theory and Practice
   - PRE 902 Research Methodology in Education


School of Education Core Requirements in Curriculum and Instruction and Educational History or Philosophy. All students must enroll in one course in curriculum and instruction and one course in educational history or philosophy.

Program Requirement. All students must enroll at least once in PRE 940 Advanced Studies in Educational Psychology and Research.

Supervised College Teaching. All students must enroll in PRE 996 College Teaching Experience in: _____

Research Skills. Doctoral preparation in educational psychology and research implies a strong emphasis on the development of research skills. Every doctoral student must demonstrate these skills by completing three projects. Examples include submission of a scholarly paper to an appropriate professional organization, development of a position paper on an issue related to educational psychology and research, or application of statistical procedures to a dataset.

Comprehensive Examination. Following completion of course work, a student must complete and pass a written comprehensive examination and then a comprehensive oral examination. The program defines the nature of these examinations.

Dissertation. Upon passing the written and oral portions of the comprehensive examination, the candidate, in consultation with the advisor, assembles a dissertation committee. For information on post-comprehensive enrollment and general information about doctoral programs, see the pertinent chapters of this catalog.

School Psychology Programs

Training Director: Steven Lee, swlee@ku.edu, 632 J.R. Pearson, (785) 864-3931

Programs lead to Specialist in Education (Ed.S.) and Doctor of Philosophy (Ph.D.) degrees. The curriculum prepares the student to function professionally as a school psychologist and to develop the skills of a psy-
choeducational consultant. The program emphasizes current issues and trends in school psychology. The doctoral program adheres to a scientist-practitioner orientation that extends the student’s professional skills and theoretical understanding of school psychology issues. This approach helps the student to acquire competence in research and in the teaching of psychology.

**Admission.** The admission deadline is January 15 to begin course work in the following summer or fall.

**Required Admission Materials:**
1. KU Graduate School Application Form, www.graduate.ku.edu, and application fee. See Admissions in the General Information chapter of this catalog.
3. Two copies of official transcripts of all previous college work, sent directly to the Graduate School. One of the original transcripts is forwarded to the School of Education to complete licensing and/or certification paperwork.
4. GRE (general test) scores: Institution code of R6871, Department code of 3406.
5. Letter of intent.
6. Résumé.
7. Three letters of recommendation from people who can assess the applicant’s prospects for completing the program.

**Ed.S. in School Psychology**

The Ed.S. program prepares graduates to function effectively as school psychologists and to meet the recommendations of professional organizations and Kansas licensure requirements. The Ed.S program is accredited by the National Association of School Psychologists (NASP).

**Program Requirements.** The Ed.S. program consists of two years of full-time graduate study (about 70 semester credit hours) followed by a third year of internship. Students completing the program are licensed for early childhood through grade 12 if they obtain 100 hours of applied experience with young children and their families in practica or internship.

All students obtain competence in school psychology primarily by completing a sequence of prescribed courses and field-based experiences. However, there may be room in a student’s program for electives, depending on previous experiences and course work. In addition, students who do not have a bachelor’s degree in education must complete a general educational curriculum course (T&L 740 or T&L 842) and a history and philosophy of education course (T&L 770, T&L 771, or T&L 775) to fulfill state licensure requirements. The standard course sequence for students in the Ed.S. program is as follows:

**First Year, Fall Semester**
- PRE 720 Developmental Psychopathology: Diagnosis, Intervention, and Prevention
- PRE 725 Educational Measurement
- PRE 980 Introduction to School Psychology
- SPED 725 Introduction to the Psychology and Education of Children and Youth with Disabilities
- PRE 710 Introduction to Statistical Analysis and PRE 711 Lab for Introduction to Statistical Analysis (may be waived by examination)

**First Year, Spring Semester**
- PRE 703 Constructive Classroom Discipline
- PRE 805 Individual Intelligence Testing
- PRE 891 Assessment of Behavior Problems and Personality
- PRE 965 Foundations of Psychoeducational Consultation

**First Year, Summer Session**
- PRE 705 Human Development through the Lifespan
- PRE 998 Seminar in (School Psychology)
- PRE 835 Clinical Techniques in Academic Assessment and Intervention

**Second Year, Fall Semester**
- PRE 855 Psychoeducational Clinic I: Assessment, Consultation, and Intervention
- PRE 910 Practicum in School Psychology
- PRE 960 Assessment of Preschool Development
- PRE 975 Therapeutic Intervention: Home and School
- PRE 947 Specialist Research

**Second Year, Spring Semester**
- PRE 704 Advanced Educational Psychology: Learning Processes in Education
- PRE 911 Advanced Practicum in School Psychology
- PRE 947 Specialist Research
- PRE 715 Understanding Research in Education
- PRE 865 Psychoeducational Clinic II: Assessment, Consultation, and Intervention

**Second Year, Summer Session**
- T&L 740 Foundations of Curriculum and Instruction or
- T&L 842 Foundations of Curriculum Development
- T&L 770 History and Philosophy of Education or
- T&L 771 Philosophy of Education I or
- T&L 775 History of Education and Culture in America

**Third Year**
- PRE 991 Ed.S. Internship (Full-year school psychology internship)

**Ph.D. in School Psychology**

The doctoral program adheres to a scientist-practitioner orientation. Doctoral study extends the student’s applied, research, and teaching skills and allows specialization. A 12-credit-hour minor is required. Research skills are described under Doctor of Philosophy with a Major in Education. The doctoral program in school psychology is accredited by the American Psychological Association, the National Association of School Psychologists, the National Council for the Accreditation of Teacher Education, and the Kansas State Department of Education. It is usually a four-year program of full-time study followed by a full year of internship.

**Research Skills.** The student must complete course work and demonstrate computer analysis of research data. In addition, each doctoral student must submit a manuscript and have it accepted for presentation at a convention of a scholarly association or submit a manuscript for publication in a professional journal.

**Comprehensive Examination.** After completing course work, a student must pass a written comprehensive examination. Content is based on the curricular requirements of the school psychology program. After satisfactory completion of the written examination, the student must pass a comprehensive oral examination. The program defines the nature of these examinations.

**Internship.** The internship usually is finished in one year after completion of most course work, although it may extend over two years. It is a year of supervision in which the student extends skills and continues professional development while working professionally in an approved setting. The internship gives students an opportunity to integrate theory and practice as they field-test skills and concepts. Content, structure, and supervision requirements follow guidelines of the American Psychological Association and the Council of Directors of School Psychology Programs. Information on internship sites is available in the department office.

**Dissertation.** Upon passing the written and oral portions of the comprehensive examination, the candidate, in consultation with the adviser, assembles a dissertation committee. For information on post-comprehensive enrollment and general information about doctoral programs, see the pertinent chapters of this catalog.

**Course Work Requirements**

**Professional School Psychology Area**

**1. Psychodiagnostic Assessment:** All students take all four courses.
- PRE 770 Developmental Psychopathology, Diagnosis, Intervention, and Prevention
- PRE 805 Individual Intelligence Testing
- PRE 998 Seminar in (School Psychology)
For help locating course descriptions, see the Directory of Courses, pages 5-6.

Psychological Foundations. All students must take course work in the five psychological areas that constitute the master's degree requirements.

1. Biological Bases of Behavior (3 hours). Choose one:
   - PSYC 864 Clinical Neuropsychology
   - PSYC 861 Biological Foundations of Psychopathology
   - PSYC 822 Seminar in Psychobiology
   - ABSC 730 Developmental Neurobiology

2. Cognitive-affective Bases of Behavior (3 hours; met through Professional School Psychology Area courses).

3. Social Bases of Behavior (3 hours: met through Professional School Psychology Area courses, plus one course from this list): PSYC 774 Advanced Social Psychology I or PSYC 769 Social Psychology: Theory, Research, and Clinical Applications or PSYC 802 Social-psychological Aspects of Health, Disability, and Associated Life Stress

4. Individual Bases of Behavior (3 hours; met through Professional School Psychology Area courses).

5. History and Systems of Psychology (3 hours; met through Professional School Psychology Area courses, plus one course from the following list): PSYC 805 History of Psychology or ABSC 921 The History and Systems of Psychology

Research Skills. Students must take the following three courses, plus 6 hours in measurement, statistics, evaluation, or research design.

PRE 811 Analysis of Variance
PRE 902 Research Methodology in Education
PRE 904 Regression Analysis

Education Core (12 hours): Students must complete a course in curriculum or instruction, history or philosophy of education, learning and development, and research design or statistics. The research design or statistics requirement is met in the research skills area. Students not holding the bachelor's degree in education will have met the curriculum or instruction and the history and philosophy of education requirements through the professional school psychology area, leaving the learning and development requirement to be met. PRE 760 fulfills human development requirements.

Appreciation/Sensitivity to Ethnic and Cultural Diversity. All students must complete one of the following courses:

- TEL 745 Multicultural Education or
- PRE 875 Cross Cultural Counseling

Supervised College Teaching. All students must take the following course:

PRE 996 College Teaching Experience

Minor Area. A minor of at least 12 hours of approved study outside the school psychology program is required. The minor should be supportive and broaden the student's professional preparation and interests. Courses in the minor usually will not fulfill other program content requirements. Prior degree course work may not be applied to the minor. Exceptions might be agreed upon by the student and the minor adviser.

Ph.D. Internship. All students must complete a full-year internship:

PRE 992 Ph.D. Internship in School Psychology.

- Psychology and Research in Education Courses

PRE 598 Special Course: ___ (1-5)
PRE 690 Introduction to School Psychology (3)
PRE 700 Advanced Educational Psychology: Development and Education of the Adolescent (2-3). This course, from a psychological perspective, to topics and problems in the development of adolescents and youth, with emphasis on application to educational issues. Note: To be offered annually. LEC
PRE 702 Advanced Educational Psychology: The Development and Education of the Child (3). Study of children from a cognitive developmental perspective. Changes in children are examined in light of environmental influences including social factors, educational practices, and child-rearing as they interact with conditions internal to children. Key issues include the study of cognition, language, motives, social-emotional issues, the self, and the problem of developmental delays. A major concern is the role of adults in supporting positive development, particularly in educational settings. LEC
PRE 703 Constructive Classroom Discipline (3). This course will examine concepts and techniques of constructive classroom management. Various theoretical orientations including humanism and behaviorism will be considered. Emphasis will be on the identification of strategies that teachers can use (1) to facilitate an environment that reduces the likelihood of misbehavior, and (2) to develop and reinforce the appropriate behavior effectively with individuals and groups of children to resolve difficulties that arise in the classroom. The class should have value to classroom teachers, school psychologists, school counselors, and other school consultants. LEC
PRE 704 Advanced Educational Psychology: Learning Processes in Education (3). A study of the mental processes that influence learning and comprehension. The scope of the course will include individuals at all developmental levels and in a variety of educational settings. Key issues include the study of language, memory, concepts, motivation and social factors affecting learning processes. LEC
PRE 705 Human Development through the Lifespan (3). This course will cover the social, emotional, psychological, and cognitive changes that occur from conception through death. Methodological issues will also be addressed. Prerequisite: A graduate or undergraduate course in psychology. LEC
PRE 710 Introduction to Statistical Analysis (3). Emphasis on the conceptual understanding of statistical analysis. Course includes univariate and bivariate descriptive statistics, sampling distributions, statistical estimation, hypothesis testing and procedures in testing statistical hypothesis for one and two sample designs. Prerequisite: Concurrent enrollment in PRE 711 required, or with the permission of instructor on the basis of knowledge of statistical packages presented in PRE 711. LEC
PRE 711 Lab for Introduction to Statistical Analysis (1). Creation and manipulation of data sets. Analysis of data with statistical packages, with emphasis on descriptive statistics, graphical procedures, and univariate parametric methods. Graded on a satisfactory/fail basis. Prerequisite: Concurrent enrollment in PRE 710 or PRE 811 or with the permission of the instructor. LAB
PRE 712 Beyond Curriculum: Assessment, Classroom Management, Counseling, and Consultation (3). Development of classroom skills that serve to promote healthy student behavior and optimal academic performance. Emphasis on the use of data in decision-making about assessment, behavior management, and communication with stakeholders. Serves to promote teacher practice characterized by accurate measurement and assessment, a preventative approach to classroom management, and effective communication with students, parents/guardians, and other professionals. Course format involves collaboration of several graduate faculty and an experiential component designed to foster skill acquisition and efficacy. Prerequisite: Successful completion of student teaching. LEC
PRE 715 Understanding Research in Education (3). This course introduces the concepts and skills involved in understanding and analyzing research in education and related areas. The course provides an overview of basic, general knowledge of various research methodologies. Students should expect to study much of this material in greater depth through additional course work before being fully prepared to conduct independent research. However, this course should enhance their ability to locate, read, comprehend, and critically analyze research articles and reports. Topics in the course include quantitative and qualitative methods and designs, historical and descriptive research, and program evaluation. (This course fulfills the requirement of the research methods course in the first 12 hours of graduate study.) LEC
PRE 720 Educational Measurement in the Classroom (3). An introduction to concepts and skills basic to the development of instruments and procedures for forming judgments and summarizing classroom evaluation. Planning student evaluation, coordinating evaluation with objectives, item development, item analysis, relating evaluation to instruction, grading, and reporting to students, parents and the school. Norm referenced and criterion referenced tests are considered. LEC
PRE 725 Educational Measurement (3). The course is an introduction to the application of the concepts of reliability, validity, and practicality to the development and use, and interpretation of measuring instruments in the field of education. The concepts of norm referenced and criterion referenced tests; the interpretation and use of norms; standard scores, percentiles, quotients, and grade equivalents are among the topics covered. An understanding of the role of measurement in evaluation, diagnosis, selection and placement is included. LEC

PRE 730 Counseling and Consultation Skills for Teachers (2). This course is designed to give an overview of basic counseling and consultation skills and concepts. Areas covered include self-awareness, personal values, decision making, communication skills, consultation skills, evaluation of self and responsibility for self as a counselor. Course format includes lectures and small group exercises. Prerequisite: Admission to fifth-year program or graduate certification program. LEC

PRE 740 Counseling and Interviewing Skills (3). An experiential and performance-based course having three major objectives: 1) the acquisition of basic counseling skills and strategies by means of miocro counseling training; 2) learning to use these skills effectively and appropriately in a simulated counseling session; 3) the students’ understanding of their personal characteristics and how these characteristics relate to functioning as an effective helping professional. This course should normally be taken at the earliest possible time in the student’s program. Open to counseling majors. Non-majors may be admitted only by permission of the instructor, if space permits. Prerequisite: Written consent of laboratory coordinator. LEC

PRE 742 Counseling Theory and Techniques (3). An introductory examination of several major theories of counseling and therapy including psychodynamic views, person-centered, behavioral, and cognitive-behavioral approaches. Attention given to research reviews and factors various theories have in common. Designed for graduate students in counseling psychology or allied fields. Prerequisite: Graduate student status or permission of the instructor. LEC

PRE 770 Developmental Psychopathology: Diagnosis, Intervention, and Prevention (3). Foundations of child and adolescent psychopathology from a developmental and educational perspective. Classification, assessment, and etiology of clinical disorders. Examination of risk and protective factors associated with these various disorders. Coverage of empirical-based intervention strategies and prevention programs. Graduate student standing. LEC

PRE 790 Research and Evaluation Proposal Development (3). A course for students designing a research or evaluation proposal leading to a thesis or dissertation. Specific topics concern the problem for study, reviewing the literature, and selecting appropriate research and evaluation designs, instrumentation, and data analysis issues. The goal of the course is to aid students in the preparation of research proposals at the master’s level. LEC

PRE 797 Independent Readings and Research in: (1-3). Opportunity for students to participate in supervised reading and research in special topics of interest (for which regularly scheduled courses are not given). Topics and credit are arranged by advisement. May not be used to substitute for regularly scheduled course offerings. Intended for students with appropriate undergraduate or graduate preparation but without an option or course. Students will be required to submit a proposal for the work. (Students with extensive graduate work should enroll in PRE 997; undergraduate students may enroll in PRE 497). RSH

PRE 798 Special Course: (1-5). A special course of study for meeting curricular or professional—primarily for graduate students. Course is graded on a satisfactory/fail basis. LEC

PRE 800 Development during Youth and Adulthood (3). An examination from a life-span perspective of major issues affecting changes after adolescence. Topics include intelligence, identity, intimacy, the role of work, and moral concepts. Theoretical issues, research findings, and educational and social policy implications will be examined. Students will prepare papers on significant issues in the field and survey extensively the research and theoretical literature. Prerequisite: Prior enrollment in a course on naturalistic or experimental research methods. LEC

PRE 805 Individual Intelligence Testing (1-3). Supervised experience in the administration, scoring, and interpretation of the major individual intelligence tests for children, adolescents, and adults. Other areas to be covered in this course will include models of intelligence and factors influencing intelligence; measurement characteristics of instruments used to assess cognitive abilities; ethical and legal issues in the use of intelligence tests; and application of the topics covered to the classroom setting. Prerequisite: PRE 725 and permission of instructor. LEC

PRE 806 Issues in Human Growth and Development (3). An overview and analysis of selected issues in the field of human growth and development. The course will be on current theoretical and methodological nature that affect the field of developmental psychology and applications to social and educational settings. Prerequisite: Prior completion of a course in developmental psychology. LEC

PRE 807 Research in Human Development (3). An overview of important models, principles and research findings related to the learning process. Attention is given to theories of learning and information processing which attempt to explain perceptual behavior, verbal learning and memory and social learning processes. Emphasis is placed on student development of research proposals in the area of human learning, selection, use, and interpretation of tests and other measuring instruments in the field of education. The concepts of norm referenced and criterion referenced tests; the interpretation and use of norms; standard scores, percentiles, quotients, and grade equivalents are among the topics covered. An understanding of the role of measurement in evaluation, diagnosis, selection and placement is included. LEC

PRE 811 Analysis of Variance (3). Analysis of variance techniques including one-way ANOVA, planned and post hoc comparisons, multiway ANOVA, repeated measures ANOVA, and mixed designs. Prerequisite: PRE 710 and PRE 711. LEC

PRE 812 Meta-analysis (3). Statistical methods to summarize results from multiple studies. Prerequisite: PRE 811. LEC

PRE 814 Nonparametric Statistics (3). Methods of analysis for nominal and ranked data, multiway contingency table analysis. Prerequisite: PRE 811. LEC

PRE 816 Evaluating School Programs (3). Methods and procedures for evaluating educational programs. Attention is given to the development and evaluation of goals and objectives, creation of designs to monitor processes and outcomes, utilization of test and measurement systems for assessing outcomes, establishing evaluation standards and criteria, and application of statistical analyses. Prerequisite: PRE 710 or equivalent. LEC

PRE 822 Educational Scales, Questionnaires, and Sampling (3). Development, construction, validation and scaling of non-cognitive instruments including questionnaires, surveys, checklists, rating scales and unobtrusive measures. The sampling methodology is emphasized. Item construction and analysis and the development of subscales are stressed. Prerequisite: PRE 720 or PRE 725 and PRE 710. LEC

PRE 830 Individual and Group Assessment (3). A consideration of basic concepts pertaining to selection and interpretation of both standardized and non-standardized assessment procedures and devices with attention given to communicating assessment results within the counseling relationship. Prerequisite: PRE 725 or comparable undergraduate principles of measurement course. LEC

PRE 835 Clinical Techniques in Academic Assessment and Intervention (3). Students will learn techniques of formal and informal assessment of academic skills in school-aged students. In addition, students will learn consultation and intervention approaches and strategies for use with students who have academic delays. This course has a field-based practicum component. Prerequisite: Graduate student standing in the School Psychology program and permission of instructor. LEC

PRE 840 Guidance and Counseling in the Public Schools (3). This course is designed to provide information about the organization and administration of guidance and counseling programs in the public schools. Special topics for the course will be determined in consultation with the role of the counselor can be approved with admission of the instructor. LEC

PRE 842 Counseling Practicum (Elementary, Secondary, Counseling Psychology) (0). This course is taken as one of the last courses in the master’s degree counseling program. The primary purpose of the course is for the student to develop individual counseling skills while functioning in a counseling setting. In addition to individual skills, students are also encouraged to participate in group counseling and other counseling related activities within the particular counseling setting. Students enroll in practical for the level most closely related to their professional goals, i.e., elementary, secondary, counseling psychology. Graded on a satisfactory/fail basis. Prerequisite: PRE 740, PRE 742, and prior or concurrent enrollment in PRE 830, PRE 840, PRE 844, and PRE 846. Pre-enrollment with practicum coordinator. Students currently on academic probation will not be allowed to enroll in practicum. LEC

PRE 844 Theory of Group Counseling (3). Focuses on issues in group counseling. Topics covered are types of groups, theoretical orientation of groups, stages of group development, group leadership, selection of members, ethical issues, and effectiveness of groups. Prerequisite: Students must be admitted to the Program in Counseling Psychology. Nonmajors must have prior written consent of instructor. LEC

PRE 846 Career Development (3). Stresses the importance of career development in education, with an emphasis on developmental life planning. Course includes topics such as delivery systems, utility of career development theory, sexism and racism in career development and counseling, the effects of sex role socialization, nature of the work of evaluation, career information, use of career information in individual and group counseling, and the role of empirical research in career development theory and practice. LEC

PRE 850 Human Relationship Skills in the Classroom (3). The purpose of this course is to provide educators with awareness and skill training in basic human relationship/communication skills. The course is focused on skills that provide educators with effective communication skills for working with students, educators, and parents. LEC

PRE 855 Psychosocial Education Clinic I: Assessment, Consultation, and Intervention (3). This is a practical application course where students apply previous learning and gain experience in assessment and intervention with children, families, and school consultation. Team collaboration, peer review, and case conferences are essential elements of this course. Students work with clients in the on campus learning center under supervision. Topical seminars also are included throughout the semester. Prerequisite: Graduate student standing in the School Psychology program and permission of instructor. LEC
PRE 860 Assessment of Behavior Problems and Personality (3). The purpose of this course is to examine appropriate assessment techniques for the evaluation of behavior problems. Interview procedures, behavioral observation strategies, behavior rating scales and checklists, self-report inventories, and rational theoretical techniques will be introduced. The intent is to place these assessment approaches in their theoretical contexts and to discuss how they could be used by personnel specialists to understand the problem behavior and plan interventions to enhance students’ personal adjustment and achievement in the classroom. Prerequisite: PRE 770, standing in the school of psychology program, or permission of instructor. LEC

PRE 865 Psychocultural Counseling Clinic II: Assessment, Consultation, and Intervention (3). A continuation of School Psychology Counseling Clinic I where students will be performing the same activities at a higher level of autonomy and independence. Prerequisite: Graduate student standing in the School Psychology program, PRE 855, and permission of instructor. LEC

PRE 870 Developing, Modifying, and Maintaining Gifted/Talented Education Programs (3). An overview of issues, models and methods for implementing and assessing special programs for gifted and talented students. Topics include: selecting and implementing program systems and models, orienting staff and parents to the special education program, and implementing student programs with the general education staff. Prerequisite: TEL 744, TEL 745, TEL 747, or consent of instructor. LEC

PRE 871 The Creative Process (3). An investigation of the nature of the creative process, emphasizing theories and models of the origins and development of creativity. Students learn about, apply and develop techniques for defining and identifying creative processes, and encouraging creative thinking among children and youth. Prerequisite: PRE 870 or consent of instructor. LEC

PRE 875 Cross Cultural Counseling (3). Examines the impact and influence of culture within a variety of counseling theories including identification of cultural assumptions and limits of theories. The course will assist in understanding cultural differences of racial minorities and various socioeconomic subgroups and will provide opportunities for self-examination of cultural assumptions/values and effects within counseling. Prerequisite: PRE 742 or equivalent. LEC

PRE 880 Legal, Ethical, and Professional Issues in Counseling (3). An examination of legal, ethical, professional standards and issues affecting the practice of professional counseling. Topics include an overview of the history and organization of the counseling profession, legislative regulation of counseling, ethical standards of the counseling profession, standards for professional practice, and issues of counseling and management. Prerequisite: PRE 890 or equivalent. LEC

PRE 890 Diagnosis and Psychopathology (3). An examination of psychological disorders from a counseling psychology perspective that emphasizes strengths. The course will cover the current version of the Diagnostic and Statistical Manual (DSM-IV) of the American Psychiatric Association. Prerequisite: Consent of instructor. LEC

PRE 893 Internship in School Counseling (2). Two consecutive enrollments covering a period of one academic year. During this time the student prepares a portfolio of skills competencies, classroom guidance programs presented, and research experiences appropriate to the student's school level. Supervision will be conducted on an individual basis and will include a minimum of two visits per semester. Prerequisite: Must have school counseling position and a completed Masters degree from K.U. in School Counseling. FLD

PRE 896 Seminar in: (1-3). Prerequisite: Permission of instructor. LEC

PRE 897 Independent Study (1-4). Graded on a satisfactory/unsatisfactory basis. Prerequisite: Consent of adviser and instructor. RSH

PRE 898 Master's Project (1-4). Prerequisite: Prior or concurrent enrollment in PRE 710, PRE 715, or PRE 790. RSH

PRE 899 Master's Thesis (1-6). Prerequisite: Prior or concurrent enrollment in PRE 710. THE

PRE 900 Legal, Ethical, and Professional Issues in Professional Psychology (3). This seminar is designed to examine the major legal and ethical principles and areas of concern that affect professional psychology. The course will also examine the historical development of professional psychology and the issues that affect the future direction of research and practice. Prerequisite: Doctoral status in counseling, clinical, clinical, child, or school psychology, or consent of instructor. LEC

PRE 901 Research Practicum in: (1-3). This course is designed to give students experience in conducting research. It is expected that students will be performing research at least two consecutive semesters. (This course fulfills the requirement by the School of Education for a two semester, research practicum course.) Prerequisite: Doctoral student status in a program in the Department of Psychology and Research in Education. RSH

PRE 902 Research Methodology in Education (3). An examination and study of the problems and procedures which relate to the validity of research methods. Emphasis will be placed on reading the current literature on research methodology. Students are required to develop a research proposal. Prerequisite: PRE 811 and PRE 720 or PRE 725. LEC

PRE 903 Computer Applications for Statistical Analyses (3). Computer applications for a variety of statistical techniques. Emphasis may be with applications to research in the behavioral sciences. Prerequisite: PRE 811. LEC

PRE 904 Regression Analysis (3). Multiple correlation/regression techniques, including polynomials, analysis of interactions, dummy coding, non-orthogonal analysis of variance, and analysis of covariance. Prerequisite: PRE 811 and experience with a statistical software package. LEC

PRE 905 Multivariate Analysis (3). Multiple regression, discriminant analysis, logistic regression, and exploratory factor analysis. Prerequisite: PRE 904 and experience with a statistical software package. LEC

PRE 906 Confirmatory Factor Analysis and Multivariate Statistical Modeling (3). Emphasis on unidimensional and multidimensional measurement models, general methods for the unification of theory, and relationships among models. Applications of statistical techniques to psychological problems. Prerequisite: PRE 905. LEC

PRE 907 The Psychology of Instruction and Human Learning (4). A study of research and theory in the areas of cognitive learning and of instruction, including such topics as motivation, problem solving, discovery learning, conceptualization, theory construction and task analysis. Emphasis placed on independent learning experiences and field-based experimentation with pilot study. Prerequisite: PRE 807 and PRE 710. LEC

PRE 910 Practicum in School Psychology (3). Supervised practice in the application of psychological theory of educational problems. Includes work useful with exceptional children as well as experience in the application of such areas as mental hygiene and learning theory to problems involving the total school population. (Same as SPED 801.) Prerequisite: Permission of adviser and instructor. LEC

PRE 911 Advanced Practicum in School Psychology (3). A continuation of PRE 910, with special emphasis placed on the techniques associated with learning difficulties. (Same as SPED 802.) Prerequisite: PRE 910 and permission of adviser and instructor. LEC

PRE 916 Educational Evaluation: Theory and Practice (3). The course will treat an intensive critical study of various views of evaluation as it exists opposite the experimental research process, emphasizing the operational definitions of objects, existing models, taxonomies, and structure, and goals and methods of obtaining and summarizing evaluation data. Prerequisite: PRE 710 and PRE 816 or equivalents or permission of instructor. LEC

PRE 918 Seminar in Current Issues and Trends in: (1-3). An examination of selected current issues and trends. (This course fulfills the requirement by the School of Education for a course in current issues and trends, Doctoral concentration course.) Prerequisite: Doctoral concentration in the Department of Psychology and Research in Education. LEC

PRE 921 Theory and Applications of Educational Measurement (3). Application of theory including classical theories of reliability and validity, latent trait theories, item sampling, and factor analysis to problems in educational test development and use in areas such as evaluation, research, placement, and selection. Prerequisite: PRE 725 and PRE 811. LEC

PRE 922 Item Response Theory (3). Theoretical foundations and practical application of item response theory in educational measurement. Prerequisite: PRE 921. LEC

PRE 940 Advanced Studies in Educational Psychology and Research (3). A course designed to offer a comprehensive view of the field of educational psychology. The course will examine the thematic areas with a focus on latest developments and emerging theories in learning, development and quantitative methods. Intended for post-master’s level students. Prerequisite: Prior graduate level coursework in development, learning, measurement, and statistics. LEC

PRE 944 Practicum in Group Counseling (3). Group practicum is designed to integrate theories, procedures, and research in group counseling. Each student is to meet regularly with small groups of clients and make tape recordings and/ or records of group and individual behavior. Members will meet in the seminar to analyze developments in their groups, problems of group leadership, and techniques for individual behavior change through group interaction. Prerequisite: PRE 842, PRE 844, and consent of instructor. FLD

PRE 945 Supervision in Counseling (3). Designed to be the initial advanced practicum for first year doctoral students. Attention is directed to development of a broad range of basic and advanced skills. Prerequisite: PRE 842 or equivalent. LEC

PRE 946 Specialist Research (1-4). RSH

PRE 948 Advanced Practicum I (6). Designed to be the initial advanced practicum for first year doctoral students. Attention is directed to development of a broad range of basic and advanced skills. Graded on a satisfactory/fail basis. Prerequisite: PRE 842 or equivalent. LEC

PRE 949 Advanced Practicum II (6). Intensive counseling practice, including group and individual supervision, that may be taken either through Counseling and Psychological Services or an approved site outside of the university. Focus is on the acquisition and demonstration of advanced counseling skills. Two consecutive semesters (Fall, Spring) of enrollment are required of doctoral students. Responsibility to the site is for a continuous nine months, with fall semester ending on the first day of spring semester classes. A grade of incomplete will be granted at the end of the regular fall grading period, with the regular fall
grade being granted after completion of full semester responsibilities. Graded on a satisfactory/fail basis. Prerequisite: Satisfactory completion of PRE 995 or permission of instructor. LEC

PRE 950 Cognitive Theory and Strategies in Counseling Psychology (3). An examination of historical and contemporary cognitive theories and strategies used in the practice of counseling psychology. Consideration of theoretical positions and issues, research functions, assessment strategies, and application of theoretical perspectives. Prerequisite: PRE doctoral student status or consent of instructor. LEC

PRE 951 Psychodiagnostic Assessment (3). Survey of selected psychodiagnostic instruments currently in use and their administration, scoring, and interpretation. Emphasis will also be placed on the use of the clinical interview as an assessment tool, case conceptualization/diagnosis, and integrative report writing. Prerequisite: PRE 830 and either doctoral student status or consent of instructor. LEC

PRE 952 Advanced Counseling Theory and Research (3). An advanced treatment of theory, research, and practice issues central to Counseling Psychology. Topics include theoretical and research paradigms in Counseling Psychology; the relationship of theory and research to practice; and evidence on factors influencing counseling processes and outcomes. Prerequisite: Counseling Psychology doctoral student status or consent of instructor. LEC

PRE 953 Interdisciplinary Perspectives on Counseling and Personality (3). A study of personality and therapeutic change from systems, inter- actional, and communications perspectives, with implications for research and assessment in counseling. Designed for graduate students at the specialist and doctoral levels. Prerequisite: Counseling Psychology doctoral student status or consent of instructor. LEC

PRE 954 Vocational Psychology (3). A survey of the major career development theories in counseling psychology: Models and methods of career counseling, models and evaluation of career counseling, and integration of different theoretical perspectives. The empirical support of each theory and needed research will be identified. The course will include presentation of theories of career development and their specific applicability in counseling. The career development of special groups (women, the elderly, minorities) will be studied as well as alternative methods of delivery in career development and counseling. Prerequisite: PRE 846 or equivalent. LEC

PRE 955 Research in Counseling (1). The course for research in counseling psychology is designed to help the student conduct a research study in an area related to counseling psychology. The seminar has two major overall goals: 1) provide an opportunity for a student to actually conduct a research study, and 2) to help students get more knowledge about counseling psychology. A grade of "P" will be given for successful progress at the end of the first term of enrollment. Students will receive a letter grade after completion of the second semester for all work taken. Prerequisite: Successful completion of doctoral review. LEC

PRE 956 Theory of Marriage and Family Counseling (3). A survey of contemporary systems of marital and family counseling. Consideration of marital and family function/dysfunction, theoretical models of family counseling, models of counseling practice and methods, and research on marital and family counseling. Prerequisite: Graduate student status as an advanced master's student or doctoral student in the counseling psychology program or written permission of instructor. LEC

PRE 960 Assessment of Preschool Development (3). The purpose of this course is to introduce the student to norm-referenced and criterion-referenced procedures in the assessment of various domains of infant and preschool development. Instruments appropriate for the sequential stages of the assessment process will be emphasized including screening, diagnosis, educational planning and evaluation. Each instrument introduced will be evaluated critically. Furthermore, the course will emphasize the linkage between assessment and intervention. It is the intent of the course to provide the student practical experience in administering representative instruments from the various domains. Prerequisite: PRE 702, PRE 725, and permission of instructor. LEC

PRE 961 Models of Consultation (3). This course is designed to examine models of consultation in the field of Counseling Psychology. Major models of consultation in diverse settings will be examined. Prerequisite: Graduate student status in counseling psychology or written permission of instructor. LEC

PRE 965 Foundations of Psychocounseling Consultation (3). This is the first of a two semester sequence of courses on school-based consultation. The course is a combination lecture-laboratory experience that introduces the student to the literature, theory, and techniques of consultation. Prerequisite: Approval of instructor. LEC

PRE 966 Consultation II: Practice (3). This is the second in a series of two consultation courses. The course continues a review of literature and theory and also includes applied consultation experiences for the student. Class time is used to supervise the student's field-based consultation activities. Prerequisite: Approval of instructor. LEC

PRE 970 Counseling with Adults (3). This course will focus on the utilization and integration of adult life span theory and issues with counseling theory and practice. Particular attention is given to the adaptation of counseling practices to the developmental concerns of adult male and female clients. Additional emphasis is given to encouraging research projects related to the adult lifespan and effective counseling practices. Prerequisite: Graduate student status as an advanced master's student or doctoral student in the Program in Counseling Psychology or written permission of instructor. LEC

PRE 975 Therapeutic Intervention: Home and School (3). The course includes a review of literature and theory as well as supervised practice. Therapeutic intervention is broadly conceived, including individual and group counseling, and parent and teacher consultation. The importance of the family-school relationship is stressed. Prerequisite: Permission of instructor and completion of course on counseling. LEC

PRE 980 Advanced Topics: ______ (1-3). A special course of study to meet current need of education professionals—primarily for post-master's level students. LEC

PRE 990 Internship in Counseling Psychology (2). Three consecutive enrollments, covering a minimum of eleven months of experience in an approved counseling psychology field setting. Supervision and directed experiences coordinated by the student's adviser, the program training director, and internship setting supervisors. Required of all counseling psychology doctoral students. Prerequisite: Doctoral degree-seeking status in counseling psychology; completion of Ph.D. comprehensive examinations, and consent of counseling psychology faculty. FLD

PRE 991 Ed.S. Internship (1)-5. This course has two components: 1) a supervised experience as a practicing school psychologist, and 2) a group supervision class emphasizing case presentations and other integrative practice elements. The student functions as a provisionally certified school psychologist. Prerequisite: Completion of Ed.S. degree. FLD

PRE 992 Ph.D. Internship in School Psychology (5). This is a one year, supervised experience in an approved setting. The structure and content of the experience follows guidelines of several professional organizations including The American Psychological Association and the National Association of School Psychologists. Prerequisite: Approval of School Review Committee. FLD

PRE 995 Field Experience in: ______ (1-5). Supervised and directed experiences in selected educational settings. The adviser will schedule regular observations of the field experience and conferences with the student. Written summaries and evaluations of the field experiences will be prepared independently by the student, a representative of the cooperating agency, and the adviser. Open only to advanced students. Field experience credit in any one semester may not exceed five hours, and total credit may not exceed eight hours. FLD

PRE 996 College Teaching Experience in: ______ (2). To meet the college teaching experience requirement for doctoral programs, a student shall engage in a semester long, planned, instructional activity that shall include college classroom teaching under supervision. Planning shall be done with the adviser and/or member of the faculty who will supervise the experience. The activity shall be done under the supervision of a member of the University of Kansas faculty or by an individual or individuals designated by the candidate's committee. FLD

PRE 997 Individual Study (1-4). Prerequisite: Prior graduate course work in the area of study and consent of instructor. Course is graded on a satisfactory/fail basis. RHS

PRE 998 Seminar in: ______ (1-15). THE

PRE 999 Doctoral Dissertation (1-15). THE

Special Education

Chair: Chriss Walther-Thomas, chrisswt@ku.edu
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 521 Lawrence, KS 66045-3101, www.soe.ku.edu/sped

(785) 864-0545

Graduate Adviser: Eva Horn, evahorn@ku.edu
406 Joseph R. Pearson Hall, (785) 588-0615
Admissions Officer: Sherrie Saathoff, saathoff@ku.edu, 521 Joseph R. Pearson Hall, (785) 864-0556

Professors: Chaffin, Clark, Deshler, Greenwood, Horn, Meyen, Peterson, Sailor, Schumaker, Simpson, Skrtic, A. Turnbull, H.R. Turnbull, Walther-Thomas, Wehmeyer

Kleinhammer-Trammill, Morningstar, Palmer, Utley

Professors Emerit: Gallagher, Guess, Moran, Whelan

Associate Professors: Gauth, Knowlton, Lenz, Myles, Roberts, Robinson, Smith, Thompson

The department provides comprehensive graduate programs for students planning professional careers in special education and related fields. Programs prepare graduates for roles as teachers, administrators, consul-
tants, supervisors, researchers, clinicians, teacher educators, family and community services coordinators, and policy-makers at national, state, or local levels. Students seeking Kansas teacher licensure to work as special education teachers can obtain endorsement in one of four areas: adaptive (high-incidence disabilities), functional (low-incidence disabilities), deaf/hard of hearing, and early childhood special education. The adaptive, functional, and deaf/hard of hearing areas require that the candidate have a current Kansas license in regular education. Students seeking master’s degrees may concentrate in adaptive, deaf/hard of hearing, autism, cognitive and multiple disabilities, early childhood special education, and transition services. Doctoral program emphases include learning disabilities, emotional and behavior disorders, autism, deaf/hard of hearing, cognitive and multiple disabilities, early childhood special education, and transition services. Graduate degrees associated with the department’s comprehensive programs are the Master of Science in Education (M.S.Ed.), the Doctor of Education (Ed.D.), and the Doctor of Philosophy (Ph.D.).

Admission, program descriptions, and degree requirements are online at www.soe.ku.edu/sped or may be obtained from the admissions officer, Sherrie Saathoff, ssathoff@ku.edu.

Send original transcripts of all completed college and university course work to The University of Kansas Graduate Application Processing Center 1450 Jayhawk Blvd., Room 313 Lawrence, KS 66045-7535

Send all other required admission materials (see procedural instructions at www.soe.ku.edu/sped) to The University of Kansas Sherrie Saathoff, Admissions Officer Department of Special Education Joseph R. Pearson Hall 1122 West Campus Rd., Room 521 Lawrence, KS 66045-3101

Upon admission, students and faculty advisers develop a plan of study in accordance with professional interests and goals. The department conducts graduate degree programs on the main campus in Lawrence and selected programs on the KU Edwards Campus in Overland Park in suburban Kansas City, about 40 miles from Lawrence. Formal courses, practica, research, and development projects are offered. Students can expect to complete some graduate work on each campus.

M.S. in Education Degree

Most students completing this degree work as general educators, special educators, or consultants. Some are employed in other settings, such as clinics, hospitals, residential treatment centers, community-based service centers, and early childhood programs. Completion of this degree may qualify licensed general educators for endorsement in one or more disability areas. Some M.S.Ed. students work in related fields and do not complete special education teacher licensure. Yet another application for this degree is for general education teachers who wish to expand their knowledge and skills by adding professional competence in teaching children and youth with disabilities in classrooms.

Master’s program options that include licensure range from 34 credit hours (functional curriculum) to 42 credit hours (adaptive curriculum). All students complete a common core of courses (20 to 23 hours) and emphasis-specific courses (11 hours for functional, 19 hours for adaptive). Students pursuing special education licensure can be recommended for provisional endorsement after completing 15 credit hours (characteristics, assessment, instructional methods, behavior management, and practicum). The master’s degree also requires 7 to 10 additional hours including content elective(s), research, and completion of a project, thesis, or written examination.

Doctoral Degrees

The Ph.D. and Ed.D. are similar in many aspects, but each serves a different need for special educators seeking advanced knowledge and skills for leadership positions. Both degrees require intensive and rigorous study in special education foundations, areas of disability, curriculum, teaching, program development, and research skills. Both also require study in departments that support the special education major. The Graduate Record Examination is required for admission.

Doctor of Education. This degree is designed for master special educators who seek leadership positions in public school and other agencies related to program leadership, administration, development, and evaluation. Students complete a sequence of courses emphasizing applied research knowledge and skills. Specific core and research skills for the Ed.D. are described in the department’s Guide to the Doctoral Program, online at www.soe.ku.edu/sped. The research skills requirement may be satisfied by completing a minimum of 12 hours designed to develop skills related to understanding, promoting, and evaluating special education services (e.g., statistics, assessment and evaluation, research methods, and evaluation). In addition to a research skills core, students complete a structured, supervised field internship.

Doctor of Philosophy. This degree emphasizes research skills development. Graduates are prepared for roles as teacher educators, researchers, program managers, policy makers, or clinicians. Specific core and research skills for the Ph.D. are described in the department’s Guide to the Doctoral Program, online at www.soe.ku.edu/sped. Research skills requirements are satisfied by a minimum of 6 hours of statistics and a minimum of 9 hours in one or more of the following areas: quantitative methods, qualitative methods, measurement and assessment, historical and philosophical methods.

Special Education Courses

SPED 500 Introduction to Sign Language (3).
SPED 501 American Sign Language I (ASL I) (3).
SPED 502 American Sign Language II (ASL II) (3).
SPED 503 American Sign Language III (ASL III) (3).
SPED 504 American Sign Language IV (ASL IV) (3).
SPED 598 Special Course: ______ (1-5).
SPED 631 Characteristics of Students Needing an Adaptive Curriculum (3).
SPED 632 Characteristics of Students Needing a Functional Curriculum (3).
SPED 633 Characteristics of Learners with Hearing Loss – Deaf Studies (3).
SPED 635 Characteristics of Children and Youth with Disabilities: (1).

SPED 641 Methods: Academic Instruction for Children and Youth with Disabilities in General Education and Learning Center Settings (3).
SPED 644 Methods for Teaching Learners with Hearing Loss (3).
SPED 660 Education of Children and Youth with Disabilities I: (3).
SPED 672 Field Experiences with Exceptional Children and Youth: (3).

SPED 700 Introduction to Sign Language (3). This is an introductory course in Sign Language and includes ASL and English sign vocabulary, a description of all manual sign systems, medical aspects of hearing loss, communication and language, and Deaf culture and community. LEC
SPED 701 American Sign Language I (ASL I) (3). This course will cover the development of American Sign Language and its application within the Deaf Community. It is based on the functional-notational approach to learning sign language. This approach organizes language around communicative purposes of everyday interaction. Prerequisite: SPED 701. LEC
SPED 703 American Sign Language III (ASL III) (3). This is the third level course in American Sign Language. The primary objective of the American Sign Language III “Signing Naturally” Level 2 curriculum is for students to continue using the two basic language skills: visual listen- ing and signing. Prerequisite: SPED 702. LEC
SPED 704 American Sign Language IV (ASL IV) (3). This is the fourth level course in American Sign Language. The primary objective of the American Sign Language IV “Signing Naturally” Level 3 curriculum is for students to continue using the two basic language skills — visual listening and signing. Prerequisite: SPED 703. LEC
SPED 706 Advanced Practices for Children with Exceptionalities in the General Education Classroom (3). This course is designed to enable novice teachers to master and apply the instructional and communicative skills that will facilitate appropriate and productive inclusions of children and youth with exceptionalities within general education classrooms and other school settings. Prerequisite: Admission to the Teacher Education Program. LEC
SPED 707 Children and Youth with Disabilities in General Education (3). This course is designed to enable students to master and apply the instructional and communicative skills that can assist and facilitate appropriate and productive teaching of children and youth in general education settings. Instructional skills addressed at the mastery and generalization levels include the development and implementation of instructional plans reflective of the individual needs of children and youth with disabilities. Communicative skills include the establishment and maintenance of lines of communication with all individuals concerned with the development of the student. Although there are no formal field experiences, it should be noted that this course is designed to be taken during the fifth year of the student’s program. Prerequisite: HSES 500, MGMT 500, T&L 500, or VAE 500. LEC
SPED 708 Introduction to Hearing Impairments (3). A study of hearing defects and methods of diagnosis. The course also covers remedial work which teachers can use in treating such defects and meeting problems of hearing defective children. Prerequisite: Nine hours of education including educational psychology. LEC
SPED 710 Methods of Teaching Language to the Deaf I (3). The effects of hearing loss on language acquisition and development. Systems for teaching language to individuals with hearing loss are introduced. Prerequisite: Normal language development and nine hours of education including educational psychology. LEC
SPED 715 Understanding Research in Education (3). This course introduces concepts and skills involved in understanding and analyzing research in special education. The course provides an overview of basic, general knowledge of various research methodologies. In addition, this course will teach students to locate, read, comprehend, and critically analyze research articles and reports. Students will become familiar with the principles of educational research to become good “consumers” of this research. LEC
SPED 717 Exceptional Children in Regular Classrooms (3). This course is designed to explore the relationship between regular and special education. Educational service delivery systems for exceptional children are identified and analyzed. Emphasis is placed upon procedures and special services that regular class teachers can use to provide instructional services to exceptional children assigned to regular classrooms. Procedures for enabling normal children to understand and appreciate the interaction with children who exhibit physical and behavioral variance from established norms are conveyed. Especially for regular class teachers and students desiring a career in teaching exceptions, understanding of options for defining by designated area sections or as a general overview of several areas. LEC
SPED 718 Instructional Planning for Children and Youth with Disabilities: (1-3). This course provides knowledge and skills to select, adapt, and sequence instructional methods and materials to facilitate general education curriculum. LEC
SPED 719 Learning and Technology (1). The central framework of “human learning” provides a context for understanding technology-based educational innovations. The lessons in this course explore how various “features of learning” and “features of teaching” are impacted by technology. They discuss realistic options for improving the learning of students, and the learning of teachers, as they use technology in education. (Life-span range of levels.) LEC
SPED 724 Data-driven Instructional Decision Making (1). The lessons in this course present research-based methods for monitoring student behavior and academic progress. They explain how teachers may use this information to plan and develop instructional and behavioral interventions following a decision making model. It is also exploring computer and information management technology tools and support and facilitate the collection, storage, and analysis of observational data. LEC
SPED 725 Introduction to the Psychology and Education of Children and Youth with Disabilities (3). This course provides an overview of instructional practices in the identification, placement, and education of students with disabilities. This course emphasizes patterns of social, cognitive, language, and physical development. Social, political, and economic advocacy issues are also addressed. Prerequisite: One course in Child Development. LEC
SPED 726 Exceptionality and Technology (1). Technology has the potential to dramatically improve the education and quality of life for people with disabilities. This course presents a basic understanding of technology in special education, a functional model for selecting the best technology applications for students with special needs, and strategies for applying your knowledge to practical situations. LEC
SPED 729 Introduction to Computing in Special Education (3). This course is designed to provide an introduction to basic concepts of computer literacy, with particular emphasis on the uses of microcomputers in educational settings for individuals with special needs. Topics include an overview of computer specific to the needs of individuals with special needs including: a) applications and the impact of computers on society; b) an introduction to computer hardware and associated concepts; c) introductory programming concepts; d) a survey of instructional and instructional-support applications of computers including examples of related software; e) software evaluation techniques; and f) an overview of resources in educational computing. Students will acquire hands-on operating experience with microcomputers through scheduled laboratory periods. (Same as T&L 729.) LEC
SPED 731 Characteristics of Students Needing an Adaptive Curriculum (3). This course is designed as an introduction to the definition, characteristics, cause, assessment, and specific services for students needing an adaptive curriculum. The needs for specialized services to meet specific learning and/or behavioral needs will be presented. Students will learn about the history of serving children and youth with high incidence disabilities associated with specific learning, emotional/behavioral, mild mental retardation and a range of physical and health needs. Key individuals in the research of specific disabilities associated with these needs and how they lead to understanding of who these individuals are and how to address specific needs, will also be addressed. Learning characteristics will be addressed in relation to why and how specialized instruction can meet the learning and developmental needs of individuals, specifically in the areas of instructional and assistive technology. LEC
SPED 732 Characteristics of Students Needing a Functional Curriculum (3). This introductory course provides an overview of the characteristics of learners with significant support needs. Students will learn and understand various classification systems and the implications of: low-incidence disabilities, significant cognitive disability, various vision and/or hearing impairments, including deaf-blindness motor disabilities, and health impairments. Course will be introduced to various etiologies: pre-, per-, and post-natal causes, syndromes and chromosomal disorders, and biomedical causes of severe disability. Additional content includes anatomy of sensory organs of children. Will be of particular medical reports, assessment procedures, and in school settings considerations (e.g., orientation and mobility, cochlear implants, medications, tube feeding, physical therapy, occupational therapy). Prerequisite: An introductory course in special education. LEC
SPED 733 Characteristics of Learners with Hearing Loss – Deaf Studies (3). Deaf Studies is the basic characteristics course for both the Master’s
degree in Deaf Education and for Kansas and Missouri endorsement in Deaf/HOH. The course includes medical aspects/etiology of hearing loss, history, persistent laws, Deaf culture, and community issues in association with community and psychology, language and sign systems, multicultural education, multi-ple disabilities and hearing loss, and specific issues in the field. LEC

SPED 735 Characteristics of Children and Youth with Disabilities: (3). Social, cognitive, emotional, and other developmental aspects associated with children or youth identified with learning disabilities, behavior disorders, and mental retardation are covered by this course. Characteristics, specific needs, and service delivery approaches are compared and contrasted. Prerequisite: SPED 425 or SPED 725. LEC

SPED 740 Managing Classroom Behavior of Exceptional Children and Youth (3). Designed to acquaint regular and special education teachers, principals, school psychologists, counselors, and speech pathologists with principles and application of classroom management techniques applicable to exceptional children and youth. Methods of changing inappropriate behaviors and prompting the acquisition of adaptive behaviors through positive management procedures will be stressed. Includes an introduc-
tion to behavior management strategies appropriate for students with disabilities and health issues. LEC

SPED 741 Methods: Academic Instruction for Children and Youth with Disabilities in General Education and Learning Center Settings (3). This course is an initial methods course for individuals seeking li-
censure in Adaptive or Functional Special Education. The course ad-
dresses how to develop and write Individualized Educational Plans. Students learn about instructional planning to differentiate various learner needs, universal design principles, and developing appropriate accommodations for students with disabilities. Particular attention is given to instructional strategies for supporting the development of literacy in reading and math. Prerequisite: SPED 631 or SPED 731, and SPED 632 or SPED 732. LEC

SPED 742 Methods: Life Skills and Community Based Instruction (3). This course will provide an overview assessment and instructional practices contributing to community-referenced planning, community based instruction, and life skills instruction. Students will conduct eco-
 logical inventories and other student-referenced assessments, design community-based instructional programs, ecologically-valid and age-appropriate to facilitate mastery of skills essential for community and social inclusions, explore best practices in community based instruc-
tional programs, including parent and family involvement, transporta-
tion, instructional strategies, personnel training, and administrative and policy supports. Prerequisite: SPED 632 or SPED 732. LEC

SPED 743 Methods: Positive Behavior Support and Classroom Management (3). This course provides a problem-solving approach and the framework for teaching and assessment strategies to develop pro-
social behavior of children with disabilities, and teaching the behaviors of peers in classrooms and whole school contexts. Students assess problem be-
 havior, discover the functions of problem behavior, and learn pro-social alternatives in home, school, and community settings. Prerequisite: SPED 631 or SPED 731, and SPED 632 or SPED 732. LEC

SPED 744 Methods for Teaching Learners with Hearing Loss (3). The purpose of this course is to provide students with appropriate instruc-
tional methodology for teaching students who are deaf or hard of hearing at the early childhood, elementary, and secondary levels. Upon completion, the student will be familiar with legal issues, IEP development, methods of instruction, assessment, curriculum planning, teaming, learning styles, behavior management, and transition issues. LEC

SPED 745 Audiology and Aural Rehabilitation (3). This course will provide a broad overview of the components of an aural rehabilitation service delivery model including audiological diagnostics and assessment, selec-
tion and fitting of a variety of hearing devices, and intervention strategies for auditory ana-and speech perception disorders. Students work directly with professionals such as special education teachers, general education teachers, therapists and other support personnel. Students participate as aides, tutors, and instructors with individual and small groups of children and youth. Ongoing meetings with supervisors are designed to facilitate both reflection and strategic learning. LFD

SPED 746 Education of Secondary and Post-secondary Level Exceptional Students: (1-10). A course based on the problems and needs of secondary and post-secondary level handicapped students with a focus on curriculum alternatives (academic and vocational), in-
structional planning options, instructional methods and materials and educational and employment resources. Prerequisite: SPED 736 or SPED 737. LEC

SPED 747 Practicum with Children and Youth with Disabilities: (3). This is a methods course that covers instructional approaches and procedures that offer developmentally appropriate, effective and inclu-
sive early intervention for preschool and kindergarten age children who experience delays. Students will learn to develop teaching methods, delays defining conditions are at-risk for developmental problems and disabilities. It is directed to-
ward: (a) “how” to teach, or the technical components of developing and delivering effective instruction that provide access to the general early childhood curriculum within recognized approaches to childhood education for young children, and (b) the “what” to teach, or the selection of developmentally and individually appropriate child ob-
jectives as well as specific materials and specialized instructional ap-
proaches. The role of instructional planning relevant to state and fed-
eral mandates will also be considered. The course is primarily in-
tended for persons who are currently working toward certification in the ECSE program area. Prerequisite: SPED 425 or SPED 725, and SPED 755, which can be taken concurrently. LEC

SPED 748 Functional Assessment Methods for Positive Behavioral Support (PBS) (3). This course will provide an introduction to positive behavioral support (PBS). The purpose of this course is to provide individuals with the knowledge and skills to implement functional assessment methods that are used to build effective behavioral support plans. A strong functional assessment is at the heart of Positive Behavioral Sup-
port. After completing this course, you will have a better understanding of how to implement functional assessment methods in your classroom. LEC

SPED 753 Development and Implementation of PBS Plans (1). A positive behavioral support plan (PBS) describes how the environment associated with problem behavior will be modified, what and how skills and strategies will be taught, and how individuals sup-
porting a student will respond to both positive and problematic behav-
ior. This course contains lessons on designing PBS plans, implement-
 ing PBS plans, and modifying and assessing PBS plans. LEC

SPED 754 Intervention Strategies for PBS I (1). The purpose of this course is to introduce interventions that typically be used in positive behavioral support. An effective positive behavioral support plan contains multiple intervention strategies that ad-
dress the function maintaining a student’s problem behavior. This course contains a lesson on social skills education, crisis prevention, and interventions addressing physiological factors that influence a student’s problem behavior. LEC

SPED 755 Intervention Strategies for PBS II (1). The purpose of this course is to introduce interventions that typically be used in positive behavioral support. This course contains lessons addressing setting events, antecedent interven-
tions, replacing problem behavior, and consequence interventions. LEC

SPED 756 Redesigning Environmental Systems (1). The purpose of this course is to describe how positive behavioral support can be used to redesign the environment at a systems level. Considering the larger issues within a system including the broader environment, the values and beliefs held by staff, policies and procedures that promote ongoing learning, and collaborative problem solving processes within a school will improve implementation of long-term positive behavioral support efforts. This course contains lessons on classroom management, staff development, and school-wide discipline. LEC

SPED 757 Creating Positive Learning Environments (1). One of the most important outcomes of a positive behavioral support plan is an in-
crease in the quality of life for both the student and everyone within the student’s social network. The purpose of this course is to introduce topics related to creating positive learning environments through person-centered planning, self-determination, and quality of life. LEC

SPED 758 Application of Assessment Information for Exceptional Children and Youth (3). An analysis of information derived from assessment instruments and procedures appropriate to measuring the social and cognitive development of exceptional children and youth. Provides experiences in determining assessment data required in the develop-
ment of individualized educational programs (IEP). Attention is also given to the design of informal assessment to the needs of exceptional children and youth. Experience is provided in the preparation and presentation of assessment data for use in instructional
planning conferences. Prerequisite: An undergraduate or graduate course in educational measurement, and SPED 425 or SPED 725. LEC

**SPED 793 Psychology of Deafness** (3). Reviews of the literature pertaining to the deaf and hard of hearing. Divergent views of deafness, type and degree of deafness are considered. Prerequisite: SPED 791. LEC

**SPED 798 Special Course:** (1-5). A special course designed to address topical issues. LEC

**SPED 800 Classroom Intervention for Language Disorders of Handicapped Learners** (3). Emphasis is given to milestones in normal language acquisition and variations from norms demonstrated by handicapped learners. Attention is given to theoretical approaches to language training, formal and informal language assessment techniques, and instructional methods. Students design individualized instructional plans for incorporating language into the daily curriculum for handicapped learners. Prerequisite: SPED 625 or SPED 725. LEC

**SPED 801 Practicum in School Psychology** (4). Supervised practice in the application of psychological theory to educational problems. Includes work useful with exceptional children as well as experiences in the application of such areas as mental hygiene and learning theory to problems involving the total school population. (Same as SPED 910.) Prerequisite: Permission of advisor and instructor. LEC

**SPED 802 Advanced Practicum in School Psychology** (4). A continuation of SPED 801 with special emphasis on remedial techniques associated with learning difficulties. (Same as SPED 911.) Prerequisite: SPED 801 and permission of advisor and instructor. LEC

**SPED 804 Designing Online Instruction for E-learning Environments** (3). The role of the instructional designer in the development and postsecondary levels and the process of designing content for e-learning applications. Attention will be given to design features, content structuring, instructional management, evaluation, and collaboration in the use of technology to develop a process for developing online curriculum and instruction. (Same as T&L 804.) Prerequisite: None. A background in education is preferred. LEC

**SPED 805 Practicum in Individual Intelligence Testing** (4). Practicum training, by arrangement, in administeration and interpretation of test results for school situations with particular emphasis on the Stanford-Binet. Prerequisite: Permission of instructor. LEC

**SPED 809 Methods of Teaching Speech to Learners with Hearing Loss** (3-4). This course covers the evaluation and treatment of speech skills of students with hearing loss and the historical review of the emphasis placed on speech development in deaf students is provided, including prominent professionals throughout history. Students learn formal and informal methods of evaluation, the developmental order and classification systems for sounds in the English language, and visual, auditory, and tactile facilitation techniques. Auditory training programs and techniques are also emphasized to train future professionals to improve their students’ listening abilities. LEC

**SPED 810 Methods of Teaching Language to Learners with Hearing Loss** (3-4). The purpose of this course is to better prepare students to provide effective language instruction to children who are Deaf or Hard of Hearing (D/H). The course focuses on the effect of hearing loss on language and reading, communication options, assessment, and instructional strategies. LEC

**SPED 811 Methods of Teaching Elementary School Subjects to the Deaf** (3). This skills in adapting materials and methods of teaching science, math, and social studies, spelling, and writing to hearing impaired students. Emphasis is placed on problems, trends and procedures used in career education specifically for the hearing impaired. Prerequisite: SPED 711. LEC

**SPED 812 Instructional Approaches in Inclusive Elementary Settings** (3). This advanced method approach course provides curriculum design and instructional procedures appropriate for students at the elementary and middle school levels, including functional, academic, social, and home and community life skills. NOTE: This is a 2 credit course to be offered during the first 8 weeks of a semester. It will precede SPED 814 in the same semester. Prerequisite: SPED 614 or SPED 714. LEC

**SPED 814 Instructional Approaches in Inclusive Secondary Settings** (3). This advanced method course provides curriculum design and instructional procedures at the secondary level, including career preparation and transition from school to adult life in the community. Prerequisite: SPED 614 or SPED 714: Learning Styles and Instructional Accommodations. LEC

**SPED 818 Management Principles and Assessment Procedures for the Young or Severely Handicapped** (3). Examines basic learning procedures and techniques that are essential to programming efforts with the severely or young handicapped. Includes assessment scales, writing instructional plans, development of special behavior and evaluating operant behavior. Task and concept analysis related to treatment programs. Prerequisite: Students in the Early Childhood for the Handicapped program must enroll in one hour of practicum, SPED 773. Students in the Severely Handicapped Program must complete SPED 720. LEC

**SPED 840 Program Planning in Special Education – Early Childhood** (3). This course is designed to provide knowledge and skills to implement federal and state development mandates for special education and related services programs for young children from birth to five. It covers procedures for developing, implementing, and evaluating (a) instructional accountability for these children’s participation in the general early childhood curriculum; (b) relationships between general and special education personnel and programs; (c) roles and responsibilities; (d) interdisciplinary team planning including families; (e) coordinating, educating, and supervising paraprofessionals; and (f) general management responsibilities associated with instruction of young children with disabilities. Prerequisite: SPED 760 or SPED 860, which may be taken concurrently. LEC

**SPED 841 Advanced Methods: Learning Strategies and Content Enhancements** (2). This course is based on the theoretical concepts of instruction. Specific learning strategies and content enhancement teaching routines are presented; students will implement these tools in classroom settings. Teaching routines that facilitate strategic learning during content- area instruction that compensate for inefficient learning will be introduced, evaluated, and implemented in classroom settings. The focus is strategy and routine implementation to help students in general education classrooms acquire, store, and express information; demonstrate competence, and interact with others in academic and employment settings. Course content will focus on learning how to select learning strategies that match student needs from published curricula as well as how to create strategies with students. Prerequisites: SPED 613 or SPED 731, and SPED 641 or SPED 741. LEC

**SPED 842 Advanced Methods: Strategies for Students with Significant Sensory, Motor, and Health Needs** (2). In this course, students will study assessment techniques and instructional strategies for teaching learners with sensory and/or motor impairments and complex medical needs. Students will learn use of residual and alternative senses; proper positioning and transfer for students with motor impairments, nutrition, hydration, and medical management. Students will develop appropriate goals and objectives in the sensory and motor areas, incorporating related services into inclusive educational settings, embedded sensory and motor skills training into the general education curriculum, adapt materials and apply assistive technologies. Prerequisite: SPED 632 or SPED 732, and SPED 742. LEC

**SPED 843 Advanced Methods: Strategies for Students with Significant Behavior, Social, and Emotional Needs** (2). This course is designed to introduce educators and related service professionals to prevention and intervention related to a broad range of antisocial, aggressive, and behavioral problems. Approaches focus on understanding and addressing the precipitating factors related to inappropriate behavior, short-term approaches for immediate crises, and problem-solving strategies for longer-term change. Course content will include antisocial, aggressive, and violent behavior; options for classroom interventions; school and system-oriented interventions; and ethical and legal issues involved in various prevention and intervention approaches. Class work will focus on literature, research-based intervention approaches, and case work illustrating specific approaches. Prerequisite: SPED 631 or SPED 731, 741, and 743. LEC

**SPED 844 Advanced Methods: Nonsymbolic and Symbolic Communication Assessment and Augmentation Strategies** (3). This advanced course examines current principles and practices in the development of multi-modal communication programs for students who do not spontaneously use speech for effective communication. It provides a framework upon which communication programming decisions can be based and interventions and strategies be developed. Prerequisites: SPED 632 or SPED 732, and SPED 742. LEC

**SPED 850 Curriculum Planning for Exceptional Children and Youth** (3). Provides experiences in applying information on identifying learning and behavioral characteristics of exceptional children and youth. Practices in adapting curriculum materials to meet the needs of the handicapped. Prerequisite: SPED 725 and SPED 753. LEC

**SPED 851, Law and Special Education** (3). This course focuses on the laws that apply to special education, especially Individual With Disabilities Education Act and “No Child Left Behind Act.” The American legal system, particularly in respect to special education, the constitutional and statutory provisions of federal and state law, and judicial decisions interpreting those laws are reviewed. The course relates equality, procedural due process, and substantive due process doctrines to school practices affecting students with disabilities and examines the six principles of P.L. 94-142 and similar principles in state legislation. LEC

**SPED 852 Citizens with Disabilities, Public Policy, and Policy Analysis** (3). Students to analyze public policy that affects citizens with disabilities, various models of analysis are brought to bear on federal policy (e.g., education, transportation, housing, institutionalization, protection and advocacy, medical assistance, employment, vocational rehabilitation, and others). This course is not for credit required in history and/or philosophy of education. (Same as T&L 857.) Prerequisite: SPED 851 or permission of instructor. LEC

**SPED 853 Professional Ethics, Public Values, and Citizens with Disabilities** (3). This course addresses the issues that professionals (e.g., educators, physicians, allied health providers, attorneys, and other disabilities).
Special Education

Innovative special education training programs are being created to prepare skilled personnel for the changing roles, organizations, and educational processes that will characterize education in the future.

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The University of Kansas current requirements. Processes that organizations, and changing roles, personnel for the being created to programs are innovative special education training programs. It covers procedures for developing, implementing, and evaluating (a) instructional accountability for special education students’ participation in district and state assessments; (b) relationships between general and special education personnel and programs; (c) roles and responsibilities; (d) interdisciplinary team planning including families; (c) coordinating, educating, and supervising paraprofessionals; and (c) general management responsibilities associated with instruction of children and youth with disabilities. Prerequisite: SPED 631 or SPED 734, or SPED 632 or SPED 732, or SPED 735. LEC

SPED 854 Interprofessional Collaboration (3). This course is designed to provide knowledge and skills to implement federal and state development mandates for special education programs. It covers procedures for developing, implementing, and evaluating (a) instructional accountability for special education students’ participation in district and state assessments; (b) relationships between general and special education personnel and programs; (c) roles and responsibilities; (d) interdisciplinary team planning including families; (e) coordinating, educating, and supervising paraprofessionals; and (f) general management responsibilities associated with instruction of children and youth with disabilities. Prerequisite: SPED 850 or SPED 852 or permission of instructor. LEC

SPED 855 Family and Community Systems (3). This course is designed to introduce students to strategies, theories, and applications of successful relationships between families of students with disabilities and the school community. Course topics will include family involvement, historical perspectives of family life and school involvement, effective relationships between home, school, community, communication with families, collaborative leadership in working with families, school-based programs, home-based programs, and multicultural considerations. Prerequisite: SPED 651 or SPED 752 or SPED 652 or permission of instructor. LEC

SPED 856 Transition Education and Services from Childhood through Adulthood (3). The purpose of this course is to provide a background in career development and transition education for persons with disabilities through adulthood. Transition education is based on IDEA requirements for transition services, career development and transition processes, transition services assessment, secondary special education curricular implications, career development and transition service needs, collaborative services in schools and communities to promote quality transition services, and issues and trends in transition education and services. LEC

SPED 857 Vocational Training and Employment (3). This course is designed to provide students in special education and related areas with an overview of employment and vocational models for adolescents and young adults with disabilities. Emphasis is placed upon theory and practice related to career development, supported employment, working with businesses, and school and community vocational training models. Prerequisite: SPED 856 or SPED 858. LEC

SPED 858 Assessment for Transition Planning (3). This course is designed to provide a review of psychometric principles and their utility as a foundation for quality assessment in transition assessment and planning for youth with disabilities. Formal and informal assessments across a range of transition planning areas are reviewed and evaluated. Skills in curriculum-based assessment, rating scales, situational assessment, and functional assessment are emphasized. Prerequisite: SPED 856 or permission of instructor. LEC

SPED 859 Intergeneracy Services for Transition to Adulthood (3). The purpose of this course is to provide an overview of intergeneracy and community services and systems available to adults with disabilities. Emphasis is placed upon theory and practice related to intergeneracy collaboration; systems change efforts in transition services; and state-of-the-art practices regarding supporting individuals with disabilities in community employment, living, socialization, community participation, and other areas of adult life. Prerequisite: SPED 856. LEC

SPED 860 Education of Children and Youth with Disabilities II: Methods for Developing and Implementing Overall Treatment/Educational Programs, Managing and Selecting Curriculum/Service Models for Programs, and Developing Instructional Materials are Emphasized. Procedures for Managing Classroom Staff and Service Resources, Coordinating Educational Programs with Families, Other Service Personnel and Program Support Staff, and Monitoring Overall Program Effectiveness are Addressed. Prerequisite: SPED 850 or permission of instructor. LEC

SPED 874 Planning for Adult Outcomes: (1-3). The problems, trends, issues, and procedures used in planning life skills, occupations, and educational skills, and transition from school to adult living for persons with disabilities will be examined. The course will be organized by topics pertaining to career/vocational development, assessment, and transition programs and services. These will include: (a) transitions from early childhood to adulthood; (b) application of assessment information; and (c) vocational preparation and employment. Prerequisite: SPED 100 (may be taken concurrently). LEC

SPED 875 Practicum with Children and Youth with Disabilities (1-10). This course is designed to provide intensive field work and direct teaching experiences with children and youth with disabilities in residential, and clinical settings. Prerequisite: SPED 775. LEC

SPED 879 Conferencing with Parents of Exceptional Children and Youth: (3). A course to develop knowledge and skills in the techniques of interviewing and conferencing, with special application to the professional, legal and ethical problems related to working with parents of exceptional children. Prerequisite: SPED 452 or SPED 725. LEC

SPED 880 Coordination and Supervision of Services for Exceptional Children (3). An analysis of the role of the special education coordinator and supervisor. Particular attention will be given to: program development; planning, organizing, and delivering in-service training; personnel recruitment, selection, and evaluation; program management; and program evaluation. Students will write the terminal project to their specific area of expertise in special education. Prerequisite: SPED 425 or SPED 725 and six additional semester hours in special education. LEC

SPED 890 Interdisciplinary Programming for Children and Youth with Disabilities (3). This course is designed to provide students a survey of disciplines which contribute to care and treatment of students with disabilities. Emphasis on professional roles, team participation, case management, and supportive follow-up. Disciplines include: medicine, education, audiology, psychology, speech pathology, occupational therapy, physical therapy, music therapy and social work. Prerequisite: SPED 425 or SPED 725. LEC

SPED 898 Independent Study (1-4). Prerequisite: Consent of adviser and instructor. RSH

SPED 899 Master’s Project (1-4). RSH

SPED 899 Master’s Thesis (1-6). THE

SPED 910 Advanced Application of Behavioral Management Techniques to Exceptional Children and Youth (3). Theory and principles of behavioral analysis will be taught. Students will analyze existing and new data and design and implement programs and techniques related to exceptional children and youth using principles and methods of behavioral analysis. Prerequisite: SPED 425 or SPED 725 and SPED 839. LEC

SPED 915 Advanced Curriculum Development for Children and Youth with Disabilities (3). This course is designed to provide principles of development, needs assessment, evaluation and dissemination applied to curriculum products. Analysis of organizational and conceptual features of major curriculum development projects for students with disabilities are addressed; participants design curriculum procedures. Prerequisite: Twelve semester hours in special education and a general curriculum course. LEC

SPED 920 Management of Instructional Resources for Exceptional Children and Youth (3). Designed for individuals with responsibilities for the operation of instruction resource centers and educational programs serving exceptional children and youth. Experiences relate to: selection, acquisition, circulation, and management of special education instructional media/materials and the delivery of in-service training specific to their skills. Prerequisite: Professional preparation and/or experience in the Education of Exceptional Children and Youth and C&I 616. Introduction to Educational Communications. LEC

SPED 925 Medical Aspects of Handicapping Conditions (3). The organization of this course follows the chronology of an individual’s total development from genetic origin through fetal development, perinatal, infancy, childhood and adolescence, and adulthood. Emphasis is placed on the biological and medical implications of handicapping conditions on development. Attention is given to prevention, treatment, and habilitation or rehabilitation of various conditions. Prerequisite: SPED 425. LEC

SPED 949 Specialist Research (1-4). RSH

SPED 950 Civic Professionalism (3). This course is concerned with the relationship between professions and society in a democracy, and specifically, with the ethics and practices associated with the professions of education, special education, and other disability-related fields. Models of professionalism are compared and advantages of civic professionalism for individuals with disabilities and their families, the professions, and society as a whole are explored. Lessons drawn from disagreements over questions such as the nature and social consequences of the professions are used to broaden understanding of what professionalism could and should be in a democracy. Prerequisite: Admission to doctoral program. LEC

SPED 970 Problems of Exceptionality: (3). An extensive analysis of the literature and research pertinent to issues in a given disability. Separate sections are organized for various disabilities. Students may enroll in more than one section as a part of a graduate program. Prerequisite: Three courses in special education or permission of instructor. LEC

SPED 971 Organization and Administration of Services for Children and Youth with Disabilities (3). This course is designed to prepare administrators and prospective administrators for organizing and administering educational programs for children and youth with disabilities. Major topics include a review of current trends in special education, state and federal guidelines and regulations, legal and financing aspects of special education, program planning, and administration of special services. (Same as T&L 599.) Prerequisite: Nine hours of education including educational psychology and SPED 725. LEC

SPED 972 Individualized Planning for the Exceptional Child (3). Provides a wide variety of opportunities to evaluate the learning characteristics of exceptional children. Students will administer individualized...
educationally significant tests to various types of exceptional children and plan development and/or corrective programs on the basis of these evaluations. Prerequisite: SPED 805. LEC

SPED 975 Advanced Practicum with Children and Youth with Disabilities: _____ (1-10). Advanced development of conceptual and practical field-based skills. Prerequisite: SPED 775. LEC

SPED 980 Advanced Topics: _____ (1-3). A special course of study to meet current needs of education professionals — primarily for post-master's level students. LEC

SPED 981 Leadership and Systems Change (3). This course is designed to provide students with an overview of seminal leadership and systems change literature. Students analyze and apply the literature at the teacher, family, school building, district, state, and federal levels. Strategies for developing and mobilizing stakeholders to support the process of change will be covered. Prerequisite: Admission to doctoral program. LEC

SPED 983 Proposal Development (3). This course is designed to teach a broad array of strategies associated with the development of successful proposals that will generate funds to support programmatic work. Among the topics covered in this course are sources of funding, strategies for conceptualizing and writing proposals, collaboration strategies, proposal peer-review process, and integrating proposal development activities into other professional responsibilities. Prerequisite: Admission to doctoral program and PRE 710. LEC

SPED 995 Field Experience in: _____ (1-5). Supervised and directed experiences in selected educational settings. Instructors conduct regular observations and conference with students. Written summaries and evaluations of field experiences are prepared independently by the student, a representative of the cooperating agency, and the instructor. Open only to advanced students and field experience credit in any one semester may not exceed five hours, and total credit may not exceed eight hours. LEC

SPED 996 College Teaching Experience (2). This course is designed to prepare students for college teaching. Enrolled students shall engage in semester-long, planned, instruction that includes college classroom teaching under supervision. Planning shall be done with a member of the faculty who will supervise the experience. LEC

SPED 997 Individual Study (1-4). Prerequisite: Prior graduate course work in the area of study and consent of instructor. RSH

SPED 998 Seminar in: _____ (1-4). LEC

SPED 999 Doctoral Dissertation (1-15). THE

Teaching and Leadership
Chair: John Rury
Joseph R. Pearson Hall, 1122 West Campus Rd., Room 421
Lawrence, KS 66045-3101, www.soe.ku.edu/tl
(785) 864-4435

Professors: Capps, Ginsberg, Hillesheim, Hiner, Imber, Mahllos, McKnight, Rury, Twombly

Professors Emeriti: Bushman, Erb, LaShier, Noyce, Ridgway, Schild, Smith, Sundbye, Swartz

Courtesy Professor: Carlsen


Associate Professors Emeriti: Hughes, Richardson

Assistant Professors: Bradley, Massengill, Ng, Smith, Thomas

Courtesy Assistant Professors: Surbaugh, Walter

The Department of Teaching and Leadership offers a broad range of professional programs in curriculum and instruction and in educational policy and leadership. Students should contact the appropriate program adviser for specific program requirements.

For complete program information, write to the department at the address above.

Note: Degree requirements are subject to change. Prospective and current students should obtain the current degree requirements from the department.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other supporting application materials to

The University of Kansas
Department of Teaching and Leadership
Joseph R. Pearson Hall
1122 West Campus Rd., Room 421
Lawrence, KS 66045-3101

Curriculum and Instruction Programs

Programs in curriculum and instruction prepare teachers at all levels. At the graduate level, this involves course work leading to initial licensure, the Graduate Certification Program, and programs leading to the Master of Arts (M.A.) with a major in education and Master of Science in Education (M.S.Ed.). The Doctor of Education (Ed.D.) and Doctor of Philosophy (Ph.D.) with a major in education are for students who plan to teach at the college level or assume major leadership positions in schools, e.g., assistant superintendent for curriculum and instruction. Academic concentrations are:

1. Foreign language education.
2. Language arts education.
5. Social studies education.
6. Reading.
7. Teaching English as a second language.
8. Educational communications and technology.
10. Gifted and talented education.
11. Economics education.

Admission. In addition to general requirements for admission to graduate study in the School of Education, concentrations in curriculum and instruction require completion of an appropriate undergraduate program and, in most instances, a teaching license.

Materials describing all curriculum and instruction programs may be obtained from the department. All applications and materials for admission to graduate study in curriculum and instruction should be sent to the Graduate School. When admission materials are processed, the student is assigned an adviser according to the student’s interest. Deadlines for applications are generally March 1 for summer session, July 1 for fall semester, and November 1 for spring semester. Please check with the department; some programs have different deadlines. Each student should consult the assigned adviser during each enrollment and plan a program with the adviser at the first enrollment or promptly thereafter. A copy of this program should be filed in the student’s folder in the School of Education Graduate Division Office.

Admission to Master’s Programs. Minimum requirements are a completed graduate application and two official transcripts of all college records. Non-native speakers of English also need a Test of English as a Foreign Language score or a degree from an English-speaking university. Each program has slightly different requirements. Consult the department.
Admission to Doctoral Programs. Minimum requirements are a completed graduate application, two official transcripts of all college records, and:

1. Master’s degree or equivalent with at least a 3.5 grade-point average on a 4.0 scale.
2. Graduate Record Examination general test scores (successful candidates normally have scores of at least 500 on the verbal and 500 on the quantitative sections).
3. Statement of career goals: how this degree will help meet professional aspirations and areas of interest in curriculum and instruction.
4. Letters of reference from three persons including the master’s thesis adviser, if applicable.
5. An article, paper, or other composition written by the applicant.

For non-native speakers of English, a degree from an English-speaking university or a TOEFL score.

Basic and applied research skills, including statistics, research design, and related options appropriate to the degree, are required for the Ph.D. and Ed.D.

Specific descriptions of research options may be obtained from the department.

Educational Policy and Leadership Programs

Graduate programs in educational policy and leadership promote the professional and intellectual development of practitioners, teachers, and scholars in this field at all levels of education. The department offers Master of Science degrees in educational administration (K-12), foundations of education, and higher education, as well as Ed.D. and Ph.D. degrees in educational policy and leadership.

Admission. Applicants for all programs must submit the following materials:

1. Graduate School application form.
2. Two official transcripts from each collegiate institution attended.
3. Original Graduate Record Examination general test scores (Ed.D. and Ph.D. in all concentrations and master’s in educational administration). Applicants for the Ed.D. with a concentration in educational administration and for the master’s degree in educational administration may submit scores on the Miller Analogies Test in lieu of GRE scores.
4. Statement of career goals.
5. Three letters of recommendation evaluating the applicant’s capacity for rigorous graduate study and qualifications for leadership positions in education and related fields.

Individual program concentrations may require additional application materials. Please consult the appropriate program advisor. The following application deadlines apply:

M.S. in educational administration .................. March 1
M.S. in higher education .................. March 1
M.S. in foundations of education .......... November 1, March 1, July 1
Ph.D. and Ed.D. concentrations:

Educational administration ...................... March 1
Higher education .................... March 1
October 15
Foundations of education ............ November 1, March 1, July 1

All students planning to pursue programs leading to licensure as building or district-level school administrators must begin coursework in the summer (March 1 application deadline).

Master’s Degree Programs in Educational Policy and Leadership

The master’s program in educational administration prepares graduates for positions of public school leadership at the building level. The master’s program in higher education prepares graduates for entry-level positions in college and university settings. The master’s program in foundations of education is for school professionals and others who wish to study the history, philosophy, and sociology of education. Please refer to the appropriate program brochure for information about requirements for each master’s degree.

Doctoral Programs in Educational Policy and Leadership

The Ed.D. trains educational practitioners to understand and apply the most advanced knowledge to their work. The Ph.D. prepares scholars to contribute to the field through theoretically grounded, original research.

All doctoral students must complete a program that provides a broad understanding of educational policy and leadership as well as a concentration in educational administration, higher education, foundations of education, or in a combination of two areas.

A general description of each concentration is given here. Request the program brochure for each area for specific information on courses and requirements.

Educational Administration. The educational administration concentration prepares teachers and administrators for leadership roles in school settings. Studies in this concentration stress fundamental fields of knowledge and educational policy development necessary for effective leadership of elementary and secondary teachers and their schools.

Foundations of Education. The foundations of education area promotes educational leadership through the broad examination of educational theory and its practical application on a local, national, and international level. Emphasis is placed on social, philosophical, historical, comparative, and interdisciplinary inquiry into the relationship between human aspirations and the aims and methods of education. Courses of study in this area are flexible and reflect the particular needs and aspirations of each student. The multidisciplinary aspect of the program is reflected in specialized courses and seminar offerings. The foundations area includes exposure to Western and Eastern philosophies of education, educational theory, history of education, and comparative and international education.

Higher Education. The concentration in higher education provides current and prospective college or university staff members and administrators with theoretical and practical knowledge of higher education as a complex human activity. The program in higher education includes studies in the concentration, in statistics and research, in a cognate area (Ph.D.), and in practicum or field research (Ed.D.), as well as in core requirements for the doctorate.

Basic and applied research skills, including statistics, research design, and related options appropriate to the degree, are required for the Ph.D. and Ed.D.

Specific descriptions of research requirements may be obtained from the department.
Teaching & Leadership Courses

T&L 500 Student Teaching in: (1-6).

T&L 503 Teaching Practicum in: (5-16).

T&L 550 Childhood and Youth in America (3).

T&L 598 Special Course: (1-5).

T&L 615 Teaching English as a Second Language/Bilingual Education (3).

T&L 616 Diagnosis and Remediation in Second Language Education (3).

T&L 617 Second Language Acquisition (3).

T&L 644 Understanding the Nature of Talent in Children and Youth (3).

T&L 645 Teaching for Talent Development (3).

T&L 652 Residential Staff Skill Enhancement and Administration (2-3).

T&L 700 Teaching with Community, Contemporary, and Primary Resources is designed for grades 4-12 teachers who wish to utilize community-based, mass media, and/or primary resources. The course focuses on the use of community resources such as local historical societies, museums, and government agencies; on the use of mass media such as newspapers, magazines, organizations’ newsletters, television, and film; and on the use of primary resources such as artifacts, documents, recordings, and oral historians. Participants receive sample resources from each of the three areas along with accompanying activities. LEC

T&L 701 Social Studies in the Elementary School (3). A study of the purpose, content, psychology, and materials and methods for teaching the social sciences in the elementary school. Emphasis on principles and procedures for combining the social studies with other areas of the curriculum in broad unit instruction. Prerequisite: Nine hours of Education including educational psychology LEC

T&L 702 Economic Education (2-3). An examination of the concepts, theories, and materials utilized in teaching economics in the K-12 curriculum. Particular emphasis given to the functional integration of economic concepts into the elementary and secondary social studies curriculum. The use of economic resource material is considered. Participants develop projects for use in their own classrooms. LEC

T&L 703 Curriculum Development in Economic Education (3). Extension and application of economic concepts and theories through integration into the scope and sequence of the school curriculum. The process will include the development and field testing of a project that utilizes appropriate concepts, materials, community resources and techniques for integrating economic into the total curriculum. Prerequisite: T&L 702. LEC

T&L 704 Teaching Economics in: (3). A critical analysis of the relationship between economics and a designated school subject selected from history, geography, or consumer education; a determination of the economic concepts that can be appropriately integrated into the particular discipline; and a comprehensive search of the particular curriculum area to identify the most effective and efficient points at which the economic concepts can be integrated. Prerequisite: T&L 702. LEC

T&L 705 International Issues in the K-12 Curriculum (3). An examination of current international topics and issues from an economic education perspective. Special emphasis given to the functional integration of global topics and issues into the curriculum at both elementary and secondary levels. Students survey and analyze economic education resource materials and develop international lessons for use in their own classrooms. This course is offered during summer term, locally, and as a study abroad option. This course has been offered two times previously as T&L 798—summer 1993 at the Regents Center and in Great Britain. LEC

T&L 706 Social Studies in the Middle School (3). The purpose of this course is to offer preservice and practicing middle grades educators the following: (1) an overview of the historical and philosophical antecedents of social studies education; (2) a brief review of the developmental characteristics of early adolescence; (3) the specifics of a citizenship education program specifically designed for middle grades social studies; and (4) a range of time-tested ideas for challenging young adolescents with academic experiences that address their unique developmental profile and capture their imaginations for active, responsible citizenship. LEC

T&L 707 Social Studies in the Secondary Schools (3). The purpose of the course is to offer preservice and practicing K-12 social studies educators the following: (1) an overview of theoretical bases for social studies education and discipline specific curriculum standards; (2) a review of the major curricular and extracurricular K-12 social studies programs; (3) strategies for the design, implementation, and evaluation of social studies programs; and (4) experience with the design, implementation, and/or evaluation of a social studies program. LEC

T&L 708 Theory and Research in Social Studies Education (3). The purpose of this graduate level course is to stimulate and communicate substantial research and thinking in Social Studies Education. Its purpose is to foster the creation and exchange of ideas and research findings that will expand knowledge about purposes, conditions, and effects of schooling and education about society and social relations. LEC

T&L 709 Teaching and Learning Social Studies: (Geographic Concepts) (3). The course is grounded in geographic content, skills, and perspectives contained in the national standards, and is structured around the five fundamental themes of geography. The focus of this course is to provide teachers with a conceptual basis for learning and teaching geography, as well as enhancing opportunities for disseminating solid geographic content in any grade level. LEC

T&L 710 Social Studies Programs in the K-12 Curriculum (3). The purpose of the course is to offer preservice and practicing K-12 social studies educators the following: (1) an overview of theoretical bases for social studies education and of the social studies and discipline specific curriculum standards; (2) a review of the major curricula and extracurricular K-12 social studies programs; (3) strategies for the design, implementation, and evaluation of social studies programs; and (4) experience with the design, implementation, and/or evaluation of a social studies program. LEC

T&L 711 Teaching Native Americans in: (1-3). Research-based practices for teaching American Indian students in mathematics, science, reading, or another designated subject area, paying particular attention to cultural relevancy and learning needs of this population. May be repeated in a different subject area. Prerequisite: Admission to graduate school in education or permission of instructor. LEC

T&L 712 Teacher as Leader in the Education Community (2). This course is designed to enhance the students’ understanding of and experience from two perspectives: 1) from their teacher education preparation course work; and 2) from their recently completed student teaching experience. Focus of the course will center on the following themes: how to continue to progress in the development of a teacher as leader and becoming adept at planning and articulating curriculum and instruction for the classroom, school, and community. Prerequisite: Successful completion of student teaching. LEC

T&L 715 Understanding Research in Education (2-3). This course introduces students to the foundations of the research process, developmental levels, theory, models, and procedures at the emergent, elementary, and secondary levels. Elements of cultural, linguistic, and ethnic diversity that affect the research process are included. Students work with research related to the reading process, remediation, and assessment. Prerequisite: Admission to graduate standing in the School of Education. LEC

T&L 716 Foundations of Reading: Process, Theory, and Instruction (3). It is the purpose of this course to introduce students to the foundations of the reading process, developmental levels, theory, models, and procedures at the emergent, elementary, and secondary levels. Elements of cultural, linguistic, and ethnic diversity that affect the reading process are included. Students work with research related to the reading process, remediation, and assessment. Prerequisite: Admission to graduate standing in the School of Education. LEC

T&L 718 Teaching Writing and the English Language (3). The study of modern procedures of secondary school instruction in the English language and composition. Emphasis is given to the following areas: the teaching of language topics in the secondary curriculum, e.g., the heritage of English, geographical and social dialects of English, usage in language, the nature of language, making modern English grammar functional in the English classroom; the refinement of gram analyzing to oral and written composition; and general approaches to the teaching of writing in the secondary school. LEC

T&L 719 Teaching Young Adult Literature (Grades 7-12) (3). A study of the characteristics of adolescents with respect to their interest and reading habits; criteria for choosing books for junior and senior high school in-class and out-of-class reading; selection of materials; methods for helping poor readers; literacy discrimination and appreciation; censorship; literacy: techniques for presenting literary selection in class. Wide reading among best of current and classical literature. LEC

T&L 720 Writing and Spelling Development and Instruction (3). A study of the research base on writing, spelling, speaking, and listening for teaching the language arts; an overview of development in writing and spelling, the writing and spelling processes and instruction, and strategies for integrating the language arts. Prerequisite: Admission to a masters program within the School of Education, T&L 716. or permission of instructor. LEC

T&L 721 Comprehension and Study Strategies for Use with Multiple Texts (3). It is the purpose of this course to examine research, theory, and practice in reading comprehension. Emphasis is placed on the application of strategies for various text types (expository, narrative, persuasive, and technical) for teaching reading comprehension and study skills across content areas in the K-12 classrooms. Prerequisite: T&L 716 or permission of the instructor. LEC

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG

Teaching & Leadership 133
The Center for Economic Education increases the economic literacy of pre-service and in-service teachers through teaching and consultation in economic education.

The South Central Regional Technology in Education Consortia is one of six federally funded R*TEC’s with the mission of improving student performance by integrating advanced technologies into educational activities.

T&L 722 Teaching Literature to Children (3). An opportunity to survey the broad range of trade books published for children; criteria for book selection; children’s reading interests and tastes; illustration of children’s books; sources for selecting literature; poetry; the role of children’s literature in today’s elementary curriculum. LEC

T&L 724 Language and Literature in the Reading Program (3). A study of linguistic and literary aspects of reading instruction, focusing on language and cognitive development as they relate to reading. Emphasis will be on approaches for differentiating reading instruction to provide for less proficient to gifted readers, research and issues related to reader response, techniques for assessing children’s reading attitudes and interests, procedures for selecting literature, and strategies for integrating literature into the elementary school reading program. Prerequisite: T&L 716 or permission of instructor. LEC

T&L 725 Emergent Literacy and Beginning Reading (3). A study of emergent literacy through the beginning stages of literacy development. Course content focuses on the history, theory, and research that supports instructional reading practices for children pre-kindergarten through grade two. Prerequisites: T&L 720, T&L 721, T&L 724, or permission of instructor. LEC


T&L 727 Developing Assessment and Instructional Plans for Students with Reading Disabilities (3). A study of the characteristics of students with reading disabilities; the causes of reading difficulties; principles and procedures for diagnosing and remediating reading difficulties; strategies for working with students with learning disabilities. Prerequisite: Admission to a masters program within the School of Education, T&L 716, T&L 720, T&L 721, and T&L 724, or permission of instructor. LEC

T&L 728 Practicum for Students with Reading Disabilities: Pre-adolescent through Adult (3). Case study approach to the treatment of pre-adolescent through adults with reading disabilities. Requires diagnostic testing of the learner, construction of case study reports, and participation in staffing for the purpose of designing remedial reading programs. Students also participate in implementation of remedial programs with pre-adolescent through adults through tutoring in either a clinical setting or a public school setting. Prerequisite: Admission to a masters program within the School of Education, T&L 716, T&L 720, T&L 721, T&L 724, T&L 727, or permission of instructor. LEC

T&L 729 Introduction to Computing in Education (3). This course introduces basic concepts of computer literacy, with particular emphasis on the uses of microcomputers in educational settings. Topics include an overview of computing applications and the impact of computers on society, an introduction to computer hardware and associated concepts, introductory programming concepts, a survey of instructional and instructional support applications of computers including examples of related software, software evaluation techniques, and an overview of resources for educational computing. Students will acquire hands-on operating experience with microcomputers through scheduled laboratory periods. (Same as SPED 729.) LEC

T&L 730 Educational Media Development (3). This course will explore educational media development from various theoretical and functional viewpoints; (2) the role of media (TV, radio, print, etc.) in the development of instruction; (3) new media formats (computer-based multimedia, streaming video, Internet-based media, etc.); and (4) current and future trends in educational technology. Use of technology to create learning environments for students with disabilities. Prerequisite: T&L 708, T&L 716, or T&L 720, or permission of instructor. LEC

T&L 731 Design of Instructional Materials (3). Introduction to the systematic design and production of instructional resources. Emphasizes the theories of instructional design and mediated instruction. Utilizes various learning theories to use computers and video as well as traditional media. Although this course is practically oriented, it includes theoretical readings designed to provide a principled underpinning to instructional design. Prerequisite: T&L 601. LEC

T&L 732 Science in the Elementary School (3). Survey of concepts and processes that provide the foundation for modern elementary science curriculum. Provides a broad background for understanding and teaching an adopted science program or developing a unique program. LEC

T&L 733 Mathematics in the Elementary School (3). A study of recent changes in elementary mathematics instruction and content and their rationale. Specific emphasis is given to changes recommended by the national council for Teachers of Mathematics and other professional organizations. For teachers and principals who desire background for current instructional materials in elementary mathematics. Prerequisite: Teaching experience or permission of instructor. LEC

T&L 734 Integration of Instruction in the Elementary School (2). A study of the rationale for core content instruction, teaching, math, science, and social studies and practical strategies for integrating instruction throughout the elementary school curriculum. LEC

T&L 735 Instructional Strategies in Educational Programs (3). The three phases of instruction include: (1) choice of instructional materials; (2) teacher’s role as curriculum designer; (3) instructional strategies. Prerequisites: T&L 716 and T&L 720 appropriate to the student’s certification level in the content area. LEC

T&L 736 Analysis of Teaching and Learning in: (2). LEC

T&L 737 The Governance and Organization of Schools (2-3). Course provides the prospective teacher with an overview of the following topics: (1) The role of various levels of government in controlling schools, (2) the composition and functioning of school boards, (3) the ways schools are funded, (4) the laws affecting school operations and teachers’ jobs, (5) the ethical responsibilities of teachers, (6) the role of teacher unions and associations, and (7) the terms of teachers’ employment. LEC

T&L 738 Applied Research in the Classroom (2). This course is designed to facilitate the implementation and completion of an action research project during the internship experience. Prerequisite: Successful completion of student teaching. LEC

T&L 739 Internship in Teaching: (1-15). A supervised internship experience leading to initial certification and completion of the total professional role as a teacher in an approved school setting, with level and subject area to be selected according to the teaching field. Prerequisites: T&L 500 and T&L 720 appropriate to the student’s teaching level and area, or equivalent. FLD

T&L 740 Foundations of Curriculum and Instruction (3). Basic concepts and processes of curriculum and instruction, including theories, planning models, resources for decision-making, current trends, research, and proposals for improvement in curriculum and instruction. LEC

T&L 741 Introduction to Middle Level Education (3). Designing educational programs appropriate for early adolescent learners is the focus of this course. Such topics as interdisciplinary team organization, advisory programs, exploration, curricular balance, and the role of the middle grades in a K-12 sequence will be emphasized. LEC

T&L 742 Planning for School Improvement (2-3). This course will emphasize the latest research and practice related to school improvement. Students will function as a member of a school improvement team and synthesize research and practice into the development, revision, and/or assessment of a school improvement plan for a specific school site. Corequisite: Enrollment in the summer institute on school improvement. LEC

T&L 743 Multicultural Education (3). In order to provide the student with an understanding of multicultural education, the course will examine the effects of such issues as ethnicity in America, the melting pot theory, separation, cultural pluralism, legal issues, and bilingual education upon the curriculum and instruction in today’s classrooms. It will include an evaluation of materials for bias and stereotypes. Field experiences are a part of this course. LEC

T&L 744 Understanding the Nature of Talent in Children and Youth (3). This course addresses the social, cultural, and historical developmental aspects of talent as manifested in children and youth. Prerequisite: Admission to a masters program within the School of Education, T&L 716, T&L 720, T&L 721, and T&L 724, or permission of instructor. LEC

T&L 745 Teaching for Talent Development (3). The course introduces key theories and basic principles of curriculum development and introduction for students with high potential and/ or high achievement. Frameworks and models for modifying general education content, cognitive processes, and learning outcomes are applied to enhancing talent development. The course focuses on the foundation aspects of general education and the development of assessment frameworks to measure the total professional role as a teacher in an approved school setting, with level and subject area to be selected according to the teaching field. Prerequisites: T&L 464, T&L 744, or equivalent course. LEC

T&L 746 Teaching for Talent in General Education Settings (3). This course is designed to address the social, cultural, and historical developmental aspects of talent as manifested in children and youth. Prerequisite: Admission to a masters program within the School of Education, T&L 716, T&L 720, T&L 721, and T&L 724, or permission of instructor. LEC

T&L 747 Practicum in Gifted and Talented Education (1-10). A course designed to provide experiences for students to work intensively and to teach identified gifted and high potential students in educational settings. Students will develop competencies necessary in implementing individual and group educational plans through a variety of in-service-
The course focuses on the processes of recruitment, selection, training and teacher rights, equity, and the administration of schools. Pre-requisite: Admission to graduate study. LEC

T&L 753 Introduction to Personnel Administration in Education (3). An overview of the theory and practice of personnel administration. The course focuses on the processes of recruitment, selection, training and development, evaluation, compensation, equal employment opportunity, and labor relations. LEC

T&L 754 Analysis of Administrative Problems (3). An introduction to various methods of problem identification; strategies of information gathering; schemes for the analysis of qualitative and quantitative data; models of problem definition and decision making; and communication methods appropriate for differing audiences. Students will build basic computer, library, decision and communication skills useful in future administrative practice and subsequent course work. LEC

T&L 755 Human Resource Management (3). An overview of the theory and practice of the management, recruitment, selection, compensation, placement, and development of personnel in the school setting. LEC

T&L 756 History of Educational Thought (3). An examination of the major ideas that have shaped practice in the schools. Emphasis is placed on defining the student with the development of a coherent and consistent personal philosophy of education upon which administrative practice can be based. LEC

T&L 757 Education in American Society (3). A study of the roles and goals of education in the United States, the interrelationships among schools and students, teachers, administrators, and parents, and the culture of schools. LEC

T&L 760 Curriculum Issues in Urban Education (2). This course will be guided in a study to comprehend community characteristics, including ethnic and socioeconomic diversity, historical developments and other contextual factors affecting curricular development and school reform. The course will include case studies of existing urban school districts and policy documents and contemporary practical issues. This will be linked to more general principles of curriculum design, and a review of relevant curriculum standards and assessment strategies. LEC

T&L 761 Planning Instruction and Instructional Strategies in Urban Settings (2). This course will prepare students to engage in instructional planning and to utilize pertinent instructional strategies for urban classrooms, with an emphasis on secondary and middle schools. Students will use various strategies and conceptual frames appropriate to the various disciplines to create lessons that will allow them to teach and learn in a controlled setting. Practice teaching will be undertaken in an urban setting, under the supervision of the instructor and other veteran teachers. Following the teaching experience, students will study social and cultural aspects of urban schools and evaluate curricular materials. Students will also critically assess their teaching experiences, and develop plans for continuing improvement. FLD

T&L 762 Teaching Mathematics in the Urban Middle/Secondary School (3). The purpose of this course is to help urban teachers plan, organize, teach, and assess science learning in the middle and secondary grades. The Kansas Teaching Standards (in Professional Education and in Science Teaching) identify the knowledge and abilities addressed. Instructors designed the course to enable participants to make progress toward achieving the Kansas Teaching Standards. It is the participant’s responsibility to acquire the knowledge and abilities addressed and to demonstrate the progress being made toward meeting the Standards. A mathematics teaching portfolio is the tool used to document progress toward achieving the Standards. LEC

T&L 763 Teaching Science in the Urban Middle/Secondary School (3). The purpose of this course is to help urban teachers plan, organize, teach, and assess science learning in the middle and secondary grades. The Kansas Teaching Standards (in Professional Education and in Science Teaching) identify the knowledge and abilities addressed. Instructors designed the course to enable participants to make progress toward achieving the Kansas Teaching Standards. It is the participant’s responsibility to acquire the knowledge and abilities addressed and to demonstrate the progress being made toward meeting the Standards. A science teaching portfolio is the tool used to document progress toward achieving the Standards. LEC

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
At least 8 hours must be completed at KU if it is to be the recommending institution for adding endorsements to the teaching license.
ministrators, cooperating teachers, university supervisors, and student teachers. Designed for both administrative and instructional person- 

T&L 852 School Resource Management (3). An examination of the sources and uses of fiscal resources in education including underlying concepts from economic theory; the impact of values on fiscal policy, state funding formulas, and school budgeting and accounting practices. LEC

T&L 853 Strategic Planning and Development (3). An examination of current trends in personnel evaluation with a focus on clinical supervision and adult development. Students will participate in simulation exercises to de- velop skills in classroom observation, conferencing techniques, evaluation of teaching behaviors, and construction of evaluation instrument. LEC

T&L 854 The Student in Society (3). A study of children and youth with particular emphasis on demographic characteristics of the popula- tion served by schools and implications of those characteristics for schools and schooling. LEC

T&L 855 Teacher Evaluation (3). Teacher Evaluation is based on clinical, empirical and theoretical information related to effective teacher evaluation behavior from the administrative perspective. It is intended to pro- vide exposure to competencies essential to effective evaluation of teach- ing performance. Evaluation knowledge, skill and performance are ac- quired and developed through reading, discussion, active teaching of content related to teacher evaluation and practicing observation, record- ing and conferencing skills. A variety of approaches is considered, but behav- iorally-anchored measurement of teaching behavior is emphasized. Opportunities and needs for improvement are identified with the assis- tance of video-taped diagnosis of conferencing behavior. Evaluation of teaching behaviors is performed with the assistance of video-taped diagnosis of conferencing behavior. Prerequisite: T&L 752 or T&L 750 or LEC

T&L 856 Law and Special Education (3). This course focuses on laws that apply to special education. The American legal system, parti- cularly in regard to special education, the educational rights and responsibilities of federal and state law and the judicial decisions interpret- ing those laws are reviewed. The course relates equal protection, pro- ceedural due process, and substantive due process doctrines to school practices affecting disabled children and examines the sex principles of P.L. 94-142 and similar principles in state legislation. This course is not the equivalent of or a substitute for T&L 752. (Same as SPED 851.) Prerequisite: SPED 750 or permission of instructor. LEC

T&L 857 Disabled Citizens, Public Policy and Policy Analysis (3). To train students to analyze public policy which affects disabled citizens, various models of analysis are brought to bear on federal policy (education, transpor- tation, housing, institutionalization, protection and advocacy, medical assist- ance, employment, vocational rehabilitation and others). Not valid for core requirement in history and/or philosophy of education. (Same as SPED 852.) Prerequisite: SPED 851 or SPED 750 or permission of instructor. LEC

T&L 858 Professional Ethics, Public Values and Disabled Citizens (3). This course addresses the issues that professionals (educators, physicians, allied health providers, attorneys and others) and families of disabled people face in the context of public values and attitudes and rules of right and wrong, without discrimination, segregation, and non-treatment. Not valid for core requirement in history and/or philosophy of education. (Same as SPED 853.) Prerequisite: T&L 750, SPED 851, or permission of instructor. LEC

T&L 870 Advanced Research II (3). Selection of self-defined areas in philosophy, such as emphasis on value-theory or epistemology or metaphysics, and their implications for educational theory. Normally a limited number of authors will also be selected for monographic treat- ment. Prerequisite: T&L 771 or T&L 851. LEC

T&L 871 Introduction to Qualitative Research (3). An introduction to the foundations of and techniques associated with qualitative research methods. Students will practice interview and participant observation skills and will analyze and interpret data. Additional topics include craft- ing qualitative research questions, ethics of fieldwork, and establishing trustworthiness of data. Common traditions of qualitative methods em- ployed in education and other related fields will be introduced. LEC

T&L 880 The Community/Junior College (3). A survey of the history and development of the community/junior college. Emphasis will be given to the student, the faculty, the curricula, administration, and finance. The course is intended to provide a general understanding of the operation and concerns of today’s community/junior college for the current or potential community/junior college student and staff. LEC

T&L 881 Seminar in Leadership (3). The purpose of this seminar is to explore leadership in education, particularly higher education, from a variety of perspectives. Readings come from a variety of disciplinary perspectives, such as sociology, organizational behavior, and psychol- ogy. We consider various aspects of leadership and analyze the leader from a symbolic perspective, as a manager of meaning and critical change. The course emphasizes the management of institutional perspectives with the help of several critical perspectives as we pre- pare to examine who the leaders are as well as who they will, and need to, be in the years of tomorrow. LEC

T&L 882 Higher Education in the United States (3). The purpose of the course is to acquaint students in higher education, and students from other areas who intend to work in the post-secondary setting, with the history, philosophy and development of higher education in the United States. The course focuses on three periods: 1) the founding of Harvard in 1636; 2) dissent, disruption, and change, 1960-1979; and 3) the issues and crises, the 1980’s. European higher education and its early in- fluence on higher education in the United States is also examined. LEC

T&L 883 The College Student (3). The characteristics of college stu- dents; impact of college on student behavior, changing attitudes, values, beliefs, and the implications of recent research on traditions and new students for instructional and administrative practices. LEC

T&L 884 Research on College Students (3). Examination of the American college student from societal, development, research, and in- stitutional perspectives and to review the policy implications of these findings for college and university administrators and faculty. Topics include research and theory concerning the college student experi- ence, the diverse nature of the student body and its implications for in- stitutional policy and practice, and formulation of individual philoso-phies and priorities applicable to working with college students. LEC

T&L 885 Assessment and Program Evaluation in Higher Education (3). Nature, objectives, and basic procedures of assessment and pro- gram evaluation as applied to the various aspects of higher education settings. In addition to basic procedures for evaluating programs, top- ics covered include accreditation, program review, benchmarking, stu- dent outcomes assessment, and evaluation of teaching in colleges and universities. Prerequisite: PRE 715 or equivalent. LEC

T&L 893 Advanced Building Leadership Internship (2). Supervised and directed experiences to enhance the necessary leadership skills of a build- ing/district leader. Activities will include the construction of an evaluation instrument, the construction of a model program, and the development of the community/junior college. Particular emphasis will be given to the student, the faculty, the curricula, administration, and development of the community/junior college. Two of the following: T&L 750, T&L 752, T&L 753, or T&L 840. LEC

T&L 896 Seminar in: (1-4). LEC

T&L 897 Independent Study (1-4). Prerequisite: Consent of adviser and instructor. RSH

T&L 898 Master’s Project (1-4). RSH

T&L 899 Master’s Thesis (1-6). THE

T&L 915 Evaluation of Research in Reading (3). An intensive investi- gation of research evaluation in reading and its relationship to the reading process. Discussion of the current trend of contemporary theory and practice. Prerequisite: T&L 716 or equiva- lent and PRE 710 and PRE 811. LEC

T&L 940 Change Processes and Staff Development (3). An intensive study of the theoretical and practical aspects of professional develop- ment and the elements involved in the change process of leadership. Emphasis will be on understanding the relationships among educators, the change process, and the improvement of educational programs. Prerequisite: Six hours of T&L course work and permission of instructor. LEC

T&L 941 Contemporary Research of Teaching Effectiveness (3). A review of recent research on the conceptualization, measurement, and improvement of teaching effectiveness. Particular attention is given to the history of efforts to improve teaching, to the reasons why such ef- forts have often been unsuccessful, and to the recent contributions of the “micro-criteria” approach to the problem. LEC

T&L 943 Curriculum Supervision (3). An intensive study of the theoretical and research bases for curriculum supervision and improvement. Topics in- clude models and practices in supervision and staff development, skills and instruments used in curriculum assessment, coordination of both human and material resources, and the dynamics of change strategies. LEC

T&L 944 Diagnosis and Evaluation of Instruction in Higher Education (3). The course will focus on (1) a review of the practical and theoretical problems of developing, in institutions of higher education, programs for the diagnosis and/or evaluation of classroom instruction, including use of videotape feedback for diagnosis, and the development of surveys for evaluation for diagnosis of teaching, and (2) the importance of care- ful administrative and review procedures as the evaluation of teaching becomes more formal and consequential. Three hours of credit will be awarded to those enrolled in the laboratory section of the course. LEC

T&L 950 Educational Policy Making and Reform (3). An analysis of patterns of influence, organizations, and governmental agencies which impact education at the community, state and national levels. Particular emphasis is placed on analysis of policy making, the relationship of policy to administration. Recommended to students in educational administration and higher education. LEC

T&L 951 Supervision of Instruction (3). A study of the principles and techniques necessary for coordinating, monitoring, and improving the educational programs of elementary and secondary schools. LEC
See the School of Fine Arts chapter of this catalog for programs in visual art education, music education, and music therapy.

In 1909, the education program at KU was reorganized as the School of Education.
School of Engineering

Stuart Bell, Dean
Eaton Hall, 1520 West 15th St., Room 1
Lawrence, KS 66045-7621, www.engr.ku.edu

Admission ............................................... 141
Procedure .................................................. 141
Baccalaureate Preparation ......................... 141
Facilities .................................................... 141
English Proficiency Requirement ............... 141
Graduate Grade-point Average Requirement .... 141
Degree Programs ......................................... 141
Aerospace Engineering ............................... 142
M.S. Degree Requirements .......................... 142
M.E. Degree Requirements ......................... 142
Ph.D. Degree Requirements ....................... 142
D.E. Degree Requirements ......................... 143
Aerospace Engineering Courses ................... 143
Chemical & Petroleum Engineering .............. 145
M.S. Degree Requirements .......................... 145
M.S. in Chemical Engineering: Option A ....... 146
M.S. in Chemical Engineering: Option B ....... 146
M.S. in Petroleum Engineering .................... 146
Ph.D. Degree Requirements ....................... 146
Admission .................................................. 146
Qualification as a Ph.D. Aspirant ............... 146
Ph.D. Advisory Committee ......................... 146
Plan of Study & Foreign Language or Other Research Skills Requirement .......... 146
Comprehensive Examination ..................... 147
Ph.D. Dissertation & Final Oral Examination ... 147
Chemical & Petroleum Engineering Undergraduate Courses ......................... 147
Mechanical Engineering ............................. 161
M.S. Degree Requirements .......................... 161
Ph.D. Degree Requirements ....................... 161
D.E. Degree Requirements ......................... 162
Financial Aid ............................................. 162
Mechanical Engineering Courses ................ 162

Civil, Environmental, & Architectural Engineering .............................................. 149
Degree Programs & Admission .................... 149
Master's Degree Requirements ................... 149
Doctoral Degree Requirements .................... 150
Architectural Engineering Courses ............... 150
Civil Engineering Courses ......................... 151
Construction Management Courses ............... 153

Electrical Engineering & Computer Science .................................................... 154
Admission .................................................. 154
M.S. Degree Requirements ......................... 154
Doctoral Degree Requirements .................... 155
Electrical Engineering & Computer Science Courses ........................................ 156

Engineering Management ....................................... 158
Admission .................................................. 158
M.S. Degree Requirements ......................... 159
Engineering Management Courses ............... 159
Engineering Courses ................................. 160

Engineering Physics ..................................... 161
Engineering Physics Courses ....................... 161

Financial Aid ............................................. 162
School of Engineering

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Admission

Procedure
Admission requirements are the same as those of the Graduate School, with the following additions: two official copies of the undergraduate transcript, transcripts of any graduate work, and three letters of recommendation from references. Some engineering departments require the Graduate Record Examination. Applications must be accompanied by a nonrefundable fee. See Admission in the General Information chapter of this catalog.

Baccalaureate Preparation
To qualify for graduate work in any field of engineering, a student generally must hold an accredited baccalaureate degree in that field and have a 3.0 grade-point average. A student with good preparation in such fields as mathematics, chemistry, or physics, or in a related engineering field, may qualify by taking appropriate undergraduate courses determined by the department. Undergraduate hours do not count as part of a student’s Plan of Study.

Exceptionally qualified undergraduates may be admitted directly to a Fast-track Ph.D. program, which does not require the master’s as an intermediate degree. Students who wish to earn a Ph.D. and believe that they meet this criterion are encouraged to contact the graduate adviser in their field of interest.

Degree Programs
The Master of Science degree is offered in aerospace engineering, architectural engineering, chemical engineering, civil engineering, computer science, electrical and computer engineering, engineering management, environmental engineering or science, mechanical engineering, petroleum engineering, and water resources science. The Master of Engineering is offered only in aerospace engineering.

The Department of Civil, Environmental, and Architectural Engineering offers the Master of Civil Engineering and the Master of Construction Management. The school offers a Ph.D. degree in aerospace engineering, chemical and petroleum engineering, civil engineering, computer science, electrical engineering, environmental engineering or science, and mechanical engineering. Doctoral students interested in careers in research or teaching or both should consider the Ph.D. degree. Exceptionally qualified undergraduates may be

Facilities
Engineering faculty members and graduate students are major users of the facilities and services of many research laboratories and centers across campus and among our research partners at other universities. The largest facilities are the university’s Designated Centers:

- Energy Research Center
- Infrastructure Research Institute
- Higuchi Biosciences Centers
- Intelligent Systems Laboratory
- Center for Advanced Scientific Computing
- Center for Science Education
- Kansas Biological and Geological Surveys
- Policy Research Institute

The University of Kansas set a record of $274 million for total research expenditures in fiscal year 2004. Science and engineering expenditures increased by 9.7 percent to $102 million. See the Research and Academic Support chapter of this catalog.

English Proficiency Requirement
All graduate students in the School of Engineering who are required to take courses at the Applied English Center must pass the AEC’s English Proficiency Examination within three semesters of their initial enrollment. Failure to complete the English proficiency requirement within this time limit will result in dismissal from the graduate engineering program.

Graduate Grade-point Average Requirement
In addition to completing a Plan of Study that is formally approved by his or her committee and other requirements appropriate to the graduate degree, a student must (1) attain at least a 3.0 grade-point average in all graduate courses and (2) attain at least a 3.0 grade-point average in all course work, including undergraduate courses taken to make up background deficiencies (excluding Applied English Center courses).

The school offers a Ph.D. degree in aerospace engineering, chemical and petroleum engineering, civil engineering, computer science, electrical engineering, environmental engineering or science, and mechanical engineering. Doctoral students interested in careers in research or teaching or both should consider the Ph.D. degree. Exceptionally qualified undergraduates may be
admitted directly to a Fast-track Ph.D. program, which does not require the master’s as an intermediate degree.

For students interested in careers in engineering design or engineering project management, the school offers programs leading to the Doctor of Engineering (D.E.) degree in aerospace engineering, civil engineering, electrical engineering, and mechanical engineering. For information on graduate studies in petroleum management, contact the Department of Chemical and Petroleum Engineering or the School of Business.

Aerospace Engineering

Chair: Mark S. Ewing
Graduate Adviser: Saeed Farokhi
Learned Hall, 1530 West 15th St., Room 2004
Lawrence, KS 66045-7609, www.engr.ku.edu/ae
(785) 864-4267

Professors: Downing, Farokhi, Lan, Taghavi

Professors Emeriti: Muirhead, Roskam

Associate Professors: Barrett-Gonzalez, Colgren, Ewing, Hale, Sorensen

The department offers the Master of Science and Master of Engineering with a major in aerospace engineering and the Doctor of Philosophy and Doctor of Engineering in aerospace engineering.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Aerospace Engineering
Learned Hall, 1530 West 15th St., Room 2004
Lawrence, KS 66045-7609

M.S. Degree Requirements

The M.S program has two options. Option A requires a minimum of 30 credit hours of graduate work including 6 hours earned in the satisfactory completion of a thesis. Option B requires a minimum of 33 hours of graduate work with an emphasis on an independent investigation that must include 3 hours of Special Problems, but a thesis is not required. The candidate must pass a final oral examination in which the thesis (or results of the independent investigation) is defended and the candidate demonstrates a working knowledge in aerospace engineering.

M.E. Degree Requirements

The M.E program emphasizes systems design and management skills rather than the more analytic equivalents of the M.S. program. The entrance requirements are the same as those for the M.S. program. A total of 36 semester credit hours is required, including 6 hours for a design project and 6 hours for an industrial internship. The candidate must pass an oral review of the design project.

Ph.D. Degree Requirements

The program normally includes 60 credit hours of course work beyond the B.S. and the equivalent of 15 hours on a dissertation. A minimum of 15 hours must be distributed in aerodynamics, structures and materials, dynamics and controls, design, and propulsion, with a minimum of one course in each area. An additional minimum of 15 hours of specialization is required in one area. At least 15 hours of graduate-level mathematics beyond the B.S. are required. Credit hours earned in completing a master's degree can be used to satisfy a portion of these when appropriate. Unique situations can be accommodated with the approval of the graduate adviser and the candidate's major professor.

In addition to the general rules and regulations of the Graduate School, a student must meet departmental requirements for the Ph.D. degree. After two semesters following the completion of M.S. requirements (or at a comparable level for non-M.S. students), the student is evaluated. To be allowed to continue for the Ph.D., the student must (1) have a minimum grade-point average of 3.5 in M.S. course work, (2) pass a qualifying examination, and (3) submit a Plan of Study.

The qualifying examination tests the student's breadth of knowledge and determines his or her ability to formulate mathematical representations of real physical situations. The examination covers mathematics and three of the following five areas: aerodynamics, structures and materials, dynamics and controls, design, and propulsion. A student is allowed only two attempts to pass this examination.

After passing the qualifying examination, the aspirant forms an advisory/dissertation committee. This committee must have five members, including at least one from a department other than aerospace engineering. The committee approves the aspirant's program and administers the comprehensive examination and the formal oral defense of the dissertation.

Transfer students admitted with M.S. degrees must take the qualifying examination and prepare a Plan of Study after the first semester but before the end of the second semester.

When the aspirant has completed most of the course work and satisfied the Foreign Language or Other Research Skills (FLORS) requirement, he or she must take the comprehensive examination. The first part must consist of a written research proposal outlining in some detail the work to be done for the dissertation. The second part is an oral examination in which she or he must defend the research plans and demonstrate competence in her or his particular and related areas. Upon passing the comprehensive examination, the aspirant becomes a candidate for the Ph.D. The dissertation committee directs preparation of the dissertation and approves it. A formal oral and public defense of the dissertation is required before the candidate's committee, any other interested members of the graduate faculty, and the general public.

Students can satisfy the FLORS requirement by selecting and having approved by the committee chair one of these options:

Option 1. Aspirants whose dissertations are primarily theoretical must demonstrate proficiency in computer science and complete 3 hours of graduate courses in instrumentation or experimentation.

Option 2. Aspirants whose dissertations are primarily experimental must demonstrate proficiency in computer science and complete 3 hours of graduate courses in computational methodology.

Option 3. All aspirants can substitute a demonstration of reading proficiency in a non-native foreign language for the proficiency in computer science. This language must be one with a significant body of literature in the aspirant's dissertation area.

Some examples of experimental and computational courses are

Experimental Courses
AE 705 Structural Vibrations and Modal Testing
AE 730 Advanced Experimental Fluid Dynamics
The Doctor of Engineering emphasizes systems design and management skills. Entrance requirements are the same as those for the Ph.D. program. Sixty hours of technical and management courses beyond the B.S. are required. These 60 hours must be distributed as follows:

1. At least 15 semester credit hours of graduate mathematics beyond the B.S.A.E. degree.
2. At least 15 semester credit hours must be taken in engineering management courses.
3. At least 15 semester credit hours of technical courses must be distributed in the areas of:
   - aerodynamics
   - structures and materials
   - dynamics and controls
   - design
   - propulsion
4. At least 15 semester credit hours of D.E. project.

In addition, 12 hours of industrial internship must be completed.

Credit hours earned completing a master’s degree can satisfy a portion of these requirements when appropriate. Unique situations can be accommodated with the approval of the graduate adviser and the major professor.

In addition to the general rules and regulations of the Graduate School, a student must meet the following departmental requirements. After two semesters following completion of M.S. or M.E. requirements (or at a comparable level for non-M.S. or non-M.E. students), the student is evaluated. To be allowed to continue, the student must (1) have a minimum grade-point average of 3.5 on M.S. or M.E. course work, (2) pass a qualifying examination, and (3) submit a Plan of Study. The qualifying examination tests the student’s breadth of knowledge and determines his or her ability to apply this knowledge to engineering design and management problems. The examination consists of four parts, covering design and management, mathematics, and two of the following five areas: aerodynamics, structures and materials, dynamics and controls, design, and propulsion. A student is allowed only two attempts to pass this examination.

After passing the qualifying examination, the aspirant forms a project committee of at least five faculty members including at least one from engineering management. Where possible, an appropriate industrial adjunct professor will be a member. One member acts as the principal investigator and/or major professor. The committee approves the Plan of Study and administers the comprehensive examination and the oral defense of the project.

When the aspirant has completed most of the course work and satisfied the computer skill requirement, he or she must take the comprehensive examination. The first part must consist of a written project proposal outlining in some detail the work to be done for the project. The second part is an oral examination in which he or she must defend the project plans and demonstrate competence in his or her particular and related areas. Upon passing the comprehensive examination, the aspirant becomes a candidate for the D.E. The project is prepared under the direction of this committee and must be approved by them. A formal oral and public defense of the project is required before the committee, any other interested members of the graduate faculty, and the general public.

For the D.E. program, the research skills requirement is satisfied when the aspirant demonstrates competence in computer programming, as certified by the Department of Electrical Engineering and Computer Science.

Note: A course taken to satisfy the FLORS requirement cannot also be used to satisfy the doctoral degree course requirements.

A 12-month continuous internship must be served in an industrial or governmental organization before assumption of the project responsibility. This internship must be under joint guidance of a preceptor, who will be appointed to the adjunct faculty, and a regular faculty member. The internship requirement cannot be satisfied by working in any KU facility.

Because the internship is a degree requirement and because KU cannot guarantee internship employment, the student must indicate in writing, before completing the first semester as an aspirant for the degree and after passing the qualifying examination, how the internship requirement is to be satisfied. This can be a letter from the faculty adviser indicating a grant availability, notice of a project appointment or assignment, or a letter from a company or agency (U.S. or abroad) expressing willingness to sponsor the student in an internship.

**Aerospace Engineering Courses**

- AE 507 Aerospace Structures I (3).
- AE 508 Aerospace Structures II (3).
- AE 509 Honors Aerospace Structures (3).
- AE 510 Aerospace Materials and Processes (4).
- AE 522 Aerospace Systems Design II (4).
- AE 523 Space Systems Design (4).
- AE 524 Propulsion System Design I (4).
- AE 545 Fundamentals of Aerodynamics (5).
- AE 546 Honors Aerodynamics (5).
- AE 550 Dynamics of Flight I (3).
- AE 551 Dynamics of Flight II (4).
- AE 552 Honors Flight Dynamics and Control (4).
- AE 560 Spacecraft Systems (3).
- AE 572 Fundamentals of Jet Propulsion (3).
- AE 573 Honors Propulsion (3).
- AE 590 Aerospace Seminar (1).
- AE 592 Special Projects in Aerospace Engineering (1-5).
- AE 593 Honors Research (1-5).
- AE 670 Aerospace Propulsion III (3).
- AE 701 Structural Design (3). Design and internal construction of major structural components: wing, fuselage, empennage, landing gear, engine pylons. Layout of major structures and system interfaces, internal geometry, material alternates, manufacturing alternates and design constraints. Certification and proof of design requirements. Prerequisite: AE 421, AE 506, and AE 510. LEC
- AE 704 Dynamics and Vibrations (3). Problems in engineering dynamics and vibrations. Topics include applications of generalized forces and coordinates, Lagrange equations, and a study of the performance of single and multiple degrees of freedom in vibrational systems. (Same as CE 704.) Prerequisite: AE 508. LEC

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
The Kurata Thermodynamics Laboratory is a research facility in the Department of Chemical and Petroleum Engineering.


AE 707 Aerospace Structural Loads (3). Steady state spanwise and chordwise airloads, windsheds, gusts, landing gear loads, bird strike, traumatic loads, special component and military load requirements. Prerequisite: AE 507 and AE 545. LEC

AE 708 Aerospace Structures III (3). Modern methods in aircraft structural analysis. Computer solutions of linear problems of elastic structures. Orthotropic plate elements. Approximation and error estimation. Introduction to design with composites, preliminary design, optimization, processing variables, product design. Prerequisite: C&E 121, AE 508 or CE 761, and AE 521. MEE 600 or CE 710. LEC

AE 710 Advanced Structural Composites (3). The course objectives are to provide each student with a more in-depth understanding of and practical hands-on experiences with available fiber and matrix materials, manufacturing methods, and the mechanical behavior of composite materials and structures. Modern software tools and manufacturing methods are addressed, to include optimization techniques and design for manufacturability. Classical plate theory, bending, buckling, and vibration of anisotropic plates are addressed. Damage tolerance and fatigue, as well as nondestructive evaluation techniques are also covered. Skills learned in previous composite courses will be utilized to design, analyze, and fabricate structures of current industrial relevance. Prerequisite: AE 508 or AE 509 or similar, or consent of instructor. LEC

AE 712 Techniques of Engineering Evaluation (3). The formulation of problems arising in aerodynamics, heat transfer, stress analysis, thermodynamics, and vibrations. The expression of these problems in a form amenable to quantitative evaluation by dimensional reasoning, analog techniques, relaxation methods, and classical analysis. LEC

AE 721 Aircraft Design Laboratory I (4). The purpose of this course is to provide aerospace engineering students with an opportunity to gain more in-depth airplane design education through team design work. This team design work will involve detailed design efforts in such areas as: landing gear design, systems design, propulsion system integration, structures design, and aerodynamic design. Prerequisite: AE 507, AE 521, AE 545, AE 551, and AE 571. AE 521 may be taken concurrently. LAB

AE 722 Aircraft Design Laboratory II (4). The purpose of this course is to provide aerospace engineering students with an opportunity to gain more in-depth airplane design education through team design work. This team design work will involve detailed design efforts in such areas as: landing gear design, systems design, propulsion system integration, structures design, and aerodynamic design. Prerequisite: AE 507, AE 521, AE 545, AE 551, and AE 571. Aircraft Lab

AE 724 Propulsion System Design and Integration (3). Theory and design of propulsion systems for both low and high speed aircraft and their integration into the overall configuration. Internal and external dynamics and aerodynamics including the effect of the external aerodynamics of the aircraft. Engine/airframe compatibility and the problems of matching both steady state and dynamic characteristics to obtain peak performance. Prerequisite: AE 521 and AE 572. LEC

AE 725 Numerical Optimization and Structural Design (3). Classical theories of unconstrained and constrained optimization. Numerical techniques for constrained optimization, including sequential approximate problem techniques as well as the method of feasible directions. Computer aided solutions to practical design problems in aerospace engineering. Final design project. Prerequisite: MATH 220 and MATH 290 or junior status. LEC

AE 730 Advanced Experimental Fluid Dynamics (3). Theory, operation, and hands-on laboratory experiments on various flow measuring techniques including: multi-hole directional pitot probes, hot-wire anemometry, laser-Doppler velocimetry and particle image velocimetry. Flow visualization techniques including smoke injection, schlieren photography, and schlieren bubbles, etc. Prerequisite: AE 430, AE 545, or consent of instructor. LEC

AE 731 Supersonic Aerodynamics Laboratory (1). Supersonic wind tunnel and shock tube operations, techniques, and instrumentation. Flow study and model testing. Prerequisite: AE 455. LAB

AE 732 Introduction to Flight Test Engineering (2). Course presents flight test principles, instrumentation, planning, and operation of aerospace vehicle flight testing. Course is structured with lectures, laboratories, and flight experiments. Student teams plan and execute a series of flight test experiments including: familiarization with flight test measurements, static system calibration, rate-of-climb performance, and determination of vehicle flight dynamics. Prerequisite: AE 445 and AE 550 or consent of instructor. LEC

AE 743 Compressible Aerodynamics (3). Compressible flow with heat and friction; shock waves, 1D unsteady gas dynamics, shock tube, cone flows, methods of characteristics, hypersonic flow theory. Prerequisite: AE 545. LEC

AE 745 Applied Wing and Airfoil Theory (3). Applications of potential flow theory to aerodynamics of airfoil sections; wings and wing-body combinations. Inviscid flows, high-angle-of-attack and transonic aerodynamics. Prerequisite: AE 545. LEC

AE 746 Computational Fluid Dynamics (3). Applications of numerical techniques and digital computers to solving fluid flow problems. Solutions involving incompressible and compressible flows, inviscid and viscous flows. Finite difference and other partial differential equations governing the fluid flow. Prerequisite: AE 545. LEC

AE 748 Helicopter Aerodynamics (3). Helicopter components and their functioning; rotor aerodynamics, performance, stability and control, aeroelastic effects and vibrations. Prerequisite: AE 551. LEC

AE 750 Applied Optimal Control (3). Introduction to optimal control analysis and design tools useful for the design of Multi-Input/Multi-Output controllers. Linear Quadratic Regulator problem extended by including techniques for handling higher dimensional systems. The techniques are illustrated with aerospace applications. Prerequisite: AE 551 or ME 682 or consent of instructor. LEC


AE 753 Digital Flight Controls (3). Introduction to the classical Z-plane analysis and design tools useful for the design of control systems containing continuous dynamics and a digital computer. Mathematical modeling of the digital computer and real actuators. Aerospace applications used to demonstrate the concepts. Prerequisite: AE 551 or ME 582 or consent of instructor. LEC

AE 754 Missile Dynamics (3). Design of missile configurations. General equations of motion, aerodynamics of missiles, and simple supersonic and hypersonic flight regimes. Theory of missile trajectory. Linear and nonlinear theories of missile flight dynamics. Introduction to guidance and control. Launching problems and free-flight dispersions. Prerequisite: AE 551. LEC

AE 760 Spacecraft Systems (3). Fundamentals of spacecraft systems and subsystems. Spacecraft systems engineering, space environment; basic astrodynamics; and the following spacecraft subsystems: attitude determination and control; electrical power; thermal; propulsion; structures and mechanical systems; communications; electronics; and communications. Same as AE 560 with the addition of a research paper. Not available for students that have taken AE 560. Prerequisite: AE 507, REC 519, MATH 124, and ME 312 or equivalents. LEC

AE 765 Orbital Mechanics (3). Motion of space vehicles under the influence of gravitational forces. Two body trajectories, orbit determination, orbit transfer, universal variables, mission planning using patched cones. Transfer orbits. Prerequisite: MATH 220, MATH 290, and CE 301 or equivalent. LEC

AE 766 Spacecraft Attitude Dynamics and Control (3). Dynamics of rigid spacecraft, attitude control devices including momentum exchange, mass movement, gravity gradient and reactor rockets. Design of feedback control systems for linear and bang-bang control devices. Prerequisite: AE 551 or permission of instructor. LEC

AE 767 Spacecraft Environments (3). Fundamentals of spacecraft environments. Description and analysis of the natural environment in which spacecraft operate post-launch. Includes optical, electromagnetic, corpuscular radiation, plasma and Earth, thunder, light, solar and space weather. Prerequisite: PHSX 212 required. PHSX 313 or PHSX 351 recommended. LEC

AE 771 Rocket Propulsion (3). Basic elements of rocket propulsion: systems, propellants, and performance. Prerequisite: AE 545 or equivalent. LEC


AE 790 Special Problems in Aerospace Engineering (1-5). Directed studies of advanced problems in aerospace engineering. Open only to graduate students with departmental approval. ERP

AE 803 Aerodynamics (3). Introduction to self-excited vibrations, wing flutter, panel flutter, unsteady aerodynamics, launch vehicle structural vibrations. Prerequisite: AE 508, AE 545, AE 551, and AE 704. LEC

AE 821 Advanced Aircraft Design I (3). Fundamentals of design optimization. Aircraft cost prediction methods: development, manufacturing, and operating. Minimization of operation costs and implications to configuration design. Design to minimize life-cycle costs. Design decision making on the basis of cost. Prerequisite: AE 551 or permission of instructor. LEC

AE 822 Advanced Aircraft Design II (3). Design of flight control systems, fuel systems, hydraulic systems, and electrical systems. Weapon system integration problems, design for low radar cross sections. The kinematics of landing gear, tire systems, and third runway (if any). Prerequisite: AE 551. LEC

AE 840 Aerodynamics of Viscous Flows (3). Concepts of boundary layer equations of viscous fluids. Various transformations for compressible boundary-layer equations. Approximate and exact finite-dif-

Chemical and Petroleum Engineering
Chair: Laurence Weatherley, lweather@ku.edu
Learned Hall, 1530 West 15th St., Room 4132
Lawrence, KS 66045-7609, www.cpe.engr.ku.edu
(785) 864-4965
Graduate Adviser: Trung V. Nguyen,
4132 Learned Hall, (785) 864-2906
Graduate Recruiting Director: Carl Locke,
4132 Learned Hall, (785) 864-2902
Professors: Davis, Gehrke, Green, Locke, Nguyen, Subramaniam, Vossoughi, Weatherley, Willhite
Professors Emeriti: Bishop, Maloney, Mesler, Preston, Rosson, Swift, Walas
Associate Professors: Camarda, Howat, Liang, Nordheden, Ostermann, Southard
Assistant Professors: Berkland, Detamore, Laurence, Scurto, Stagg-Williams
Associate Scientists: McCool, Tsau
C&PE undergraduate programs provide a foundation that enables a graduate to pursue a professional engineer- ing career. For those who want a deeper academic understanding of these branches of engineering or who plan to work in research or development, master’s and doctoral programs are available. The department offers the M.S. degree in chemical engineering and petroleunm engineering. The Ph.D. degree may also be earned. See the General Information chapter of this catalog for requirements for admission and degrees.

In the master’s programs, the primary emphasis is on formal course work in engineering and related sub- jects. Students take a sequence of core courses in heat, mass and momentum transport, thermodynamics, re- action kinetics, applied mathematics, reservoir engi- neering, and petroleum recovery.

In the doctoral program, the emphasis is on research that involves an independent attack on a significant en- gineering problem. Specific Ph.D. course work depends on the specialization. Specializations reflect the re- search interests of the faculty. In addition to specialized courses in the department, advanced courses in mathe- matics and computer science, life sciences, physical sci- ences, and other branches of engineering may be used to prepare the Plan of Study for a Ph.D. student. These guidelines include departmental requirements and are intended to assist the student and advisory committee in preparing a Plan of Study for a degree.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Chemical and Petroleum Engineering
Learned Hall, 1530 West 15th St., Room 4132
Lawrence, KS 66045-7609

M.S. Degree Requirements
The master’s programs are designed for students with baccalaureate degrees in chemical or petroleum engineer- ing. Students with degrees in another branch of engineer- ing or in mathematics, chemistry, physics, or other sci- ences may be admitted and are encouraged to consider the programs. They usually must take some undergraduate course work to provide the necessary background for graduate courses. A student who has not received a degree from a U.S. university also must submit a Test of English as a Foreign Language report and is expected to meet the requirements of the Graduate School.

For an M.S. in chemical engineering, the under- graduate prerequisite courses are C&PE 511, C&PE 512, C&PE 521, C&PE 523, and C&PE 524. For an M.S. in petroleum engineering, the undergraduate prerequisite courses are C&PE 511, C&PE 521, C&PE 527, and C&PE 618. Depending on a student’s aca- demic background and proposed Plan of Study, additional undergraduate prerequisite courses may be re- quired. Up to 3 credit hours of the undergraduate prerequisite courses (numbered 500 or above) may be counted as elective hours in the M.S. degree program.

Before the end of the first semester of M.S. study, each student, with the help of the graduate adviser and the research director, must submit a Plan of Study to the associate dean for research and graduate programs.

Two degree options are available for the M.S. de- gree in chemical engineering.

Option A requires a minimum of 30 credit hours in- cluding submission and successful oral defense of a re- search thesis for 6 hours of credit. Students admitted to this option are considered for research assis- tantships, teaching assistantships, and fellowships. Option B requires a minimum of 33 credit hours. This option does not require a thesis but does require a written report of a 3-hour special project. Students are not eligible for research assistantships and fellow- ships. They may be considered for teaching assis- tantships, but priority is given to students in Option A.
Once admitted, students are not allowed to change from one option to the other without faculty approval. A 3.0 grade-point average at the end of each semester of residence is required to maintain regular student status and for graduation. Only the first 6 hours of enrollment in C&PE 803 meet degree requirements.

The following tables represent typical plans of study that might be evoked by a student and adviser. Only rarely are exceptions in C&PE course work allowed. It is recommended that part of the elective hours be from other departments. For petroleum engineering, if a student has not completed an advanced-level, reservoir-related course in geology as an undergraduate, such a course must be taken as one of the electives. GEOG 535 Petroleum and Subsurface Geology is recommended.

**M.S. in Chemical Engineering: Option A**

<table>
<thead>
<tr>
<th>Core Course Work (15 hours)</th>
</tr>
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<tbody>
<tr>
<td>C&amp;PE 701 Methods of Chemical and Petroleum Calculations .......... 3</td>
</tr>
<tr>
<td>C&amp;PE 721 Chemical Engineering Thermodynamics ...................... 3</td>
</tr>
<tr>
<td>C&amp;PE 722 Kinetics and Catalysis ........................................ 3</td>
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<tr>
<td>C&amp;PE 731 Convective Heat and Momentum Transfer .................... 3</td>
</tr>
<tr>
<td>C&amp;PE 732 Advanced Transport Phenomena II ............................ 3</td>
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<tr>
<th>Research (9 hours)</th>
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<tbody>
<tr>
<td>C&amp;PE 800 Seminar .......................................................... 3</td>
</tr>
<tr>
<td>C&amp;PE 803 Research ......................................................... 6</td>
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<tr>
<td>Thesis Oral Examination ................................................. 6</td>
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<table>
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<tr>
<th>Electives (6 hours)</th>
</tr>
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<tbody>
<tr>
<td>M.S. in Chemical Engineering: Option B</td>
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</tbody>
</table>

### Core Course Work (15 hours)

- C&PE 701 Methods of Chemical and Petroleum Calculations (3 hours)
- C&PE 721 Chemical Engineering Thermodynamics (3 hours)
- C&PE 722 Kinetics and Catalysis (3 hours)
- C&PE 731 Convective Heat and Momentum Transfer (3 hours)
- C&PE 732 Advanced Transport Phenomena II (3 hours)

### Electives (6 hours)

- C&PE 825 Graduate Problems in Chemical and Petroleum Engineering (3 hours)

### Ph.D. Degree Requirements

**Admission.** Admission is by approval of the graduate faculty of the department upon recommendation by the graduate standards committee. Admission is based on demonstrated potential to complete a Ph.D. program successfully. The measures of performance used in the decision process are undergraduate and graduate grade-point averages, research performance, letters of recommendation and GRE scores. A student who has not received a degree from a U.S. university also must submit a Test of English as a Foreign Language report and is expected to meet the requirements of the Graduate School.

Normally, admission occurs after a student has completed an M.S. degree. In rare cases, a student may be admitted to the Ph.D. program without an M.S. Such admission normally is granted only if the applicant has clearly demonstrated exceptional performance in an undergraduate program and in any graduate work. Students who are admitted to the Ph.D. degree program and who do not complete an M.S. degree in chemical and petroleum engineering must take the M.S. core courses (15 credit hours) over and above the course work specified for the Ph.D. degree.

**Qualification as a Ph.D. Aspirant.** All students must show competence in four areas of chemical engineering: computation, transport phenomena, thermodynamics, and kinetics. They must take the qualifying examinations after the first semester, usually the fall. Examinations in all four subjects are offered at the end of fall semester.

The examination normally is written and graded by the instructor who last taught the course and is of equivalent difficulty to the final examination for that course. Qualifying examinations for computation and thermodynamics could be the regular fall semester final examinations for C&PE 701 and C&PE 721, if they are comprehensive. Qualifying examinations for transport phenomena and kinetics are scheduled during the same period as the fall semester final examinations.

The grade is based on the scale used in the course, so that a student scoring as many or more points as one who received an A or a high B in the course passes the examination. Instructors must turn in graded examinations and assigned grades to the graduate standards committee before the deadline for submitting fall grades.

A qualifying examination is waived for a student who completes the master’s core course in that subject at KU with a grade of A. Other waivers may be made at the discretion of the graduate standards committee.

The graduate standards committee evaluates competence, taking into account student performance in courses and qualifying examinations. Possible decisions are:

- a. A student becomes a Ph.D. aspirant and continues in the program.
- b. A student who does not pass a portion of the qualifying examination must retake that particular area of the examination at the end of the following semester.
- c. At the committee’s discretion, a student showing a lack of competence a second time may be dismissed from the program.
- d. A student is dismissed from the program due to a clear lack of competence in multiple subject areas.

Based on the decision, the committee makes a recommendation to the departmental faculty about the student’s status.

- a. Where performance has been satisfactory, the committee recommends that the student be designated a Ph.D. aspirant.
- b. Where performance has been clearly unsatisfactory, the committee recommends that the student be dropped from the program.
- c. In cases where a student has been admitted to the Ph.D. program without completing an M.S. degree and where performance has been judged marginal or unsatisfactory, the committee recommends that the student either be placed in the M.S. program or be dropped from the graduate program.

Once a student has been designated a Ph.D. aspirant, monitoring of progress is the responsibility of the Ph.D. advisory committee.

**Ph.D. Advisory Committee.** A three-member advisory committee is formed for each student once the student has been designated a Ph.D. aspirant. The research director normally serves as the committee chair. The committee works with the aspirant to develop an appropriate overall Plan of Study and monitors the progress of the student throughout the remainder of the Ph.D. program.

**Plan of Study and Foreign Language or Other Research Skills Requirement.** A formal Plan of Study is drawn up, approved by the advisory committee, and submitted to the associate dean for research and graduate programs.
Credit hours for the Ph.D. degree normally consist of 15 credit hours of course work beyond that required for an M.S. degree and 30-34 credit hours of research work as specified in the following table.

**Course Work (18 credit hours)**
- C&PE 800 Seminar ......................................................... 9
- Outside electives ......................................................... 6
- C&PE 902 Preparation for the Ph.D. Comprehensive Examination ......................................................... 3

**C&PE Research (30-34 credit hours)**
- C&PE 825 Graduate Problems in Chemical and Petroleum Engineering (optional) ........................................... 2-4
- C&PE 904 Research ......................................................... 30

The following guidelines apply in selection of course work.

1. Enrollment in the C&PE seminar (C&PE 800) every semester in residence.
2. Enrollment for a minimum of three graduate-level courses in C&PE. These do not include C&PE 902 Preparation for the Ph.D. Comprehensive Examination or C&PE 800 Seminar. All courses in the C&PE department that count toward the Ph.D. degree must be numbered 700 or above.
3. Enrollment for at least two courses (normally 6 hours) numbered 700 or above outside the department.
4. For non-KU students, the KU equivalents of courses that have already been counted toward the master’s degree do not count toward the Ph.D. degree.
5. Normally C&PE 825 is connected in some way to thesis research and counted as research credit. However, if C&PE 825 is used to broaden and diversify the student’s knowledge, a maximum of 3 hours will be allowed as course credit.

These guidelines are to aid in the preparation of the program of study for most Ph.D. students. However, there may be exceptions, arising from the student’s academic background and the type of research, wherein the selection of courses may not adhere to these guidelines. In such exceptional cases, the student’s Ph.D. program of study must have the approval of the graduate standards committee.

**Comprehensive Examination.** The aspirant may undertake the comprehensive examination after completion of a majority of the course work for the Ph.D. and all of the department, school, and Graduate School requirements prerequisite to this examination, including the FLORS requirement. The examination consists of two parts: a written proposal for research and an oral examination based on, but not limited to, the research proposal.

For the research proposal, the student is assigned a topic of current interest to the chemical and/or petroleum engineering profession. This assignment is made by an examining committee consisting of at least five persons, including the advisory committee and at least one person outside the department. The aspirant identifies a research problem within the assigned topic area and prepares a written proposal for research on this problem. Normally, the written proposal must be prepared over a specified time period of 30 consecutive days. Except in unusual circumstances, the problem must be distinctly different from the dissertation problem.

The examining committee evaluates the research proposal upon completion. If the committee judges it satisfactory, the oral examination part of the comprehensive examination is held. The oral examination is based on the research proposal but also may cover areas peripheral to the proposal.

A student must pass both parts of the examination. Failure of either part constitutes an Unsatisfactory grade on the entire examination. An aspirant who receives a grade of Unsatisfactory may repeat the examination upon the recommendation of the examining committee, but under no circumstances may it be taken more than twice. The examination may not be repeated until at least 90 days have elapsed since the unsuccessful attempt.

To prepare the aspirant for the comprehensive examination, the advisory committee may require enrollment in C&PE 902 during the first year of the Ph.D. program. On receipt of a grade of Honors or Satisfactory on the comprehensive examination, the aspirant is admitted to candidacy for the degree of Doctor of Philosophy.

**Ph.D. Dissertation and Final Oral Examination.** The doctoral dissertation, based on independent research conducted by the candidate, constitutes the final phase of the doctoral work and must be completed within the time constraints prescribed by the Graduate School. Upon acceptance of the dissertation by the advisory committee, the candidate defends the dissertation in a final oral examination. The examining committee consists of at least five persons, including the advisory committee members and at least one person from outside the department.

**Chemical and Petroleum Engineering Undergraduate Courses**
- C&PE 111 Introduction to the Profession
- C&PE 117 Introduction to Petroleum Engineering Profession I
- C&PE 121 Introduction to Computers in Engineering
- C&PE 127 Introduction to Petroleum Engineering Profession II
- C&PE 211 Material and Energy Balances
- C&PE 221 Basic Engineering Thermodynamics
- C&PE 511 Momentum Transfer
- C&PE 512 Process Engineering Thermodynamics
- C&PE 517 Reservoir Engineering I
- C&PE 521 Heat Transfer
- C&PE 522 Economic Appraisal of Chemical and Petroleum Projects
- C&PE 523 Mass Transfer
- C&PE 524 Chemical Engineering Kinetics and Reactor Design
- C&PE 527 Reservoir Engineering II
- C&PE 528 Well Logging
- C&PE 613 Chemical Engineering Design I
- C&PE 615 Introduction to Process Dynamics and Control
- C&PE 616 Chemical Engineering Laboratory I
- C&PE 617 Drilling and Well Completion
- C&PE 618 Secondary Recovery
- C&PE 619 Petroleum Engineering Laboratory I
- C&PE 623 Chemical Engineering Design II
- C&PE 624 Plant and Environmental Safety
- C&PE 626 Chemical Engineering Laboratory II
- C&PE 627 Petroleum Production
- C&PE 628 Petroleum Engineering Design
- C&PE 629 Petroleum Engineering Laboratory II
- C&PE 651 Undergraduate Problems
- C&PE 654 Undergraduate Seminar in Chemical and Petroleum Engineering
- C&PE 655 Introduction to Semiconductor Processing
- C&PE 656 Introduction to Biomedical Engineering
- C&PE 657 Polymer Science and Technology

**Chemical and Petroleum Engineering Courses**
- C&PE 511 Momentum Transfer (3).
- C&PE 512 Process Engineering Thermodynamics (3).
- C&PE 517 Reservoir Engineering I (4).

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The Radar Systems and Remote Sensing Laboratory in Nichols Hall develops, evaluates, and applies new radar systems and other related technologies for remote sensing of the land, sea, ice, and atmosphere.

Radar systems engineering emphasizes microwave (including millimeter waves), signal analysis, remote-sensing/surveillance systems, and electromagnetics.

C&PE 521 Heat Transfer (3).
C&PE 522 Economic Appraisal of Chemical and Petroleum Projects (2).
C&PE 523 Mass Transfer (4).
C&PE 524 Chemical Engineering Kinetics and Reactor Design (3).
C&PE 527 Reservoir Engineering II (4).
C&PE 528 Well Logging (3).
C&PE 613 Advanced Engineering Design I (4).
C&PE 615 Introduction to Process Dynamics and Control (3).
C&PE 616 Chemical Engineering Laboratory I (3).
C&PE 617 Drilling and Well Completion (3).
C&PE 618 Secondary Recovery (4).
C&PE 619 Petroleum Engineering Laboratory I (2).
C&PE 623 Chemical Engineering Design II (3).
C&PE 624 Plant and Environmental Safety (5).
C&PE 626 Chemical Engineering Laboratory II (3).
C&PE 627 Petroleum Production (3).
C&PE 628 Petroleum Engineering Design (3).
C&PE 629 Petroleum Engineering Laboratory II (2).
C&PE 651 Undergraduate Problems (1-6).
C&PE 654 Undergraduate Seminar in Chemical and Petroleum Engineering (1).
C&PE 655 Introduction to Semiconductor Processing (3).
C&PE 656 Introduction to Biomedical Engineering (3).
C&PE 657 Polymer Science and Technology (3).
C&PE 661 Undergraduate Honors Research (3).
C&PE 702 Advanced Methods of Chemical Calculations (3).
C&PE 710 Subsurface Methods in Formation Evaluation (3). Study of subsurface methods and their applications to exploration, evaluation, and production of hydrocarbon reservoirs. Emphasis is on fundamentals of quantitative well log interpretations and the use of well log data in solving geologic and reservoir engineering problems, e.g., porosity, hydrocarbon saturation, permeable bed thickness, connectivity and correlation, structural mapping, and stratigraphic and paleoenvironmental studies. Laboratory. Prerequisite: GEOL 535 or C&PE 517 or consent of instructor. LEC 115.
C&PE 715 Topics in Chemical and Petroleum Engineering: flow through porous media (3). A study of improved oil recovery processes such as miscible displacement, microemulsion displacement, and thermal methods. Prerequisite: C&PE 618 or permission of instructor. LEC 115.
C&PE 719 Advanced Topics in Chemical and Petroleum Engineering: Optimization of processes (3). Study of optimization methods that are applied to chemical and petroleum engineering. Prerequisite: C&PE 715. LEC 115.
C&PE 721 Chemical Engineering Thermodynamics (3). Chemical engineering applications of advanced thermodynamics and physical chemistry. Prerequisite: C&PE 512. LEC 115.
C&PE 722 Kinetics and Catalysis (3). Modeling and analysis of chemical reactors with emphasis on heterogeneous catalytic reaction systems. Prerequisite: C&PE 524. LEC 115.
C&PE 731 Convective Heat and Momentum Transfer (3). The formulation and solution of steady- and unsteady-state convective heat and momentum transfer problems. Applications of boundary-layer theory to free and forced convection with study of similarity and integral methods of solution for laminar and turbulent flow; development of analogies; transport properties from kinetic theory of gases viewpoint. Prerequisite: ME 610 or C&PE 517 or consent of instructor. LEC 115.
C&PE 732 Advanced Transport Phenomena II (3). The formulation and solution of steady- and unsteady-state mass transfer problems (including those complicated by momentum and heat transfer). This course is the sequel to C&PE 731 and relies upon much of the material treated there. The mathematical approach predominates and the methods available for determining suitable mass transfer coefficients are covered. LEC 115.
C&PE 751 Basic Rheology (3). Basic rheology including classification of classical bodies based on their stress and strain tensors, rheological equation of state, material functions, generalized Newtonian and general linear viscoelastic fluids, mechanical models such as those of Jeffreys and Maxwell. Prerequisite: C&PE 511 or an equivalent course in fluid mechanics. LEC 115.
C&PE 756 Introduction to Biomedical Engineering (3). The graduate elective form of CPE 656, a study of transport phenomena and kinetics in physiological systems. An introduction to mathematical modeling of biological processes is given with additional homework problems designed for upper level graduate students with prior numerical simulation experience. An oral presentation of the final research report is required for this section. Prerequisite: C&PE 701. CHEM 520 and C&PE 524, or consent of instructor. LEC 115.
C&PE 765 Corrosion Engineering (3). Electrochemical basis of corrosion. Types of corrosion and corrosive atmospheres. Corrosion control measures and industrial problems. Prerequisite: ME 306 or CHEM 188. LEC 115.
C&PE 771 Advanced Reservoir Engineering (2-3). Physical principles of petroleum production; gas drive performance; partial water drive performance; pressure maintenance through gas and water injection. Prerequisite: C&PE 527. LEC 115.
C&PE 799 Introduction to Flow in Porous Media (3). Generalized Darcy’s law, vector equations, solutions of partial differential equations with various boundary conditions as applied to the flow of fluids in porous media. Prerequisite: C&PE 527. LEC 115.
C&PE 795 Enhanced Petroleum Recovery (3). A study of improved oil recovery processes such as miscible displacement, microemulsion displacement, and thermal methods. Prerequisite: C&PE 618 or permission of instructor. LEC 115.
C&PE 798 Phase Equilibrium (3). A study of heterogeneous phase equilibrium phenomena from the standpoint of the phase law of Gibbs. Applications include phase relations in oil and condensate reservoirs and those for systems at cryogenic temperatures. LEC 115.
C&PE 800 Seminar (0.50-1). Every fall, five to six seminar sessions will be devoted to providing incoming students information on available thesis/dissertation research projects, library resources, computing environment and other pertinent information. For the remainder of the year, the seminar will involve presentation of current research and other topics of interest to chemical and petroleum engineering. These presentations will be made by invited guests, faculty, and advanced graduate students. Graded on a satisfactory/unsatisfactory basis. LEC 115.
C&PE 801 Introduction to Research (1). One hour per week in which the staff introduces entering graduate students to research. Topics include discussion of research methods, methods of effectively tapping library resources, preparation of literature surveys, and presentation of research results. Faculty members of the department will present presentations of their current research interests. Offered fall only. Corequisite: C&PE 800. LEC 115.
C&PE 802 CEBC Colloquium (0.50-1). A forum in which graduate and postdoctoral students, and faculty present the results of CEBC research and literature surveys that support the mission of CEBC. LEC 115.
C&PE 803 Research (1-4). For M.S. candidates. LEC 115.
C&PE 804 Petroleum Management Seminar (1). Structure, operation, and problems of the petroleum industry from a management viewpoint. Presentations will be made by faculty, advanced students, and invited guests. Prerequisite: Permission of instructor. LEC 115.
C&PE 825 Graduate Problems in Chemical and Petroleum Engineering (1-5). Advanced laboratory problems, special research problems, or library reading problems. Three hours maximum acceptable for master’s degree. RSH 115.
C&PE 902 Preparation for the Ph.D. Comprehensive Examination (3). Preparation for a research proposal in an area assigned by the advisor’s advisory committee. The grade received on the Ph.D. comprehensive examination will apply to this credit. RSH 115.
C&PE 904 Research (1-2). For Ph.D. candidates. THE 115.
C&PE 919 Advanced Topics in Process Modeling or Simulation or Control: chemical and petroleum engineering topics (1-4). Advanced study in process modeling, simulation or control on topics which may vary from year to year. LEC 115.
C&PE 929 Advanced Topics in Chemical and Petroleum Engineering: chemical and petroleum engineering topics (1-4). Advanced study in various branches of chemical and petroleum engineering on topics which may vary from year to year. LEC 115.
C&PE 933 Heat and Mass Transfer in Porous Media (3). Advanced study of heat and mass transfer in porous media such as packed columns, catalytic beds, chemical reactors, and petroleum reservoirs. Mechanisms of interphase and intraphase transfer, diffusion, and dispersion. Included are methods of solution of the describing differential equations. LEC 115.
C&PE 936 Industrial Separation Processes (3). Determination and treatment of vapor-liquid separations, including methods for obtaining and treating equilibrium data, procedures for calculating multi-component separations by distillation, absorption, extraction, and adsorption. LEC 115.
C&PE 937 Applied Rheology (3). Industrial applications of fluid mechanics including compressible flow, flow of non-Newtonian fluids, flow of drag reducing systems all to be considered in laminar and turbulent flow regimes, and within conduits, and porous media. LEC 115.
C&PE 939 Advanced Topics in the Transport Phenomena: chemical and petroleum engineering topics (1-4). Advanced study in various branches of transport phenomena on topics which may vary from year to year. LEC 115.
C&PE 940 Data Analysis in Engineering and Natural Sciences (3). Statistical inference and data analysis, emphasizing interpretation of observations from areas of engineering and natural sciences. Basic knowledge of controlled experimentation is not possible. The basics of elementary statistics and matrix algebra are covered, followed by topics in time, series analysis, map analysis, including automatic contouring, and multivariate procedures such as principal components, discrimination and factor analysis. A suite of computer programs is provided. Students are encouraged to use data from their own graduate research in class projects. LEC 115.
Civil, Environmental, and Architectural Engineering

Chair: Tom Mulinazzi
Learned Hall, 1530 West 15th St., Room 2150
Lawrence, KS 66045-7609, www.ceae.ku.edu
(785) 864-3766

Graduate Adviser: Bruce McEnroe,
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Professors: Darwin, Kurt, Lane, Lee, Marotz, McCabe, McEnroe, Mulinazzi, Parr, Randtke, Rolfe, Thomas
Professors Emeriti: Angino, Burkhead, Douglas, Easley, Lucas, McKinney, Pogge, Willems, Yu
Associate Professors: Browning, Glavinich, Graham, Han, Matamoros, Medina, Parsons, Rock
Assistant Professors: Bai, Young

Degree Programs and Admission

The department offers graduate programs leading to the following degrees:

- Master of Science with a major in Architectural Engineering.
- Master of Science with a major in Civil Engineering.
- Master of Science with a major in Environmental Engineering.
- Master of Science with a major in Environmental Science.
- Master of Science with a major in Water Resources Science.
- Master of Civil Engineering.
- Master of Construction Management.
- Doctor of Philosophy with a major in Environmental Engineering.
- Doctor of Philosophy with a major in Environmental Science.
- Doctor of Philosophy with a major in Civil Engineering.
- Doctor of Engineering with a major in Civil Engineering.

The Master of Science degrees in civil engineering, environmental engineering, and architectural engineering and the Master of Civil Engineering degree require ABET-accredited baccalaureate degrees in engineering.

The Master of Civil Engineering degree provides an option for working professionals who do not need the research component of the M.S. degrees. This degree requires two courses in engineering management to complement the technical engineering graduate courses.

The interdisciplinary Master of Science degrees in environmental science and water resources science are intended primarily for students with baccalaureate degrees in fields other than engineering.

The Master of Construction Management is a professional degree intended for part-time graduate students employed in the construction industry. Most students in this program have baccalaureate degrees in fields other than engineering.

The department’s doctoral degrees are the research-oriented Doctor of Philosophy degree, with majors in civil engineering, environmental engineering, and environmental science, and the practice-oriented Doctor of Engineering degree in civil engineering.

Graduate students in the engineering degree programs can specialize in structural engineering, environmental engineering, water resources engineering, geotechnical engineering, transportation engineering, construction, engineering mechanics, building mechanical systems, or energy management. Many of the department's graduate courses are taught in the evenings on the KU Edwards Campus in Overland Park for the convenience of part-time graduate students employed in the Kansas City area.

The department admits for all semesters. Students may pursue degrees full or part time. Applicants with baccalaureate degrees in engineering are expected to have undergraduate grade-point averages of 3.0 or higher on a 4.0 scale for regular admission to a master's program. An undergraduate grade-point average of 3.3 or higher is expected for applicants with baccalaureate degrees in other fields. Applicants with slightly lower grade-point averages may be admitted on probation. Graduate Record Examination scores are required and are used in the evaluation process, but minimum scores for admission have not been established. The GRE engineering and other subject examinations are not required. The Test of English as a Foreign Language is required for international applicants. Applicants should take the GRE and TOEFL examinations as soon as possible, to expedite the admission process.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Graduate Secretary, Department of Civil, Environmental, and Architectural Engineering
Learned Hall, 1530 West 15th St., Room 2150
Lawrence, KS 66045-7609

Master's Degree Requirements

Candidates for the Master of Science degrees have two options. Option A requires 30 credit hours including a thesis of 6 hours (6-10 hours for the environmental degrees) and a final oral examination including defense of the thesis. Option B requires 30 hours including a 3- or 4-hour special problem investigation in the specialization and a final examination. It does not require a thesis.

The M.S. degree in civil engineering requires a minimum of 9 hours of graduate-level courses in one of the following areas: (1) construction, (2) engineering mechanics, (3) environmental engineering, (4) geotechnical engineering, (5) structural engineering, (6) transportation engineering, or (7) water resources engineering. In addition, a minimum of 6 total hours of graduate-level work is required in any one or more of the remaining six departmental areas.

The M.S. degrees in environmental engineering and environmental science require an understanding of chemical, biological, and physical principles of environmental engineering processes, i.e., satisfactory completion of CE 770, CE 772, CE 773, and CE 774 or equivalent. Substitutions require the approval of both the student’s committee and the graduate adviser.

The water resources science degree requires a 15-hour core consisting of 3 hours of graduate-level work in each of the following six areas: water quality, surface water hydrology, groundwater, water resources, fluid mechanics, and meteorology.
The Master of Civil Engineering degree requires 34 semester hours of graduate courses, of which a minimum of 7 hours must be in engineering management core courses. The core courses are EMGT 806, EMGT 809, EMGT 810, EMGT 811, EMGT 813, EMGT 821, EMGT 823, and EMGT 830. EMGT 809 is required, and only one of either EMGT 813 or EMGT 823 is accepted. The remaining 27 hours in technical courses are subject to the same criteria as the Master of Science degree in civil engineering, with the additional restriction that no more than 10 hours of engineering management courses may be applied toward the degree. A written 4-hour final examination is required in the student’s area of concentration. This examination is waived if the student has passed the Professional Engineer examination.

The Master of Construction Management degree requires 33 credit hours, consisting of 18 hours of core courses, 12 hours of electives, and 3 hours of master’s project. The core courses are CMGT 700, CMGT 701, CMGT 702, CMGT 703, CMGT 704, and CMGT 705.

Courses to be applied toward any of the master’s degrees must be listed on a Plan of Study form approved by the student’s major professor and examining committee and the departmental graduate studies committee. No more than 9 hours of courses from other departments or more than 6 hours of courses numbered below 700 (of which only 3 hours may be within the department) may be applied toward any of the master’s degrees without approval of the departmental graduate studies committee. No more than 4 hours of special problem credit may be applied toward any of the master’s degrees without approval of the departmental graduate studies committee.

**Doctoral Degree Requirements**

Candidates for the Ph.D. must satisfy all Graduate School degree requirements. Requirements for the Doctor of Engineering degree with a major in civil engineering are in accordance with the requirements of the School of Engineering. A Plan of Study must be approved by the student’s major professor and examining committee and the departmental graduate studies committee.

An aspirant for the Ph.D. degree must pass a qualifying examination. The department normally gives this examination upon completion of the aspirant’s M.S. work or at a comparable level for non-M.S. students.

Before being admitted to the comprehensive examination, the aspirant must satisfy the department’s basic research skills requirement. This requirement provides the aspirant with research skills that are distinct from, but strongly supportive of, the dissertation research. Two research skills are required. Possible research skills include foreign language, computer science, mathematics, statistics, specific laboratory skills, and specific skills in the physical or biological sciences. The foreign language skill can be obtained by taking a two-course sequence in the selected language or demonstrated by passing an examination. The selected research skills must be listed on the Plan of Study form. A separate statement attached to the Plan of Study must list the work to be completed to obtain the two research skills.

**Architectural Engineering Courses**

ARCE 561 Building Mechanical Systems for Architects (3).
ARCE 642 Illumination Engineering (3).
ARCE 644 Daylighting Analysis and Design (3).
ARCE 645 Power System Engineering (3).
ARCE 648 Power System Design (3).
ARCE 660 Building Thermal Science (3).
ARCE 661 HVAC&R Systems Design (3).
ARCE 663 Energy Management (3).
ARCE 664 Fire Protection Engineering (3).
ARCE 665 Solar Energy Systems Design (3).
ARCE 670 Building Power Systems for Architects (1).
ARCE 672 Building Interior Lighting for Architects (1).
ARCE 675 Architectural Acoustics (3).
ARCE 676 Building Acoutsual Systems for Architects (1).
ARCE 680 Architectural Engineering Design I (6).
ARCE 681 Architectural Engineering Design II (6).
ARCE 690 Special Problems (1-3).
ARCE 691 Honors Research (3).
ARCE 700 Directed Readings in Architectural Engineering (1-3). Individual study of special topics and problems. May be repeated for credit. Prerequisite: Student must submit, in writing, a proposal including a statement of the problem the student wishes to pursue and a bibliography of the articles and books required to complete the project. The student must also have a signed agreement with the faculty member proposed as instructor for the course. Consent of instructor.
ARCE 742 Advanced Illumination Engineering (3). Advanced design of luminous environments. Emphasis will be given to visual comfort, illumination systems and system design, and economics of lighting and energy conservation. Prerequisite: ARCE 642 or consent of instructor. LEC
ARCE 743 Space and Light Theory in Architecture (3). This lecture/laboratory course focuses on the mutual interaction of architectural space and light. Taught from an ergonomic viewpoint, it demonstrates how the physical spaces of the built environment are modified by illumination as perceived by the human visual system. It includes the behavior of color, texture, and reflectance under electric and natural light, and the resultant impact on the visual perception of architectural space. The course is open to students of architecture, interior design, stage lighting design, and architectural engineering. (Same as ARCH 736) Prerequisite: MATH 115 or MATH 121, PHYS 114 or PHYS 121, graphics course, or consent of instructor. LEC
ARCE 745 Power System Analysis I (3). Introduction to the analysis of commercial, industrial, and utility power systems. Emphasis is placed on modeling system components which include circuits, transformers, induction machines, and synchronous machines and the development of a power system model for analysis from these components. System modeling will be applied to short-circuit studies and used to analyze symmetrical faults, to develop sequence networks using symmetrical components, and analyze unsymmetrical faults. Prerequisite: ARCE 643 or consent of instructor. LEC
ARCE 746 Power System Analysis II (3). A continuation of ARCE 745 that uses power system modeling to analyze power system load flow, operation, stability, transient response, harmonics, and reliability. Conductor ampacity calculations, economic conductor selection, and insulation coordination are also introduced. Prerequisite: ARCE 745, ARCE 357, and MATH 526 or consent of instructor. LEC
ARCE 749 Power System Protection (3). This course introduces techniques and methods used to analyze and predict the performance of commercial and industrial power systems and equipment under faulted conditions. Emphasis is placed on the selection, application, and coordination of protective devices to detect and clear power system faults in a safe and reliable manner. Prerequisite: ARCE 745 or consent of instructor. LEC
ARCE 760 Automatic Controls for Building Mechanical Systems (3). An introduction to controls for building mechanical systems. Discussions of the theory, design, and equipment used for control systems. The benefits of pneumatic, electrical, and electronic (DDC) controls will be examined. Prerequisite: ARCE 357 or consent of instructor. LEC
ARCE 764 Advanced Thermal Analysis of Buildings (3). Manual and computational methods for determining steady-state and transient thermal loads in buildings. Advanced analysis of energy consumption given choices in building materials and mechnetuctanc unds. Prerequisite: ARCE 217 and ARCE 660, or consent of instructor. LEC
ARCE 890 Architectural Engineering Seminar: (1-3). Individual or group studies in building engineered systems or construction engineering. Prerequisite: Graduate standing in Architectural Engineering and consent of instructor. RSH
ARCE 895 Master’s Project (1-3). Directed study and reporting of a specialized topic of interest to the architectural engineering profession. Prerequisite: Consent of instructor. RSH
ARCE 899 Master’s Thesis (1-6). Directed research and reporting of a specialized topic of interest to the architectural engineering profession. Prerequisite: Consent of instructor. THE
Civil Engineering Courses

CE 552 Water Resources Engineering Design (4). 
CE 562 Structural Design I (3). 
CE 563 Structural Design II (3). 
CE 570 Concepts of Environmental Chemistry (2). 
CE 571 Environmental Chemical Analysis (1). 
CE 573 Biological Principles of Environmental Engineering (3). 
CE 574 Design of Air Pollution Control Systems (3). 
CE 576 Municipal Water Supply and Wastewater Treatment (4). 
CE 577 Industrial Water and Waste (3). 
CE 580 Transportation Planning and Management (3). 
CE 582 Highway Engineering (3). 
CE 586 Foundation Engineering (3). 
CE 625 Applied Probability and Statistics (3). 
CE 684 Materials for Transportation Facilities (3). 
CE 704 Dynamics and Vibrations (3). Problems in engineering dynamics and vibrations. Topics include applications of generalized forces and coordinates, Lagrange equations, and a study of the performance of simple and multidegree of freedom systems. Prerequisite: CE 570 or equivalent. LEC 
CE 710 Structural Mechanics (3). Basic concepts in the analysis of stress and strain and the behavior of materials. Topics include elementary theory and problems in elasticity, theories of failure of materials including energy mechanics and introduction to plasticity. LEC 
CE 721 Experimental Stress Analysis (3). Introduction to experimental stress-analysis techniques. Theory and application of mechanical strain gauges, electrical strain gauges, photoelastic techniques, and brittle coatings. LEC 
CE 725 Multivariate Statistical Methods (3). The emphasis of this course is on the theory and problem-solving aspects of the concepts of multiple regression and related techniques of data analysis. Prerequisites: MATH 330 and AE 304. LEC 
CE 730 Intermediate Fluid Mechanics (3). Fall semester. Principles of steady and unsteady flows, theories of potential, viscous, and turbulent flows, and applications in water resources engineering. Prerequisite: CE 330 and MATH 320. LEC 
CE 746 Pavement Construction (3). Introduction to the equipment, materials, and construction practices employed in the construction of flexible and rigid highway and airfield pavements, and the relationship of each to pavement design and performance. The principles of statistical based quality control and quality assurance methods and specifications will be included. Prerequisite: CE 484 or 412, CE 582, and CE 625 or equivalent. LEC 
CE 748 Asphalt Technology (3). An introduction to the production of asphalt cements and its use in pavement construction and maintenance applications. Pavement distress identification. Design and use of bituminous pavements and materials for other than highway applications. Prerequisite: CE 484 or consent of instructor. LEC 
CE 751 Watershed Hydrology (3). Study of hydrologic processes at the earth’s surface: evaporation, snowmelt, precipitation, infiltration, runoff, and streamflow. Modeling of hydrologic processes; statistical analysis of hydrologic data; applications to the analysis and design of engineering projects. Prerequisite: CE 455 or equivalent. LEC 
CE 753 Chemical Hydrogeology (3). A study of natural groundwater chemistry and an introduction to groundwater contamination chemistry, including discussion of origins and evolution of water and solutes because of speciation, solubility, sorption, ion exchange, and oxidation-reduction processes. Effects on groundwater quality, water-rock interactions (geochemistry), and surface-water interactions are included. (Same as GEOL 753.) Prerequisite: One year of chemistry, one year of calculus, and an introductory course in hydrogeology or equivalent, or consent of instructor. LEC 
CE 754 Physical Hydrogeology (3). A study of fluid flow in subsurface hydrologic systems. Investigation of the groundwater environment including porosity, and hydraulic conductivity and their relationship to typical geologic materials. Examination of Darcy’s law and the continuity equation leading to the general flow equations. Discussion of typical hydraulic testing methods to estimate aquifer parameters in various situations and the use of these parameters to model future effects. Study of the basic mechanical and hydraulic behavior of typical regional flow systems. (Same as GEOL 751.) Prerequisite: Differential Equations and Introductory Hydrogeology or Fluid Mechanics, or consent of instructor. LEC 
CE 755 Free Surface Flow I (3). A study of uniform and non-uniform steady flows of open channel flows, including hydraulic jump, and the delivery of canals. Prerequisite: CE 330. LEC 
CE 756 Wetlands Hydrology and Introduction to Management (3). A study of the basic structure and functions of wetlands; the physical, chemical, and biological processes involved; and an introduction to the management of wetlands. Also a brief introduction to the legal aspects of wetlands, the Section 404 permitting processes, and mitigation requirements. Prerequisite: Senior or graduate standing in engineering or a science area, or consent of instructor. LEC 
CE 757 Pipe-flow Systems (3). Hydraulic analysis and design of pipelines, pipe networks, and pumping systems. Analysis and control of hydraulic transients. Engineering of water distribution systems. Prerequisite: CE 550 or equivalent. LEC 
CE 758 Water Resource Policy and Planning (3). An appraisal of federal and state water law, policy and planning processes directed toward the management and protection of water resources, emphasizing the framework linking social, technical, and legal aspects of planning. Prerequisite: CE 455 or equivalent. LEC 
CE 761 Matrix Analysis of Framed Structures (3). Analysis of 2-D and 3-D frame and truss structures by the direct stiffness method. Computer techniques required to implement the analysis. LEC 
CE 762 Behavior of Reinforced Concrete Members (3). This mechanics course covers in detail the constitutive behavior of reinforced concrete members subjected to various types of loading and presents the basis for modeling the response of reinforced concrete structures in the nonlinear range of response. Topics covered include: stress-strain behavior of concrete under multiaxial stress states of stress; moment-curvature analysis; advanced analysis of the effects of reinforcement on concrete; behavior of concrete members subjected to cyclic loading; and effects of mix at the interface between reinforcing steel and concrete. Prerequisite: CE 563 or equivalent. LEC 
CE 763 Advanced Concrete Design I (3). The theory and design of prestressed concrete structures based on service load and strength criteria. Prerequisite: CE 563. LEC 
CE 764 Advanced Concrete Design II (3). The theory and design of reinforced concrete members and structures with emphasis on frames and slabs. Introduction to bridge design and earthquake design. Prerequisite: CE 563. LEC 
CE 765 Advanced Steel Design I (3). The theory and design of standard steel framed structures (primarily buildings). Design philosophies, stability, composite design, structural behavior, preliminary design, and connections. Prerequisite: CE 562 or equivalent. LEC 
CE 766 Advanced Steel Design II (3). Introduction to simple plastic design principles. Analysis and design of steel bridges including composite and noncomposite plate girders, curved girders, box girders, and other specialized bridge types. Fatigue and other design criteria. LEC 
CE 767 Introduction to Fracture Mechanics (3). Theories and modes of structural failure as related to structural design. Application of fracture mechanics to failure analysis, fracture control plans, fatigue crack growth, and stress-corrosion crack growth. Prerequisite: CE 310 or CE 311 plus a structural or mechanical design course. LEC 
CE 770 Concepts of Environmental Chemistry (2). The fundamentals of aquatic chemistry, with emphasis on applications in water purification and wastewater treatment. May not be taken for credit by students with credit in CE 570. Prerequisite: CE 477 or equivalent, calculus, and five hours of chemistry. LEC 
CE 771 Environmental Chemical Analysis I (2). A laboratory introducing the basic chemical tests used in the water and wastewater fields of environmental engineering and science. May not be taken for credit by students with credit in CE 571. Prerequisite: Credit or co-enrollment in CE 770. LAB 
CE 772 Physical Principles of Environmental Engineering Processes (3). Physical principles of suspensions, kinetics, fluid flow, filtration, and gas transfer are applied to various environmental physical processes. Prerequisite: CE 477 or equivalent, calculus, and four hours of physics. LEC 
CE 773 Biological Principles of Environmental Engineering (3). A basic study of the microorganisms important in environmental engineering. Emphasis is placed on the microbiology of dilute nutrient solutions. Microbial physiology, microbial ecology, and biochemistry will be discussed as they pertain to environmental engineering and science. Both biochemical and physiological aspects are included. (Two lectures and one three-hour laboratory per week.) May not be taken for credit by students with credit in CE 573. Prerequisite: CE 477 or equivalent, calculus, and five hours of chemistry. LEC 
CE 774 Chemical Principles of Environmental Engineering Processes (3). Chemical principles of stoichiometry, thermodynamics, and kinetics are applied to various chemical processes having application in the field of environmental engineering and science, including adsorption, ion exchange, coagulation, precipitation, and gas transfer. Prerequisite: CE 477 or equivalent, calculus, and credit registration in CE 570 or CE 770. LEC 
CE 775 Marine Pollution (3). Marine chemistry and relation to pollution problems. Types of pollution and effects on the environment. Interrelation of the chemical, physical, and biological parameters of the ocean and their interaction with pollutants. Special emphasis on problems of worldwide occurrence, international law, coopera-
CE 776 Contaminant Transport (3). A study of the transport of conserva-
tive and non-conservative pollutants in subsurface waters. Case studies 
are used to illustrate and develop a conceptual understanding of such pro-
cesses as diffusion, advection, dispersion, retardation, chemical reactions, 
and biochemical processes. Computer models are used to quantify these 
processes and gain an appreciation of modeling limitations. (Same as GEOL 754.) Prerequisite: Introductory course in hydrogeology and fa-
miliarity with computer use, and consent of instructor. LEC

CE 777 Industrial Water and Wastes (3). A review of the methods of 
industrial water treatment and the fundamentals of industrial wastewater 
control. Topics include: water budgets, cooling tower and boiler 
treatment, corrosion control, government regulations, para-

CE 779 Water Quality (3). Examination of water quality principles, 
policy, processes, practices, computer programs, laws and regulations as 
they relate to the integrated planning and control of point and non-
boundary sources of pollution. Prerequisite: MATH 212 or equivalent, 
CE 477, and CE 770. LEC

CE 781 Traffic Engineering (3). A study of the traffic engineer’s 
characteristics and behavior patterns of the road user and his or her vehicle 
in traffic. The major content involves techniques for obtaining data, analyzing 
data and interpreting data on traffic speed, volume, streamflow, in-
tersection operation, parking and accident incidences. Capacity and 
assignment are discussed. Up to most up to date procedures for major traffic facilities such as undivided highways, city streets, freeways, interchanges and intersections are also discussed. Prerequisite: CE 502 or equivalent. LEC

CE 785 Terrain Analysis (3). A study of the applications of the theory of 
photometric-photographic interpretation as it pertains to the field of civil engi-
neering including the recognition of soil types and classes, engineering 
materials surveys, route location, and the delineation of watersheds and 
estimates of runoff there from. Prerequisite: CE 487 or equivalent. LEC

CE 787 Advanced Soil Mechanics (3). Three lecture periods. A study of the 
strength and compression characteristics of cohesive and noncohesive soils 
under various loading conditions. Prerequisite: CE 487 or equivalent. LEC

CE 788 Geotechnical Engineering Testing (3). Three lectures. Field 
testing techniques, sampling methods, and laboratory testing proce-
bureaus used to determine soil properties for engineering projects. 
Prerequisite: CE 487. LAB

CE 789 Pavement Management Systems (3). Basic components of 
pavement management systems. Emphasis is given to pavement eval-
uation, planning pavement investment, rehabilitation design alterna-
tives, and pavement management program implementation. Prereq-

CE 791 Waste Facility Siting and Design (3). A review of current site 
characterization and design methods for solid and hazardous waste fa-
cilities with particular emphasis on working within the modern regula-
tory environment. Prerequisite: CE 487 or equivalent. LEC

CE 792 Knowledge-based/Expert Systems in Engineering (3). Intro-
duction to the use of knowledge-based systems for engineering prob-
lem solving. These systems have a separation between the facts and 
concepts (the knowledge base) and the reasoning process used to 
form conclusions (the inference mechanism). A wide variety of applica-
tions are addressed including civil, chemical and petroleum, and aerospace engineering. Prerequisite: Computer literacy, bachelor’s degree in engineering, or consent of instructor. LEC

CE 793 Advanced Concepts in CADD (3). Advanced concepts related to 
the application of computer-aided design and drafting to the practice of 
civil engineering are presented. This includes: developing macros, under-
standing CADD programming languages, and relating CADD and other civil engineering based programs. An engineering approach to Geogra-
phical Information Systems (GIS) will be presented. Prerequisite: Working knowledge of one computer-aided design graphics software package. LEC

CE 794 Environmental Graduate Student Orientation (1). An intro-
ducatory graduate level course with emphasis on selecting a research topic, 
preparing a thesis or special problem report, technical reports, oral presenta-
tions, papers, and grant proposals. This course will also provide orientation 
information for new students and advice on preparing a plan of study. LEC

CE 795 Scanning Electron Microscopy and X-ray Microanalysis (3). 
The course covers electron optics, electron beam-specimen interaction, 
image formation, x-ray spectral measurement, qualitative and quantitative 
x-ray microanalysis, practical techniques of x-ray analysis and specimen 
preparation techniques. Emphasis is placed on materials, but most tech-
niques apply to biological specimens as well. Prerequisite: PHYS 212. LEC

CE 800 Theory of Elasticity (3). The basic equations of the theory of 
elasticity, stress and strain transformation, strain-displacement, compat-
ability and stress-strain relations. Formulation of problems and 
effects of elastic solutions. Introduction to approximate solution methods based on energy methods and finite elements. LEC

CE 801 Energy Methods (3). The methods of analysis by energy 
methods of mechanics problems. Includes variational energy princi-

CE 802 Nondestructive Evaluation of Materials and Structures (3). 
This course covers nondestructive methods and their application to en-
geineered structures and components. Methods covered include: ultra-

CE 804 Free Surface Flow II (3). Continuation of CE 755 with concen-
tration on computer modeling of open channel flow using HEC-RAS, 
WSPRO, and other programs. Analysis of bridge systems using FHWA 
methods is also considered. Prerequisite: CE 755. LEC

CE 856 Wetland Design, Engineering, and Management (3). Intro-
duction of design concepts in creating and restoring wetland systems. 
Review of wetland hydrology and hydraulics. Interaction of wetland hy-
drology, soils, and vegetation providing environmental benefits. Consid-
erations in project planning, site selection and preparation, construction 
and operation, and maintenance. Use of state and local legal and man-
agement tools to protect and restore wetlands. Emerging concepts of 
mitigation and banking. Prerequisite: CE 756 or equivalent. LEC

CE 857 Sediment Transport (3). A study of the transport of sediment in al-
kaline channels. Specific topics include properties of sediment, mechanics 
of bed forms, particle entrainment, scour analysis, prediction of suspended 
colloidal load and bedload deflection of design flow, and sediment 
transport. Prerequisite: CE 757 or equivalent. LEC

CE 861 Finite Element Methods for Solid Mechanics (3). Stress analysis 
of 2D and 3D solids, plates, and shells by the finite element method. Element 
formulations and behavior with emphasis on the isoparametric concept. Com-
puter modeling and interpretation of results. Introduction to material and 
shape nonlinear analysis of solids. Prerequisite: CE 761 or equivalent. LEC

CE 864 Seismic Performance of Structures (3). This course builds on topics 
from structural dynamics to introduce the principles of structural 
performance during earthquake events. Emphasis is placed on estimating the 
response of building structures as represented by simple and complex 
models. Topics covered include: the effects of ground motion and simple 
systems to ground motion, nonlinear response of building systems, and 
performance-based earthquake engineering. Prerequisite: CE 704. LEC

CE 865 Structural Design for Dynamic Loads (3). The behavior and 
design of structural systems subjected to dynamic forces such as blasts, 
earthquakes, and wind loads. Prerequisite: CE 704 or equivalent. LEC

CE 869 Plates and Shells (3). The analysis and design of plates and 
shells including thin and thick plates, membrane theory of shells and 
bending theories of shells. LEC

CE 871 Fundamentals of Bioremediation (3). A study of microbial 
ecolgy and physiology as they relate to the degradation of environmental con-
taminants. Emphasis is placed on the relationship between the physio-
logical traits or microorganisms, and the physical and chemical properties of 
the contaminant and the remediation process. Case studies involving 
is-set bioremediation and reactor design are discussed. Prerequisite: 
CE 573 or CE 773 or equivalent, and five hours of chemistry. LEC

CE 873 Environmental Monitoring (2). A lecture-laboratory course to fa-
miliarize students with environmental monitoring techniques, regulations, 
and systems. Dimensions of environmental monitoring will be considered 
for air, soil, and water measurements. The major emphasis will be on mon-
itoring techniques and their principles, utility, and limitations. LEC

CE 874 Air Pollution Control (3). The design of control devices for 
the abatement of air pollutants, both gaseous and particulate, emitted from 
stationary sources. This includes the basic theory of control device 
operation and economic factors associated with each type of control de-
vice design. Prerequisite: CE 704 and CE 722. LEC

CE 875 Solid and Hazardous Wastes (3). Fundamental issues associated 
with solid and hazardous wastes are presented. Topics include government 
regulations, waste characteristics and quantities, the transport and attenua-
tion of wastes in the environment, risk assessment, health and safety treat-
ment and disposal techniques. Special emphasis is placed on hazardous 

catestric remediation strategies in terrestrial systems. Prerequisite: Graduate

KU is recognized as a leader in the use of radar for geologic mapping.

The Master of Civil, Environmental, & Architectural Engineering
standing in the Environmental Science and Engineering program, or consent of instructor. CE 770 and CE 773 are recommended. LEC

CE 876 Wastewater Treatment Plant Design (3). Application of physical, chemical and biological principles to the design of wastewater treatment systems for domestic and other wastewaters. Special emphasis is placed on biological treatment processes. Prerequisite: CE 576 or equivalent, or CE 575 or CE 773 or equivalent. LEC

CE 877 Water Treatment Plant Design (3). Application of physical, chemical, and biological principles to the design of water treatment plants and processes for domestic water supply from surface and ground water sources. Prerequisite: CE 774, or concurrent enrollment. LEC

CE 878 Quality Modeling (3). Fundamentals of physical and mathematical principles applied to air quality modeling; considered are factors that influence the choice and application of air quality models, as well as the interpretation of model output data. Practical applications are stressed using standard models. Prerequisite: CE 778 or equivalent and MATH 121 or CE 625, LEC

CE 879 Environmental Research Seminar (1). Discussion of current topics in environmental engineering and science and related fields by staff, students, and visiting lecturers. May be taken only once for credit. LEC

CE 881 Traffic Engineering II: (Traffic Operations and Management) (3). Two lecture periods and one laboratory period. A study of theory and practical applications of a number of traffic operational and management tools to achieve the convenient, safe and efficient movement of people and goods in urban street networks. Prerequisite: CE 781 or equivalent. LEC

CE 882 Geometric Design of Traffic Facilities (3). A study of basic principles in the design of freeways, urban street systems, parking terminal and other traffic facilities with emphasis on capacity, safety, level of service, and dynamic design concepts. Prerequisite: CE 781 or equivalent. LEC

CE 883 Urban Transportation Planning (3). A detailed study of the comprehensive transportation planning process which involves the determination of urban travel characteristics and needs from studies of traffic, social-economic, and environmental factors, as well as the applications of land use, trip generation, trip distribution, model split, and traffic assignment. Prerequisite: CE 781 or equivalent. LEC

CE 884 Principles of Pavement Design (3). A study of the scientific principles of pavement design as applied to airfield and highway pavements, considering loading conditions, stress distribution, and the properties of the various pavement components, for both rigid and flexible pavements. Prerequisite: CE 487 or equivalent. LEC

CE 885 Advanced Foundation Engineering (3). A study in the design, construction, and behavior of footings and rafts, piles and drilled shafts founded on soils and rocks. Prerequisite: CE 588 or equivalent. LEC

CE 886 Engineering Rock Mechanics (3). Rock properties and behavior; theories of failure of brittle, jointed, and anisotropic rocks; rock support; laboratory and in-situ testing techniques. Prerequisite: A course in physical geology and CE 487 or equivalent. LEC

CE 887 Earth Structures (3). Current theory and practice relating to the design of retaining walls, earth slopes, large embankments, and landslide mitigation. Application of geotechnics to the design of earth retaining structures and slope stabilization. Prerequisite: CE 588 or consent of instructor. LEC

CE 890 Advanced Special Problems (1-5). A directed study of a particular complex problem in the area of civil engineering or allied field. This course is for graduate students only. BSH

CE 892 Structural Engineering and Mechanics Seminar (1). Presentation and discussion of current research and design in structural engineering and engineering mechanics. LEC

CE 895 Special Topics: (1-3). A course or colloquium to present topics of special interest. LEC

CE 899 Thesis (1-15). An investigation of a special problem directly related to civil engineering. RSH


Construction Management Courses

CMGT 700 Construction Project Management (3). An introduction to the management of construction projects. This course addresses project delivery systems, project organization, estimating and bidding, planning and scheduling, legal and safety issues, among other topics. Prerequisite: Graduate standing or consent of instructor. LEC

CMGT 701 Construction Planning and Scheduling (3). An introduction to the planning and scheduling of projects both construction and design. Emphasis is placed on the critical path method including network development, production of time schedules, time-cost considerations, and the efficient utilization of resources. Manual and computer techniques are covered. Prerequisite: CMGT 400 or CMGT 700 and MATH 526 or EMGT 802, LEC

CMGT 702 Construction Equipment and Methods (3). This course introduces the student to the multitude of construction equipment employed in the projects. The underlying technology and engineering principles are reviewed. Principles of equipment selection, equipment utilization, and equipment economic analysis are covered. Prerequisite: CMGT 400 or CMGT 700, MATH 526 or EMGT 802, and ARCE 357 or EMGT 806, LEC

CMGT 703 Construction Quality, Productivity, and Safety (3). Operations analysis for work improvement in construction process, such as crew balancing, time-lapse photography, and planning techniques. Regulations, accident prevention, and safety management are covered. Prerequisite: CMGT 400 or CMGT 700, MATH 526 or EMGT 802, and ARCE 357 or EMGT 806, LEC

CMGT 704 Construction Estimating and Bidding (3). A study of the quantity survey, cost estimating, scheduling and project controls; construction operations; and methods of building construction. Prerequisite: CMGT 400 and CMGT 700, MATH 526 or EMGT 802, and ARCE 357 or EMGT 806, LEC

CMGT 800 Construction Seminar: (1-3). In-depth study of a special or contemporary issue in construction. Prerequisite: CMGT 700 and other courses as required by instructor or consent of instructor. LEC

CMGT 801 Directed Readings in Construction Management (1-3). Graduate-level directed readings on a topic in construction management mutually agreed on by the student and instructor. Intended to build on one or more of the core course topics: project management; planning and scheduling; equipment and methods; quality; productivity and safety; estimating and bidding; contracts, bonds, and insurance. CMGT 801 may be repeated for credit to a maximum of three hours in the degree program. Prerequisite: Approval of the course topic and deliverable(s) required. LEC

CMGT 802 Construction Contracts, Bonds, and Insurance (3). Legal doctrines relating to owners, design professionals, and contractors. Sources of law, forms of association, and agency. Contract formation, rights and duties, interpretation, performance problems, disputes, and claims. Surety bonds and insurance. Prerequisite: CMGT 400 or CMGT 700, MATH 526 or EMGT 802, and ARCE 357 or EMGT 806, LEC

CMGT 803 Construction Project Management (3). Graduation-level investigation requiring research of a topic in construction management mutually agreed on by the student and instructor. Intended to build on one or more of the core course topics: project management; planning and scheduling; equipment and methods; quality; productivity and safety; estimating and bidding; contracts, bonds, and insurance. CMGT 803 may be repeated for credit to a maximum of three hours in the degree program. Prerequisite: Approval of the course topic and deliverable(s) required. LEC

CMGT 804 Construction Planning and Scheduling (3). An introduction to the planning and scheduling of projects both construction and design. Emphasis is placed on the critical path method including network development, production of time schedules, time-cost considerations, and the efficient utilization of resources. Manual and computer techniques are covered. Prerequisite: CMGT 400 or CMGT 700 and MATH 526 or EMGT 802, LEC

CMGT 805 Construction Accounting and Finance (3). Project level cost control concepts and structure, time and cost integration, data collection and reporting, equipment cost, job overhead cost, and cost control. Integrating construction project level cost with construction company financial accounting and financial management. Prerequisite: CMGT 702 and CMGT 704 or consent of instructor. LEC

CMGT 895 Construction Management Project (1-3). Graduate-level investigation and report on a construction management topic mutually agreed on by the student and project advisor. This is a directed reading course in the Master of Construction Management (M.C.M.) degree program. Successful completion of this project requires acceptance of the written report and oral presentation to the student’s graduate committee. Prerequisite: Approval of project topic by project advisor. CMGT 700, CMGT 701, CMGT 702, CMGT 703, CMGT 704, CMGT 705, and nine elective credit hours. IND
Electrical Engineering and Computer Science

Chair: Costas Tsatsoulis
Eaton Hall, 1520 West 15th St., Suite 2001E
Lawrence, KS 66045-7621, www.eecs.ku.edu
(785) 864-4487; fax: (785) 864-3226
Graduate Studies Director: Arvin Agah,
2001 Eaton Hall, (785) 864-8821
Professors: Alexander, Allen, Demarest, Evans, Frost, S. Gauch, Gogneni, Grzymala-Busse, Minden, Petri, Prescott, Roberts, Rowland, Saidian, Shannugan, Tsatsoulis
Professors Emeriti: Ambler, Daugherty, Dean, Moore, Rummer, Schwepe, Smith, Talley, Unz, Wallace
Associate Professors: Agah, Andrews, Brown, Chakrabarti, J. Gauch, Hui, Kinnersley, Kong, Miller, Niehaus, Stiles
Associate Professor Emeritus: Doemland
Assistant Professors: Chen, Clark, James
Research Assistant Professors: Dawood, Deavours, Kanagaratnam

The department offers M.S. degrees in electrical engineering, computer engineering, and computer science; Ph.D. degrees in electrical engineering and computer science; and D.E. degrees in electrical engineering. The department also offers M.S. programs in computer science and computer engineering at the KU Edwards campus in the Kansas City area.

The department has specific plans of study in engineering of computer-based systems, human-machine interaction, intelligent systems, Internet engineering, principles of communication networks, remote sensing, software engineering, and telecommunication systems engineering. Class lists and teaching schedules are available in the graduate office or on the department Web site. Other plans of study can be constructed, in conjunction with a faculty adviser, to fit individual student needs.

Admission

Admission is open to college and university graduates whose previous records indicate an ability to succeed with graduate work in the chosen discipline.

An applicant for the M.S. program in electrical engineering or in computer engineering normally has a baccalaureate degree in electrical or computer engineering. An applicant for the M.S. program in computer science normally has a baccalaureate degree in computer science. However, a student with good preparation in some other field of engineering, mathematics, business, or science may qualify for one of the programs by taking appropriate additional undergraduate courses. Such courses normally do not count toward the graduate degree. Lists of specific prerequisite courses for each M.S. program are available in the graduate office or on the department Web site.

An applicant for the Ph.D. or D.E. program in electrical engineering normally has an M.S. in electrical or computer engineering. An applicant for the Ph.D. in computer science normally has an M.S. in computer science or computer engineering. Applicants with strong academic credentials may be admitted directly into one of the Ph.D. programs or the D.E. program without an M.S. in the requisite field.

Applicants must demonstrate evidence of aptitude for graduate work, as shown by suitable performance in undergraduate and any graduate course work, by aptitude test scores on the Graduate Record Examination, and by academic letters of reference. The GRE requirement can be waived where other data are unusually strong.

Unless the applicant's native language is English or the applicant has received a baccalaureate degree or higher from an accredited U.S. institution of higher education, he or she must meet the department's standard for the Test of English as a Foreign Language, which is higher than that of the Graduate School. Applicants for graduate teaching assistantships must obtain a satisfactory score on the Test of Spoken English.

The application deadline for fall admission is March 1. The deadline for spring admission is October 1. For full consideration for fellowships and assistantships, applications should be submitted two months before these deadlines. See page 137 for application fees.

Submit your application to the Graduate School online at www.graduated.ku.edu. Send original transcripts of all college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to

The University of Kansas
Department of Electrical Engineering and Computer Science
Graduate Office, Eaton Hall
1520 West 15th St., Suite 2001E
Lawrence, KS 66045-7621

M.S. Degree Requirements

The M.S. degree programs in electrical engineering, computer engineering, and computer science require a minimum of 30 credit hours of approved graduate course work and offer thesis and nonthesis options. A master's thesis should address an open problem in EECS. After evaluating current literature related to the problem of interest, students must design, build, and evaluate hardware or software systems or system models to prove or disprove their research hypothesis. Completing a thesis typically takes two semesters and produces results that could be published as a paper in conference proceedings or a professional journal. The nonthesis option requires a project that demonstrates the student's ability to design and build hardware or software systems or system models using current EECS tools or techniques. M.S. projects are not required to address an open research question and typically require one semester.

Central to each program is the development of each student's Plan of Study. The plan must be approved by a committee of three EECS Graduate Faculty members, one of whom serves as the student's thesis or project adviser. The plan must be developed and submitted to the graduate office during the first semester. The plan describes all course work to be taken and designates the option to be followed. Selection of courses is flexible. The student may select a set of required courses from one of several predefined areas or, working in conjunction with an adviser, customize the course selection. A current list of the areas and their requirements is available from the graduate office. The three EECS...
Graduate Faculty members who approve the plan verify that courses selected meet the guidelines and are appropriate for the M.S. degree program (CS, CoE, EE). Modifications to the plan must be approved by the student’s committee and submitted to the graduate office.

The course work must include a minimum of 15 credit hours of EECS courses numbered 700 or higher, excluding EECS 801 Directed Graduate Readings, EECS 891 Graduate Problems, and EECS 899 Master’s Thesis or Report. A maximum of 9 hours outside the department and a maximum of 6 hours numbered below 700 may be counted toward the 30 hours required for the degree. Courses numbered below 500 do not count toward the degree. All plans of study must include at least one semester of EECS 802 EECS Colloquium.

Subject to the general restrictions on M.S. course work, the thesis option requires a minimum of 24 credit hours of course work approved in a Plan of Study, 3 to 6 hours of EECS 899 Master’s Thesis or Report, and a general oral examination. For students completing the thesis option, EECS 891 Graduate Problems does not count toward the 30 hours required for the degree. Before thesis work begins, the student selects a thesis adviser who is a Graduate Faculty member of the department.

Subject to the general restrictions on M.S. course work, the nonthesis option requires a minimum of 27 semester credit hours of course work approved in a Plan of Study, 3 credit hours of EECS 891 Graduate Problems, and a general oral examination. For students completing the nonthesis option, EECS 899 Master’s Thesis or Report does not count toward the 30 hours required for the degree. Before thesis work begins, the student selects a project adviser who is a Graduate Faculty member of the department.

The general oral examination must be taken in the last semester. It is conducted by an examining committee consisting of the thesis or project adviser and at least two other Graduate Faculty members of the department selected by the student and adviser. The committee determines if the written thesis or report, oral presentation of research, and general knowledge of the discipline meet the department’s standards.

**Doctoral Degree Requirements**

Requirements for the doctoral degree programs include a written doctoral qualifying examination, course work, a research skills requirement, a comprehensive oral examination, a dissertation, and a final oral examination. Doctoral students also must take at least one semester of EECS 802 EECS Colloquium.

In the first semester, the student must select a major adviser and a committee on studies. This committee guides the student’s selection of courses, participates in the comprehensive and final examinations, and helps the student select a topic for research leading to the dissertation. Should the student’s interest change, the committee membership may be changed accordingly, with the approval of the department’s graduate studies committee.

The student’s committee consists of a minimum of five Graduate Faculty members and is chaired by the major adviser. The adviser and at least two other members of the committee must be members of the department Graduate Faculty. One committee member must be from outside the department.

Each doctoral student must pass a doctoral qualifying examination. It is a written examination taken within a single day that measures the student’s ability to comprehend and interpret technical literature in an unfamiliar topical area in the discipline. The examination is offered once a year, in the fall semester, and the student must take it at the first opportunity after completing the M.S. or after initial enrollment in the doctoral program. If failed, it may be retaken once, in the following spring semester. More detailed description of the examination, including samples, is available in the graduate office.

Programs leading to the Ph.D. in electrical engineering or computer science require a minimum of 18 semester credit hours of course work beyond the requirements for the M.S. degree, and a minimum of 18 credit hours of dissertation research. A minimum of 15 of these 18 hours must be EECS classes numbered 700 and above, excluding EECS 801 Directed Graduate Reading and EECS 891 Graduate Problems.

Students admitted to a doctoral program without an M.S. in the intended field also must meet the 24-hour course work requirement for the M.S. thesis option, for a total of 42 credit hours of course work. In this case, 30 of the 42 hours must be EECS classes numbered 700 and above, excluding EECS 801 Directed Graduate Reading and EECS 891 Graduate Problems.

For the D.E., at least 96 hours of graduate course work, specified by the committee, are required. These include approved master’s course work in the discipline, 30 hours of doctoral project work, and 12 to 18 hours of industrial internship. Deviations from this requirement can be approved by the graduate studies committee.

Waiver of required hours on the basis of graduate work done elsewhere may be allowed by petition to the graduate studies committee.

After passing the qualifying examination, each aspirant to the Ph.D. or D.E. degree must complete one of the following research skill requirements before being permitted to take the comprehensive examination. Selection of a particular requirement must be approved by the student’s committee. Selection of a nonstandard skill must also be approved by the graduate studies committee. The options are:

- Demonstration of a reading knowledge of one modern foreign language in which a substantial research literature relevant to the thesis or general degree area exists.
- Demonstration of proficiency in the use of computers to solve real science and engineering problems. The student must write, debug, and document a program to solve a relevant problem.
- Nonstandard skill. Demonstration of any other research skill that is acceptable to the student’s committee.

The student must take the doctoral comprehensive examination after passing the qualifying examination, completing the research skills requirement, and completing at least three-fourths of the course work requirement beyond the M.S. The student must complete the comprehensive examination before detailed work on the Ph.D. dissertation or D.E. project begins. Before the examination, the student must submit in writing to the committee a detailed proposal for a possible Ph.D. dissertation or D.E. project. In the comprehensive examination, the student is examined upon the proposal and on knowledge and insight in the specialization, and a dissertation committee is formed.

The examining committee for the comprehensive examination consists of five or more members of the Graduate Faculty, at least one of whom must be from the outside the department and at least three of whom are in the department. It normally includes the stu-
Remote sensing.

Researchers at KU’s Information and Telecommunications Technology Center specialize in bioinformatics, information technology, telecommunications, radar systems, and remote sensing.

EECS 502 Senior Design Laboratory I (3).
EECS 502 Senior Design Laboratory II (3).
EECS 510 Introduction to the Theory of Computing (3).
EECS 512 Electronic Circuits III (3).
EECS 541 Computer Systems Design Laboratory I (3).
EECS 542 Computer Systems Design Laboratory II (3).
EECS 546 Integrated Circuit Design (5).
EECS 560 Data Structures (3).
EECS 562 Introduction to Communication Systems (4).
EECS 580 Electrical Energy Conversion (3).
EECS 603 Information Processing with C++ (3).
EECS 611 Noise Reduction in Electronic Systems (3).
EECS 622 Microwave and Radio Transmission Systems (3).
EECS 625 Introduction to Radar (3).
EECS 628 Fiber Optic Communication Systems (3).
EECS 644 Introduction to Digital Signal Processing (3).
EECS 645 Computer Architecture (3).
EECS 647 Introduction to Database Systems (3).
EECS 648 Software Engineering Tools (3).
EECS 649 Introduction to Artificial Intelligence (3).
EECS 660 Fundamental of Computer Algorithms (3).
EECS 662 Programming Languages (3).
EECS 663 Introduction to Communication Networks (3).
EECS 665 Compiler Construction (3).
EECS 670 Introduction to Semiconductor Processing (3).
EECS 672 Introduction to Computer Graphics (3).
EECS 678 Introduction to Operating Systems (3).
EECS 690 Special Topics: (1-3).
EECS 692 Introduction to Computer Networking (1-3).
EECS 700 Special Topics: (1-5). Courses on special topics of current interest in electrical engineering, computer engineering, or computer science, given as the need arises. May be repeated for additional credit. Prerequisite: Variable. LEC.
EECS 713 High-Speed Digital Circuit Design (3). Basic concepts and techniques in the design and analysis of high-frequency digital and analog circuits. Topics include: transmission lines, ground and power planes, layer stacking, substrate materials, terminations, via, component issues, clock distribution, crosstalk, filtering and decoupling, shielding, signal launching. Prerequisite: EECS 312 and senior or graduate standing. EECS 420 recommended. LEC.
EECS 716 Formal Language Theory (3). Formal language generation by grammars, recognition by automata (finite and pushdown automata, Turing machines), and equivalence of these formulations; elementary containment and closure properties. Emphasis on context-free, deterministic context-free and regular languages. Prerequisite: EECS 510 or EECS 805 or equivalent. LEC.
EECS 720 Electromagnetics for Communications and Radar (3). Topics in electromagnetics relevant to wireless communication, optics and telecommunications, radar, and remote sensing. Subjects covered include space waves, guided waves, radiation and antennas, scattering, electromagnetic properties of materials, and optics. Prerequisite: EECS 420 or equivalent. LEC.
EECS 721 Antennas (3). Gain, Pattern, and Impedance concepts for antennas. Linear, loop, helical, and aperture antennas (arrays, reflectors, and lenses). Cylindrical and biconical antenna theory. Prerequisite: EECS 360, EECS 420, or EECS 720. Infrequently offered. LEC.
EECS 722 Mathematical Logic (3). Propositional calculus. First order theories and model theory. Elementary arithmetic and Gödel’s incompleteness theorems. (Same as MATH 722.) Prerequisite: MATH 765 or MATH 791, or equivalent evidence of mathematical maturity. LEC.
EECS 723 Microwave Engineering (3). Survey of microwave systems, techniques, and hardware. Guided-wave theory, microwave network theory, active and passive microwave components. The four-hour version of the course includes a laboratory. Prerequisite: EECS 420. LEC.
EECS 735 Automated Theorem Proving (3). Computer-based theorem-proving methods for selected domains such as plane geometry, symbolic integral calculus, and propositional calculus are reviewed. Mechanical theorem-proving procedures for the first-order predicate calculus are studied in depth. Includes resolution, semantic resolution, hyper-resolution, linear resolution, and paramodulation. Applications of these procedures to areas such as proofs of program correctness, deductive question answering, program solving, and program synthesis. Prerequisite: EECS 720 and a knowledge of mathematical logic equivalent to that supplied by EECS 210. Infrequently offered. LEC.
EECS 740 Digital Image Processing (3). This course gives a hands-on introduction to the fundamentals of digital image processing. Topics include: image formation, image transforms, image enhancement, image restoration, image reconstruction, image compression, and image segmentation. Prerequisite: EECS 672 or EECS 744. LEC.
EECS 741 Computer Vision (3). This course gives a hands-on introduction to the fundamentals of computer vision. Topics include: image formation, edge detection, image segmentation, line-drawing interpretation, shape from shading, texture analysis, stereo imaging, motion analysis, shape representation, object recognition. Prerequisite: EECS 672 or EECS 744. LEC.
EECS 742 Digital Video for Multimedia Systems (3). An introduction to digital video for multimedia systems. Topics include basics of digital video, capture and non-linear editing, video feature detection (temporal segmentation, motion estimation), content based video classification, video compression techniques and standards (JPEG-1, 2, 4, 7), video streaming and multimedia applications. Digital video tools and techniques will be utilized in several programming projects. Prerequisite: EECS 740 or equivalent. LEC.
EECS 744 Digital Signal Processing I (3). Discrete fourier transforms, design of digital filters, fast fourier algorithms, and its application to signal processing, description of DSP chips and introduction to quantization error. Prerequisite: EECS 360. LEC.
EECS 747 Mobile Robotics (3). Design, construction, and programming of mobile robots. Topics include computational hardware, designing and prototyping, sensors, mechanics, motors, power, robot programming, robot design principles, and current research in mobile robotics. LEC.
EECS 749 Knowledge-based Systems (3). General concepts of intelligent problem solving, rule-based systems, reasoning under uncertainty, associative networks, model-based reasoning blackboards, object-oriented systems, case-based reasoning, induction, neural networks. Students may not earn credit in both EECS 749 and CE 792. Prerequisite: EECS 649, EECS 730, or equivalent. LEC.
EECS 750 Operating Systems (3). An analytical treatment of the structures and theoretical foundations of operating systems and related systems, and of their design and implementation. Cooperating and distributed processes, memory and store management strategies, resource sharing and queuing, concurrency control, and systems software such as design methodologies, fault tolerance, languages for distributed programming, and communication protocols will also be discussed. Prerequisite: EECS 678, and one of EECS 461, MATH 526, or MATH 627. LEC.
EECS 752 Concurrent Software Systems (3). Introduction to design and implementation of concurrent (multithreaded, parallel, or distributed) software systems. The course examines problems and solutions common to all concurrent software, including interference, deadlock, consensus, resource allocation, coordination, global predicate evaluation, ways of expressing concurrency, concurrent I/O, debugging, fault tolerance, and heterogeneity. Prerequisite: EECS 448 and EECS 678. LEC.
EECS 753 Embedded and Real Time Computer Systems (3). This course will cover emerging and proposed issues in embedded and real time computer systems. Topics will include new paradigms, enabling technologies, and challenges resulting from emerging application domains. Prerequisite: EECS 645 and EECS 678. LEC.
EECS 755 System Requirements, Models, and Analysis (3). Modern software engineering techniques for modeling and analyzing software systems. Course coverage concentrates on pragmatic, formal modeling techniques that support predictive analysis. LEC.
EECS 762 Programming Paradigms (3). An investigation of alternative programming paradigms and their role in expressing expressiveness and style. Emphasis is on a comparative understanding of a spectrum of programming paradigms, with some facility in the use of at least one typical language representative of each paradigm studied. The course will review and investigate as appropriate imperative, functional, object-oriented, parallel, and logical programming paradigms, plus additional paradigms as relevant. Prerequisite: EECS 662 or EECS 807 or equivalent. LEC.
EECS 762 Programming Language Foundations (3). Relationship between syntax, static-semantic, and semantic structures. Attribute gramm-
murs as models for static-semantic information processing. Survey of formal
semantic models, including operational, denotational, and axiomatic examples,
including divide-and-conquer, dynamic programming, backtracking, branch-
and-bound heuristics; design and analysis of approximation algorithms; lower bound
theory; polynomial transformation and the theory of NP-Completeness; additional topics may be selected from artifi-
cial intelligence, natural language, string matching, and other combinato-
rial problems. Prerequisite: EECS 660 or EECS 805 or equivalent. LEC

EECS 764 Analysis of Algorithms (3). Models of computations and perfor-
measurements; asymptotic analysis of algorithms; basic design paradigms
including divide-and-conquer, dynamic programming, backtracking, branch-
and-bound heuristics; design and analysis of approximation algorithms; lower bound theory; polynomial transformation and the theory of NP-Completeness; additional topics may be selected from artificial intelligence, natural language, string matching, and other combinatorial problems. Prerequisite: EECS 660 or EECS 805 or equivalent. LEC

EECS 767 Information Retrieval (3). The objective of this course is to give
students a hands on introduction to information retrieval systems. Classic techniques and retrieval systems were described in the presentation of current research in the area. Topics include: file structures, term-weighting schemes, text preprocessing, World Wide Web search engines, multimedia retrieval systems, artificial intelligence applications. Prerequisite: EECS 647 or permission of instructor. LEC

EECS 773 Advanced Graphics (3). Advanced topics in graphics and graph-
ics systems. Techniques for scientific visualization and photorealistic render-
ing. Ray tracing; radiosity; volumetric rendering; antialiasing; animation. Special-
ized modeling techniques like particle systems and recursive constructions. Collaborative interaction and visualization. Prerequisite: EECS 672. LEC

EECS 774 Geometric Modeling (3). Introduction to the representation,
manipulation, and analysis of mathematical models of physical objects with
graphical and physical characteristics. Geometric CAD/CAM. Basic geometric analysis tools. Implicit and paramet-
ric representations of curves and surfaces. Curve and surface design and display techniques. Curve and surface intersections. Solid model representation. Boolean operations. B-spline and NURBS and the boundary evaluation algorithm. Geometric modeling system architectures. Project developed in C. Prerequisite: EECS 672. LEC

EECS 781 Numerical Analysis I (3). Finite and divided differences. In-
terpolation; numerical methods of integration; and integration as a quadrature. Numerical integration of ordinary differential equations. Curve fitting. (Same as MATH 781). Prerequisite: MATH 320 and knowledge of a programming language. LEC

EECS 782 Numerical Analysis II (3). Direct and iterative methods for solv-

EECS 800 Special Topics: (1-5). Advanced courses on special topics of current interest in electrical engineering, computer engineering, or computer science, given as the need arises. May be repeated for additional credit. Prerequisite: Variable. LEC

EECS 801 Directed Graduate Readings (0-3). Graduate level directed
readings on a topic in electrical engineering, computer engineering, or computer
science, mutually agreed on by the student and instructor. May be
repeated for credit on another topic. Prerequisite: Consent of instructor. RSH

EECS 802 Electrical Engineering and Computer Science Colloquium (0.2). A series of speakers from industry, govern-
ment, other universities, and research organizations on the university
campus presenting talks on various topics related to electrical engi-
neering, computer engineering, or computer science. Course will be graded Satisfactory/Fail. No prerequisite. LEC

EECS 810 Principles of Software Engineering (3). Practical concepts of software engineering with a focus on management issues as well as formal-
ism; modern software development processes; project management, requirements analysis, specification, design, implementation, testing, mainte-
nance; metrics and planning. The course is intended for EECS graduate students (focusing in software engineering or computer science) as well as others with a strong interest in software engineering methodologies. The
course will be project-intensive and will serve as a preparation for other graduate software engineering courses. Prerequisite: EECS 448 and EECS 560 or equivalent. Not open to students who have taken EECS 848. LEC

EECS 811 Software Project Management (3). Process management in the context of software development; building productive teams; measur-
ing performance; management issues in the creation, development, and
maintenance of software. Various estimate techniques, planning, risk anal-
ysis, project administration, and configuration management; fundamentals of software process modeling and definition; process improvement, frame-
works for quality software, process properties and measurements, capable-
ability maturity models, and intelligent application-driven applications of ITIL and SQA to software process improvement. Prerequisite: EECS 810. LEC

EECS 812 Software Requirements Engineering (3). Objectives, processes, and activities of requirements engineering and requirements management; classification of requirements; managing changing requirements; languages, notations, and methodologies; formal and semi-formal methods of presenting and validating the requirements; requirements standards; traceability issues. Prerequisite: EECS 810. LEC

EECS 814 Software Quality Assurance (3). Software quality engineer-
ing as an integral facet of software development, from requirements through de-
velopment, maintenance, and process improvement; how to carry out inspec-
tions, manual and automated testing techniques, fundamental con-
cepts in software testing; verification, validation, test case selection, test-
ing strategies such as black-box testing, integration testing, regression testing, system testing, acceptance testing, design for testability, fundamental concepts in software integration, configuration management, models for quality assurance; documentation, industry, and government standards for quality. Prerequisite: EECS 810. LEC

EECS 816 Object-Oriented Software Development (3). Abstract data
types, objects and classes, class associations, modeling with objects,
domain modeling, use case modeling, interactive and incremental de-
velopment, object-oriented analysis and design, frameworks, component-based software architecture, UML and Unified Process, reusability, design patterns, object orientation, and CORBA. Prerequisite: EECS 810. LEC

EECS 818 Software Architecture (3). Design methodologies, software architectures, architectural qualities, architectural styles; software archi-
tectural patterns and reuse; domain specific architectures; trade-
off analysis, software architecture case studies, architectural styles; the
analysis of an architecture. Prerequisite: EECS 810 and EECS 816. LEC

EECS 821 Adaptive Antenna Arrays for Communications and Radar (3). Description and analysis of antenna arrays that have dynamically ad-
justable patterns. Topics include phased array antennas, digital beam-
forming in element and beam space; adaptive beamforming algorithms; error effects; relationship between multiple access schemes such as FDMA, TDMA, DCM, and SDMA; mobile satellite, indoor, and radar
applications; and current antenna, transceiver, and ESP technology. Prereq-
quisite: EECS 420, EECS 461, and EECS 744 or equivalent. LEC

EECS 823 Microwave Remote Sensing (3). Description and analysis of basic microwave remote sensing systems including radars and ra-
diometers as well as the scattering and emission properties of natural
targets. Topics covered include plane wave propagation, antennas, ra-
diometers, atmospheric effects, radiometric targets, and calibration
for remote sensing applications. Prerequisite: EECS 420 and EECS 622. LEC

EECS 825 Radar Systems (3). Description and analysis of radars of vari-
dous types. Resolution in angle, range, and speed. Ambiguities. Re-
turn from point and area targets. Detection in the presence of noise and
fading. Tracking and MTI. Amplitude measurement. Imaging radars. Prerequisites: EECS 420, EECS 460, and EECS 461. LEC

EECS 828 Advanced Fiber-optic Communications (3). An advanced
course in fiber-optic communications. The course will focus on important aspects and applications of modern fiber-optic communica-
tions, ranging from photonic devices to systems and networks. Topics include: advanced semiconductor laser devices, external optical modu-
ators, optical amplifiers, optical fiber nonlinearities and their impact in
WDM and TDM optical systems, polarization effect in fiber-optic sys-
tems, optical receivers and high-speed optical system performance
evaluation, optical solution systems, lightwave analog and digital trans-
mission, SONET & ATM networking, and advanced multi-access lightwave networks. Prerequisite: EECS 628 or equivalent. LEC

EECS 830 Advanced Artificial Intelligence (3). A detailed examination of
computer programs and techniques that manifest intelligent behavior, exam-
bles drawn from current literature. The nature of intelligence and in-
telligent behavior. Development of, improvement to, and general-
erization from artificially intelligent systems, such as theorem-provers,
pattern recognizers, language analyzers, proof checkers, decision mak-
ers, decision-makers, planners, and learners. Prerequisite: EECS 730. LEC

EECS 833 Neural Networks and Fuzzy Systems (3). Fundamental the-
oary of adaptive systems. Introduction to Artificial Neural Networks (ANN)
and learning algorithms, neural computers, pattern classification using
neural networks, and hopfield networks. Introduction to fuzzy sets and fuzzy
relations, fuzzy-model-based classification and control, fusion of fuzzy
models with neural networks, and applications of fuzzy-neural networks in
engineering problems. Prerequisite: Permission of instructor. LEC

EECS 837 Data Mining (3). Extracting data from data bases to data ware-
houses. Preprocessing of data: handling incomplete, uncertain, and vague
data sets. Discretization methods. Methodology of learning from ex-
amples: rules of generalization, control strategies. Typical learning systems:
ID3, AQ, C4.5, and LERS. Validation of knowledge. Visualization of knowl-
edge bases. Learning from observation, conceptual clustering. Data min-
ing using neural nets. Genetic algorithms. Data mining using heuris-
tic approaches based on probability theory, fuzzy set theory, and rough
set theory. Prerequisite: EECS 638 or permission of instructor. LEC

EECS 844 Digital Signal Processing for Communications and Radar (3). This course focuses on the design and implementation of commu-
nication and radar systems using digital signal processing algorithms. Subjects include digital filters, modulation and demodulation algo-
rithms, subsampling techniques, adaptive algorithms for filters and an-
tennas, DSP microprocessors, and other system level issues. Prerequisite:
EECS 744 or permission of instructor. LEC

EECS 845 Implementation of High-performance Integrated Networks (3). Processing requirements for integrated networks and associated
applications. Principles of VLSI architectures. Overview of selected topics,
including scrambling and descrambling, synchronization, cell switching, routing, bandwidth shaping and policing, encryption, and de-
cryption. Implementation of network functions using high performance spe-

EECS 964 Simulation of Communication Systems (3). A study of the design and implementation of simulation methodologies for modeling, performance analysis, and congestion control techniques for Internet (IP) networks. Topics include: an introduction to queueing theory; analysis of TDMA systems; modeling and analysis of networks of queues; analysis of composition and flow control algorithms; analysis of routing algorithms; analysis of bus and ring networks. Prerequisite: EECS 861. LEC

EECS 865 Wireless Optical Networks (3). Introduce method-ologies for multiwavelength optical network analysis, design, control, and survivability. Prerequisite: EECS 863. LEC

EECS 895 Wireless Communication Systems (3). The theory and practice of the engineering of wireless telecommunication systems. Topics include cellular principles, mobile radio propagation (including indoor and outdoor channels), radio link calculations (including Rayleigh, Rician, and other models), packet radio, radio equalization, diversity, error correction coding, spread spectrum, multiple access techniques (including time, frequency, and code), and wireless networking. Current topics of interest will be covered. Corequisite: EECS 861. LEC

EECS 896 Detection and Estimation (3). Detection of signals in the presence of noise and estimation of signal parameters. Narrowband signals, multiple observations, signal detectability and sequential detection. Structure and performance of the receiver. Discrete-time processing and filtering. Prerequisite: EECS 861. LEC

EECS 967 Mathematical Optimization with Communications Appli-cations (3). A mathematical study of various methods for minimizing (or maximizing) functions that arise in communications. Prerequisites: EECS 861 or EECS 863. LEC

EECS 897 Information Theory and Coding II (3). Advanced topics in information theory and coding. Current research trends. New developments in error correction coding, data compression, special channels, and combined modulation/coding. Applications from telecommunications, economics, computer science, physics, the biological sciences, and other areas. Lectures by the instructor. Class discussion. Readings from the literature. Student papers and presentations. Prerequisites: EECS 869. LEC

EECS 998 Post-Master’s Research (1-6). RSH

EECS 999 Doctoral Dissertation (1-12). THE

Career opportunities for engineers include a wide range of positions with business, industry, and government.

The Anschutz Library brings together scientific resources from many areas.

Some departments do not offer all courses in any one semester. See www.registrar.ku.edu/timetable for current course offerings.

Electrical Engineering & Computer Science; Engineering Management

Admission
Applications are invited from qualified graduates of accredited programs in engineering, science, mathematics, and computer science. All applicants must have a strong mathematics and science foundation (6-8 hours of calculus, 3 hours of differential equations, 6 hours of physics, and 3 hours of chemistry) as well as courses or demonstrated ability in statistics, probability, and linear algebra. The Graduate Record Examination is not required. Students from other KU programs taking EMGT classes should discuss prerequisites with the EMGT instructor or director before enrollment.

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG

Electrical Engineering & Computer Science; Engineering Management

The University of Kansas
Kansas City, Kansas 66106-2901
(913) 897-8000
www.ku.edu

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Applicants must fulfill the general requirements of the Graduate School (a cumulative undergraduate grade-point average of 3.0 on a 4.0 scale or higher for regular admission and of 2.75 or higher for probationary admission). Applicants must also have at least two years of full-time, post-baccalaureate experience in a technological environment.

A completed application includes the application fee, application form, résumé, two original transcripts, and three recommendation forms. International students also must meet English, visa, and financial requirements. Application packets, course schedules, faculty biographical information, and other program information may be requested from the EMGT office or downloaded from our home page.

Submit your application to the Graduate School online at www.gradute.ku.edu. Send original transcripts of all college and university course work to

**The University of Kansas**
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

**The University of Kansas Edwards Campus**
Engineering Management
12600 Quivira Rd.
Overland Park, KS 66213-2402

**M. S. Degree Requirements**

A minimum of 33 credit hours is required, including 18 hours of core courses, 12 hours of electives, and a 3-hour field project.

**Core Courses** (18 hours)

- EMGT 806 Finance for Engineers
- EMGT 809 Personal Development for the Engineering Manager
- EMGT 810 Applications of Quantitative Analysis in Decision Making
- EMGT 811 Engineering Systems Simulation
- EMGT 813 Design Project Management in Professional Practice
- EMGT 823 Management of Internal Engineering Projects
- EMGT 844 Managing Software Development Projects
- EMGT 821 Strategic Analysis of Technology Projects

**Electives** (12 hours). These may be drawn from three areas:

1. **Engineering Management**
   - EMGT 800 Special Topics in Engineering Management
   - EMGT 801 Management Theory and Practice for Engineering Managers
   - EMGT 802 Statistical Analysis and Prediction of Engineering Systems
   - EMGT 803 Technological Forecasting and Assessment
   - EMGT 804 Business Development and Marketing of Professional Services
   - EMGT 805 Management of Innovation
   - EMGT 807 Labor and Employee Relations for the Engineering Manager
   - EMGT 808 Quality Management
   - EMGT 812 Law and the Design Professional
   - EMGT 814 Financial and Managerial Accounting for the Engineer
   - EMGT 824 Product Marketing for Engineering Managers
   - EMGT 840 Systems Approach to Engineering
   - EMGT 848 Information Technology for Management
   - EMGT 850 Environmental Issues for Engineering Managers
   - EMGT 854 Management of Business Intelligence and Security for Engineering Managers
   - EMGT 860 Special Problems in Engineering Management
   - EMGT 862 Manufacturing Systems Integration
   - EMGT 867 Advanced Operations Management

2. **Graduate courses** from any EMGT-approved technical discipline for which the student meets prerequisite requirements for enrollment—500 to 800 level.

3. **Business.** Any M.B.A. course for which the student meets prerequisites for enrollment.

**Field Project** (3 hours)

- EMGT 835 Field Project (M.S.)

**The candidate must pass a final oral examination defending the nonthesis project and demonstrating a working knowledge of engineering management.**

- **Engineering Management Courses**

  - EMGT 608 Principles of Engineering Management
  - EMGT 800 Special Topics in Engineering Management
  - EMGT 801 Management Theory and Practice for Engineering Managers
  - EMGT 802 Statistical Analysis and Prediction of Engineering Systems
  - EMGT 803 Technological Forecasting and Assessment
  - EMGT 804 Business Development and Marketing of Professional Services
  - EMGT 805 Management of Innovation
  - EMGT 806 Finance for Engineers
  - EMGT 807 Labor and Employee Relations for the Engineering Manager
  - EMGT 808 Quality Management
  - EMGT 810 Applications of Quantitative Analysis in Decision Making

Applied statistical methods to engineering systems will be introduced in this course for analyzing engineering and management systems. Emphasis will be given to applied regression analysis, analysis of variance, analysis of time dependence by smoothing, Bayes method, time series analysis, auto-regressive moving averages and forecasting model.

Prerequisite: Skills in probability, statistics, and computer application.

- EMGT 803 Technological Forecasting and Assessment
  - EMGT 804 Business Development and Marketing of Professional Services
  - EMGT 805 Management of Innovation
  - EMGT 806 Finance for Engineers
  - EMGT 807 Labor and Employee Relations for the Engineering Manager

This course is an introduction to labor relations and human resources, including employment practices in unionized and non-union organizations. The course will examine labor relations, human relations and collective bargaining with emphasis on the negotiation and administration of labor agreements. Included will be a survey of the historical, legal, and structural environments that influence the collective bargaining process. Research topics focus on some of the most important issues in the workplace: protecting jobs, increasing productivity, computerization, worker participation, expanding and declining labor markets, and new methods of decision making in the human resources field.

- EMGT 808 Quality Management

The overwhelming challenge that faces the U.S. today is the need to regain its competitive position in the world marketplace. This course offers a broad view of Quality Management in that it focuses on the managerial aspects of quality, rather than just the technical. For example, students will learn the Malcolm Baldridge award criteria which focuses on leadership, data analysis, human resources, quality assurance, quality results, and customer satisfaction. In addition, a review of the theory and approaches of the major quality leaders such as Deming, Juran, and Crosby will be covered. Practical applications of FQM concepts in a technological environment will be stressed throughout the course.

- EMGT 809 Personal Development for the Engineering Manager

Includes the study of theories, tests for, and objectives of engineering and management ethics. Explores personal values. Measures personal profile and preferred communication style for each student. Includes management of stress, time, and career. Each student prepares career and personal development plans. Managerial writing and communication skills are developed through weekly projects including report and proposal preparation, internal correspondence concerning praise and reprimand, and organizational policy preparation. Interpersonal and nonverbal communication styles are studied. Lecture and laboratory will involve instructor-assisted peer mediation of topics after introduction of constructive techniques of interpersonal communication.

- EMGT 810 Applications of Quantitative Analysis in Decision Making

This course emphasizes the use of general system theory, classical optimization and optimality conditions, model development, and theory and application of mathematical programming, to include: linear programming,
Engineering Management


dynamic programming, queuing models, integer and non-linear programming, and introduction to decision analysis. Prerequisite: Elementary skills in linear algebra, probability, and computer application. LEC

EMGT 811 Engineering Systems Simulation (3). Methods of developing, implementing, and using computer simulations for management processes such as inventory control, waiting lines, project monitoring, and capital investment decisions are covered. Extensive use is made of simulation languages and integrates digital and graphic-supported gaming and decision analysis. Engineering systems and chemical processes are studied under deterministic and stochastic conditions. Two hours lecture, three hours laboratory per week. LEC

EMGT 812 Law and the Design Professional (3). This course covers: legal doctrine related to designers, design professionals, and contractors; sources of law, forms of association, and agency; contracts, including formation, rights and duties, interpretation, performance problems, dismissal, and claims; standard of care and the management of construction claims; duties and obligations of the design professional, the owner, and the contractor; surety bonds and insurance. Prerequisite: Admission to graduate study in engineering or architecture. LEC

EMGT 813 Design Project Management in Professional Practice (3). Includes planning, organizing, staffing, directing, and controlling design projects. Treats those topics from viewpoints of profit, cost control, client satisfaction, and project team human relations. Also covers delegation, motivation, team building, performance review, resolution, and group dynamics. Presents the project manager's job from an augmented model of the Blake-Mouton grid. Prerequisite: Admission to graduate study in engineering or architecture. LEC

EMGT 815 Financial and Managerial Accounting for the Engineer (3). The elements of the accounting cycle are defined so as to help the student understand the process from the balance sheet for the last period through the journal, ledger, income statement, trial balance and an adjusted balance for the current period. There is a heavy emphasis on the definition and significance of accounting terminology. The communication interfaces between engineers and the controller's office are examined as are recent developments in cost accounting. Prerequisite: Admission to graduate study in architectural, construction, engineering or technology management, or permission of instructor. LEC

EMGT 821 Strategic Analysis of Technology Projects (3). A study of the economic feasibility of competing engineering projects including the application of break-even analysis, decisions under uncertainty, decision trees, stochastic models, risk vs. return, and forecasting. A study of the financial figures of merit used to evaluate competing engineering projects including the discount rate of return method, the accounting rate of return, the operating return method, return on equity, earnings per share, margin on sales, selling price of stock, corporate credit rating, total sales, market share, market analysis, and performance evaluation. A study of the strategic evaluation of a project including the proposed product or service, the organization, the environment, and the venture in general. Prerequisite: Admission to the M.S. Engineering Management program or permission of instructor. LEC

EMGT 823 Management of Internal Engineering Projects (3). The purpose of this course is to introduce the student to all aspects of managing a project within a company or organization. The entire project life cycle will be broken into its separate tasks, and many project considerations will be discussed including material procurement, working with contractors and consultants, selecting software, and managing the project team. The course will focus on how to manage project scope, schedule, and budget, and resources using personal computer software. A semester project is required presenting an example of project management or investigating some aspect of project management in detail. LEC

EMGT 824 Product Marketing for Engineering Managers (3). Basic principles applicable to engineering managers in the production- or operations-based enterprise. Includes a broad overview of the major components of marketing (competition, product, price, promotion, and distribution). Also describes the integration of those components into the marketing plan. The students will develop a group marketing plan for an agreed-upon product. Prerequisite: Admission to a graduate program in engineering or Pittsburgh State's technology management program. LEC

EMGT 830 Case Studies in Engineering Management (3). A capstone course for the program which provides an integration of the material presented in the other courses through the utilization of several engineering management case studies. Prerequisite: Completion of a minimum of 21 hours in EMGT/ENG and/or a project in the Engineering Management program. LEC

EMGT 835 Field Project (M.S.) (1-3). A problem in engineering management, the satisfactory completion of which satisfies the project requirement for the degree of Master of Science in Engineering Management. THE

EMGT 840 Systems Approach to Engineering (3). This is a first course at the graduate level introducing the formal methods and processes in bringing complex systems into being and improving existing systems. Systems include both products and services. Emphasis is placed on the definition of customer needs, the entire life cycle of systems, and the analysis of external specification methods, the value cost ratio and the management of the systems engineering process. LEC

EMGT 844 Managing Software Development Projects (3). This course investigates the area of managing software development and presents the management process as a means of optimizing business considerations and project demands. Uncertainties in product/service specifications, technical, cost, and computer application. LEC

A Directory of Courses appears on pages 5-6 of this catalog.
Engineering Physics

Chair: Stephen J. Sanders
Malott Hall, 1251 Wescoe Hall Dr., Room 1082
Lawrence, KS 66045-7582, www.physics.ku.edu
(785) 864-4626

No graduate program in engineering physics is offered. The courses listed below are applicable toward degrees in related areas.

* Engineering Physics Courses
  EPHX 501 Honors Research (1-4).
  EPHX 503 Undergraduate Research (1-4).
  EPHX 516 Physical Measurements (4).
  EPHX 518 Mathematical Physics (3).
  EPHX 521 Mechanics I (3).
  EPHX 531 Electricity and Magnetism (3).
  EPHX 536 Electronic Circuit Measurement and Design (4).
  EPHX 600 Special Topics in Physics and Astrophysics: ___ (3).
  EPHX 611 Introductory Quantum Mechanics (3).
  EPHX 615 Numerical and Computational Methods in Physics (3).
  EPHX 621 Mechanics II (3).
  EPHX 623 Physics of Fluids (3).
  EPHX 631 Electromagnetic Theory (3).
  EPHX 641 Introduction to Nuclear Physics (3).
  EPHX 655 Optics (3).
  EPHX 661 Introduction to Elementary Particle Physics (3).
  EPHX 671 Thermal Physics (3).
  EPHX 681 Concepts in Solids (3).
  EPHX 691 Astrophysics I (3).
  EPHX 693 Gravitation and Cosmology (3).

Mechanical Engineering

Chair: Ronald L. Dougherty
Learned Hall, 1530 West 15th St., Room 3013
Lawrence, KS 66045-7699, (785) 864-3181
www.engr.ku.edu/me

Graduate Adviser: Bedru Yimer,
3031C Learned Hall, (785) 864-2982

Professors: Bell, Burmeister, Dougherty, Faddis, Surana, Yimer

Professors Emeriti: Barr, Bauleke, Forman, Gyorg, Reese

Associate Professors: Luchies, Sorem, TenPas, Umholtz
Assistant Professors: Fischer, Friis, Maletsky, Wilson
The department offers Master of Science in mechanical engineering, Doctor of Philosophy, and Doctor of Engineering degrees. Areas of study in mechanical engineering include computer-integrated manufacturing, computational mechanics and finite element analysis, heat transfer and thermal-fluid system design, mechanical system design and analysis, control systems, and biomechanics and biomaterials.

Admission

To qualify for any of the graduate programs, a student generally must have earned an accredited baccalaureate degree in mechanical engineering. A student with good preparation in some other engineering discipline, or a related field such as physics, may qualify by taking appropriate undergraduate courses specified by the graduate admissions committee.

For admission to regular status, the student must have an undergraduate grade-point average of at least B (3.0 on a 4.0 scale). For students whose undergradu-
The comprehensive examination has written and oral components. The written component contains a detailed literature review of existing research in the proposed area as well as a description of the work or research plan to be completed for the dissertation. During the oral examination, the aspirant must defend the proposed work or research plan and demonstrate proficiency in the specialization.

A minimum of 84 credit hours beyond the bachelor’s degree is required for a Ph.D. For students with a 30-credit-hour master’s degree in mechanical engineering, a minimum of an additional 24 hours of graduate course work and a 50-hour dissertation are required. If a master’s degree is not sought, 48 hours of graduate course work beyond the bachelor’s degree and a 36-hour dissertation are required. A minimum of 9 credit hours of the 24 (or 21 of the 48) must be mechanical engineering courses numbered 700-990 (excluding ME 702, ME 899, and ME 901). A minimum of 9 credit hours of advanced mathematics beyond the bachelor’s degree is required. Following completion of 18 credit hours of course work beyond the master’s degree, the student must pass a comprehensive examination.

The Ph.D. student must demonstrate a proficiency in at least one research skill area. Since the needs of each student differ, the research skills are determined with the advice and approval of the advisory committee. Possible research skill areas include foreign language and computer science.

A dissertation is required of each doctoral candidate. The Ph.D. dissertation presents the results of the student’s research investigation. It is expected to make an original contribution to technical knowledge of sufficient quality to merit publication in refereed journals. A final oral examination or a defense of the dissertation is required.

**D.E. Degree Requirements**

The degree of Doctor of Engineering is granted upon completion of at least 90 credit hours of post-baccalaureate work. The minimum course work requirement is 54 credit hours, which must include

- Engineering design ................................. 9 cr. hrs.
- Engineering management .......................... 9 cr. hrs.
- Mathematics ........................................ 9 cr. hrs.

The remaining 27 credit hours of course work are selected to meet the student’s interests and goals, subject to the approval of the advisory committee. Course work required for a master’s degree may be included in this 54-hour total if approved by the advisory committee. A minimum of 21 credit hours of mechanical engineering courses numbered 700-990 (excluding ME 702, ME 899, and ME 901) must be included. In addition, the following research components are required for the degree:

- Internship ......................................... 12 cr. hrs.
- Project ............................................... 24 cr. hrs.

Each student must spend at least 12 consecutive months of approved internship in industry or government. One credit hour is given per month of approved internship experience, provided the student is enrolled in ME 901. The internship is intended to involve the student at a level that promotes experience in project management. Students must pass a qualifying examination, a comprehensive examination, and a final oral examination. (See Ph.D. Degree Requirements.)

**Financial Aid**

Various types of financial aid are available, including teaching and research assistantships and graduate fellowships. Students holding teaching assistantships for 40-percent time or more receive tuition waivers but must pay campus fees. Students holding research assistantships may pay reduced tuition. Fellowships with stipends plus fees may be available for particularly outstanding students. Applications for fellowships or assistantships should be submitted before the academic year for which the fellowship or assistantship is desired. Similarly, applications for assistantships should be submitted two months before the desired entry date.

**Mechanical Engineering Courses**

- ME 501 Mechanical Engineering Design Process (3).
- ME 508 Numerical Analysis of Mechanical Engineering Problems (3).
- ME 510 Fluid Mechanics (3).
- ME 512 Introduction to Thermal Engineering (3).
- ME 520 Dynamics of Machinery (3).
- ME 528 Mechanical Design I (3).
- ME 550 Mechanical Engineering Experimentation (2-3).
- ME 590 Special Topics ................................ (1-5).
- ME 612 Heat Transfer (3).
- ME 627 Automotive Design (3).
- ME 628 Mechanical Design II (3).
- ME 633 Basic Biomechanics (3).
- ME 636 Internal Combustion Engines (3).
- ME 637 Steam Power Plants (3).
- ME 640 Design Project (1).
- ME 641 Design Project Option A (2-3).
- ME 642 Design Project Option B (3).
- ME 643 Design Project Option C (3).
- ME 644 Design Project Option D (2-3).
- ME 656 Thermal System Design (3).
- ME 682 Control Systems (3).
- ME 696 Design for Manufacturability (3).
- ME 701 The Finite Element Method for Stress Analysis (3).
- ME 702 Mechanical Engineering Analysis (3).
- ME 708 Microcomputer Applications in Mechanical Engineering (2-3).
- ME 710 Advanced Fluid Mechanics (3).
- ME 711 Bearings and Bearing Lubrication (3).
- ME 712 Advanced Engineering Thermodynamics (3).

**KU’s science and engineering research expenditures increased by 9.7 percent to $12 million from $92.9 million in fiscal year 2003.**
ME 720 Advanced Dynamics of Machinery (3). Dynamics of particles and of rigid bodies with advanced engineering applications; general-ized coordinates; Hamilton's principles; Hamilton-Jacobi theory. Prerequisite: ME 520. LEC

ME 731 Convective Heat and Momentum Transfer (3). The formulation and solution of steady and unsteady convective heat, mass, and momentum transfer problems. Topics include boundary layers, duct flows, natural convection with and without phase change, development of transport properties, numerical methods. Prerequisite: ME 612 or equivalent. LEC

ME 732 Computational Fluid Dynamics and Heat Transfer (3). The fundamentals of the finite-difference method are presented and applied to the formulation of numerical models for heat and momentum transfer. The accuracy, stability, and computational efficiency of different algorithms are analyzed. Computer programs are developed for classical benchmark problems. Prerequisites: ME 612 or equivalents. LEC

ME 733 Gas Dynamics (3). A study of the thermodynamics and fluid dynamics of gaseous media. Emphasis is placed on the rigorous application of conservation laws to represent physical processes. Classical and statistical models for the thermodynamic and transport properties are examined. Applications include determination of gas properties, wave propagation, and high-speed flow. Prerequisite: ME 412 and ME 510 or equivalents. LEC

ME 740 Mechanical Vibrations (3). Linear vibration theory. Lumped parameter approximations and distributed systems. Generalized properties and numerical solutions. Prerequisite: ME 520 and ME 528. LEC

ME 750 Biomechanics of Human Motion (3). Fundamental concepts of anatomy and physiology are introduced but the focus is on the biomechanics of human motion. Human body segment kinematics and joint kinematics are analyzed. Introduction to muscle modeling, application of isometric and isokinetic tests. Prerequisite: ME 612 or equivalents. LEC

ME 751 Experimental Methods in Biomechanics (3). This course will focus on methods of experimental measurement and computational modeling used in biomechanics. Instrumentation used to measure three-dimensional motion, ground reaction forces, center of pressure and EMG measures are considered. Methods used for inverse dynamics, direct dynamics and simulation are introduced. Corequisite: ME 520. LEC

ME 753 Bone Biomechanics (3). Provides an in-depth knowledge of bone as a living mechanical system. Topics include the microstructure, biology, mechanical properties, mechanical modeling, adaptation of bone to the mechanical environment, and its simulation. Students assignments include experiments on bone, finite element analysis laboratory, and bone remodeling simulations. Prerequisite: ME 311 or equivalent. LEC

ME 754 Continuum Mechanics for Soft Tissues (3). An introductory course in the analysis of the mechanical behavior of materials modeled on the continuum assumption. The course will provide background on soft tissue properties and will focus on the tools necessary to model soft tissues, including the essential mathematics, stress principles, kinematics of deformation and motion, and viscoelasticity. Prerequisite: ME 311 or equivalent. LEC

ME 760 Biomedical Product Development (3). Introduction to methods of taking medical product inventions from conception to initial stage production. Students work in cross-functional teams to investigate development potential of inventions. Topics covered include product development processes, regulatory issues with the FDA, quality system requirements, SBIR/STTR funding pathways, biomaterial and biomechanics issues in medical product design, and ethical considerations. Prerequisite: Senior or graduate student standing in engineering, business, industrial design, or an applicable life science field and permission of instructor. LEC

ME 761 Theory of the Finite Element Method (3). Finite element method for solid mechanics, heat transfer, fluid mechanics, and dynamics. Introduction to finite element principles, and solution of problems. Prerequisite: ME 508 or equivalent. LEC

ME 763 Introduction to Composite Materials (3). A basic treatment of the analysis, design, and manufacture of fibrous composite materials. Laminated fiber reinforced composite materials are examined in detail. Properties of the constitutive materials are studied. Laminated plate and shell theories are discussed as well as computer applications. Laboratory works consist of the fabrication and testing of various laminated composite specimens. LEC

ME 765 Biomaterials (3). An introductory course on biomaterials science and biocompatibility of materials in the design of biomaterials implants. Topics include ethical considerations in biomaterials research and the role of the FDA in medical device design are also presented. Prerequisite: ME 508 or equivalent. LEC

ME 770 Conductive Heat Transfer (3). The formulation of steady and unsteady-state convective heat transfer problems and their solution by analytical and numerical methods. Prerequisite: ME 612 or equivalent. LEC

ME 774 Radiative Heat Transfer (3). The formulation of steady and unsteady radiation heat transfer problems and their solution by analyti-cal and semi-analytical methods and of radiative heat transfer. Topics include but not limited to digital control methods, energy-based modeling, and state-space methods. Prerequisite: ME 682. LEC

ME 780 Kinematic Synthesis of Mechanisms (2-3). A study of methods of synthesis of mechanisms from kinematic specifications. Prereq-uisite: ME 520. LEC

ME 782 Advanced Control Systems (3). Advanced methods in the modeling, analysis and design of linear and nonlinear control systems. Topics include but not limited to digital control methods, energy-based modeling, and state-space methods. Prerequisite: ME 682. LEC

ME 790 Special Topics: (1-5). Advanced courses on special topics of current interest in mechanical engineering. Given as the need arises. Prerequisite: Approval of instructor. RSH

ME 796 System Design and Analysis (3-9). Design and analysis of sys-tems and components, using both individual and team projects. Engineer- ing experience in planning, execution and reporting on selected practical engineering situations. Prerequisite: ME 628 or equivalent. LEC

ME 798 Advanced Microprocessor Applications (3). Advanced design and development of microprocessor based mechanical systems. Individual and team projects involving the development and integration of hardware and software into a “smart” system which includes the sensing, processing, and controlling functions are accomplished. Emphasis is on the use of the latest sensors and development tools. Prerequisite: Permission of instructor. LEC

ME 860 Advanced Mechanical Engineering Problems (1-3). An anal- lytical or experimental study of problems of theoretical or practical interest to a student and faculty member and which is intended to de-velop students capability for independent research or application of en-gineering science and technology. Minimum credit toward any degree is three hours unless waived in writing by the departmental chairperson. Prerequisite: Approval of instructor. RSH

ME 862 Finite Element Method for Transient Analysis (3). Advanced treatment of dynamic and transient response for linear and nonlinear problems in solid mechanics. Formulation and solution of time depend-ent linear and nonlinear field problems using finite element tech-niques. Prerequisite: ME 761 or equivalent. LEC

ME 863 Mechanics of Composite Materials (3). Introduction to the basic concepts of the mechanical behavior of composite materials. The mechanics of laminated fiber reinforced composite materials are devel-oped as a continuing example. Prerequisite: ME 528 or equivalent. LEC

ME 890 Special Topics (1-5). Advanced courses on special topics of current interest in mechanical engineering, given as the need arises. Prerequisite: Approval of instructor. RSH

ME 899 Independent Investigation (1-9). An analytical or experimental in-vestigation of an engineering problem requiring independent research. If the thesis option is selected six credit hours are required for the degree. If the project option is selected three credit hours are required for the degree. (See requirements for the Master of Science degree for additional details.) THE

ME 901 Doctor of Engineering Internship (1-12). A twelve month inter-ernship in industry or government for doctor of engineering candi-dates. The student is supervised by a person at the student's workplace. Bimonthly progress reports are to be filed with the student's advisory committee. One credit hour per month of internship. FLD

ME 961 Finite Element Method for Nonlinear Problems in Solid Me-chanics (3). Advanced treatment of finite element methods for structural analysis including material and geometric non-linearity as well as large strain deformation. Prerequisite: ME 761 or equivalent. LEC

ME 962 p-Approximation, Error Estimation, and Other Advanced Topics in the Finite Element Method (3). Advanced treatment of p-Approximation, error estimation, and other advanced topics in the finite element method. Prerequisite: ME 761 or equivalent. LEC

ME 963 Finite Element Method in Fluid Dynamics (3). One, two, and three dimensional finite element formulation for steady and unsteady fluid flows. Finite element formulations for non-isothermal, non-Newtonian flows, and treatment of transport problems. Prerequisite: ME 761 or equivalent. LEC

ME 964 Advanced Topics in the Finite Element Methods for Fluid Dynamics (3). Steady state and time dependent finite element formula-tions for one, two, and three dimensional low and high speed compressible flows, visco-elastic fluid flows, chemically reacting flows, and fluid flows with phase change; analysis of accuracy, stability, and adaptive processes. Prerequisite: ME 963. LEC

ME 990 Special Topics (1-5). Advanced courses on special topics of current interest in mechanical engineering, given as the need arises. Prerequisite: Approval of instructor. RSH

ME 999 Independent Investigation (1-18). An analytical or experiment-al investigation of an engineering problem requiring independent re-search. Thirty credit hours as a minimum are awarded for the Ph.D. dis-sertation. An original contribution suitable for publication in a refereed journal is required of Ph.D. candidates. Twenty four credit hours as a minimum are awarded for the D.E. project. The D.E. candidate will have technical and supervisory responsibility for a multiperson project and a formal final project report suitable for publication is required. THE
GRADUATE STUDIES IN ART & DESIGN .... 169
M.F.A. in Art ............................................................. 169
  Admission ............................................................... 169
  M.F.A. Degree Requirements ................................... 169
  Art Courses ............................................................ 169
  Drawing Courses ..................................................... 170
  Painting Courses .................................................... 170
  Printmaking Courses ............................................. 170
  Sculpture Courses ................................................ 170
M.F.A. in Design ...................................................... 170
  Admission ............................................................... 170
  M.F.A. Degree Requirements ................................... 171
  Advanced Design Studies Courses ............................ 171
  Ceramics Courses .................................................. 171
  Design Theory Courses ......................................... 171
  Industrial Design Courses ...................................... 171
  Interior Design Courses ........................................... 171
  Metalsmithing/Jewelry Courses ................................. 171
  Textile Design Courses ......................................... 171
  Visual Communication Courses ............................... 171
M.F.A. in Scenography .............................................. 171
M.A. in Visual Art Education ...................................... 172
  Admission ............................................................... 172
  M.A. Degree Requirements ...................................... 172
  Visual Art Education Courses .................................... 172
GRADUATE STUDIES IN MUSIC & DANCE .... 173
Music Courses .......................................................... 173
Dance ................................................................. 174
  Dance Courses ....................................................... 174
Nonmajors in Performance .......................................... 174
M.M. Areas in Performance ........................................ 174
  Admission ............................................................... 175
  M.M. Degree Requirements .................................... 175
  Brass ................................................................. 176
    Brass Courses ..................................................... 176
    Euphonium Courses ............................................. 176
    Trombone Courses ............................................. 176
    Trumpet Courses .............................................. 176
  Tuba Courses ..................................................... 176
  Tuba-Euphonium Consort Course ............................... 176
  Church Music ...................................................... 176
  Church Music Courses .......................................... 176
  Keyboard ............................................................. 176
    Accompanying Courses ....................................... 176
    Carillon Courses .............................................. 176
    Harpsichord Courses .......................................... 176
    Organ Courses .................................................. 176
    Piano Courses .................................................. 177
  Strings ............................................................... 177
    Chamber Music Courses ..................................... 177
    Double Bass Courses ......................................... 177
    Harp Courses ................................................... 177
    Strings Courses .................................................. 177
    Viola Courses .................................................. 177
    Violin Courses ................................................... 178
    Violoncello Courses .......................................... 178
Wind & Percussion .................................................. 178
  Bassoon Courses .................................................. 178
  Clarinet Courses .................................................. 178
  Flute Courses ..................................................... 178
  French Horn Courses ............................................. 178
  Oboe Courses ..................................................... 178
  Percussion Courses ............................................. 179
  Saxophone Courses .............................................. 179
  Wind & Percussion Courses ..................................... 179
  Voice ............................................................... 179
  Voice Courses .................................................. 179
M.M. in Music Theory or Composition ........ 180
  Admission ............................................................... 180
  M.M. Degree Requirements ..................................... 180
  Music Theory & Composition Courses ........................ 180
M.M. in Musicology .................................................. 180
  Admission ............................................................... 180
  M.M. Degree Requirements ..................................... 180
  Musicology Courses ............................................... 180
M.M. in Conducting ............................................... 181
  Admission ............................................................... 181
  M.M. Degree Requirements ..................................... 181
  Band Courses ....................................................... 181
  Choral Music Courses .......................................... 181
  Conducting Courses ............................................. 182
  Jazz Courses ....................................................... 182
  Orchestra Courses .............................................. 182
  Percussion Ensemble Course ................................... 182
  Wind Ensemble Course .......................................... 182
M.M.E. Music Education/Music Therapy ... 182
  Admission ............................................................... 182
  Master’s Degree Programs ..................................... 183
  M.M.E. with a Major in Music Education ....................... 183
  M.M.E. with a Major in Music Therapy ........................ 183
  Final Examination ............................................... 183
  Nonthesis Option .................................................. 183
  Music Education & Music Therapy Courses .................... 183
Doctor of Musical Arts ................................. 184
  Admission ............................................................... 184
  Composition ......................................................... 185
  Conducting .......................................................... 185
  Performance ......................................................... 185
  D.M.A. Degree Requirements .................................... 185
  Composition ......................................................... 186
  Conducting .......................................................... 186
  Areas in Performance ............................................... 186
Doctor of Philosophy in Music .................. 187
  Admission ............................................................... 187
  Ph.D. Degree Requirements ..................................... 187
Doctor of Philosophy in Music Education .... 188
  Admission ............................................................... 188
  Research Skills .................................................... 188
  Preliminary & Comprehensive Examinations ............... 188
Graduate Programs in Related Fields .... 188

School of Fine Arts

Steven K. Hedden, Dean
Murphy Hall, 1530 Naismith Dr., Room 446
Lawrence, KS 66045-3102, www.ku.edu/~sfa

Facilities .......................................................... 167
Graduate Programs in Related Fields ........ 188
Doctor of Philosophy in Music ........ 187
Doctor of Philosophy in Music Education .... 188
Graduate Programs in Related Fields .... 188

Photo, page 164:
Master of Fine Arts students exhibit their work in the Art and Design Gallery.
School of Fine Arts

Steven K. Hedden, Dean
Lois Greene, Associate Dean, Academic Affairs
Christopher M. Johnson, Associate Dean, Research and Graduate Studies
Murphy Hall, 1530 Naismith Dr., Room 446
Lawrence, KS 66045-3102
finearts@ku.edu or www.ku.edu/~sfa
Phone: (785) 864-3421, Fax: (785) 864-5387

The Graduate Division of the School of Fine Arts includes three departments: the Department of Art, the Department of Design, and the Department of Music and Dance.

The Departments of Art and Design offer graduate programs leading to the Master of Fine Arts degree. The Department of Design also offers a Master of Arts degree with a major in visual art education.

The Department of Music and Dance offers Master of Music programs in composition, conducting, musicology, music theory, and most areas of performance, and Master of Music Education degree programs in music education and music therapy.

The Kansas Board of Regents has designated KU as the sole institution in the Regents system authorized to grant doctoral degrees in music. The Doctor of Musical Arts degree is offered in composition, conducting, and many areas of performance. Programs are offered leading to the Doctor of Philosophy degree in music education and to the Doctor of Philosophy degree in music with subspecialties in musicology and music theory.

Contact the departments for admission requirements. See Admission in the General Information chapter of this catalog for more information.

Facilities

The 130,000-square-foot, five-story Art and Design Building houses all the major programs of the art and design departments, including studios and faculty and administrative offices. The building houses the 2,100-square-foot Art and Design Gallery, which features new exhibitions every two weeks and is an important component of the teaching mission. Each major art and design program offers all students spacious work spaces and a wide range of equipment, from traditional to the newest digital technology. Students have access to the Mac and PC Computer Labs with current and professionally recommended software; state-of-the-art large-format, black/white, and color printers; and a Digital Media Lab for motion graphics, animation, and time-based work. There are satellite computer labs throughout the building, including the textile design, printmaking, interior design, and visual communica-

tion areas. Students have access to a traditional Photography Lab, which includes a dark room for black-and-white photography, a digital processing lab, dedicated spaces for project photography, and an equipment check-out facility. There is also a 6,400-square-foot Common Shop that includes a wide range of woodworking equipment, a plastic vacuum former, metal-working equipment, and classroom space. All labs and the shop have technical support staff.

There are three large, well-equipped painting studios. The print studio consists of 8,000 square feet of work space for serigraphy, lithography, and intaglio and has a satellite computer laboratory. The intaglio studio has five presses and a separate acid room. The lithography studio has three presses and various sizes of stones. The serigraphy studio has 12 printing stations, a separate wash-out room, and a large exposure unit, available for a variety of photo-based processes. The sculpture studio is divided into five general work areas with appropriate equipment: woodworking, metal fabrication, foundry, an open courtyard, and individual studios. The foundry contains equipment for casting with a variety of kilns, three gas-fired furnaces, and an overhead crane. There is an induction furnace with a lift-swing unit for bronze and a tilt box unit for iron and steel. Graduate students have individual studios.

The Center for Design Research, housed in a converted native limestone farmhouse and barn on the edge of campus, is a resource for testing design research for industry partners and has involved faculty and students from industrial design and interior design. Corporate-sponsored projects are supervised by design faculty members and executed by graduate students and advanced undergraduates selected through portfolio review. This fully equipped facility has become a connection between the academic and professional worlds of design as well as a focus for collaborations among applied design areas and other KU units including special education, aerospace engineering, and business.

The six-room, 3,800-square-foot Metalsmithing/Jewelry studio has separate areas for soldering, smithing, plating/electroforming, a finishing room, casting, gas and TIG welding, enameling, and a student-operated supply store. Computer software is available for students to develop three-dimensional jewelry models. The Ceramics area includes 5,300 square feet of studio space in the Art and Design Building as well as separate west-campus Chamney Barn facilities. Kilns include salt, soda, cross draft wood, anagama wood fired, raku, an electric test kiln, and several kinds of gas and electric kilns. The Textile Design area has separate weaving, screenprinting, sewing, and dye
areas. The weaving studios are equipped with four-, eight-, and 16-harness looms and two 16-harness AVL compu-dobby looms. The sewing area includes traditional machines, sergers, and a computer-aided embroidery machine. The textile computer lab offers weaving programs including jacquard weaving CAD software and other general graphics programs. All areas provide studio spaces for graduate students.

The **Helen Foresman Spencer Museum of Art** houses the only comprehensive art collection in Kansas. Collections are particularly noteworthy in medieval art, 17th- and 18th-century German and Austrian painting, sculpture, American painting, prints, American photography, Japanese art of the Edo period, textiles (especially quilts), and decorative arts. Spencer Museum of Art sponsors exhibitions, lectures, films, workshops, and activities that support curricular instruction in the arts. Publications include exhibition and collection catalogs, the *Murphy Lectures in Art*, the annual *Register*, and a monthly calendar. The museum houses galleries and offices; an auditorium, the Kress Foundation Department of Art History; and the *Murphy Library of Art and Architecture*, with 150,000 volumes and 600 current journals documenting art, design, and architecture from all cultures, from antiquity to the present.

**Murphy Hall**, named for former KU chancellor Franklin D. Murphy, M.D., houses the Department of Music and Dance, which administers all programs in music and dance. Murphy Hall is a five-level facility with offices for faculty members in applied music, music theory and composition, musicology, opera, and ensembles. It is designed for music and theatre and contains three performance areas: Crafton-Pfreyer Theatre, William Inge Memorial Theatre, and Swarthout Recital Hall. **Crafton-Pfreyer Theatre** provides a venue for plays, operas, musical theatre shows, and concerts. It is a fully equipped, 1,188-seat prosenium stage facility. **William Inge Memorial Theatre** is an intimate black-box facility with seating for up to 125, suitable for plays and small opera productions. **Swarthout Recital Hall**, a 350-seat facility with exceptional acoustics, is dedicated to faculty and student solo and chamber music presentations and occasional opera productions. Murphy Hall also houses classrooms, practice rooms, rehearsal halls, and storage for instruments and sheet music; the **Electronic Music Studio**, which contains exceptional equipment for the composition of electronic music; and an electronic keyboard laboratory.

The new **Opera and Musical Theatre Complex** contains a black-box theatre, dressing room and wardrobe area, set construction and storage area, and office and performance control areas. The **Music Education and Music Therapy Complex** contains a model music education classroom, a general music instruction classroom, large and small therapy clinical spaces, three research spaces, faculty offices, and the **Psychology and Acoustics of Music Laboratory**. The **Music Therapy Clinic**, a clinical training and research facility, is housed in Murphy Hall and Dole Human Development Center.

**The Lied Center of Kansas** is a 2,020-seat performing arts hall. On KU’s west campus at Irving Hill Road and Constant Avenue, it is the venue for the **Lied Center Series**, including the Concert Series, Swarthout Chamber Music Series, New Directions Series, Broadway and Beyond Series, World Series, and Lied Family Series. It also presents Department of Music and Dance productions, Student Union Activities shows, and university and community events. The performing arts hall offers excellent acoustic quality and technical production capabilities. The stage features a 56-foot wide proscenium opening, resilient wood floor, counterweighted rigging system, and ample wing space. There is a full complement of backstage support areas including seven dressing rooms, dance rehearsal studio, two warm-up rooms, a Greenroom, and a production office.

The **Dane and Polly Bales Organ Recital Hall**, opened in 1996, is acoustically designed for the teaching and performance of organ music. It has seating for 200 and is attached to the Lied Center main lobbies at two levels. It houses a 45-stop mechanical key-action (electric stop-action) organ built by Hellmuth Wolff et Associés, one of the finest builders of organs in the world. The hall is available to organ students for practice, lessons, and recitals. The organ is enhanced by three magnificent stained glass windows designed by Peter Thompson, former dean of Fine Arts.
GRADUATE STUDIES IN ART AND DESIGN

M.F.A. in Art

Chair: Judith McCrea
Graduate Director: Gina Westergard
Art and Design Bldg., 1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531, www.ku.edu/~sfa/art
(785) 864-4401

Professors: Brawley, Carter, Katz, Lubensky, McCrea, Thompson

Professors Emeriti: Gee, Green, Schira, Shimomura, Sudlow, Tefft

Associate Professors: Asbury, Blackhurst, Dishinger, Hachmeister, Hartman, Krueger, Price, Velasco

Associate Professors Emeriti: Burnham, Wright

Assistant Professors: Bowen, Fortushniak, Nam, Park

Admission

By permission of the Kansas Board of Regents, application for admission to graduate programs in the Department of Art may be refused if available instructional space does not allow addition of more students. The quota of new students who can be accepted into these programs is sometimes filled by February 1.

To be admitted, students whose major is in art must have undergraduate backgrounds judged by the graduate faculty to be appropriate preparation for the specific specialization selected for graduate study.

A departmental faculty selection and review committee evaluates the transcripts and portfolios of applicants to determine their qualifications for admission. The committee expects applicants to have the B.F.A. degree or equivalent experience in art. The department encourages full-time residence.

Submit your application and fee to the Graduate School online at wwwgraduate.ku.edu. Send two official transcripts of all college and university course work to the Graduate Application Processing Center, 1450 Jayhawk Blvd., Room 313, Lawrence, KS 66045-7535.

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send three letters of recommendation, statement of purpose, slide portfolio, slide information sheet, application form for financial assistance, self-addressed stamped return mailer, and statement of financial resources and proof of proficiency in English (international students) to the Graduate School.

The University of Kansas
Director of Graduate Studies, Art and Design
1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531

M.F.A. Degree Requirements

The graduate program consists of 60 semester hours of graduate credit, including thesis exhibition, in courses approved by the graduate director and the graduate thesis committee. A student may concentrate in one or more specializations. When the student has completed 24 hours, the faculty selection and review committee reviews the student’s work. The graduate director gives the student a written assessment of progress, signed by the committee. At the end of the next semester, the same committee conducts a thesis review that determines whether the student is prepared to begin thesis work, needs additional course work, or is to be dropped from the program. Upon approval by the review committee, the candidate begins work toward the thesis.

Students not receiving approval may continue to work toward the next review unless denied by the committee. A student who is approved for thesis work may enroll in Thesis in Art after completing 36 credit hours. Before thesis enrollment, the student selects a graduate thesis committee consisting of three members of the graduate art faculty. The committee advises the student, conducts regularly scheduled reviews of the work, and determines whether the requirements for the thesis have been completed. The membership of the graduate thesis committee must be approved by the graduate director.

The final departmental requirements are a thesis exhibition of the student’s work, an oral examination, and a thesis folio of the exhibition. The thesis folio includes a statement written by the candidate concerning the work and a visual record of the exhibition. The department reserves the option of selecting and retaining one example of each graduate student’s work. Upon enrolling, the student automatically accepts these requirements and conditions.

Required Courses (60 credit hours)

- Seminar ................................................................................................. 4
- Directed study I ..................................................................................... 15
- Directed study II .................................................................................. 12
- Directed study III .................................................................................. 9
- Directed study IV .................................................................................. 9
- Directed study V .................................................................................... 11
- Thesis ..................................................................................................... 11

Art Courses

ART 500 Special Topics in Art: _____ (1-3).
ART 540 Professional Activities Seminar (1).
ART 560 Performance Art (3).
ART 575 Directed Reading in Art (1-3).
ART 598 Special Topics: Studio Theory and Criticism (3).
ART 599 Special Problems in Art (3).
ART 695 Directed Study I (1-5).
ART 696 Directed Study II (5).
ART 801 Directed Study III (5). Individual studio activity under direction of faculty adviser. May be repeated for credit in subsequent semesters. Prerequisite: Permission of graduate program director. RSH
ART 802 Directed Study IV (5). Continuation of Directed Study III. RSH
ART 803 Directed Study V (5). Continuation of Directed Study IV. RSH
ART 805 Graduate Studio (3). Individual graduate studio research in art. Course content to be determined by the student under supervision of a faculty member. May be repeated for credit. Prerequisite: Graduate standing in the School of Fine Arts and permission of instructor. RSH
ART 810 Principles and Practice of Studio Teaching (1). Development of teaching methodology for prospective graduate teaching assistants and current graduate teaching assistants. Required participation in regularly scheduled ABS 101 or ABS 102 course(s) or teaching appointment for regularly scheduled ABS 101 or ABS 102 course. Credit earned does not satisfy any credit requirements for a degree. May be repeated for credit. Permission of instructor plus 12 hours of completed graduate course work. Graded on satisfactory/unsatisfactory basis. RSH
ART 861 Directed Reading in Art (1-3). Prerequisite: Permission of instructor. RSH
ART 898 Special Topics: Studio Theory and Criticism (3). Lecture, discussion, and supervised research in current topics related to contemporary studio theory and criticism. May be repeated for credit as topics vary. This course will be counted as a graduate level academic elective in course and credit distribution. LEC
ART 899 Graduate Seminar (1). Weekly discussion of issues and/or work in art. (Graded on a satisfactory/or F basis.) Repeat for credit in subsequent semesters. SEM
ART 906 Graduate Studio (3). Individual graduate studio research in art. Course content to be determined by the student under supervision of a faculty member. May be repeated for credit. Prerequisite: ART 801 and permission of instructor. RSH
ART 950 Thesis in Art (1-6). Original research in art culminating in a thesis exhibition. Repeat for credit. Prerequisite: Thirty-six hours of graduate credit and permission of graduate review committee. THE
Art & Design—M.F.A. in Art, M.F.A. in Design

○ Drawing Courses
DRWG 505 Drawing V (3).
DRWG 506 Drawing VI (3).
DRWG 515 Life Drawing III (3).
DRWG 516 Life Drawing IV (3).
DRWG 518 Life Drawing III, Honors (3).
DRWG 519 Life Drawing IV, Honors (3).
DRWG 535 Special Topics in Drawing: ____ (3).
DRWG 807 Drawing VII (3). Individual research in drawing. Prerequisite: DRWG 506. RSH
DRWG 817 Life Drawing V (3). Individual research in figure drawing. Prerequisite: DRWG 518. RSH
DRWG 908 Drawing VIII (3). Continuation of DRWG 807. Prerequisite: DRWG 807. RSH
DRWG 918 Life Drawing VI (3). Continuation of DRWG 817. Prerequisite: DRWG 817. RSH

○ Painting Courses
PNTG 565 Painting III (3).
PNTG 566 Painting IV (3).
PNTG 567 Painting III, Honors (3).
PNTG 588 Special Topics in Painting: ____ (1-3).
PNTG 589 Painting IV, Honors (3).
PNTG 585 The Figure I (3).
PNTG 586 The Figure II (3).
PNTG 588 The Figure I, Honors (3).
PNTG 589 The Figure II, Honors (3).
PNTG 667 Painting V (3).
PNTG 668 Painting VI (3).
PNTG 687 The Figure III (3).
PNTG 688 The Figure IV (3).
PNTG 869 Painting VII (3). Individual research in painting. Prerequisite: PNTG 668. RSH
PNTG 889 The Figure V (3). Individual research in the figure and its environment in various media. Prerequisite: PNTG 688. RSH
PNTG 970 Painting VIII (3). Continuation of PNTG 889. Prerequisite: PNTG 889. RSH
PNTG 990 The Figure VI (3). Continuation of PNTG 890. Prerequisite: PNTG 889. RSH

○ Printmaking Courses
PRNT 523 Printmaking III A (Intaglio) (3).
PRNT 524 Printmaking III B (Lithography) (3).
PRNT 525 Printmaking III C (Serigraphy) (3).
PRNT 528 Printmaking IV B (Lithography) (3).
PRNT 528 Printmaking IV C (Serigraphy) (3).
PRNT 579 Special Problems in Printmaking (3).
PRNT 662 Printmaking V (3).
PRNT 663 Printmaking VI (3).
PRNT 802 Special Problems in Printmaking (3). Individual research in printmaking; course content to be determined by the student under supervision of a faculty member. May be repeated for credit in subsequent semesters. Prerequisite: PRNT 579 and permission of instructor. RSH
PRNT 827 Printmaking VII (3). Continuation of PRNT 663. Prerequisite: PRNT 663. LAB
PRNT 903 Special Problems in Printmaking (3). Individual research in printmaking; course content to be determined by the student under supervision of a faculty member. May be repeated for credit in subsequent semesters. Prerequisite: PRNT 802 and permission of instructor. RSH
PRNT 928 Printmaking VIII (3). Continuation of PRNT 827. Prerequisite: PRNT 827. LAB

○ Sculpture Courses
SCUL 556 Sculpture IV (3).
SCUL 558 Sculpture IV, Honors (3).
SCUL 559 Special Problems in Sculpture (3).
SCUL 657 Sculpture V (3).
SCUL 658 Sculpture VI (3).
SCUL 804 Special Problems in Sculpture (3). Individual research in sculpture; course content to be determined by the student under supervision of a faculty member. May be repeated for credit in subsequent semesters. Prerequisite: SCUL 559 and permission of instructor. RSH
SCUL 859 Sculpture VII (3). Individual research in sculpture. Prerequisite: SCUL 858. RSH
SCUL 905 Special Problems in Sculpture (3). Individual research in sculpture; course content to be determined by the student under supervision of a faculty member. May be repeated for credit in subsequent semesters. Prerequisite: SCUL 804 and permission of instructor. RSH
SCUL 960 Sculpture VIII (3). Continuation of SCUL 859. Prerequisite: SCUL 859. RSH

M.F.A. in Design
Chair: Gregory Thomas
Graduate Director: Gina Westergard
Art and Design Bldg., 1467 Jayhawk Blvd. Room 300 Lawrence, KS 66045-7531, www.ku.edu/~sfa/dsgn
(785) 864-4401

Professors: Branham, Dooley, Greene, Havener, Lau, Rake, Swindell

Professors Emeriti: Boyle, Dykes, Mann-Coats, Reiber, Schira, Smith

Associate Professors: Fitzgerald, Hofstra, Iversen, M. Jordan, Kowalchuk, Stanionis, Stone, Tveit, Varney, Vertacnik, Westergard, Wong

Associate Professors Emeriti: Brejcha, Valanne
Assistant Professors: Armstrong, Bowman, Brackett, Hertowski, Huang, Isozaki

Lecturers: L. Jordan, L. Kemnitzer, Kuhn, Sampson-Tailleur, Staples

Admission
By permission of the Kansas Board of Regents, application for admission to graduate programs in the Department of Design may be refused if available instructional space does not allow addition of more students. The quota of new students who can be accepted into these programs is sometimes filled by February 1.

Students in design must have undergraduate backgrounds judged by the graduate faculty to be appropriate preparation for the specialization selected. These areas are ceramics, industrial design, metalsmithing/jewelry, textile design (weaving, printing, dyeing), and scenography.

A departmental faculty committee reviews transcripts and evaluates applicants' slide portfolios to determine admission qualifications. In general, the committee expects the applicant to hold a B.F.A. or equivalent degree, to present about 70 hours of undergraduate credit in studio or related professional courses including about 36 hours of studio credit in a major area, to have maintained an undergraduate grade-point average of approximately B overall and in the proposed major, and to have had a minimum of 9 hours of credit in art history. A student applying in industrial design must present evidence of substantial achievement as a practicing professional.

Submit your application and fee to the Graduate School online at www.graduate.ku.edu. Send two official transcripts of all college and university course work to The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send three letters of recommendation, statement of design philosophy, slide portfolio, slide information sheet, application form for graduate teaching assistantships, self-addressed stamped return mailer, statement of financial resources (international students), and proof of proficiency in English (international students) to
The University of Kansas
Director of Graduate Studies, Art and Design
1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531

M.F.A. Degree Requirements
The program consists of a minimum of two years of full-time study and requires 60 credit hours, including thesis or exhibition, in courses approved by the department and by the graduate faculty committee. A student may concentrate on one or more specializations. Students seeking the M.F.A. in design participate in two interim reviews before beginning thesis work, the first after 12 hours in the concentration, the second after 24 hours. The student must pass each review level to take course work applicable to the next level. Failure to pass a review results in termination of study.

A typical program in design includes

- Graduate seminar in design ................................................................. 6
- Directed reading in design ................................................................. 3
- Area concentration ............................................................................... 24
- Graduate-level academic electives (Art history including HA 706 Seminar on Special Problems in Art History; Philosophy of Art, architecture, design history, or other graduate-level academic course) .... 9
- Electives ................................................................................................ 9
- Thesis .................................................................................................. 9

The final departmental requirements may be satisfied under one of two options:
1. Presentation of a written thesis and an oral exam.
2. An exhibition of the student’s work and a catalog of the exhibition. The catalog must include a statement about the work with particular relevance to the exhibit and a visual record of the exhibition. An oral examination covering the exhibition is required.

Advanced Design Studies Courses

ADS 540 History and Philosophy of Design ......................................... (3).
ADS 560 Topics in Design: ................................................................. (1-3).
ADS 570 Design Seminar ................................................................. (3).
ADS 580 Special Problems in Design ................................................. (1-6).
ADS 720 Graduate Seminar in Design ................................................. (1). Comparative studies of various areas of specialization in design. Repeat for credit to a maximum of six credit hours. LEC
ADS 722 Crafts Area Graduate Critique/Seminar ................................ (1). Group critique of individual research/artwork and discussion of professional practices and contemporary issues in crafts and art. Open to all craft area graduate students. Repeat for credit to a maximum of six credit hours. Graded satisfactory/unsatisfactory. LEC
ADS 730 Directed Reading in Design .................................................. (1-3). Research reading and presentation of reports on specific subjects related to the students major area of specialization. Required of all graduate students. RSH
ADS 740 Special Problems in Design .................................................. (1-6). An in-depth study of current problems in design or crafts with an emphasis on research. Special problems proposals must be discussed with and approved by the instructor and graduate adviser prior to enrollment in the course. RSH
ADS 850 Studio Teaching Practice ....................................................... (1). Graduate students only. Must hold an assistant instructor or teaching appointment. Credit earned does not satisfy any credit requirement for a degree. Graded S or F. FLD
ADS 890 Thesis .................................................................................... (1-8). For guidance refer to Design department graduate guidelines. THE

Ceramics Courses

CER 504 Kilns .................................................................................... (3).
CER 505 Clay and Glaze Formulation .................................................. (3).
CER 506 Production .......................................................................... (6).
CER 715 Ceramics .............................................................................. (2-6). Individual research. Prerequisite: CER 515 or equivalent. RSH
CER 725 Glass .................................................................................... (2-6). Individual research. Prerequisite: Approval of instructor. RSH
CER 815 Ceramics .............................................................................. (2-6). Continuation of CER 805. RSH
CER 825 Glass .................................................................................... (2-6). Individual research. Prerequisite: Approval of instructor. RSH

Design Theory Courses

DSGN 515 Design Theory Studio III ................................................... (6).
DSGN 525 Design Theory Studio IV ................................................... (6).
DSGN 715 Design Theory ................................................................. (2-6). Prerequisite: Three years previous work in design or equivalent. RSH
DSGN 815 Design Theory ................................................................. (2-6). RSH

Industrial Design Courses

INDD 508 Materials and Processes ...................................................... (3).
INDD 510 Human Factors in Design ................................................... (4).
INDD 512 Methods in Design ............................................................. (3).
INDD 524 Packaging Design .............................................................. (3).
INDD 578 Problems in Industrial Design: ......................................... (3).
INDD 646 Industrial Design III ........................................................... (3).
INDD 648 Industrial Design IV ........................................................... (3).
INDD 655 Portfolio ............................................................................ (1).
INDD 678 Advanced Problems in Industrial Design............................. (3).
INDD 680 Thesis ................................................................................ (3-6).
INDD 715 Industrial Design ............................................................... (2-6). Research-oriented advanced study in industrial design. Prerequisite: Graduate major in industrial design or consent of instructor. RSH
INDD 815 Industrial Design ............................................................... (2-6). Prerequisite: INDD 715. RSH

Interior Design Courses

INTD 503 Interior Programming ........................................................... (3).
INTD 504 Interior Planning and Design ................................................. (3).
INTD 505 Interior Specifications .......................................................... (3).
INTD 506 Advanced Interior Planning and Design ................................ (3).
INTD 535 Portfolio .............................................................................. (1).
INTD 606 Thesis I ............................................................................ (3).
INTD 607 Professional Observation ...................................................... (3).
INTD 608 Thesis II ............................................................................ (3).
INTD 609 Interior Design Internship ..................................................... (13).
INTD 715 Interior Design ................................................................. (2-6). Individual research. Prerequisite: INTD 606 or equivalent. RSH
INTD 815 Interior Design ................................................................. (2-6). Continuation of INTD 715. RSH

Metalsmithing/Jewelry Courses

METL 501 Seminar ............................................................................ (3).
METL 515 Advanced Metals ................................................................ (6).
METL 715 Metals/Jewelry ................................................................. (2-6). Individual research. Prerequisite: METL 515 or equivalent. RSH
METL 815 Metals/Jewelry ................................................................ (2-6). Continuation of METL 715. RSH

Textile Design Courses

TD 504 History of Textiles, Lecture ..................................................... (3).
TD 515 Senior Studio I .................................................................. (3-6).
TD 520 Senior Studio II .................................................................. (3-6).
TD 715 Textile Design in Weaving, Printing, and Dyeing ................. (2-6). Individual research. Prerequisite: TD 520 or TD 525 or equivalent. RSH
TD 750 Graduate Seminar ................................................................ (0.5). Discussion of issues and/or work in textiles. Graded on satisfactory/unsatisfactory basis. LEC
TD 815 Textile Design in Weaving, Printing, and Dyeing ................. (2-6). Continuation of TD 715. RSH

Visual Communication Courses

VISC 505 Design Production for Illustration ................................... (3).
VISC 514 Graphic Design III .............................................................. (6).
VISC 515 Illustration Concepts II ........................................................ (3).
VISC 520 Hallmark Symposium Series ................................................. (0.5).
VISC 524 Graphic Design IV ............................................................... (6).
VISC 535 Applied Illustration ............................................................. (6).
VISC 540 The Arts ............................................................................. (3-6).
VISC 550 Visual Communication Internship ..................................... (3-6).
VISC 560 Special Topics in Visual Communication: ......................... (3-6).
VISC 703 Illustration ......................................................................... (3-6). LAB
VISC 706 Graphics ............................................................................. (3-6). LAB
VISC 815 Graphics ............................................................................. (2-6). Individual research. RSH
VISC 825 Illustration ......................................................................... (2-6). Individual research. RSH

M.F.A. in Scenography

For information about the M.F.A. in scenography, see Theatre and Film in the College of Liberal Arts and Sciences chapter of this catalog.
M.A. in Visual Art Education

Division Director: Denise Stone
Graduate Director: Gina Westergard
Art and Design Bldg., 1467 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7531, (785) 864-4401
Professor Emeritus: Rueschhoff
Associate Professors: Kowalchuk, Stone
Associate Professor Emerita: Baumgartel
Assistant Professor Emerita: Glenn

The graduate program includes advanced professional and scholarly study for art educators and art museum educators, an initial certification program for those with baccalaureate degrees in other fields who wish to enter art education (initial certification work typically also requires collateral undergraduate study), and advanced study for individuals in related disciplines. Details may be found in the Visual Art Education M.A. handbook, available from the division office.

Admission

Admission requirements for regular status:

1. Admission requires a bachelor's degree from an accredited institution that encompasses a minimum of 40 semester hours in fine arts studio (courses in drawing, painting, sculpture, design, printmaking, ceramics, silversmithing, weaving, lettering, commercial art, graphic design, constructive design, etc.), 9 hours in history of art, and 8 hours in visual art education. Applicants must have an overall undergraduate grade-point average of at least 3.0 on a 4-point scale. Students can be admitted to study art museum education if they have a bachelor's degree with course work in fine arts studio and/or history of art comparable to that required for the B.A.E. (48 hours in studio and 15 hours in art history), B.A. in art history (27 hours in art history and 3 hours in studio), or B.F.A. in art history (30 credit hours in art history, 30 credit hours of studio training) in these fields at KU. Students with degrees in another field (business, education, etc.) are expected to have the minimum entrance requirements for a master's degree in art history at KU (18 hours in art history including two survey courses).

2. Two official transcripts.

3. A minimum of three letters of recommendation from former or current instructors and/or those able to recommend you on the basis of professional experience (i.e., principals, supervisors, or former employers). The letters of recommendation must address your potential to take initiative as a graduate student and ability to be a self-starter.

4. Completion of the Graduate Student Information Questionnaire, available in 300 Art and Design, is required. Submit your application and fee to the Graduate School online at www.grad.ku.edu. Send two official transcripts of all college and university course work to the Division Director, Art and Design, Bldg., 1467 Jayhawk Blvd., Room 300, Lawrence, KS 66045-7531.

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send three letters of recommendation, graduate student information questionnaire (available in 300 Art and Design), statement of financial resources (international students), and proof of proficiency in English (international students) to

M.A. Degree Requirements

There are two emphases:

Traditional Art Education Emphasis. At least 15 and no more than 18 hours in visual art education and no more than 20 hours in Fine Arts. The remainder of the course work can be in related fields such as history of art, education, psychology, etc. This emphasis is appropriate for the student desiring to improve his or her fine arts knowledge and research skills in art education.

Art Museum Education Emphasis. Students take between 21 and 28 hours in visual art education including an internship and a master's thesis. Students also take HA 710 Museum Techniques and Functions and one elective course in a related area. This emphasis is intended for the student desiring to teach in the art museum setting. It is also suitable to the practitioner in the classroom who seeks to learn about the art museum.

Thesis Option. The student completes the core and elective requirements and VAE 875 Research in Art Education and an independent experimental, descriptive, historical, or philosophical investigation of a topic related to visual art education.

Project Option. The student completes the core and elective requirements and VAE 875 Research in Art Education. A substantial application of theory, principles, and/or products of visual art education in a pedagogical setting must be documented. This is not an option for the Art Museum Education emphasis.

Examination Option. Students take a total of 37 credit hours in required core courses including VAE 875 Research in Art Education and elective courses with 36 credits in regularly scheduled classes. Students also take a 1-credit-hour course, VAE 890 Preparation for the M.A. Examination, devoted to preparing and completing a written or oral final examination. The examination requires students to demonstrate their knowledge of current issues in the field. This is not an option for the Art Museum Education emphasis.

Visual Art Education Courses

VAE 500 Student Teaching in: _____ (1-6).
VAE 530 Art and Design In Daily Life (3).
VAE 596 Practicum in Teaching Art (2).
VAE 598 Special Course: _____ (1-5).
VAE 600 Evaluation and Measurement in Art Education (3).
VAE 680 Internship in Teaching Art (3-16).
VAE 695 Technical Colloquium: Art Museums and Schools (3).
VAE 698 Education of Women in the Arts (2-3).
VAE 710 Assessment in Art Education (3). The course is designed to introduce students to evaluation procedures in art education as they apply to public school teaching K-12. The material will incorporate methods of evaluating student learning in art, the effectiveness of instruction, the designing of instruments, grading procedures including the provision of feedback to students, parents, and schools. Concepts and skills for both formative and summative evaluation will be related to the development of objectives, instruction, and curriculum development as a whole. LEC
VAE 716 Teaching Art: _____ (1-6). Instructional techniques, methodology, materials, and evaluation. Processes for the specific art area named. May be repeated for credit in different media. LEC
VAE 750 Introduction to Art Museum Education (1-4). This course provides a general overview to the museum education field. Course readings include current ideas and issues on learning, art education, criticism, the museum in education, and museum education practices. LEC
GRADUATE STUDIES IN MUSIC AND DANCE

Chair: Lawrence Mallett
Murphy Hall, 1530 Naismith Dr., Room 460
Lawrence, KS 66045-3102, www.ku.edu/~sfa/mad (785) 864-3436

Application procedures and program requirements constantly change. Please see our Web site, www.ku.edu/~sfa/mad, for current information.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send original transcripts of all college and university course work to:

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Department of Music and Dance, Murphy Hall
1530 Naismith Dr., Room 460
Lawrence, KS 66045-3102

Programs of study leading to the Master of Music (M.M.), Master of Music Education (M.M.E.), Doctor of Musical Arts (D.M.A.), and Doctor of Philosophy (Ph.D.) are offered through the music divisions. Specific admission procedures and degree requirements for the M.M. and M.M.E. programs are described under division headings. Specific admission procedures and degree requirements for the D.M.A., Ph.D. (musicology/theory), and Ph.D. (music education) are listed in the appropriate sections.

Students applying for the fall semester who complete the following steps by December 15 receive priority consideration for fellowships and assistantships.

1. File a completed application form, a vita or résumé, two official transcripts from each post-secondary institution attended, and three current letters of recommendation (within the last two years). International students also must provide official documentation of financial support. The amount varies each year; contact the office for current rates.

2. Applicants in performance must include a repertoire list, copies of recent performances, and recent recordings if available.

3. Applicants in composition must include recent original compositions and recordings if available.

4. Applicants in musicology and music theory must submit at least two samples of scholarly writing.

5. Applicants in music education can find required materials and procedures in the Music Education and Music Therapy section or at www.ku.edu/~memt.

Diagnostic Examinations. All M.M. (except opera), D.M.A., and Ph.D. musicology and music theory students must take written diagnostic examinations in musicology and music theory. These are given at the beginning of enrollment week to determine whether any need exists for remedial work, so that an appropriate academic program can be designed for each student. Students who show the need for remedial work must complete certain course work carrying undergraduate credit or must show mastery of the material by examination. Graduate students entering programs in piano must take additional tests in piano literature and functional piano skills.

At least a 3.0 grade-point average, overall and in the major area, is required for all course work counted toward any graduate degree in music. A semester grade below B in the major area results in the student being placed on probation for one semester; if the grade is
Music & Dance—Dance, Nonmajors in Performance, M.M. Areas in Performance

not B or higher in the next semester, the student may be dismissed from the program. Students must also achieve at least a grade of B in thesis, lecture-recital, document or dissertation, and on each recital for satisfactory completion of degree requirements.

In consultation with the major adviser, each graduate music student selects a faculty advisory committee, subject to consent of the faculty members involved and approval of the director of graduate studies. This usually occurs during the second semester of full-time enrollment. All committees must have at least four members from the graduate music faculty. This committee and major divisional faculty evaluate required recitals and administer the final oral examination. All degree candidates must pass the final oral examination at least four weeks before the date on which the degree is expected.

All doctoral students who have completed the required course work must be continuously enrolled until all requirements for the degree are completed. In consultation with the primary faculty member directing the project, the director of graduate studies determines the number of hours of enrollment. Each enrollment must reflect as accurately as possible the student's demands on faculty time and university facilities. Normally, a student must be enrolled in a minimum of 3 hours the semester he or she completes the degree requirements.

**M Course**

MUS 586 The Business of Music (2).
MUS 686 Arts Administration: Presenting the Performing Arts (3).
MUS 732 Twentieth Century Techniques before 1945 (3). A study and analysis of music from the turn of the century to World War II. For non-music majors. Prerequisite: Permission of instructor. LEC
MUS 733 Twentieth Century Techniques after 1945 (3). A study and analysis of music from World War II to the present. For non-music majors. Prerequisite: Permission of instructor. LEC

**Dance**

Division Director: Jerel Hilding
Robinson Center, 1301 Sunnyside Ave., Room 251
Lawrence, KS 66045-7567, (785) 864-4264
Professor: Hamburg
Associate Professors: Cohan, Hilding
The Division of Dance in the Department of Music and Dance does not offer graduate degrees. Graduate courses in dance are available to qualified persons working on advanced or interdisciplinary programs.

**Dance Courses**

DANC 530 Practicum in: _____ (1)
DANC 540 Field Experience in Dance Teaching (1-3).
DANC 550 Senior Project (3).
DANC 580 Special Topics in Dance (1-3).
DANC 598 Seminar in Dance (3).
DANC 730 Study in Masks and Martial Arts (3). This course studies the presentation of dance masters of the past (for example, Marius Petipa and Isadora Duncan) and present (for example, Martha Graham and Merce Cunningham) will be analyzed in terms of their handling of gesture, time, space, structure, and meaning. Students will be expected to seek out and study, photographs, and films in order to do written and performance projects based on the choreographic principles of old and new masters in ballet and modern dance. Prerequisite: A course in dance choreography or consent of instructor. LEC
DANC 735 Analysis, Criticism, and Choreography (3). The choreographic approaches of outstanding dance masters of the past (for example, Marius Petipa and Isadora Duncan) and present (for example, Martha Graham and Merce Cunningham) will be analyzed in terms of their handling of gesture, time, space, structure, and meaning. Students will be expected to seek out and study, photographs, and films in order to do written and performance projects based on the choreographic principles of old and new masters in ballet and modern dance. Prerequisite: A course in dance choreography or consent of instructor. LEC

**Graduate Credit for Nonmajors in Performance**

Permission to enroll for graduate credit in applied music is determined by audition. This audition should be scheduled with the major division faculty at the beginning of each semester.

**M.M. Areas in Performance**

Brass and Percussion
Division Director: Scott Watson
Murphy Hall, 1330 Naismith Dr., Room 120
Lawrence, KS 66045-3122, (785) 864-9738
Professors: Bushouse, Watson
Assistant Professors: Bobo, Hall, Leisring, Stevens

Organ and Church Music
Division Director: James Higdon
Lied Center, 1600 Stewart Dr.
Lawrence, KS 66045-7502, (785) 864-2797
Professors: Bauer, Higdon
Assistant Professor: Berghout

**Instrument**

Piano
Division Director: Richard Reber,
310 Murphy Hall, (785) 864-9643
Professors: Costa, Reber, Winerock
Professors Emeriti: Angeletti, Downs
Associate Professors: Ferrell, Hepp
Assistant Professor: Koenig

Strings
Division Director: Edward Laut,
316 Murphy Hall, (785) 864-9695
Professor: Laut
Professor Emeritus: Boyajian
Associate Professors: Chun, Sayevich

Voice
Division Director: John Stephens,
306 Murphy Hall, (785) 864-9617
Professors: Castle, Stephens
Professor Emeritus: Crawford
Admission
The applicant must perform an audition before the faculty of the major performance division. In some cases, an audiotape recording may be submitted in lieu of a live performance. A complete list of repertoire studied, including past recital programs, should be furnished to major division faculty members at the time of audition or submission of the tape recording.

Students in opera performance must take a minimum of one year each in French, German, and Italian before entering graduate school or before completing the M.M. degree. For the master’s degree program in voice, the language requirement is one year of two of the following: French, German, or Italian. Both programs have prerequisites in French, German, and Italian diction. Students found deficient in a particular area of diction must enroll in the specific course in which they are deficient and pass it with a grade of C or demonstrate proficiency by passing a diction diagnostic examination. A student whose transcript shows she or he has passed a particular language diction course normally is considered proficient in the diction of that language.

M.M. Degree Requirements
A final solo recital is required for all master’s degrees in performance. Students majoring in piano also are expected to perform a chamber music recital or a full concerto. Students majoring in opera performance also must perform a significant role in at least one fully staged production with orchestra. A recital preview is left to the discretion of the faculty members of each division. In divisions with no preview requirement, the option to have a preview is still available to students and faculty members. Divisions must approve recital content well in advance but no less than three weeks before the recital date. The candidate must file a professional-quality CD recording of the final recital with the Department of Music and Dance before the final oral examination is scheduled.

A recommended program of study in accompanying is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced accompanying</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9-12</td>
</tr>
<tr>
<td>Electives</td>
<td>9-3</td>
</tr>
</tbody>
</table>

A student may emphasize vocal or instrumental accompanying. The vocal accompanying emphasis requires entering graduate students to take diction examinations in Italian, French, and German. Students found deficient in an area of diction must enroll in the specific course in which they are deficient and pass it with at least a grade of C.

A recommended program of study for students in bassoon, cello, clarinet, double bass, flute, harp, oboe, saxophone, specialist in brass instruments, viola, and violin is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9-12</td>
</tr>
<tr>
<td>Electives</td>
<td>3-4</td>
</tr>
</tbody>
</table>

A recommended program of study in brass and percussion is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>Voice (choral ensemble each semester in residence)</td>
<td>2-3</td>
</tr>
</tbody>
</table>

All M.M. church music majors (choral conducting emphasis) who have not studied voice for a minimum of two semesters before entering this program must enroll in voice for two semesters. Students must enroll in a choral ensemble each semester of residence.

A recommended program of study in church music (organ emphasis) is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music (organ)</td>
<td>8-10</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9-12</td>
</tr>
<tr>
<td>Advanced courses in organ</td>
<td>9</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced conducting and score reading</td>
<td>9-12</td>
</tr>
<tr>
<td>Electives</td>
<td>3-4</td>
</tr>
</tbody>
</table>

All M.M. church music majors (organ emphasis) must be enrolled in MUSC 801 Music Bibliography and Research and MUSC 801 Music Bibliography and Research and MUSC 801 Music Bibliography and Research. The written diagnostic examinations in musicology and music theory are not required in the opera performance program.

A recommended program of study in opera performance is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music (voice)</td>
<td>9-12</td>
</tr>
<tr>
<td>Vocal coaching</td>
<td>3</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced course in music theory</td>
<td>9</td>
</tr>
<tr>
<td>Opera workshop and opera production</td>
<td>9</td>
</tr>
<tr>
<td>Electives</td>
<td>3-4</td>
</tr>
</tbody>
</table>

Significant role in a fully staged opera production

The written diagnostic examinations in musicology and music theory are not required in the organ performance program.

A recommended program of study in organ is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music (organ)</td>
<td>9</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>Advanced courses in organ</td>
<td>9</td>
</tr>
<tr>
<td>M.M. organ majors must be enrolled in MUSC 801 Music Bibliography and Research and MUSC 801 Music Bibliography and Research and MUSC 801 Music Bibliography and Research</td>
<td></td>
</tr>
</tbody>
</table>

A recommended program of study in piano performance, literature, and pedagogy is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music (piano)</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>Advanced piano pedagogy/piano literature</td>
<td>2-3</td>
</tr>
<tr>
<td>Electives</td>
<td>3-4</td>
</tr>
</tbody>
</table>

A recommended program of study in voice is as follows:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced applied music (voice)</td>
<td>12</td>
</tr>
<tr>
<td>MUSC 801 Music Bibliography and Research</td>
<td>3</td>
</tr>
<tr>
<td>Advanced courses in musicology and music theory</td>
<td>9</td>
</tr>
<tr>
<td>Advanced vocal repertoire</td>
<td>2-4</td>
</tr>
<tr>
<td>Electives</td>
<td>2-3</td>
</tr>
</tbody>
</table>
A recommended program of study for the woodwind specialist is as follows:

- Major instrument ................................................................. 8
- Secondary instruments (4 instruments) .................................... 4
- MUSC 801 Music Bibliography and Research ......................... 3
- Advanced courses in musicology and music theory .................. 12
- W&F 702 Special Studies in Woodwind Instrument Pedagogy ........ 3

Brass

- Brass Courses
  
  BRSS 652 Brass Choir (0-1).
  
  BRSS 921 Seminar in Performance and Pedagogy: ______ (3). Repertoire, performance practice, pedagogical, and stylistic concerns relating to the music for brass instruments throughout their history. Topics will include the physical development of the instruments, their usage as solo, chamber, and large ensemble instruments in both sacred and secular literature, and a survey of historical and modern bibliographic materials. May be repeated for credit when topics vary. IND

- Euphonium Courses
  
  EUPH 622 Euphonium (1-4).
  
  EUPH 711 Euphonium (1-4). For graduate students not majoring in euphonium. May be repeated for credit. Summer session limit one to three hours. IND
  
  EUPH 811 Euphonium (1-6). For graduate students majoring in euphonium. May be repeated for credit. IND

- Trombone Courses
  
  TROM 622 Trombone (1-4).
  
  TROM 652 Trombone Choir (0-1).
  
  TROM 711 Trombone (1-4). For graduate students not majoring in trombone. May be repeated for credit. Summer session limit one to three hours. IND
  
  TROM 811 Trombone (1-6). For graduate students majoring in trombone. May be repeated for credit. Summer session limit one to three hours. IND
  
  TROM 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in trombone. May be repeated for credit. Summer session limit one to three hours. IND
  
  TROM 965 Doctoral Recitals (1-3). THE
  
  TROM 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
  
  TUBA 972 D.M.A. Document (1-6). A scholarly paper on a topic pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

- Tuba-Euphonium Consort Course
  
  TUEU 652 Tuba-Euphonium Consort (0-1).

Church Music

- Church Music Courses
  
  CHUR 804 History of Liturgy (3). A survey of the history of liturgy encompassing all major Western religious traditions, along with a brief overview of the development of ritual in non-Western religions. Prerequisite: Permission of instructor. LEC
  
  CHUR 805 Selected Topics in Church Music: ______ (1-3). Topics vary by semester. May be repeated for credit. LEC
  
  CHUR 806 Service Playing I (2). A survey of organ playing and choral conducting techniques integral to the performance of religious services. Prerequisite: Permission of instructor. LEC
  
  CHUR 807 Service Playing II (2). A continuing survey of organ playing and choral conducting techniques integral to the performance of religious services. Prerequisite: Permission of instructor. LEC
  
  CHUR 821 Church Music Colloquium I: Anthem Literature (1). A survey of significant anthem literature. Prerequisite: Permission of instructor. LEC
  
  CHUR 822 Church Music Colloquium II: Handbells (1). Handbell history, literature, performance, and rehearsal techniques. Prerequisite: Permission of instructor. LEC
  
  CHUR 823 Church Music Colloquium III: Children’s Choirs (1). A study of the history and literature of children’s choirs, vocal characteristics of children, and rehearsal procedures with the children’s choir. Prerequisite: Permission of instructor. LEC
  
  CHUR 824 Church Music Colloquium IV: Hymnology (1). A study of the historical development of hymnody. Prerequisite: Permission of instructor. LEC
  
  CHUR 921 Seminar in Church Music (3). Discussion of the history of sacred music, religion, and the arts. May be repeated for credit when topics vary. LEC
  
  CHUR 962 Improvisation (2). Applied study in improvisation at the organ. Prerequisite: Permission of instructor. LEC

Keyboard

- Accompanying Courses
  
  ACMP 527 Accompanying (1-4).
  
  ACMP 529 Performance Class in Accompanying (1).
  
  ACMP 727 Accompanying (1-4). Individual instruction in vocal and instrumental accompanying. Prerequisite: Consent of instructor. IND
  
  ACMP 811 Advanced Accompanying (1-6). For graduate students majoring in accompanying. May be repeated for credit. Summer session limit one to three hours. IND
  
  ACMP 822 The Accompanist’s Literature (3). A course in which major vocal and instrumental works are studied with vocal or instrumental participants. LEC

- Carillon Courses
  
  CARI 621 Carillon (1-4).
  
  CARI 711 Carillon (1-4). IND

- Harpsichord Courses
  
  HPCD 621 Harpsichord (1-4).
  
  HPCD 711 Harpsichord (1-4). Summer session limit one to two credits. IND

- Organ Courses
  
  ORGN 502 Master Class in Organ – Lab (0).
  
  ORGN 524 Laboratory in Organ Construction (3).
  
  ORGN 603 Institute for Organ and Church Music (1-2).
  
  ORGN 608 Organ Pedagogy (2).
  
  ORGN 622 Organ (1-5).
  
  ORGN 702 Master Class in Organ – Lab (0). A class in the performance of advanced organ repertoire. For organ majors only or by consent of instructor. May be repeated. LAB
  
  ORGN 708 Organ Pedagogy (3). A survey of the philosophy, methods, and materials of organ pedagogy. Prerequisite: Permission of instructor. LEC

See pages 14 and 15 for admission procedures.

The Lied Center Series includes the concert Series, Swarthout Chamber Music Series, New Directions Series, Broadway and Beyond Series, World Series, and the Lied Family Series, bringing outstanding performers to KU each year.

Information about performances is available online at www.ku.edu/~sfa/mad or www.lied.ku.edu.
THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG

Music & Dance—M.M. Areas in Performance

177

Fine Arts

Strings

● Chamber Music Courses
CHAM 615 University Camerata (0-1).
CHAM 654 New Music Ensemble (0-2).

● Double Bass Courses
DBBS 622 Double Bass (1-5).
DBBS 711 Double Bass (1-4). For graduate students not majoring in double bass. May be repeated for credit. Summer session limit one to three hours. IND

● Double Bass Courses
DBBS 720 Double Bass Performance Class (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in violin (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC

DBBS 811 Double Bass (1-6). For graduate students majoring in double bass. May be repeated for credit. IND

● Harp Courses
HARP 622 Harp (1-5).
HARP 711 Harp (1-4). For graduate students not majoring in harp, May be repeated for credit. Summer session limit one to three hours. IND

HARP 720 Harp Performance Class (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in violin (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC

HARP 811 Harp (1-6). For graduate students majoring in harp. May be repeated for credit. Summer session limit one to three hours. IND

● String Courses
STRG 701 String Pedagogy Workshop (0.5-3). A short-term intensive course in string pedagogy intended for school orchestra directors, private teachers, and advanced students. Normally offered during the summer session. May be repeated for credit. Graded satisfactory or unsatisfactory. IND

STRG 921 Seminar in Performance and Pedagogy (3). Repertoire, performance practice, and pedagogical and stylistic problems relating to stringed instrument music before 1800. LEC

STRG 922 Seminar in Performance and Pedagogy (3). Stringed instrument repertoire from 1800 to 1875. LEC

STRG 923 Seminar in Performance and Pedagogy (3). Stringed instrument repertoire from 1875 to present. LEC

STRG 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. May be repeated for credit. Prerequisite: Consent of instructor. LEC

STRG 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. May be repeated for credit. Prerequisite: Consent of instructor. THE

● Viola Courses
VIOA 622 Viola (1-5).
VIOA 711 Viola (1-4). For graduate students not majoring in viola. May be repeated for credit. Summer session limit one to three hours. IND

VIOA 720 Viola Performance Class (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in violin (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC

VIOA 811 Viola (1-6). For graduate students majoring in viola. May be repeated for credit. Summer session limit one to three hours. IND

VIOA 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in viola. May be repeated for credit. Summer session limit one to three hours. LEC

VIOA 965 Doctoral Recitals (1-3). May be repeated for credit to a maximum of seven hours. THE
Music & Dance—M.M. Areas in Performance

● Violin Courses
VION 511 Workshop in Stringed Instrument Care and Repair (2).
VION 622 Violin (1-6).
VION 711 Violin (1-4). For graduate students not majoring in violin. May be repeated for credit. Summer session limit one to three hours. IND
VION 720 Violin Performance Class (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in violin (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC
VION 731 Baroque Violin (1-4). IND
VION 811 Violin (1-6). For graduate students majoring in violin. May be repeated for credit. Summer session limit one to three hours. IND
VION 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in violin. May be repeated for credit. Summer session limit one to three hours. RSH
VION 965 Doctoral Recitals (1-3). Maximum of seven hours credit. THE

● Violoncello Courses
VNCL 622 Violoncello (1-5).
VNCL 711 Violoncello (1-4). For graduate students not majoring in violoncello. May be repeated for credit. Summer session limit one to three hours. IND
VNCL 720 Cello Performance Class (1). Studio performance of solo, ensemble, and orchestral audition repertoire for students concurrently enrolled in violin (viola, etc.) study. For freshman and sophomores (120); juniors and seniors (320); graduate student (720) (as appropriate). May be repeated for credit. LEC
VNCL 811 Violoncello (1-6). For graduate students majoring in violoncello. May be repeated for credit. Summer session limit one to three hours. IND
VNCL 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in violoncello. May be repeated for credit. Summer session limit one to three hours. RSH
VNCL 965 Doctoral Recitals (1-3). May be repeated for credit to a maximum of seven hours. THE

Wind and Percussion
● Bassoon Courses
BASN 622 Bassoon (1-4).
BASN 711 Bassoon (1-4). For graduate students not majoring in bassoon. May be repeated for credit. Summer session limit one to three hours. IND
BASN 811 Bassoon (1-6). For graduate students majoring in bassoon. May be repeated for credit. Summer session limit one to three hours. IND
BASN 921 Seminar in Performance (3). A study of repertoire and performance practice relating to the bassoon during the seventeenth and eighteenth centuries. LEC
BASN 922 Seminar in Performance (3). A study of repertoire and extended performance techniques of the twentieth century. LEC
BASN 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in bassoon. May be repeated for credit. Summer session limit one to three hours. RSH
BASN 965 Doctoral Recitals (1-3). Maximum seven hours credit, THE
BASN 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. THE
BASN 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

● Clarinet Courses
CLAR 622 Clarinet (1-4).
CLAR 711 Clarinet (1-4). For graduate students not majoring in clarinet. May be repeated for credit. Summer session limit one to three hours. IND
CLAR 811 Clarinet (1-6). For graduate students majoring in clarinet. May be repeated for credit. Summer session limit one to three hours. IND
CLAR 921 Seminar (3). A study of clarinet repertoire and performance techniques in the 18th and 19th centuries. LEC
CLAR 922 Seminar (3). A study of clarinet repertoire and performance techniques from 1900 to the present. LEC
CLAR 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in clarinet. May be repeated for credit. Summer session limit one to three hours. LBN
CLAR 965 Doctoral Recitals (1-3). Maximum seven hours credit. RSH
CLAR 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
CLAR 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

● Flute Courses
FLUT 622 Flute (1-4).
FLUT 711 Flute (1-4). For graduate students not majoring in flute. May be repeated for credit. Summer session limit one to three hours. IND
FLUT 731 Baroque Flute (1-4). IND
FLUT 811 Flute (1-6). For graduate students majoring in flute. May be repeated for credit. Summer session limit one to three hours. IND
FLUT 921 Seminar in Performance (3). A study of repertoire and performance practice relating to the baroque flute and recorder during the seventeenth and eighteenth centuries. LEC
FLUT 922 Seminar in Performance (3). A study of repertoire and extended performance techniques of the twentieth century. LEC
FLUT 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in flute. May be repeated for credit. Summer session limit one to three hours. RSH
FLUT 965 Doctoral Recitals (1-3). Maximum seven hours credit. THE
FLUT 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
FLUT 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

● French Horn Courses
FRHN 622 French Horn (1-4).
FRHN 652 Horn Ensemble (0-1).
FRHN 711 French Horn (1-4). For graduate students not majoring in French horn. May be repeated for credit. Summer session limit one to three hours. IND
FRHN 811 French Horn (1-6). For graduate students majoring in French horn. May be repeated for credit. Summer session limit one to three credits. IND
FRHN 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in French horn. May be repeated for credit. Summer session limit one to two hours. RSH
FRHN 965 Doctoral Recitals (1-3). THE
FRHN 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
FRHN 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

● Oboe Courses
OBOE 622 Oboe (1-4).
OBOE 711 Oboe (1-4). For graduate students not majoring in oboe. May be repeated for credit. Summer session limit one to three hours. IND
OBOE 731 Baroque Oboe (1-6). IND
OBOE 811 Oboe (1-6). For graduate students majoring in oboe. May be repeated for credit. IND
OBOE 921 Seminar in Performance (3). A study of repertoire and performance practice relating to the baroque oboe during the seventeenth and eighteenth centuries. LEC
OBOE 922 Seminar in Performance (3). A study of repertoire and extended performance techniques of the twentieth century. LEC
OBOE 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in oboe. May be repeated for credit. Summer session limit one to three hours. RSH
OBOE 965 Doctoral Recitals (1-3). Maximum seven hours credit. THE
OBOE 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH
OBOE 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE

The Collegium Musicum gives performances of early vocal and instrumental music using KU’s collection of replicas of early instruments.

The Thomas Gorton Music and Dance Library houses more than 111,000 scores, books, sound recordings, videos, microforms, and serials, and has the leading music collection in the Great Plains.
THE UNIVERSITY OF KANSAS  •  2005-07 GRADUATE SCHOOL CATALOG

Music & Dance—M.M. Areas in Performance

Fine Arts

Voice

Voice Courses

VOIC 500 Directed Study: _____ (1-3).

VOIC 520 Vocal Coaching (1).

VOIC 622 Voice (1-4).

VOIC 670 Advanced Lyric Diction for Singers: _____ (1).

VOIC 704 Vocal Repertoire: _____ (2). A survey of selected topics in vocal repertoire to be chosen from categories such as: Italian, German, French, and English songs, oratorio literature, and art songs by various composers. The course may be repeated for credit when topic varies.

VOIC 705 Advanced Vocal Literature I (3). An investigation of the development of French melodic literature. The course will include directed readings, writing, and performance.

VOIC 706 Advanced Vocal Literature II (3). An investigation of the development of Italian melodic literature. The course will include directed readings, writing, and performance.

VOIC 711 Voice (1-4). For graduate students not majoring in voice. May be repeated for credit. Summer session limit one to three hours.

VOIC 720 Vocal Performance Class II (1). Solo vocal performance in a class situation with emphasis including the preparation, planning of repertoire, and interpretative skills appropriate to a recital. Advanced repertoire and appropriate level of vocal and musical comprehension shall be expected from the graduate student. Prerequisite: Consent of instructor.

VOIC 740 Vocal Performance (1). A class in the performance of vocal repertoire.

VOIC 770 Special Studies in Voice: English Lyric Diction for the Choral Singer and Soloist (1). A graduate level course designed for the choral director, public school music teacher and voice teacher. Techniques for achieving a distinct, unaltered English pronunciation will be studied. The International Phonetic Alphabet will be employed.

VOIC 808 Vocal Pedagogy (1). A course offering performers and beginning teachers of classical singing a basic overview of vocal production. The class will explore the empirical and scientific principles of breathing, resonance, timbre, and other vocal features. Discussions of repertoire choices, vocal health, teaching styles, career development and other topics pertaining to the training of singers will be included. Added emphasis will be placed on historical and contemporary pedagogies through original research.

VOIC 811 Voice (1-6). For graduate students majoring in voice. May be repeated for credit. Summer session limit one to three hours.

VOIC 820 Vocal Coaching (1-4). In-depth investigation of elements of vocal performance such as: language, musical style, tradition, dramatic content and the communication thereof. Open to graduate voice majors with consent of instructor.

VOIC 890 Opera Workshop (0-4). The study of various aspects of opera, such as character development, aria, chorus, and opera scene study, staging, body movement, and audition techniques. May be repeated for credit. ACT

VOIC 892 Opera Production (2-4). The preparation and performance of an opera role. May be repeated for credit. ACT

VOIC 900 Directed Study: _____ (1-3). Investigation of a special topic or project. Prerequisite: Consent of instructor.

VOIC 921 Seminar in Performance: _____ (3). A detailed study of vocal repertoire, performance practice, and stylistic problems on a selected topic from areas such as oratorio, cantata, song cycles, vocal chamber music, opera or arias of specific composers. May be repeated for credit.

VOIC 960 Vocal Pedagogy (2). A study of the problems encountered in the teaching of vocal technique, such as breathing, resonance, tone color, dynamic control, and diction, and including sessions of supervised teaching.

VOIC 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in voice. May be repeated for credit. Summer session limit one to three hours.

VOIC 965 Doctoral Recitals (1-3). Maximum seven hours credit.

VOIC 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student's major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit.

Prerequisite: Consent of instructor.

THE UNIVERSITY OF KANSAS  •  2005-07 GRADUATE SCHOOL CATALOG

Prerequisite Courses

PCUS 622 Percussion (1-4).

PCUS 711 Percussion (1-4). For graduate students not majoring in percussion. May be repeated for credit. Summer session limit one to three hours.

PCUS 811 Percussion (1-6). For graduate students majoring in percussion. May be repeated for credit. Summer session limit one to three hours.

PCUS 921 Seminar in Performance and Pedagogy (3). A study of the interpretive problems encountered in percussion music from the various historical periods, and a study of the performance practices in orchestral, band, chamber ensemble, and solo literature.

PCUS 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in percussion. May be repeated for credit. Summer session limit one to three hours.

PCUS 965 Doctoral Recitals (1-3). The University of Kansas.

PCUS 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student's major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit.

Prerequisite: Consent of instructor.

PCUS 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student's major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit.

Prerequisite: Consent of instructor.

The Saxophone Courses

SAXO 622 Saxophone (1-4).

SAXO 711 Saxophone (1-4). For graduate students not majoring in saxophone. May be repeated for credit. Summer session limit one to three hours.

SAXO 811 Saxophone (1-6). For graduate students majoring in saxophone. May be repeated for credit. Summer session limit one to three hours.

SAXO 921 Seminar in Performance (3). A study of repertoire and performance techniques from the saxophone's inception to 1950.

SAXO 922 Seminar in Performance (3). A study of repertoire and extended performance techniques from 1950 to the present.

SAXO 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. in performance. May be repeated for credit.

SAXO 965 Doctoral Recitals (1-3). Maximum seven hours credit.

SAXO 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student's major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit.

Prerequisite: Consent of instructor.

SAXO 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student's major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit.

Prerequisite: Consent of instructor.

The Wind and Percussion Courses

W&P 630 Orchestral Repertoire (1).

W&P 655 Independent Study: _____ (1-4).

W&P 702 Special Studies in Woodwind Instrument Pedagogy (1-3).

W&P 704 Special Studies in Brass Instrumental Pedagogy (1).

W&P 706 Advanced Pedagogy Workshops in Orchestral Instruments (0.5). Methods and materials of teaching fundamentals of the instruments. Lecture, class performance, class discussion, teaching demonstrations, and library research. Summer session only.


W&P 900 Directed Study: _____ (1-3). Investigation of a special topic or project. Prerequisite: Consent of instructor.

W&P 921 Seminar in Performance: _____ (3). A detailed study of vocal repertoire, performance practice, and stylistic problems on a selected topic from areas such as oratorio, cantata, song cycles, vocal chamber music, opera or arias of specific composers (i.e., Verdi, Wagner, Mozart, Debussy, Poulenc, Wolf, Strauss), or twentieth century songs. May be repeated for credit.

W&P 961 Directed Performance (1-6). Individual instruction. Open only to students who have been admitted to the D.M.A. curriculum in performance. May be repeated for credit. Summer session limit one to three hours.

W&P 965 Doctoral Recitals (1-3). Maximum seven hours credit.

W&P 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student's major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit.

Prerequisite: Consent of instructor.
M.M. in Music Theory or Composition

Division Director: James Barnes
Murphy Hall, 1530 Naismith Dr., Room 222
Lawrence, KS 66045-3102, (785) 864-4514

Professors: Barnes, Hoag

Professors Emerit: Mattila, Pozdro, Shumway

Associate Professors: Holmberg, McGee

Assistant Professors: Haheim, Murphy

Admission

Applicants are expected to have educational backgrounds equivalent to the B.A., the B.M. in music theory, or the B.M. in composition from KU. Applicants should submit copies of compositions and/or research papers in music theory as well as recordings, if available. Applicants are expected to have a reading knowledge of German, French, Italian, or Spanish. A language deficiency may be satisfied after acceptance into the program. In addition to the required course work, students are encouraged to continue study of performance and participate in ensembles on the major instrument.

M.M. Degree Requirements

Recommended programs of study are as follows:

Music Theory

MTHC 541 Eighteenth-Century Counterpoint (3).
MTHC 542 Sixteenth-Century Counterpoint (3).
MTHC 559 Scoring for Concert Band (2).
MTHC 583 Composition (2).
MTHC 655 Readings in Music Theory: __________ (1-4).
MTHC 674 Orchestration I (3).
MTHC 676 Orchestration II (3).
MTHC 678 Electro-acoustic Composition I (3).
MTHC 680 Electro-acoustic Composition II (3).
MTHC 723 Twentieth-century Techniques before 1945 (3). A study and analysis of music from the turn of the century to World War II. Prerequisite: MTHC 215, LEC.
MTHC 723 Twentieth-century Techniques after 1945 (3). A study and analysis of music from World War II to the present. Prerequisite: MTHC 215, LEC.
MTHC 741 Canon and Fugue (3). A study of strict imitation and fugal writing. Practical work in two, three, and four parts in various media. Prerequisite: MTHC 541, LEC.
MTHC 778 History of Music Theory (3). A historical survey of music theory, both practical and speculative, from the ancient Greeks to the late twentieth century. (Same as MUSC 778.) LEC.
MTHC 789 Seminar on Selected Topics: __________ (0.5-3). Topics vary by semester. May be repeated for credit. LEC.
MTHC 801 Analytical Techniques (3). A survey of the principal theories of musical analysis, including Schenkerian analysis, set theory, serial theory, and semiology. Prerequisite: MTHC 510 or an equivalent course in musical forms. LEC.
MTHC 820 Seminar in Schenkerian Analysis (3). A seminar designed to develop and explore the use and programming of microcomputers as an aid in research and the production of music. Topics will include composition and production tools for music, structured program design, data representation, and basic computer-assisted instruction models. Prerequisite: EECS 138 or equivalent or permission of the instructor. LEC.
MTHC 830 Pedagogy of Music Theory (1-3). Procedures for teaching theoretical concepts and skills. Survey of available texts and related materials. Three credits when offered during a full academic term; one-two credits when offered as a short-term institute. Prerequisite: MTHC 214 or permission of instructor. LEC.
MTHC 853 Advanced Composition (1-6). Essentially for theory and composition majors on the master's level. May be repeated for credit. Summer session limit one to three hours. RSH.
MTHC 887 Advanced Orchestration (3). Prerequisite: MTHC 676, or consent of department. May be repeated for credit. RSH.
MTHC 889 Seminar on Selected Topics: __________ (0.5-3). Topics vary by semester. May be repeated for credit. LEC.
MTHC 899 Thesis (1-6). THE.
MTHC 953 Advanced Composition (1-6). Essentially for theory and composition majors on the doctoral level. May be repeated for credit. Summer session limit one to three hours. RSH.
MTHC 965 Doctoral Composition Recital (2). RSH.
MTHC 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student's major field. Open only to candidates for the D.M.A. in performance. May be repeated for credit. Prerequisite: Consent of instructor. RSH.
MTHC 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student's major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. THE.

M.M. in Musicology

Division Director: Paul Laird
Murphy Hall, 1530 Naismith Dr., Room 334
Lawrence, KS 66045-3102, (785) 864-9716

Professors: Barnes, Laird, Maxey

Professor Emeritus: Politoske

Associate Professor: D. Schwartz-Kates

Assistant Professors: Henry, R. Schwartz

Admission

Applicants are expected to have educational backgrounds equivalent to the B.A. or B.M. in musicology from KU. Applicants are expected to have a reading knowledge of German, French, Italian, or Spanish. A language deficiency may be satisfied after entrance into the program. Proficiency at the piano is encouraged. Applicants must submit samples of original scholarly writing. In addition to the required course work, students are encouraged to continue study of performance or composition.

M.M. Degree Requirements

The course work for the M.M. degree is as follows:

Musicology courses in the MUSC 650-MUSC 794 sequence __________ 9
MUSC 654 or MUSC 656 Collegium Musicum __________ 3
Advanced music theory courses __________ 6
MUSC 810 Music Bibliography and Research __________ 3
MUSC 840 Seminar on Selected Topics in Musicology __________ 3
MUSC 899 Thesis __________ 6
Electives in music performance __________ 4

Musicology Courses

MUSC 560 Music in World Cultures (3).
MUSC 650 Selected Topics in Music: __________ (0.5-3).
MUSC 654 Collegium Musicum, Vocal (0-1).
MUSC 656 Collegium Musicum, Instrumental (0-1).
MUSC 744 Readings in Jazz and American Popular Music (1-3). Investigation of a subject by means of directed study of primary resources. Prerequisite: Permission of instructor. IND.
MUSC 752 Music of the Middle Ages (3). Prerequisite: MUSC (MHST) 432. LEC.
Musc 753 Music of the Renaissance (3). Prerequisite: Musc (Mhsst) 432, Lec.
Musc 754 Music of the Baroque Era (3). Prerequisite: Musc (Mhsst) 472, Lec.
Musc 755 Music of the Classical Era (3). Prerequisite: Musc (Mhsst) 472, Lec.
Musc 756 Music of the Romantic Era (3). Prerequisite: Musc (Mhsst) 392, Lec.
Musc 757 Music of the Twentieth Century (3). Prerequisite: Musc (Mhsst) 392, Lec.
Musc 758 History of Musical Instruments (3). Prerequisite: Musc (Mhsst) 432 or Musc (Mhsst) 472 or permission of instructor. Lec.
Musc 759 Music in America (3). A survey of historical developments from the Pilgrims to the present. (Same as Amus 737.) Prerequisite: One course in the field of music history or permission of the instructor. Lec.
Musc 760 History of Opera (3). Prerequisite: Musc (Mhsst) 392 and Musc (Mhsst) 472. Lec.
Musc 761 History of the Mass (3). Prerequisite: Musc (Mhsst) 432 and Musc (Mhsst) 472, or permission of instructor. Lec.
Musc 765 History of Chamber Music (3). Prerequisite: Musc (Mhsst) 392 and Musc (Mhsst) 472, or permission of instructor. Lec.
Musc 766 History of the Concerto (3). Prerequisite: Musc (Mhsst) 392 and Musc (Mhsst) 472, or permission of instructor. Lec.
Musc 767 History of the Symphony (3). Prerequisite: Musc (Mhsst) 392 and Musc (Mhsst) 472, or permission of instructor. Lec.
Musc 768 History of Wind Band Music (3). A chronological survey of the development of the wind band/ensemble and its music, using standard musical works from each historical period. Prerequisite: Musc (Mhsst) 440, Musc (Mhsst) 480, or permission of instructor. Lec.
Musc 775 History of Keyboard Music (3). Prerequisite: Musc (Mhsst) 392, Musc (Mhsst) 432, and Musc (Mhsst) 472. Lec.
Musc 777 History of Solo Vocal Music (3). Prerequisite: Musc (Mhsst) 392, Musc (Mhsst) 432, and Musc (Mhsst) 472. Lec.
Musc 778 History of Music Theory (3). A historical survey of music theory, both practical and speculative, from the ancient Greeks to the late twentieth century. (Same as Mthc 778.) Lec.
Musc 794 Readings in Musicology: _____ (1-3). Investigation of a subject by means of directed reading of primary literary sources. Prerequisite: A grade average of "B" in two musicology courses numbered 500 or above and consent of instructor. Ind.
Musc 801 Music Bibliography and Research (3). Bibliography, research methods, and scholarly writing in music for entering graduate students. Prerequisite: Permission of instructor. Lec.
Musc 802 Advanced Music Bibliography and Research (3). Advanced bibliography and writing of research papers. Prerequisite: Musc (Mhsst) 801. Lec.
Musc 899 Thesis (1-6). The.
Musc 902 Seminar in Musicology (3). A research course designed primarily for doctoral students in musicology. Prerequisite: Musc (Mhsst) 801, or its equivalent. Lec.
Musc 903 Seminar in Performance Practices (3). Primary and secondary sources in performance practices dealing mainly with the seventeenth through nineteenth centuries, with implications applicable to student’s performance medium. Lec.
Musc 940 Seminar on Selected Topics in Musicology: _____ (3). Each semester a topic (to be inserted in the blank) will be the basis for discussion, reports, and a research paper. May be repeated for credit provided no course duplication takes place. Lec.
Musc 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. Lec.
Musc 972 D.M.A. Document (1-6). A scholarly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in performance and conducting. May be repeated for credit. Prerequisite: Consent of instructor. Lec.
Musc 999 Dissertation (1-12). The.

M.M. in Conducting

Band Conducting
Division Director: John P. Lynch
Murphy Hall, 1530 Nasmith Dr., Room 124
Lawrence, KS 66045-3102, (785) 864-3367

Choral Conducting
Division Director: John Paul Johnson,
332 Murphy Hall, (785) 864-9699

Orchestral Conducting
Division Director: Nicholas Uljanov,
126 Murphy Hall, (785) 864-4499
Professors: Bauer, Foster, Johnson
Professors Emeriti: Priestman, Ralston
Associate Professors: Daugherty, Gailey, Lynch, Stidham, Uljanov

Assistant Professor: Tucker

Admission
Applicants are expected to have educational backgrounds equivalent to the B.M. or B.M.E. degree (including a course in form and analysis) from KU. They should have experience in conducting that spans a period of at least one year. Such experience may include work in public school, college, or with other amateur or professional ensembles. Applicants normally are expected to have a high level of performing ability on an instrument or in voice. Applicants must complete audition-interviews successfully before the divisional faculty and should provide a resume of their conducting experience, including programs of public appearances.

M.M. Degree Requirements

The degree candidate must present a final project consisting of a public choral or instrumental program. A recital preview is left to the discretion of the faculty members of each division. In divisions with no preview requirement, the option is still available to students and faculty members. Divisions must approve the recital content well in advance but no less than three weeks before the recital date. The candidate must file a professional-quality CD recording of the final recital with the Department of Music and Dance before the final examination is scheduled.

A recommended program of study in band and orchestral conducting (minimum of 30 hours) is as follows:

- Musc 801 Music Bibliography and Research ........................................... 3
- Advanced conducting and score-reading .............................................. 12-18
- Electives .................................................................................................. 3

Band and orchestral conducting majors must be enrolled in an ensemble during each semester of residence.

A recommended program of study in choral conducting (minimum of 30 hours) is as follows:

- Musc 801 Music Bibliography and Research ........................................... 3
- Advanced courses in musicology and music theory ....................... 12
- Electives .................................................................................................. 6
- Choral literature ....................................................................................... 6
- Seminar conducting/teaching ................................................................. 6
- Electives .................................................................................................. 3
- Choral conducting majors must be enrolled in an ensemble during each semester of residence.

Band Courses

- Band 501 Workshop in: _____ (0.5-3).
- Band 559 Scoring for Concert Band (2).
- Band 602 Wind Ensemble (0-1).
- Band 630 Band Repertoire (2).
- Band 701 Workshop in _____ (0.5-3). May be repeated for credit. Lec.

BAND 803 Interpretation of Band Music (1). A study of the essential factors necessary for the understanding and subsequent interpretation of various compositions of advanced band music. In addition to the regular course work, students must qualify for the band, attend at least six hours of rehearsal per week and perform in all concerts. May be repeated for credit. Prerequisite: Consent of instructor. Lab.

Choral Music Courses

- Chor 620 Oread Consort (0-1).
- Chor 628 Summer Chorus (0-1).
- Chor 630 Choral Repertoire (2).
The University of Kansas

The nation.

than any school in

music therapists

produces more

considerations essential for making

chords, important for the understanding and subsequent interpreta-

of various compositions of advanced choral music. Offered in the

summer session only. LEC

Choral Conductors (1). Stylistic, expressive, and technical considerations essential for making

effective bowing decisions. Prerequisite: A course in conducting. LEC

Choral Diction (3). Study of methods to teach and learn diction in choral music contexts. Attention to International Phonetic Alphabet, acoustic implications of particular phonemes, and contributions of emerg-

ing technologies. Application of various languages, including English, Latin, Italian, French, German, and Spanish. (Same as MECT 825) LEC

Chor 826 Adolescent Changing Voices (2). Scientific approaches to understanding and working with unchanged children’s voices. (Same as MECT 827) LEC

Chor 827 Children’s Voices (2). Scientific approaches to understanding and working with unchanged children’s voices. (Same as MECT 828) LEC

Chor 828 Science-based Voice Education (3-6). Comprehensive ex-

amination of vocal anatomy, respiration, phonation, resonance, articulation, and voice development, with particular attention to research-based

vocal/choral pedagogies for working with children through senior adult voices. (Same as MECT 826) Prerequisite: Permission of instructor. LEC

Chor 830 Sacred Choral Repertoire (2). A study of anthems for Lection-

ary years A, B, and C. For church choir directors and church

music majors. May be repeated for credit. Prerequisite: Consent of in-

structor. LAB

Chor 850 Choral Arranging (2). Techniques of arranging for large and

small choral groups, with and without accompaniment. Prerequi-

site: MTHC 253 or consent of instructor. LEC

Chor 910 Research Methodologies in Choral Music (3). This course

will provide the student with an overview of historical, analyti-

cal, qualitative, and quantitative approaches used in the research of

choral music and issues related to teaching and conducting in the choral field. LEC

Conducting Courses

COND 711 Choral Conducting I (2). Fall semester. A study of con-

ducting techniques as they pertain to stylistic interpretation of choral

music from the Renaissance, Baroque, and Classical periods. The

building of a choral repertoire. Prerequisite: MECT 246, MECT 330, and/or consent of instructor. RSH

COND 712 Choral Conducting II (2). Spring semester. A continuation of COND 711. Interpretative analysis of stylistic characteristics of the

Romantic and contemporary periods. Prerequisite: MECT 246, MECT 330, and/or consent of instructor. RSH

COND 745 Instrumental Conducting (2). A study of conducting tech-

iques and problems in rehearsal and performance. Score analysis and

repertoire development. May be repeated for credit. Prerequisite: Consent of instructor. RSH

COND 791 Score Reading (2). Development of skills in the reading of all

clef and the most common transpositions. Simultaneous reading of

multiple lines and their practical rendition at the piano. May be re-

peated for credit. RSH

COND 811 Advanced Choral Conducting (1-6). A study of conducting

techniques as they pertain to developing an expressive and precise

choral ensemble. Participating in rehearsals under the supervision of

instructor. May involve conducting in public performance. May be re-

peated for credit. Summer session limit one to three hours. Prerequi-

site: Four hours of conducting and/or consent of instructor. IND

COND 820 Advanced Choral Conducting and Rehearsal Techniques

(3). Refinement of conducting and teaching skills in a choral setting.

Focus on relationships between choral sound, rehearsal structure and o-

ptimal learning, and age-appropriate choral literature and development of musicale. (Same as MECT 820) LAB

COND 821 Advanced Score Reading (2). Development of fluency in

reading full scores at the piano. May be repeated for credit. Prerequi-

site: Two semesters of COND 791 or consent of instructor. RSH

COND 822 Choral Literature - Late Baroque Era to Classical Era (3). LEC

COND 823 Choral Literature - Romantic Era (3). LEC

COND 824 Choral Literature - Contemporary Era (3). LEC

COND 845 Advanced Instrumental Conducting (3). A study of tech-

niques needed to project the conductor’s concept in rehearsal and per-

formance. Participating in rehearsals under the supervision of the in-

structor. May involve conducting in public performance. May be re-

peated for credit. Prerequisite: Consent of instructor. RSH

COND 921 Seminar (3). Choral literature from 1450 to 1650. LEC

COND 931 Seminar (3). Symphonic repertoire. LEC

COND 932 Seminar (3). Operatic repertoire. LEC

COND 933 Seminar (3). Solo repertoire with orchestra. LEC

COND 941 Seminar: Band Literature ______ (3). A study of literature

for wind band including original works and transcriptions. May be re-

peated for credit when topic varies. LEC

COND 961 Directed Performance (1-6). Open only to students who

have been admitted to the D.M.A. program in conducting. May be re-

peated for credit. Summer session limit one to three hours. RSH

COND 965 Doctoral Recitals (1-3). Maximum credit, four hours. THE

COND 970 D.M.A. Lecture-Recital (1-6). A lecture-recital and schol-

arly paper on a subject pertinent to the student’s major field. Open only to candidates for the D.M.A. in conducting. May be repeated for credit.

Prerequisite: Consent of instructor. RSH

COND 972 D.M.A. Document (1-6). A scholarly paper on a subject per-

tent to the student’s major field. Open only to candidates for the

D.M.A. in performance and conducting. May be repeated for credit.

Prerequisite: Consent of instructor. THE

Jazz Courses

JAZZ 608 Jazz Ensemble (0-1).

JAZZ 612 Vocal Jazz Ensemble (0-1).

JAZZ 624 Advanced Jazz Improvisation (2).

Orchestra Courses

ORCH 600 University Symphony Orchestra (0-1).

ORCH 601 University Chamber Orchestra (1).

ORCH 701 Workshop in __________ (0-5-3). May be repeated for credit. LEC

Concert Ensembles Course

PENS 652 Percussion Ensemble (0-1).

Wind Ensemble Course

WENS 652 Wind Ensemble (0-1).

M.M.E. in Music Education and Music Therapy

Division Director: Alicia A. Clair Murphy Hall, 1530 Naismith Dr., Room 448 Lawrence, KS 66045-3102, www.ku.edu/~memt (785) 864-4784 Graduate Director: George L. Duerksen, 432 Murphy Hall, (785) 864-9632 Professors: Clair, Duerksen, S. Hedden, Johnson Professors Emeriti: Radocy, Scheid Associate Professors: Colwell, Daugherty, D. Hedden Assistant Professor: Register

The division’s graduate program includes advanced professional and scholarly study for music educators and music therapists, licensure/certification programs for those with baccalaureate degrees in other fields who plan to enter the music education and music therapy professions (these initial licensure/certification programs typically also require collaborative undergraduate study), and advanced study for individuals in related disciplines. Areas of emphasis, curricula, examinations, and regulations and procedures are described in a pamphlet, Graduate Handbook in Music Education and Music Therapy, available at the division office and online at the division Web site above.

Admission

Admission requirements are as follows:

1. Undergraduate grade-point average of 3.0 or higher on a 4.0 scale.

2. An appropriate baccalaureate degree to support the individual’s goals for master’s study. Students seeking entrance into the graduate initial certification programs in music education or music therapy should

KU was the first university to offer a graduate program in functional music, now music therapy.

The Music Therapy Clinic is an educational and research facility that offers assessment and treatment programs for clients from the university and the community.

Regarded as the birthplace of music therapy, KU produces more music therapists than any school in the nation.
have substantial backgrounds in music regardless of undergraduate major.

3. Three letters of recommendation.

4. Other supporting materials are required. See www.ku.edu/~memt for details.

Apply to the Graduate School online at www.graduates.ku.edu. Send the paper application for admission, non-refundable fee, official transcripts, and test scores (i.e., Graduate Record Examination, Test of English as a Foreign Language, International English Language Testing System) to

The University of Kansas Graduate School
Graduate Applications
1450 Jayhawk Blvd., Room 300
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Music and Education and Music Therapy, Murphy Hall
1530 Naismith Dr., Room 448
Lawrence, KS 66045-3102

Master's Degree Programs

Course and Proficiency Requirements: M.M.E. with a Major in Music Education. The degree requires a minimum of 30 hours of graduate credit. At least one-half of the required credit hours must be in courses open only to graduate students. At least 20 of the hours must be in regularly scheduled classes excluding directed study, research, and thesis.

Course distribution:

• At least one-third of the total requirement in the major.
• At least one-third of the total requirement in other studies in music.
• At least 17 hours in MEMT including MEMT 812 Research in Music Education and Music Therapy (3 hours), MEMT 899 Master's Thesis (3-5 hours), and additional hours to reach the minimum elected from MEMT 700- and 800-level courses, subject to the advisor's approval. At least two courses must be at the 800 level.
• At least 10 graduate hours outside of MEMT, including at least 2 hours of applied music or conducting; at least 3 hours in musicology, theory, or composition; at least 3 hours in a nonmusic supporting area; and additional non-MEMT hours necessary to reach the minimum. All of these selections are subject to the advisor's approval.

Course and Proficiency Requirements: M.M.E. with a Major in Music Therapy. At least half the minimum 30 graduate hours must be in courses open only to graduate students.

Course distribution:

• At least one-third of the total requirement in the major, including MEMT 864 or its equivalent.
• At least one-third of the total requirement in other studies in music related to the objectives of the degree. This work must include the applied music proficiency specified below.
• The remainder of the requirement in supportive work in behavioral sciences/special education. This must include 6 hours of statistics and/or research course work chosen in consultation with the adviser.

The program must include at least 16 hours of graduate work in the division, including MEMT 812 and the master's thesis. At least 9 of these hours must be in regularly scheduled courses.

At least 10 hours of graduate work must be earned outside MEMT.

Proficiency as a performing musician must be demonstrated before the degree may be awarded. This proficiency normally is demonstrated through the videotaped audition described in the MEMT Graduate Application Procedure Document.

The M.M.E. with a major in music therapy may be earned only by individuals eligible to sit for the national examination offered by the Certification Board for Music Therapists (CBMT).

Final Examination. The final oral examination is administered by the student's adviser and at least two other members of the graduate faculty. The examination must pertain to the student's thesis but will not be confined to that topic.

Nonthesis Option

Students may elect to earn the M.M.E. with a major in music education or the M.M.E. with a major in music therapy using the nonthesis option, which functions as a terminal degree. The nonthesis option requires a total of 37 hours of credit. This includes a minimum of 33 credit hours of graduate required core courses including (except for thesis) the distributions described above for the appropriate degree, an additional 3-credit-hour project (MEMT 895 Master's Project), and a 1-credit-hour comprehensive final examination (MEMT 898 Comprehensive Examination).

Music Education and Music Therapy Courses

MEMT 500 Student Teaching in: ______ (1-6).
MEMT 596 Clinical Internship (1-15).
MEMT 597 Individual Study in: ______ (1-15).
MEMT 598 Special Course: ______ (1-5).
MEMT 634 Advanced Pedagogy and Materials: ______ (1).
MEMT 651 Sociocultural Influences on Musical Behavior (3).
MEMT 670 Acoustics of Music (3).
MEMT 707 Mainstreaming/Inclusion in Music Education (2). Skills and knowledge needed to facilitate appropriate and productive integration of children and youth with disabilities into music classroom settings. Prerequisite: MEMT 500 and SPED 431. LEC
MEMT 710 Professional Development (1). Participation in approved professional development conferences. Requires documentation of attendance, an annotated time log of activities, and a short paper. May be repeated for up to 3 credit hours. FLD
MEMT 711 Emerging Technologies for Choral Teaching and Learning (2-3). Applications of current digital and electronic technologies to choral ensemble teaching and learning. LEC
MEMT 750 Measurement in Music Education Professional Practice (3). Skills and knowledge needed by professional music educators to assess and evaluate students, learning, instruction, curriculum, and programs. Measurement and evaluation techniques for cognitive, affective, and psychomotor learning in music. Prerequisite: MEMT 200. LEC
MEMT 753 Psychology and Acoustics of Music (5). Psychological and acoustical bases of music and human musical behavior. Study of musical sound production, transmission, perception, cognition, response, and reproduction. Laboratory component and research project required. LEC
MEMT 754 Music in Therapy (3). Psychological and acoustical bases of music and human musical behavior. Study of musical sound production, transmission, perception, cognition, response, and reproduction. Laboratory component and research project required. LEC
MEMT 763 The Influence of Music on Behavior (3). A study of the various effects of music. The place of functional music in music education. Investigation of effective media and musical patterns. The relation of music to health. Prerequisite: Admission to the professional sequence in music education or music therapy or with permission from the MEMT division. LEC
MEMT 764 Music in Therapy (3). Issues examined include music therapy concepts in the development of program applications, professional marketing, and job proposals. These applications are based on theoretical constructs concerning the physiological, psychological, and social responses of persons to music. In addition, this course includes current trends in the field along with regulatory guidelines concerning practice design, implementation, and evaluation, ethics, and standards of clinical practice. Prerequisite: Admission to the professional sequence in music education or music therapy or with permission from the MEMT division. LEC
MEMT 772 Music Education and Music Therapy Research Project (1-5). Clinical, laboratory, field, or historical research in music education or music therapy. Prerequisite: MEMT 366 or equivalent, permission of instructor and at least two other members of the graduate faculty. May be repeated for up to 5 credit hours. FLD
MEMT 780 Internship in Teaching Music: ______ (1-15). A supervised internship experience leading to initial music teacher certification. The student assumes the total professional role as a teacher of music in an approved school setting. FLD
MEMT 791 Music Education/Music Therapy Techniques: ______ (1-3). Specific methodologies, strategies, approaches, and materials for
Music education/music therapy for specific populations, musical media, instructional settings, or clinical environments. LEC

MEMT 798 Special Course: Supervision in Music Therapy I (1-5). A special course of study to meet current needs of education professionals – primarily for graduate students. LEC

MEMT 812 Research in Music Education and Music Therapy (3). Study of research in music education and music therapy. Required of all candidates for graduate degrees. Enrollment must precede or be concurrent with enrollment in thesis. LEC

MEMT 813 History and Philosophy of Music Education (3). A study of music education with reference to its historical development and to educational psychology. Consideration of recent trends in the field of music in the school curriculum. Criteria for the evaluation of activities, courses, materials, and methods in a well-balanced program of music. LEC

MEMT 814 Sociology of Music (3). A study of societal influence on musical thought and practice, both in historical perspective and in comparative study of contemporary societies. The relations between school and community music. The role of musical organizations, institutions, and agencies in American life. LEC

MEMT 815 Musical Values and Aesthetics (3). Examination of musical value implications of particular musical phenomena, and contributions of viewing points are considered, with attention to philosophical and psychological aesthetics. Implications and applications of values systems for music education, music therapy, and other fields. LEC

MEMT 816 Current Trends in Music Education (3). Study of current trends in music goals, objectives, materials, equipment, facilities, procedures, and evaluation. Emphasis on understanding personalities and events which have affected changes in the field within the past five years, describing the status at present, and looking at possibilities for future development. LEC

MEMT 817 Methodologies in Music Education (3). A survey of music methodologies (general, vocal, instrumental) used by teachers at the pre-school, elementary, middle/high school, and high school levels. LEC

MEMT 818 Behavior Management in Music (3). A study of behavioral theories and techniques as applied to classroom and clinical settings for music professionals. Emphasis on a conceptual framework for human behavior and the ameliorative aspects of music. LEC

MEMT 820 Advanced Choral Conducting and Rehearsal Techniques (3). Refinement of conducting and teaching skills in a choral setting. Focus on relationships between gesture and choral sound, rehearsal structure and optimal learning, and agency cooperating in choral literature and development of musicality. (Same as COND 820.) LAB

MEMT 823 Seminar in: _____ (1-3). LEC

MEMT 825 Choral Diction (3). Study of methods to teach and learn diction in choral music contexts. Attention to International Phonetic Alphabet. Discussion of the syllable, acccentic and non-accentic meanings and contributions of various technologies. Application of various languages, including English, Latin, Italian, French, German, and Spanish. (Same as CHOR 825.) LEC

MEMT 826 Adolescent Changing Voices (2). Scientific approaches to the pedagogy of adolescent male and female voices during voice change. (Same as CHOR 826.) LEC

MEMT 827 Children's Voices (2). Scientific approaches to understanding and working with unchanged children's voices. (Same as CHOR 827.) LEC

MEMT 828 Science-based Voice Education (3-6). Comprehensive examination of vocal anatomy, respiration, phonation, resonance, articulation, and voice development, with particular attention to research-based vocal/choral pedagogies for working with children through senior adult voices. (Same as CHOR 828.) Prerequisite: Permission of instructor. LEC

MEMT 850 Measurement of Musical Behavior (5). Measurement theory applied to the development and administration of measures of musical ability, achievement, attitude, and performance for the use in individual and program evaluation. Classical and innovative methods for establishing reliability and validity. Each student will develop and evaluate a measure of some type of musical behavior appropriate for an educational or therapeutic setting. LEC

MEMT 863 The Influence of Music on Behavior II (3). A laboratory and research course to accompany or follow MEMT 763. LAB

MEMT 864 Philosophy and Theory of Music Therapy (3). Concentrated, interdisciplinary study of conceptual foundations for music therapy. LEC

MEMT 890 Practicum in Music Therapy (1-16). Advanced music therapy practice including clinical work with a population of the student’s choice which incorporates music therapy program design, implementation, and evaluation. The student will work in consultation with qualified Music Therapy staff. FLD

MEMT 891 Advanced Clinical Techniques (3). The student will articulate, test, and refine music therapy clinical practice protocol(s) with a client(s) of choice. Students will work in consultation with music therapy staff. FLD

MEMT 892 Supervision in Music Therapy I (3). Study and application of theoretical models and supervisory roles applicable to music therapy clinical supervision. Students will review developmental levels for supervisors and practicum students. Supervision of music therapy clinical practicum students will be required. LEC

MEMT 893 Supervision in Music Therapy II (3). A model of practicum supervision will be applied in music therapy clinical practicum supervision. Video and/or tape recordings of supervision conferences with practicum students will be reviewed in consultation with qualified music therapy staff. LEC

MEMT 895 Master’s Project (1-3). LEC

MEMT 897 Independent Study: _____ (1-4). Prerequisite: Consent of advisor and instructor. RSH

MEMT 898 Comprehensive Examination (1). An independent course in preparation for the non-thesis M.M.E. degree final examination. The grade will be S or U as determined by performance on the examination. Prerequisite: Permission of the instructor. IND

MEMT 899 Master’s Thesis (1-6). THE

MEMT 910 Learning Theories and Music Education (3). (V) A broad survey of formal learning theories and other approaches to the teaching-learning situation, assigning implications for, applications to, and research needs in music education. LEC

MEMT 912 Administration of Music Education Programs (3). A study of the administration of music education programs at all school levels; topics will include personnel, finance, curriculum, supervision, and articulation of the music program with other segments of the school and community. LEC

MEMT 923 Seminar in: _____ (1-3). LEC

MEMT 925 Advanced Acoustical and Psychological Aspects of Musical Behavior (5). Study and experimental investigation of acoustical, psychological phenomena as they influence music. Attention will be given to physical parameters; estimation of pitch, loudness, and timbre; magnitude estimation; theories of consonance; experimental aesthetics; and measurement and prediction of musical ability. Each student will be expected to complete an experiment or quasi-experiment related to human musical behavior. (Same as PSYC 852.) Prerequisite: MEMT 453 or equivalent, or permission of instructor. LEC

MEMT 972 Research in Music Education (2-5). For students who are sufficiently qualified to conduct original investigations in this field. Consent of instructor necessary. IND

MEMT 980 Advanced Topics: _____ (1-3). A special course of study to meet current needs of education professionals – primarily for post-master’s level students. IND

MEMT 995 Field Experience: _____ (1-5). Supervised and directed experiences in selected educational settings. The adviser will schedule regular observations of the field experience and conferences with the student. Written summaries and evaluations of the field experiences will be prepared independently by the student, a representative of the cooperating agency, and the adviser. Open only to advanced students. Field experience credit in any one semester may not exceed five hours, and total credit may not exceed eight hours. FLD

MEMT 996 Practicum in College Teaching (1-3). College teaching experience, guided by a major professor in the department. Open only to doctoral aspirants or candidates. FLD

MEMT 997 Individual Study: _____ (1-4). Prerequisite: Prior graduate course work in the area of study and consent of instructor. IND

MEMT 998 Seminar in: _____ (1-4). LEC

MEMT 999 Doctoral Dissertation (1-15). THE

Doctor of Musical Arts

Admission

The degree of Doctor of Musical Arts is intended as a recognition of high professional attainment. Since only exceptionally well-qualified candidates are admitted to the program, the doctoral studies are devoted primarily to developing professional qualifications for teaching at the college level. The degree of Doctor of Musical Arts is offered in the specific fields of church music (organ or choral conducting emphasis), composition, conducting (band, choral, or orchestral), and most areas of performance.

The applicant is expected to have a master’s degree, or its demonstrated equivalent, in the proposed field. In addition to official transcripts and letters of recommendation, all applicants should submit résumés of their training and experience in teaching and performing. General information on academic requirements, residence, tenure, and enrollment, see General
Information in this catalog. Further admission requirements for the fields are indicated below.

**Composition.** Applicants should submit scores of original works (including master's thesis), recordings, and lists of past performances.

**Conducting.** Applicants are expected to have had experience in conducting that spans a period of not less than two years. This may include work in public school, college, or with other amateur or professional ensembles. Applicants normally are expected to have a high level of performing ability on an instrument or in voice. An entrance interview-audition is required for admission. The audition is heard by a committee composed of the graduate faculty of the conducting divisions. Approval by a majority of the committee is required for acceptance into the program. The audition may include (1) harmonic and melodic dictation and/or sight-singing, (2) score identification, (3) score reading at the keyboard, and (4) conducting from a band, choral, or orchestral score to be selected by the examiners. International students may submit a videotape. The graduate faculty in the ensemble divisions review this tape.

Students applying to the D.M.A. program in choral conducting must display a working knowledge of two of the following four languages: French, German, Spanish, and Italian. A working knowledge normally implies at least two semesters of undergraduate study.

**Performance.** The applicant must be prepared to perform the equivalent of a full master's recital as deemed appropriate by the major performance division. The audition is heard by a committee of the graduate faculty of the major division. A member of the committee on graduate studies in music also may be invited to attend as a voting member of the committee. Approval by a majority of the committee is required for acceptance into the program. The applicant should consult the major performance division for specific memory and repertoire requirements. The applicant also should submit a comprehensive repertoire list indicating work studied, memorized, performed in public, or ready for immediate performance. In the case of international students, acceptance may be achieved by submitting an audiotape. The graduate faculty in the major division hear this tape.

Students applying to the D.M.A. program in voice conducting must display a working knowledge of German, Italian, and English diction before entering the graduate program or before taking the comprehensive oral examination. Entering students who are deficient in a language or a particular area of diction must enroll in the specific course in which they are deficient and pass it with a grade of C or demonstrate proficiency by passing an examination.

**D.M.A. Degree Requirements**

**Research Skills.** Before being admitted to the comprehensive examinations, all D.M.A. students must present satisfactory evidence of research skills relevant to completion of the document or lecture-recital. These skills must include one of the following with the approval of the adviser, division, and director of graduate studies in music:

1. Reading proficiency in a foreign language(s).

2. Proficiency in computer techniques by completing one of two tracks:

   **Track A**
   2. Complete at least one graduate seminar in computer applications in music.
   3. Design and implement a substantial project relevant to the candidate's professional development. This project may be developed using a traditional or music-oriented authorizing system.

   **Track B**
   1. Complete ECES 208 or equivalent.
   2. Design and implement a substantial project relevant to the candidate's professional development. This project should be written using a traditional structured or object-oriented programming language.

   3. Proficiency in techniques for measurement of quantitative research.

**Advisory Committee.** A faculty advisory committee is selected by each graduate student, in consultation with the major adviser, subject to the consent of the faculty members involved, and approved by the director of graduate studies in music. This usually occurs during the second semester of full-time enrollment. All committees must have at least four members from the graduate faculty in the Department of Music and Dance. This committee participates with the major music division faculty in evaluating required recitals and administers the comprehensive and final oral examinations. One additional committee member from outside the major department must be selected to participate in the oral comprehensive and final examination. All candidates for graduate degrees must pass the final oral examination at least four weeks before the date on which they expect to receive the degree.

**Recitals.** All students in performance and orchestral and instrumental conducting must perform a total of three recitals. This number does not include the D.M.A. lecture-recital if the student selects a lecture-recital as a final project. Each recital program should be approved by the faculty in the major area before the recital is performed. One or two recitals may be presented before taking the comprehensive oral examination.

Doctoral conducting recitals must contain 50 to 60 minutes of programmed music and be performed with an official university ensemble approved by the committee on graduate studies in music. A student who wishes to use an ensemble other than the groups already approved, to organize his or her own ensemble for a maximum of one recital, or to present a program of less than the required length, must request approval from the committee on graduate studies in music no later than the end of the semester before the beginning of the rehearsals.

For the first two required recitals in the D.M.A. program in performance and conducting, a recital preview is left to the discretion of the faculty members of each division. In divisions with no preview requirement, the option to have a preview is still available to students and faculty members. Divisions must approve the recital content well in advance but no less than three weeks before the recital date. Normally, there is no recital preview for the final recital.

All recitals and public appearances required for the D.M.A. are graded by the student's advisory committee and the faculty of the major division. The student must achieve at least a grade of B on each recital for satisfactory completion of degree requirements.
Music & Dance—Doctor of Musical Arts

Doctoral Theory Comprehensive Examinations. All students must complete two music theory projects. One must be post-tonal, and the other either tonal or pre-tonal, usually centered on literature from the student’s primary area of study. Students may begin the projects any time after completing the first theory course. Once the second project has been successfully completed, the music theory comprehensive examination requirement is satisfied.

Musicology and Oral Comprehensive Examinations. When the D.M.A. aspirant has fulfilled the Foreign Language or Other Research Skills requirement, completed most course work, and maintained the quality of work at a level satisfactory to the major division and the Graduate School, he or she may request the Graduate Division to schedule the comprehensive musicology examination. This is a written test in musicology (some major divisions also may require a written examination in the major area) and an oral examination administered by the graduate advisory committee. Majors in performance and conducting must have presented one or two of the three required recitals before taking the examinations.

Final Recital. After successful completion of the comprehensive oral examination, the candidate in performance or conducting is eligible to present the third recital. This recital, which is analogous to the doctoral dissertation, should occur near the end of the degree program but before completion of the D.M.A. document or the D.M.A. lecture-recital.

Document, Lecture–Recital, or Large-scale Composition. No later than the end of the semester after successful completion of the comprehensive examination, candidates in performance, conducting, and composition must submit to the graduate advisory committee a prospectus for a D.M.A. document or D.M.A. lecture-recital. A candidate in composition must submit a prospectus for a large-scale composition. The prospectus for a document or lecture-recital should include a preliminary bibliography and an outline of the content. The composition prospectus should outline a large-scale work for orchestra, with or without soloists, a work for chorus and orchestra, or an opera, and should include a preliminary analysis.

The D.M.A. document is a scholarly paper roughly equivalent in scope to a master’s thesis. The lecture-recital is a public presentation based on a paper written in scholarly form.

Upon satisfactory completion of all other degree requirements, candidates must schedule a final oral examination. For students in performance and conducting, the examination covers the third recital and the research reported in the document or lecture-recital. For students in composition, the examination is primarily a defense of the large-scale composition.

The student must receive at least a grade of B on the document, lecture-recital, or composition for satisfactory completion of degree requirements. Two unbound copies of the work must be submitted to the Graduate Division of the School of Fine Arts. The lecture-recital paper also must include a videotape or CD recording.

Composition

Typical program:
Master’s degree in composition ......................................................... 30
Composition .................................................................................... 18
Advanced theory and score reading .................................................. 8

MUSC 801 Music Bibliography and Research ........................................ 3
Advanced courses in musicology ......................................................... 12
MTHC 965 Doctoral Composition Recital (A complete program of original works in various media, in which the composer participates as performer or conductor) ......................................................... 2
Dissertation (A large-scale work for orchestra, with or without soloists, a work for chorus and orchestra, or an opera, written analysis to be attached) ......................................................... 16
Electives ......................................................................................... 6

Composition majors must present a public program of original compositions, approximately 45 minutes in duration, before being admitted to the comprehensive examination.

Conducting

Typical program in band conducting:
Master’s degree in conducting or equivalent ........................................ 30
Advanced conducting ..................................................................... 12-14
Score reading .................................................................................. 4
Seminars in repertoire ...................................................................... 9
MUSC 801 Music Bibliography and Research ......................................... 3
Advanced courses in musicology and music theory .............................. 12
Recitals .......................................................................................... 3
D.M.A. document or lecture-recital .................................................. 3
Electives ......................................................................................... 11-13

Typical program in choral conducting:
Master’s degree in conducting or equivalent ........................................ 30
Advanced choral conducting/score reading (must include COND 961) ......................................................... 8-12
Advanced courses in musicology and music theory .............................. 12
MUSC 801 Music Bibliography and Research ......................................... 3
CHOR 820 Orchestral Bowing Techniques for Choral Conductors ........ 1
MUSC 975 Seminar in conducting ..................................................... 3
CHOR 910 Research Methodologies in Choral Music .......................... 3
Choral literature .............................................................................. 9-12
Seminars in repertoire ...................................................................... 6
W&P 702 Special Studies in Woodwind Instrument Pedagogy ............. 3
D.M.A. document or lecture-recital .................................................. 3
Electives ......................................................................................... 39
Ensembles

Typical program in orchestral conducting:
Master’s degree in conducting or equivalent ........................................ 30
Advanced conducting, score reading, and analysis ................................ 16-18
Seminars in repertoire ...................................................................... 9
MUSC 801 Music Bibliography and Research ......................................... 3
Advanced courses in musicology and music theory .............................. 12
Recitals .......................................................................................... 3
D.M.A. document or lecture-recital .................................................. 3
Electives ......................................................................................... 11-13

Conducting majors must be enrolled in an ensemble during each semester of residence.

Areas in Performance

Typical program in bassoon, clarinet, flute, oboe, and saxophone:
Master’s degree in performance ......................................................... 30
Applied music (Four semesters, 5 hours per semester) ......................... 20
Seminars in bassoon, clarinet, flute, oboe, or saxophone ....................... 6
Recitals (One full recital, to be given in the final semester, plus two of the following: An additional solo recital, a concerto performance, a chamber music program, or a lecture-recital) .......... 7
W&P 702 Special Studies in Wind/Woodwind Instrument Pedagogy .......... 3
MUSC 801 Music Bibliography and Research ......................................... 3
Advanced courses in musicology and music theory .............................. 12
D.M.A. document or lecture-recital .................................................. 3
Electives ......................................................................................... 6

Typical program in church music (choral conducting emphasis):
Master’s degree in performance ......................................................... 30
Advanced choral conducting ............................................................... 12
Seminars in church music .................................................................. 4
Recitals (two choral recitals, one organ or voice recital) ......................... 12
Musicology and music theory ............................................................. 9
MUSC 801 Music Bibliography and Research ......................................... 3
Secondary applied area (organ or voice) ............................................... 6
Advanced courses in secondary applied area (organ or voice) ............... 6
D.M.A. document or lecture-recital .................................................. 3
Electives ......................................................................................... 5

D.M.A. church music majors (choral conducting emphasis) who have not studied voice for a minimum of two semesters before entering this program must enroll for two semesters. Students also must be enrolled in a choral ensemble each semester of residence.
Typical program in church music (organ emphasis):
Master's degree in performance ......................................................... 30
ORG 961 Directed Performance ......................................................... 19
Advanced courses in church music .................................................. 12
Advanced courses in musicology and music theory ......................... 12
MUSC 801 Music Bibliography and Research .................................. 3
Recitals (two organ recitals, one choral recital) .................................. 0
Secondary applied area (choral conducting) ..................................... 3
D.M.A. document or lecture-recital .................................................. 3
Electives .......................................................................................... 6
D.M.A. church music majors (organ emphasis) who have not studied voice for a minimum of two semesters before entering this program must enroll for two semesters. Students also must be enrolled in a choral ensemble for two semesters. Students must enroll in ORGN 702 Master Class in Organ and ORGN 720 Studio Class in Organ each semester in residence.

Typical program in organ:
Master's degree in performance ......................................................... 30
Applied music (Four semesters, 5 hours per semester) ................. 20
Recitals (Three organ recitals) .......................................................... 3
MUSC 801 Music Bibliography and Research .................................. 3
Advanced courses in organ .............................................................. 12
Advanced courses in musicology and music theory ......................... 12
D.M.A. document or lecture-recital .................................................. 3
Electives .......................................................................................... 4
D.M.A. organ majors must be enrolled in ORGN 702 Master Class in Organ and ORGN 720 Studio Class in Organ each semester in residence.

Typical program in percussion:
Master's degree in performance ......................................................... 30
Applied music (Four semesters, 5 hours per semester) ................. 20
Seminars in percussion ................................................................. 3
Recitals (One full recital, to be given in the final semester, plus two of the following: An additional solo recital, a concerto performance, a chamber music program, or a lecture-recital) ........... 7
MUSC 801 Music Bibliography and Research .................................. 3
Advanced courses in musicology and music theory ......................... 12
D.M.A. document or lecture-recital .................................................. 3
*Electives ...................................................................................... 12
*Three to 6 hours of this total must be chosen from the following: W&P 704 (1, W&P 702 (2), BAND 803 (1, COND 745 (2).

Typical program in piano performance, literature, and pedagogy:
Master's degree in performance ......................................................... 30
Applied music (Four semesters, 5 hours per semester) ................. 20
Seminars in piano ................................................................. 9
Recitals (One full recital, to be given in the final semester, plus two of the following: An additional solo recital, a concerto performance, a full chamber music program, or a lecture-recital) ........... 7
PIAN 840 Advanced Piano Pedagogy I, Group and Class Instruction (graduate teaching assistants only) ........................................... 3
MUSC 801 Music Bibliography and Research .................................. 3
Advanced courses in musicology and music theory ......................... 9-12
D.M.A. document or lecture-recital .................................................. 3
*Minor concentration (pedagogy or accompanying) .......................... 3
Electives ........................................................................................ 6
*All teaching assistants must enroll in one semester of PIAN 840.

Typical program in strings:
Master's degree in performance ......................................................... 30
Applied music (Four semesters, 5 hours per semester) ................. 20
Seminars in strings ................................................................. 9
Recitals (One full recital, to be given in the final semester, plus two of the following: An additional solo recital, a concerto performance, a full chamber music program, or a lecture-recital) ........... 7
MUSC 801 Music Bibliography and Research .................................. 3
Advanced courses in musicology and music theory ......................... 12
D.M.A. document or lecture-recital .................................................. 3
Electives ........................................................................................ 6

Typical program in French horn, trombone, trumpet, and tuba:
Master's degree in performance ......................................................... 30
Applied music (Four semesters, 5 hours per semester) ................. 20
Seminars in trombone, trumpet, or tuba ........................................ 3
Recitals (One full recital, to be given in the final semester, plus two of the following: An additional solo recital, a concerto performance, a chamber music program, or a lecture-recital) ........... 7
W&P 704 Seminar in Brass Pedagogy .............................................. 3
MUSC 801 Music Bibliography and Research .................................. 3
Advanced courses in musicology and music theory ......................... 12
D.M.A. document or lecture-recital .................................................. 3
Electives ........................................................................................ 9

Typical program in voice:
Master's degree in performance ......................................................... 30
Applied music (Four semesters, 5 hours per semester) ................. 20
Seminars in voice ........................................................................... 9
Recitals (One full recital, to be given in the final semester, plus two of the following: An additional solo recital, a major role in an opera, a major solo in an oratorio, a full chamber music program, or a lecture-recital) ........... 7
MUSC 801 Music Bibliography and Research .................................. 3
Advanced courses in musicology and music theory ......................... 9-12
D.M.A. document or lecture-recital .................................................. 3
Electives ........................................................................................ 9

Doctor of Philosophy in Music

Admission
The Doctor of Philosophy degree in music is offered in musicology and music theory. The applicant is expected to hold a Master of Music degree with emphasis in musicology or music theory from the University of Kansas or an equivalent master’s degree from another accredited institution. In addition to the required transcripts and letters of recommendation, the applicant for admission to the Ph.D. program should submit a summary of professional training and experience, and samples of original scholarly writing.

Ph.D. Degree Requirements

Foreign Language Requirements. Aspirants to the Ph.D. degree in music theory and musicology are expected to demonstrate reading knowledge of German and a Romance language chosen from French, Italian, or Spanish. Reading proficiency must be demonstrated before scheduling the oral comprehensive examination. The student also may be advised to develop reading proficiency in another language or languages in order to pursue research for the dissertation.

Course of Study. Specific course work for each student is arranged individually in consultation with the student’s adviser. The Ph.D. program normally requires four years of full-time study beyond the master’s degree, with the first two years devoted to course work. A minimum of 18 credit hours is devoted to the dissertation, an original contribution to knowledge in the student’s research area.

Students in musicology must complete at least two semesters of MUSC 654 or MUSC 656 Collegium Musicum, and two semesters of MUSC 940 Seminar on Selected Topics in Musicology. In addition, students must complete at least three more 3-credit-hour courses in musicology numbered from 650 to 799, 802, 902, or 940 and at least three more 3-credit-hour courses in music theory numbered from 655 to 830. Although the Ph.D. program does not include a minor area, students are encouraged to continue their study of performance and/or composition, and may be advised to take nonmusic courses that are directly applicable to their chosen fields of research for the dissertation.

For general information on academic requirements, residence, tenure, and enrollment, see the General Information chapter of this catalog.

Scholarly Presentation. Each candidate for the Ph.D. degree in musicology and music theory must make a public presentation of no less than 20 minutes on a scholarly topic. This requirement may be fulfilled by reading a paper at a national or regional meeting of a society in the student’s discipline or in a colloquium at the University of Kansas.

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Doctoral Theory Comprehensive Examinations. All students must complete two projects. One must be post-tonal, and the other either tonal or pre-tonal, usually centered on literature from the student’s primary area of study. Students may begin the projects any time after completing the first theory course.

Musicology and Oral Comprehensive Examinations. Comprehensive written and oral examinations are given when the student has satisfactorily completed most of the course work and has fulfilled the language requirements. The written examination tests the student’s general knowledge of musicology and her or his ability to discuss, in depth, specific aspects, issues, and developments in music. Musicology and music theory students must take an additional examination in the major field. Upon successful completion of the written examination and the theory comprehensive examination, an oral examination of about two hours is administered by the student’s graduate advisory committee and a representative of the Graduate School. With the satisfactory completion of both written and oral comprehensive examinations the aspirant is admitted to candidacy for the degree of Doctor of Philosophy in music.

Dissertation Proposal. No later than the end of the semester after successful completion of the comprehensive examinations, the candidate, in consultation with the faculty dissertation committee, must submit a dissertation proposal of several pages with a preliminary bibliography, outline, and description of the project and research plan.

Final Oral Examination. Following completion of the dissertation, a final oral examination is scheduled in which the candidate presents and defends the results of dissertation research and is expected to respond to questions from the faculty committee. A grade of at least B must be achieved on the dissertation for satisfactory completion of the degree requirements.

Doctor of Philosophy in Music Education

The Doctor of Philosophy emphasizes research and scholarship. It is often sought by those who aspire to careers in research and graduate-level teaching. The requirements help the student develop broad and profound understanding of musical behavior, sophisticated skill and extensive experience in pursuing new knowledge of such behavior, and a rational system for evaluating the relationships between the specialty and other areas of human understanding. The program culminates with completion of a substantial piece of original research.

Course requirements for the doctoral degree are flexible. The Ph.D. program requires a minor. Each student’s program is planned specifically in light of his or her background and to meet the needs of the anticipated academic and professional career. However, each student is expected to achieve a broad understanding of human musical behavior and to become skilled in researching such behavior. Professional competence, not hours of credit per se, is the underlying requisite for conferring the degree.

Detailed information about admission processes and the Division of Music Education and Music Therapy can be found online at www.ku.edu/~memt.

Admission

Requirements for Regular Admission
1. Master’s grade-point average of 3.5 or higher.
2. Scores on the three basic aptitude subtests of the Graduate Record Examination.
3. Three letters of recommendation estimating the applicant’s potential for success in doctoral study.
4. Documentation of at least 18 months of successful full-time experience as a professional music educator or music therapist.
5. Passing score on the music education and music therapy division diagnostic examination.

Research Skills

Doctoral students in music education and music therapy at KU must demonstrate research skills by completing three research projects suitable for publication. These may be developed and completed independently or in consultation with appropriate doctoral faculty members. There must be a project of each of the following types: descriptive, experimental, and historical (including the history and logic of ideas). The descriptive and experimental research articles should be presented in APA style. The historical research article may be presented in Turabian, MLA, or APA style.

Each completed project is reviewed by the student’s doctoral committee, which rules in the majority whether the project is of sufficient quality for publication in a national, refereed research journal in music education or music therapy. Single-author studies that have been published or accepted for publication in such journals may be used to demonstrate these skills.

Completion of each of the three research projects must be certified by the student’s mentor/adviser in music education or music therapy on the Doctoral Checksheet in the student’s file in the division office. The mentor/adviser must submit an appropriate Do-all form after the completion of each project.

Preliminary and Comprehensive Examinations

The student must pass a series of examinations, culminating with the comprehensive oral examination as specified by the Graduate School.

The music education/music therapy Ph.D. handbook, available in the division office, includes information about patterns of course work, the Ph.D. minor, examinations, and the dissertation.

Graduate Programs in Related Fields

College of Liberal Arts and Sciences. For information on these programs, please consult the College of Liberal Arts and Sciences chapter of this catalog.

Department of History of Art:
Master of Arts

Department of Philosophy:
Doctor of Philosophy

Department of Theatre and Film:
Master of Arts
Master of Fine Arts in Scenography
Doctor of Philosophy
William Allen White School of Journalism and Mass Communications

Qualifying Examination .................................................. 192
Enrollment Requirements after Completing Course Requirements ........................................ 192

Graduate Degree Requirements: Marketing Communications—Edwards Campus .......... 192
Course Requirements ........................................ 192
Required Courses ............................................... 192
Elective Courses ........................................ 192

Journalism & Mass Communications Courses .................................................. 192
William Allen White School of Journalism and Mass Communications

Ann M. Brill, Dean
Sharon Bass, Graduate Director
Stauffer-Flint Hall, 1435 Jayhawk Blvd., Room 200
Lawrence, KS 66045-7575
jschool@ku.edu or www.journalism.ku.edu
Phone: (785) 864-4755, Fax: (785) 864-4396

Professors: Frederickson, Gentry, Kuhn, Musser, Shaw
Associate Professors: Basow, Bass, Bengtson, Brill, Broholm, Guth, Holstead, Lee, Marsh, Utsler, Volek
Assistant Professors: Barnett, Swain, Ward

The William Allen White School of Journalism and Mass Communications offers a professional graduate program that leads to a terminal Master of Science degree in journalism. The program emphasizes professional preparation and the ability to think critically and perform in converged media. Major courses of study are News/Information, Strategic Communications, and Marketing Communications.

News/Information includes newspapers, online, broadcasting, and magazines. Strategic Communications includes advertising, direct marketing, personal selling, public relations, and sales promotion. These major areas involve work with new media and a variety of different forms of publications and dissemination. They are offered on the Lawrence campus.

The Marketing Communications course of study emphasizes the integration of marketing communications specialties. The curriculum is an advanced series of courses requiring a minimum of two years of professional experience in marketing communications or other media-related fields. It is offered on the KU Edwards Campus in Overland Park and is designed for part-time, evening study to accommodate working professionals.

Admission Requirements

Admission is based primarily on the student’s undergraduate record, references, and results of the Graduate Record Examination. Applicants who have baccalaureate degrees in journalism, as well as those with no academic or professional background in journalism, are eligible to apply for the News/Information or Strategic Communications courses of study. Applicants who have had professional experience must describe it in their applications to be evaluated for exemption from basic skills and professional course requirements.

Applicants for the Marketing Communications course of study (Edwards Campus) must have a minimum of two years of full-time professional employment in marketing communications or media-related fields.

Application Deadlines

Students may enter the News/Information and Strategic Communications programs in fall semester only. The application deadline is the preceding March 1. Students may enter the Marketing Communications program in the spring semester, which begins in January, or in the fall semester, which begins in August. Applications may be submitted at any time, although the decision to admit students is made only in November and April.

Application Materials

Applications can be considered only after these items have been submitted:
1. Completed application form, online at www.graduate.ku.edu.
2. Two official transcripts of all college-level courses.
3. Scores on the Graduate Record Examination or GRE Writing Assessment. Applicants for the Marketing Communications course of study may submit the Graduate Management Admissions Test. Tests must have been taken within the last five years.
4. Three letters of reference from persons familiar with the applicant’s abilities.
5. Written, one-page statement of the applicant’s academic and professional objectives.
6. A current résumé. Applicants for the Marketing Communications course of study also must include three examples of professional work that reflect the applicant’s years of experience.
7. Nonrefundable application fee payable to the University of Kansas. See Admission in the General Information chapter of this catalog for more information.
8. International students whose native language is not English also must submit Test of English as a Foreign Language examination scores or International English Language Testing System examination scores.
9. International students must submit proof that they have the financial resources to cover annual expenses.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send all test scores and original transcripts of all college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
School of Journalism and Mass Communications
Graduate Director, 1435 Jayhawk Blvd., Room 200
Lawrence, KS 66045-7575

Photo, page 190: Students in the School of Journalism’s new Stan and Madeline Stauffer Multimedia Newsroom in the Dole Center prepare a KUJH-TV newscast for the award-winning tv.ku.edu Web site.
Graduate Degree Requirements: News/Information and Strategic Communications—Lawrence Campus

To earn the degree, a student must complete 36 graduate credit hours with at least a B (3.0) average. A student without professional experience or an undergraduate degree in journalism and mass communications from an accredited program also must complete undergraduate basic skills courses. A student must elect to complete a thesis or project. Each student must pass a written qualifying examination.

Major Components of 36-hour Requirement. A student entering the program must have basic journalism skills. The requirement may be fulfilled by professional experience or undergraduate course work. In addition, a student takes 12 hours of core courses, 12 hours of professional courses, and 12 hours of advanced courses, including a master’s project or thesis.

Basic Skills Requirements. Students may meet the basic skills requirement with significant professional experience or an undergraduate degree in journalism and mass communications from a school accredited by the Accrediting Council on Education in Journalism and Mass Communications. A student who does not meet the requirement must complete two undergraduate courses that do not count toward the 36-hour graduate credit requirement:

- JOUR 419 Multimedia Editing (3)
- JOUR 445 Multimedia Writing and Production (3)

Core Course Requirements. The core graduate courses help students develop strong research and critical-thinking skills. Four courses are required:

- JOUR 618 First Amendment and Society (3)
- JOUR 801 Research I: Theory (3)
- JOUR 802 Research II: Methods (3)
- JOUR 803 Survey of Mass Media and Popular Culture (3)

Professional Course Requirements. Those who hold the master’s degree from KU are expected to be able to perform professional tasks. Students therefore must complete a minimum of 12 credit hours of professionally oriented courses.

A student with significant professional experience may, as part of the application, request permission to substitute other course work for all or part of the professional course requirement. The application must include documentation of the student’s professional experience. At the point of admission, the graduate committee grants or denies requests to substitute other course work for all or part of the professional course requirement.

A student takes professional courses from among courses numbered JOUR 500 to JOUR 698, excluding JOUR 618 First Amendment and Society. These courses must include one course designated as advanced media or JOUR 767 Strategic Campaigns.

Up to 6 credit hours of professional courses may be completed outside the school, with the approval of the graduate committee.

Advanced Course Requirements. A student must complete 12 credit hours of advanced course work:

- JOUR 750 Multimedia Management (3)
- JOUR 840 Seminar in ____ (3)
- JOUR 897 Project-Thesis Development (3)
- JOUR 898 Master’s Project (1-3) or JOUR 899 Master’s Thesis (3)

Qualifying Examination. Each student must pass a written qualifying examination in the semester before enrolling in JOUR 898 Master’s Project or JOUR 899 Master’s Thesis. This examination demonstrates the student’s readiness to begin work on the project or thesis. It is evaluated by an examination committee of three graduate faculty members, who also will serve on the project or thesis committee.

Enrollment Requirements after Completing Course Requirements. A student must enroll for at least 2 hours of credit each semester, excluding summer session, while working on the thesis or project. A student completing a thesis or project must be continuously enrolled, excluding summer session, until the thesis or project has been completed and approved. A minimum of 3 credit hours of JOUR 898 or JOUR 899 may be applied toward the 36 credit hours required for graduation. A student must complete the master’s degree program within seven years of admission.

Graduate Degree Requirements: Marketing Communications—Edwards Campus

The University of Kansas Edwards Campus
12600 Quivira Rd., Overland Park, KS 66213-2402
www.journalism.ku.edu/IMC, (913) 897-8416

Course Requirements
A student must complete 36 hours of credit with an average of at least a B (3.0) average. The curriculum includes 33 hours of required courses and 3 hours of electives. A student must complete the master’s degree program within seven years of admission.

Required Courses
- JOUR 820 Marketing Fundamentals for Communicators (3)
- JOUR 821 Integrated Marketing Communications and Sales Strategies (3)
- JOUR 822 Database Development and Management (3)
- JOUR 823 Branding in Marketing Communications (3)
- JOUR 824 Creative Process (3)
- JOUR 825 Relationship Marketing (3)
- JOUR 826 Innovation in Management of Communications (3)
- JOUR 827 Marketing Ethics (3)
- JOUR 828 Financial Fundamentals for Communicators (3)
- JOUR 829 Research, Metrics, and Measurement (3)
- JOUR 830 Marketing Communications Project (3)

Elective Courses
- JOUR 795 Current Issues in Marketing Communications (3)
- JOUR 796 Skill Development in Marketing Communications (3)
- JOUR 797 Special Projects in Marketing Communications (1-3)

Any student who wants to take an elective course outside the school must have permission from both the instructor of the course and from the school. The student should be prepared to indicate how the course contributes to the master’s program.

Journalism and Mass Communications Courses
- JOUR 500 Topics in Journalism: ____ (2-3).
- JOUR 502 International Journalism (3).
- JOUR 503 History of Journalism and Mass Communication (3).
- JOUR 505 Professional Development (1).
- JOUR 506 Directed Studies in Journalism (1-2).
- JOUR 507 Practicum in Journalism (Professional) (1-2).
- JOUR 508 Practicum in Journalism (Academic) (1-2).
- JOUR 512 Principles of Broadcasting, Cable, and New Technologies (3).
- JOUR 513 Principles of Advertising (3).
- JOUR 523 Principles of Public Relations (3).
- JOUR 527 Online Journalism (3).
- JOUR 533 Case Studies in Strategic Communications (3).
- JOUR 534 Diversity and the Media (3).
- JOUR 536 Documentary and Corporate Video (3).
Based on specific quantifiable corporate objectives. LEC

JOUR 537 Case Studies in Editing (3). JOUR 538 International Marketing Communications (3). JOUR 540 Sports, Media and Society (3). JOUR 542 Magazine Publishing (3). JOUR 552 Print and Online Design (3). JOUR 553 Marketing Communication Production and Design (3). JOUR 558 Commerce and the Media (3). JOUR 562 Advanced Publication Design and Production (3). JOUR 568 Marketing and Media Research (3). JOUR 572 Sales Strategy (3). JOUR 600 School Journalism and Publications (3). JOUR 608 Ethics and the Media (3). JOUR 610 Advanced Photojournalism (3). JOUR 618 First Amendment and Society (3). JOUR 626 Long-form Writing (3). JOUR 636 Opinion and Commentary – Advanced Media (3). JOUR 646 Depth Reporting – Advanced Media (3). JOUR 667 Fieldwork in Magazines – Advanced Media (3). JOUR 676 Strategic Campaigns (4). JOUR 677 Media Management (3). JOUR 692 TV News I – Advanced Media (3). JOUR 693 TV News II – Advanced Media (3). JOUR 694 Online Writing, Design, and Production – Advanced Media (3). JOUR 695 Newspaper Reporting – Advanced Media (3). JOUR 696 Newspaper and Online Editing – Advanced Media (3). JOUR 697 Magazine Writing – Advanced Media (3). JOUR 698 Media Sales (3). JOUR 699 Reporting and Editing for Print and Online – Advanced Media (3). JOUR 750 Multimedia Management (3). Addresses challenges faced by managers in developing better-performing organizations. Special attention is given to the role and scope of leadership within organizations and to the impact of evolving technologies on organizational performance. Students, many of them working as supervisors, editors, and producers in online, print, broadcast, and strategic communications, engage in classroom discussion regarding problem-solving opportunities. Emphasis is placed on community stewardship as well as on operational efficiencies. Prerequisite: At least one course designated as Advanced Media. LEC

JOUR 795 Current Issues in Marketing Communications (3). Classes are designed to address current issues in marketing communications and are open to non-degree and other graduate students. LEC

JOUR 796 Skill Development in Marketing Communications (3). Classes are designed to develop skills used in marketing communications and are open to non-degree and other graduate students. LEC

JOUR 797 Special Projects in Marketing Communications (1-3). A student may complete a special project addressing a current issue in marketing communications. Departmental permission is required. LEC

JOUR 801 Research Theories (3). A comprehensive review of the theoretical and philosophical underpinnings of media research and practice. This seminar offers a range of perspectives and covers various interpretive, cultural, and critical approaches to understanding mass communication in various contexts. Each student drafts a literature review about a topic of the student’s choice. LEC

JOUR 802 Research II: Methods (3). An introduction to methodological approaches to the study of media. Qualitative and quantitative methodologies are reviewed. The class emphasis is on learning appropriate research tools to scientifically learn about messages, media, and audiences. Each student devises a research project during the course. Prerequisite: JOUR 801. LEC

JOUR 803 Survey of Mass Media and Popular Culture (3). Covers the theories, functions, and operations of both traditional mass media and new media. The course provides a combination of historical context, current events, and a future perspective. Topics include the business and economics of the media, the role of the media, and rights and responsibilities. Prerequisite: JOUR 802. LEC

JOUR 815 Investigation and Conference (1-4). Specialized work by qualified students under direction of the graduate faculty. Investigation and research studies. Prerequisite: Ten hours of graduate work in journalism, RSH.

JOUR 820 Marketing Fundamentals for Communicators (3). The course is designed to provide a fundamental understanding of marketing theory and process and how these theories relate to Integrated Marketing Communications. Specific focus will be spent on the marketing environment, the marketing mix, market segmentation, planning, execution and measurement. As part of the class, students will learn the components of a marketing plan and how to develop a plan based on specific quantifiable corporate objectives. LEC

JOUR 821 Integrated Marketing Communications and Sales Strategies (3). The concept of integrated selling strategies and how these strategies logically lead to execution in various forms of message delivery systems. Through case studies of specific business cases, students develop insights into potential buyer segments and develop rationales for the most effective way to reach buyers. Students not only offer solutions to cases but also explore ways to measure the impact of each technique and medium used. LEC

JOUR 822 Database Development and Management (3). A course in creating, updating, and effectively using databases in marketing communications. Students learn the process of designing a database, what information to include and how to acquire information, and how to organize and execute marketing communications programs using a database. LEC

JOUR 823 Branding in Marketing Communications (3). Cases and topics in the development and evaluation of branding in marketing communications plans. The course emphasizes how organizations define actual brand problems and attempt to solve them. LEC

JOUR 824 Creative Process (3). An examination of the creative process and techniques of creative problem solving. The course gives students numerous opportunities to solve a variety of marketing communications problems. Students have an opportunity to visit with individuals who practice creativity in their professional lives and individuals who study creativity as scholars. LEC

JOUR 825 Relationship Marketing (3). An exploration of the principles of relationship marketing and their application to marketing communications. Special emphasis is on the development of relationship messages, the use of databases for constituent management, and a review of appropriate marketing communications media. Prerequisite: JOUR 820, JOUR 821, JOUR 822, and JOUR 823. LEC

JOUR 826 Innovation in Management of Communications (3). Students shall demonstrate their knowledge of Innovation Theory through papers, presentations and an essay exam. The class will emphasize Management Innovation but will also cover marketing, process and product innovation. Students will show their ability to keep up with current events and trends in management through weekly assignments. Prerequisite: JOUR 820, JOUR 821, JOUR 822, and JOUR 823. LEC

JOUR 827 Marketing Ethics (3). An examination of the ethical issues, philosophies, and decision-making systems that affect marketing communications. Through studies of specific business cases, students gain insight into the cultural, legal, and social decisions that affect an organization’s future. LEC

JOUR 828 Financial Fundamentals for Communicators (3). This course covers a wide range of financially-related concepts from the perspective of the communications function. Topics include: financial markets; finding and using key Securities and Exchange Commission filings; understanding the balance sheet, income statement and cash flows; financial analysis; investor relations; impact of Sarbanes-Oxley; corporate governance issues; building and using budgets; and impact of these concepts on not-for-profits. Prerequisite: JOUR 820, JOUR 821, JOUR 822, and JOUR 823. LEC

JOUR 829 Research, Metrics, and Measurement (3). Application of the research, metrics, and measurement tools commonly used by corporations or organizations to evaluate performance. The class focuses on working with a specific client organization in preparation for completing the marketing communications project. Prerequisite: 27 hours of required Marketing Communications course work. LEC

JOUR 830 Marketing Communications Project (1-3). A detailed focus on planning and executing a project to meet the marketing communications needs of an actual client or writing an original and publishable paper. Individual students use the skills acquired in the marketing communication curriculum to complete the project. This course meets the final requirement of the Master of Science degree in Journalism. Prerequisite: JOUR 829. LEC

JOUR 840 Seminar in: _____ (3). Research in the issues and development of media. Seminars focus on topics of current and historical interest. Students develop projects and presentations in special areas of interest and expertise. Course may be repeated under different topics. Prerequisite: JOUR 801 and 15 hours of graduate course work completed. LEC

JOUR 897 Project/Thesis Development (3). This course guides preparation for and development of a media research project or master’s thesis. Each student produces a research question or hypothesis and research design, plus a preliminary review of the literature. To enroll in this course, a student must have an approved topic and an assigned project or thesis chair. Prerequisite: JOUR 802 and 18 hours of graduate course work completed. LEC

JOUR 898 Master’s Project (1-3). The student executes a research project intended for a professional audience, or a professional media project intended for publication or distribution to a general or targeted audience. Prerequisite: JOUR 897, satisfactory completion of qualifying examination, and 24 hours of graduate course work completed. RSH

JOUR 899 Master’s Thesis (1-3). The student executes a research project on a subject of primarily theoretical interest, intended for an academic audience. Prerequisite: JOUR 897, satisfactory completion of qualifying examination, and 24 hours of graduate course work completed. THE
College of Liberal Arts and Sciences

Barbara Romzek, Interim Dean  
Strong Hall, 1450 Jayhawk Blvd., Room 200  
Lawrence, KS 66045-7535, www.clas.ku.edu

Requirements of the College .................... 197
Nondegree & Certificate-seeking Students .... 197
Degree-seeking Students ............................ 197
Enrollment (Degree, Nondegree, Certificate) ... 198
Grading ....................................................... 198
Probation & Dismissal Guidelines ............... 198
Master’s Degrees ........................................... 198
Doctor of Philosophy Degree ....................... 199
International Studies Centers .................... 199
African Studies Center, Kansas .................... 199
Center for East Asian Studies ..................... 199
Center for European Studies ...................... 199
Center for Russian, East European, & Eurasian Studies 200
Center of Latin American Studies .......... 200
Majors ...................................................... 200
African & African-American Studies ........... 200
African & African-American Studies Courses ... 200
Haitian Courses .......................................... 201
American Studies ........................................ 201
American Studies Courses .......................... 202
Anthropology .............................................. 203
Anthropology Courses .................................. 204
Applied Behavioral Science ....................... 206
Applied Behavioral Science Courses ............. 209
Biological Sciences .................................... 214
Ecology & Evolutionary Biology ................. 214
Molecular Biosciences ................................ 216
Biological Sciences Courses ....................... 219, 220
Environmental Studies Courses .................. 223
Chemistry .................................................. 223
Chemistry Courses ..................................... 225
Child Language ......................................... 227
Classics ..................................................... 228
Classics Courses ....................................... 228
Greek Courses ............................................ 229
Latin Courses ............................................ 229
Clinical Child Psychology ......................... 229
Communication Studies ............................. 230
Communication Studies Courses .................. 231
Communicative Disorders ......................... 233
Speech-Language-Hearing Courses ............. 235
East Asian Languages & Cultures ................ 236
Chinese Courses ....................................... 237
East Asian Languages & Cultures Courses .... 238
Japanese Courses ...................................... 238
Korean Courses ........................................ 238
Economics ................................................ 238
Economics Courses .................................... 240
English ...................................................... 242
English Courses ......................................... 244
European Studies ...................................... 245
European Studies Courses ......................... 245
French & Italian ........................................ 245
French Courses ......................................... 246
Italian Courses ......................................... 247
Geography ............................................... 247
Atmospheric Science Courses .................... 248
Geography Courses .................................... 248
Geology .................................................... 250
Geology Courses ....................................... 252
Germanic Languages & Literatures ............. 253
German Courses ......................................... 254
Scandinavian Courses ............................... 255
Gerontology .............................................. 255
History .................................................... 257
History Courses ........................................ 258
History of Art ........................................... 262
History of Art Courses ............................... 263
Humanities & Western Civilization ............... 264
Humanities & Western Civilization Courses ... 264
Indigenous Nations Studies ....................... 265
Indigenous Nations Studies Courses .......... 267
Interdisciplinary Studies Program ............... 268
International Studies Program ................. 268
International Studies Courses .................... 269
Latin American Area Studies ..................... 269
Latin American Area Courses ..................... 271
Liberal Arts & Sciences .............................. 272
Liberal Arts & Sciences Courses ................. 272
Linguistics ............................................... 272
Linguistics Courses .................................... 273
Mathematics ............................................. 274
Mathematics Courses .................................. 276
Museum Studies ......................................... 278
Museum Studies Courses ............................ 278
Philosophy ............................................... 279
Philosophy Courses .................................... 281
Physics & Astronomy .................................. 282
Astronomy Courses .................................... 285
Physics Courses ........................................ 285
Political Science ........................................ 287
Political Science Courses ......................... 288
Psychology ............................................... 292
Psychology Courses .................................... 294
Public Administration .............................. 298
Public Administration Courses ................. 301
Religious Studies ....................................... 302
Hebrew Courses ....................................... 303
Religious Studies Courses ......................... 303
Russian, East European, & Eurasian Studies ... 304
Russian & East European Courses .............. 305
Slavic Languages & Literatures .................. 305
Croatian & Serbian Courses ...................... 306
Czech Course .......................................... 307
Polish Courses ......................................... 307
Russian Courses ....................................... 307
Slavic Languages & Literatures Courses ....... 307
Turkish Course ......................................... 308
Ukrainian Courses ..................................... 308
Sociology ............................................... 308
Sociology Courses ..................................... 309
Spanish & Portuguese .............................. 311
Spanish Courses ....................................... 312
Speech-Language-Hearing ......................... 313
Theatre & Film .......................................... 313
Theatre & Film Courses ............................. 315
Women's Studies ...................................... 317
Women's Studies Courses ......................... 318

Photo, page 194:  
Steven Barlow (right), professor of speech-language-hearing: sciences and disorders, and his students are testing the Actifier, a new high-tech pacifier being developed by KU. The Actifier may help premature babies to feed, thrive, and leave intensive care units earlier.
The College of Liberal Arts and Sciences offers graduate programs in 44 disciplines and several interdisciplinary areas. The College’s participation in graduate education reflects a long and distinguished commitment to higher learning across the liberal arts.

It is the students’ responsibility to become thoroughly acquainted with all requirements for the degree programs in which they plan to participate. The student is subject to the regulations in force at the time of admission to the Graduate School as a degree-seeking student. If degree requirements change, the student may opt for the new requirements or continue under the regulations in force at the time of admission.

Requirements of the College

Nondegree and Certificate-seeking Students

Under certain limited circumstances, students may enroll as nondegree graduate students. This status is best suited to students who plan to transfer graduate courses at KU to a degree program at another university. Students seeking certificates or participating in workshops also may need to use nondegree status. This status carries the following limitations, of which potential nondegree and certificate-seeking students should be aware:

- Admission to a degree program is not guaranteed.
- Student health insurance is not available.
- Federal financial aid is not available.
- Student loans may not be deferred.

Admission. An applicant may seek admission to a program or department. Check with departments and programs for materials they require. Materials required by the Graduate School are:

- Graduate Application, online at www.graduate.ku.edu.
- Original transcript(s) of all college work (must show conferral of undergraduate degree).
- A $30 nonrefundable application fee payable to the University of Kansas.
- Permission of the graduate director of the department in which the course is offered.

Admission Categories. Nondegree A: Students who are regularly admissible (grade-point average of 3.0 or higher on a 4.0 scale). A student can earn a maximum of 12 hours that can be applied toward a degree (if the department is willing to accept the courses).

Nondegree C: Students who are not regularly admissible or who are enrolled only in certificate programs or workshops. A student can earn a maximum of 6 hours that may be applied toward a degree (8 hours if the student earned an undergraduate degree from KU).

Certificate: Students who are admissible under conditions stipulated by a specific certificate program.

Probation/Dismissal Policy for Graduate Nondegree and Certificate Students. If a graduate nondegree or certificate-seeking student has a cumulative grade-point average below 3.0, the Graduate School sends the student a warning letter stating that if the cumulative grade-point average does not rise to 3.0 in the next academic semester, the student will be dismissed.

If a department dismisses a student, he or she cannot be readmitted as a graduate student.

Degree-seeking Students

Admission. A nonrefundable application fee payable to the University of Kansas is required. See Admission in the General Information chapter of this catalog.

To be admitted to the Graduate School, a student must have a baccalaureate degree from an accredited institution, or the equivalent thereof from a university abroad. Requests for exemption from this regulation must be forwarded with departmental endorsement to the dean of the Graduate School.

If an applicant has a cumulative grade-point average lower than 3.0 on a 4.0 scale, that student must have a combined junior/senior grade-point average of 3.0 to be considered for admission to a degree program with regular status. This applies only to degrees granted by domestic institutions that have KU-equivalent requirements for an undergraduate degree. See Admission in the General Information chapter of this catalog.

Admission is denied if an applicant’s bachelor’s degree contains a significant amount of credit awarded for work experience that was not supervised by a faculty member of an accredited institution (life experience) or not evaluated in units that identify the academic content (e.g., P/F, S/U).

Some departments or programs may admit students who do not meet either of these minimum grade-point average requirements. These students are admitted provisionally or on probation. The requirements for achieving good standing as a graduate student are specified in the letter of admission. Generally, earning a grade-point average of 3.0 in the first semester of enrollment is sufficient to achieve good standing. In some cases, passing certain required courses with a minimum grade or meeting specific competencies by a set time also may be required.
Requirements of the College

Deadline Dates for theIssuance of I-20’s to International Students Still in Their Home Countries. Completed international applications (admitted by the department with complete financial and English information) are processed and the appropriate visa form (I-20 or IAP-66) sent to students if the applications are received in the Graduate School office by:
- November 15—any fall semester
- April 15—any summer session
- June 15—any fall semester

Students whose applications are received after these dates are granted admission for the following semester. Exceptions are handled individually.

Enrollment (Degree, Nondegree, Certificate)
Nine credit hours in fall or spring semester and 6 hours in summer session constitute full-time enrollment in graduate study. Maximum enrollment for graduate students, except in rare instances, is 16 hours in fall or spring semester and 9 hours in summer session. A graduate student’s enrollment must reflect his or her use of university resources. The enrollment of a student who is working full time on a dissertation must reflect that fact.

Certificate students may have different course-load requirements. Check with an appropriate adviser.

Generally, no student is accepted and allowed to enroll after the first four weeks of a semester or the first two weeks of a summer session.

Dual Enrollments. Students enrolled in two schools or working on two degrees at the same time must complete the work for both degrees. No courses count toward both degrees, except in the joint degree programs that have been established (e.g., M.P.A./J.D., M.A. Econ./J.D., M.B.A./M.A. in Area Studies, etc.). See also Master’s Degrees, Combined Master’s Degrees in the General Information chapter of this catalog.

International Students. International students who do not pass the Applied English Center examination or receive a waiver from the Applied English Center are not granted graduate degrees. Such students must pass the courses required of them by the Applied English Center before being allowed to enroll for graduate credit.

Grading
The +/- grading system is not used in the College of Liberal Arts and Sciences. The Credit/No Credit system is not used in the Graduate School. This is true for all courses, graduate and undergraduate.

Probation and Dismissal Guidelines
To be in good standing, a student must maintain a 3.0 cumulative grade-point average; when the grade-point average falls below 3.0, the Graduate School notifies the department that the student should be placed on probation. This action is followed by a letter to the student from the Graduate School confirming the probation and explaining the student’s options.

Usually a student is placed on probation for one academic semester. If the cumulative grade-point average has not risen to 3.0 at this point, the student can either be dismissed or allowed to continue on probation, depending on the department’s decision. If a student has a dangerously low grade-point average and is in jeopardy of never graduating, the department must write a letter to the Graduate School explaining why the student should be allowed to continue.

A graduate student can be dismissed from the Graduate School upon recommendation of the student’s department. Academic dismissal should occur before a given semester; however, if a student is dismissed during the semester, the dismissal is effective only at the end of the semester in which the department gives notification of dismissal. The Graduate School also notifies the student of dismissal. Usually a graduate student is dismissed because of a low grade-point average; however, failure of examinations or failure to make satisfactory progress toward the degree is also cause for dismissal.

Master’s Degrees
Students have seven years in which to complete the work for a master’s degree, with the possibility of a one-year extension by petitioning the Graduate School. No leaves of absence are given. See also Master’s Degree Requirements, Program Time Constraints in the General Information chapter of this catalog. Departments may have stricter time limits. See your department handbook.

Continuous Enrollment for Master’s Students. All master’s students who have completed the required course work for their degrees must be continuously enrolled in the spring and fall semesters until all requirements for the degree are completed. No enrollment is required during the summer session unless it is the semester during which the student will graduate, in which case enrollment is required. However, certain departments have rules governing summer enrollment. The number of hours of enrollment is determined by the degree program involved.

All materials relative to the completion of a master’s degree—unbound copies of the thesis, results of the final oral examination, etc.—must be in the Graduate School by the end of the first two weeks of any fall or spring semester (or the first week of the summer session) if the student does not plan to enroll.

Final Examination. A final general examination in the major subject is required. The examination is held during the semester of the student’s final enrollment in course work and, in thesis programs, when the thesis has been substantially completed. A thesis defense may be a part of the requirements for the degree but does not take the place of the required general examination in the major field. Students earning a master’s thesis degree must have completed at least 1 hour of thesis enrollment before the master’s degree can be awarded. See also Master’s Degree Requirements, M.A. and M.S. Degrees in the General Information chapter of this catalog.

Thesis. General rules for the preparation of a thesis can be obtained from the Graduate School, www.graduate.ku.edu/CLAS.

Readmission after Five Years’ Absence. Students who have been absent from the university for more than five years must apply for readmission to the degree program and the Graduate School. If degree requirements have changed, the readmitted student is expected to meet the requirements in effect at the time of readmission.
Doctor of Philosophy Degree
A total of 10 years (20 enrolled semesters) is allowed to complete both the master’s and the Ph.D. If the student either enters with a master’s degree or bypasses the Ph.D., a total of eight years is allowed.

A one-year extension is allowed, on the written advice of the dissertation committee and the graduate director or adviser of the department or program. The only exceptions to the enforcement of the one-year extension rule occur if the student is making progress and if the department shows strong support.

Several departments have set their own, stricter time limits. Please check your departmental handbook.

A student must fulfill the equivalent of three years of full-time academic study in completing the requirements for the doctorate, including the time spent attaining the master’s degree. Resident study at less than full time requires a correspondingly longer period to complete the requirements. See also Doctoral Degree Requirements, Doctor of Philosophy in the General Information chapter of this catalog.

Readmission after Five Years’ Absence. After an absence of five years, a doctoral aspirant or candidate loses status as such and must apply for readmission to the program and the Graduate School in order to continue. This includes students who have received approved leaves of absence for five years. If degree requirements have changed, the readmitted student is expected to meet the requirements in effect at the time of readmission. See also Doctoral Degree Requirements, Program Time Constraints in the General Information chapter of this catalog.

Research Skills. When a student meets the research skills requirement for the Ph.D. degree, notice must be submitted to the Graduate School on a Do-all form. The skill should be described in words; a list of course numbers or titles is not acceptable. The research skill must be completed before the oral comprehensive examination can be taken.

Residency Requirement. The doctoral residency requirement should be fulfilled before the comprehensive oral examination is scheduled.

Comprehensive Oral Examination. This examination covers the major field and any extradepartmental work for which the department wishes to hold the student responsible. The examination is expected to be broader than a mere defense of the dissertation proposal. See also Doctoral Degree Requirements, Doctor of Philosophy in the General Information chapter. The student must take the Oral Comprehensive Examination for the Ph.D. degree before the first day of finals if the hours in which the student is enrolled at the time are to count toward the 18 post-comprehensive enrollment hours described under Doctoral Degree Requirements, Doctor of Philosophy, Candidacy in the General Information chapter. It may be necessary for a student to revalidate or retake the oral comprehensive if he or she took the examination more than five years before an extension of time request.

Dissertation. Rules for preparing the final copies of the dissertation are available from the Graduate School, www.graduate.ku.edu/CLAS. All materials relative to the completion of a doctoral degree—unbound copies of the dissertation, results of the final oral examination, etc.—must be in the Graduate School by the end of the first two weeks of a semester or the first week of the summer session, if the student does not plan to enroll in dissertation hours.

Maximum Time Allowed for Submitting the Thesis or Dissertation. Effective April 1, 1995, a period of six months from defense of the thesis or dissertation is allowed for students to make revisions and to submit the final manuscript to the Graduate School or the department or both. During this time, the student must be enrolled in at least 1 hour of dissertation credit (or more if required by the department). Students who do not submit the manuscript within the six-month time limit must enroll in 3 hours per semester until the thesis or dissertation is finished.

International Studies Centers

**African Studies Center, Kansas**
Director: John M. Janzen, kasc@ku.edu
Bailey Hall, 1440 Jayhawk Blvd., Room 10
Lawrence, KS 66045-7574, www.ku.edu/~kasc
(785) 864-3745, fax: (785) 864-3330
The Kansas African Studies Center coordinates and develops the interdisciplinary interests of Africanists at KU and promotes the study and understanding of Africa in the university, the state, and the region. It sponsors research, enhances curriculum, organizes conferences, promotes special projects, acquires library and related resources, conducts outreach programs, and seeks grants and special funding to make these activities possible.

**Center for East Asian Studies**
Director: Elaine Gerbert
Bailey Hall, 1440 Jayhawk Blvd., Room 202
Lawrence, KS 66045-7574, www.ceas.ku.edu
(785) 864-3849, fax (785) 864-5034
The Center for East Asian Studies is a National Resource Center funded by the U.S. government for the study of East Asia. It promotes East Asian language and area studies; coordinates interdisciplinary activities on campus; works with the East Asian Library; advises students in East Asian studies; awards Foreign Language and Area Studies Fellowships in Chinese, Japanese, Korean, and Uyghur; and administers the KU Summer Institute at Kanagawa University in Hiratsuka, Japan. It offers outreach to schools, businesses, and the community and serves as a regional resource for information about East Asia.

**Center for European Studies**
Director: Diane Fourny
Bailey Hall, 1440 Jayhawk Blvd., Room 308
Lawrence, KS 66045-7574, www.ku.edu/~ces
(785) 864-9070
The Center for European Studies facilitates the interdisciplinary study of Western Europe through teaching, scholarship, study abroad, and international exchanges. It promotes a better understanding of European-American relations and the impact of European integration on EU member states and their European
partners and a deeper appreciation of the societies and peoples of this area. More than 80 faculty members who specialize in some aspect of European studies—including European history, French and Italian literatures and cultures, art history, Germanic languages and literatures, legal history and comparative law, Spanish and Portuguese languages and literatures, international relations, political theory, and international business—contribute to programs, research, conference series, outreach, and exchanges dealing with the European community.

**Center for Russian, East European, and Eurasian Studies**

Director: Erik Herron
Bailey Hall, 1440 Jayhawk Blvd., Room 311
Lawrence, KS 66045-7574, www.ku.edu/~crees
(785) 864-4236, fax: (785) 864-5242

The Center for Russian, East European, and Eurasian Studies is one of 13 Comprehensive National Resource Centers funded by Title VI of the U.S. Higher Education Act for the study of Russia, Ukraine, East/Central Europe, and the Balkans. It promotes language and area study in an integrated, interdisciplinary framework and in traditional academic disciplines. It administers B.A. co-major and M.A. degree programs and supports study abroad in Russia, Poland, Croatia, and Ukraine. Each year, visiting scholars from the region join KU’s 45 area faculty members in exchange, instructional, and research activities. The center also coordinates and sponsors conferences, lectures, theatre, and outreach activities of interest to KU students, faculty members, K-12 teachers, and the community. It serves as a resource to the state, the Great Plains, and the nation.

**Center of Latin American Studies**

Director: Elizabeth Kuznesof
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574, www.ku.edu/~latamst
(785) 864-4213, fax: (785) 864-3800

The Center of Latin American Studies is one of 13 Comprehensive National Resource Centers funded by Title VI of the U.S. Higher Education Act for the study of Latin America. It promotes interdisciplinary study, administers bachelor’s and master’s degree programs, awards Foreign Language and Area Studies, and coordinates research activities. Areas of particular strength are Central America, Mexico, Brazil, and Paraguay. The center coordinates Latin American events on campus, including lectures, films, exhibits, and theatrical performances. Exchanges and study abroad programs have been developed in Costa Rica (San José), Brazil (Vitoria), and Mexico (Guadalajara). The center offers outreach to schools, businesses, and the community and serves as a resource for the state, the region, and the nation.

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**MAJORS**

**African and African-American Studies**

Chair: Peter Ukpongou, afs@ku.edu
Bailey Hall, 1440 Jayhawk Blvd., Room 9
Lawrence, KS 66045-7574, www.ku.edu/~afs
(785) 864-3054, fax: (785) 864-5330

Professors: Freeman, Ukpongou
Professor Emeritus: Drainey

Associate Professors: Gordon, Mack, Myers, Pennington
Assistant Professors: Herbison, MacGonagle, Omar, Salami, Williams

The Department of African and African-American Studies focuses on the study of Africa, African America, and the Afro-Caribbean. The department does not offer advanced degrees, but graduate courses are available to students working toward interdisciplinary advanced degrees in participating disciplines or other departments and programs.

### African and African-American Studies Courses

- **AAAS 501 Regional History: _____ (3).**
- **AAAS 502 Directed Language Study: _____ (5).**
- **AAAS 503 Directed Language Study: _____ (3).**
- **AAAS 510 Comparative Racial and Ethnic Relations (3).**
- **AAAS 511 The Civil Rights Movement (3).**
- **AAAS 512 African and Western Cosmologies (3).**
- **AAAS 520 African Studies in: _____ (3).**
- **AAAS 522 African and African-American Religion: _____ (3).**
- **AAAS 523 African-American Studies in: _____ (5).**
- **AAAS 525 Social History of Black Aging in America (3).**
- **AAAS 527 Popular Culture in Africa (3).**
- **AAAS 532 Studies in Islam (3).**
- **AAAS 534 The Rhetoric of Black Americans (3).**
- **AAAS 542 The History of Islam in Africa (3).**
- **AAAS 543 Language and Culture in Arabic-Speaking Communities (3).**
- **AAAS 545 Unveiling the Veil (3).**
- **AAAS 550 Senior Seminar in: _____ (3).**
- **AAAS 551 Environmental Issues in Africa (3).**
- **AAAS 552 Classical Islamic Literature (3).**
- **AAAS 553 Geography of African Development (3).**
- **AAAS 554 Contemporary Health Issues in Africa (3).**
- **AAAS 555 African Film and Video (3).**
- **AAAS 560 Race, Gender, and Post-colonial Discourses (3).**
- **AAAS 574 Slavery in the New World (3).**
- **AAAS 578 Central African Art (3).**
- **AAAS 584 Black American Literature (3).**
- **AAAS 585 Race and the American Theatre (3).**
- **AAAS 590 The Rise and Fall of Apartheid (3).**
- **AAAS 598 Sexuality and Gender in African History (3).**
- **AAAS 600 Politics in Africa (3).**
- **AAAS 602 U.S. Foreign Policy Toward the Third World (3).**
- **AAAS 650 Sufism (3).**
- **AAAS 657 Gender in Islam and Society (3).**
- **AAAS 676 West African Art (3).**
- **AAAS 677 African Design (3).**
- **AAAS 679 African Expressive Culture: _____ (3).**
- **AAAS 680 Introduction to Modern Africa (3).**
- **AAAS 690 Investigation and Conference (1-3).**
- **AAAS 695 Honors Project in: _____ (3).**
- **AAAS 700 Africa in World Politics (3).** A 20th-century study of the combined internal and external forces that precipitated the rise of Africa, the major African issues in international relations, and Africa's impact on the modern world. LEC
- **AAAS 715 Seminar in African Art (3).** A concentrated study of a special topic relating to African Art studies. Different topics are offered in
different semesters. (Same as HA 715.) Prerequisite: Nine hours of Art History and/or consent of instructor. LEC

AAAS 774 Topics in Literature of Africa and the African Diaspora
(C). An intensive study of the literatures of Africa and/or African diaspora (people of African descent dispersed around the world). This study will focus on the major characteristics of a particular period, genre, mode, and/or theme in literatures such as African, Caribbean, Afro-Brazilian, African American, African Canadian, Black British. Critical theories pertinent to writers and their work will be covered. Topics may include studies in drama, poetry, or the novel; migration narratives; literature of a particular era, such as the Harlem Renaissance, Négritude, or the Black Arts Movement; representations of gender, etc. As topics vary by semester, the course may be repeated for credit. Undergraduates with adequate preparation may enroll with permission from instructor. (Same as ENGL 774.) LEC

● Haitian Courses


HAIT 700 Investigation and Conference (1-6). Supervised individual readings in selected areas of Haitian language, literature, and culture. Individual reports and conferences. Prerequisite: Consent of instructor. LEC

American Studies

Chair: David Katzman
Acting Graduate Director: Ann Schofield
Bailey Hall, 1440 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7574, www.ku.edu/~amerst
(785) 864-4011

Professors: Katzman, Schofield, Tuttle, Yellow Bird, Yetman
Associate Professors: Lester, Tucker
Associate Professor Emeritus: Steere
Assistant Professors: Choi, Clark


American studies is an interdisciplinary program offering graduate work on society and culture in the United States—past, present, and in global context. The program accommodates a variety of individual academic objectives. We ask all students to define a concentration—a period or problem—and to draw on the appropriate resources of the university relating to that area. Students must demonstrate coherence in their graduate work and be able to show relationships between their concentrations and the wider sociocultural system. To accomplish this, students must develop knowledge (including historical perspective) in the humanities and social sciences.

Admission

Admission is based primarily on the applicant’s undergraduate or graduate record or both, references from persons familiar with the applicant’s work, and a statement of academic objectives prepared by the applicant. Completion of a bachelor’s degree is required of all applicants. Students should have taken a substantial amount of work in American studies or in a related field (e.g., American history, literature, art, sociology, anthropology, economics, political science, psychology, journalism). Prospective students must take the Graduate Record Examination and have the results forwarded to the Graduate School.

Submit your application to the Graduate School online at www.graduatku.edu. Send transcripts of all completed college and university course work to The University of Kansas

Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
American Studies Program, Graduate Applications
Bailey Hall, 1440 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7574

M.A. Degree Requirements

Students must complete a minimum of 30 hours of course work, including 18 hours of required courses. Students in the nonthesis option take an additional 12 hours of course work that constitute a specialized interest area (e.g., race and ethnicity, gender, popular culture) and must pass a written examination. Students choosing the thesis option complete an additional 6 hours of course work, at least 6 hours of thesis research, and an oral examination on the thesis research.

M.U.P. and M.A. in American Studies

This joint degree combines in a two-and-one-half-year program the normal two-year M.U.P. degree offered through the School of Architecture and Urban Design and the normal one-year M.A. degree in American studies offered through the College of Liberal Arts and Sciences. It is designed for students interested in careers in policy planning and research involving the arts, social planning, cultural activities and facilities, and historic preservation. For more information on the combined program, consult the respective program chairs. See also Urban Planning in the School of Architecture and Urban Design chapter of this catalog.

American Studies Track, M.A. in Museum Studies

The graduate program in museum studies offers training to those who plan to pursue professional careers in museums or historical agencies. Its curriculum provides a basic understanding of the nature of museums and historical agencies as well as specialized training administered by the American studies program. See the Museum Studies graduate brochure for details. Students must complete a minimum of 42 hours of course work, including 18 hours of core courses in museum studies, 18 hours of required American studies courses, 6 hours of apprenticeship, and an oral examination.

Ph.D. Degree Requirements

Beyond the master’s degree and in addition to the general requirements of the Graduate School, a Ph.D. candidate must complete a program of core and elective courses and demonstrate historical depth in the chosen emphasis. Candidates must select a concentration related to one of (or a combination of) several broad subject areas, such as race and ethnicity, gender, popular culture, religion, labor and work, political life, art,
music, architecture, family life, Great Plains culture, urban life, or social and cultural theory. A minimum of 24 credit hours of course work and 18 credit hours of dissertation is required beyond the master’s degree.

Comprehensive Examination. Candidates take the comprehensive examination after completing their doctoral course work and satisfying the research skills requirement. The comprehensive examination has written and oral components. The written examination takes the form of a paper that coherently defines the content and parameters of the student’s academic concentration, including a discussion of the state of the art in the broad area of scholarship in which the concentration falls: the major research and scholarly controversies in the area; the principal theoretical, conceptual, and methodological approaches informing it; and the direction the area is taking. After a student’s written examination paper has been accepted by his or her examining committee, she or he may take the oral comprehensive examination, which focuses upon, but is not limited to, the issues raised in the written examination paper.

Research Skills. The department accepts reading knowledge in any two languages that would be of professional use to the student, or fluency (excellent reading and conversational abilities) in any one language of professional use, or reading knowledge in one language and proficiency in a research skill, or proficiency in two research skills relevant to the graduate program (e.g., statistics or a computer language).

Dissertation. An interdisciplinary dissertation is required. The department has established a detailed description of the procedures for completing a dissertation. The student’s dissertation committee is composed of at least three faculty members, who initially review and approve the student’s research proposal and direct the research to its completion.

Final Examination. All students must pass a final oral defense of the dissertation.

Handbook for Graduate Students

The department has prepared a handbook that summarizes procedures that a graduate student follows in working toward any of the three graduate degrees. It contains a summary of Graduate School regulations, departmental procedures, and the rationale behind these regulations. Copies are available on request from the departmental office.

American Studies Courses

AMS 501 Community Development (3).
AMS 510 History of American Women – Colonial Times to 1870 (3).
AMS 511 History of American Women – 1870 to Present (3).
AMS 512 History of Women and Work in Comparative Perspective (3).
AMS 522 American Racial and Ethnic Relations (3).
AMS 529 Race and the American Theatre (3).
AMS 536 Ethnicity in the United States: (1-3).
AMS 550 Introduction to Current Issues and Research in American Studies (3).
AMS 551 Research Project in American Studies (3).
AMS 552 Public Service in American Studies (3).
AMS 553 Honors in American Studies (3).
AMS 576 Cultural Geography of the United States (3).
AMS 579 Geography of American Foodways (3).
AMS 580 American Art (3).
AMS 585 Sociology of Sport (3).
AMS 650 Jazz and American Culture (3).
AMS 677 The American Novel in the 19th Century (3).
AMS 678 The Modern American Novel (3).
AMS 694 Directed Readings (1-4).
AMS 696 Studies in: (1-4).
AMS 700 Introduction to Museum Exhibits (3). This course will consider the role of exhibits as an integrated part of museum management, research, and public service. Lecture and discussion will focus on issues involved in planning and producing museum exhibits. Laboratory exercises will provide first-hand experience with basic preparation techniques. Emphasis will be placed on the management of an exhibit program in both large and small museums in the major disciplines. (Same as BIOL 787, GEO 781, HIST 723, and MUSE 703.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 714 Conservation Principles and Practices (3). This course will acquaint the future museum professional with problems in conserving all types of collections. Philosophical and ethical approaches will be discussed, as well as the changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and how these problems can be remedied. Storage and care of objects will also be considered. (Same as BIOL 700, GEO 780, HIST 723 and MUSE 706.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 720 The Nature of Museums (3). The purpose of this course is to provide an overview of the kinds of museums, their various missions, and their characteristics and potentials as research, education, and public service institutions responsible for collections of natural and cultural objects. (Same as ANTH 750, BIOL 785, GEO 782, HIST 725, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 725 Museum Studies Workshop: (1-3). Short, intensive workshops presented to provide specialized background in a variety of skills required in the archival and reference functions. (Same as BIOL 700, GEO 785, HIST 725, and MUSE 704.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 730 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museum collections, their associated data, and their use in scholarly research; cataloging, storage, exhibition, automated information management, and related topics will be presented for museums of art, history, natural history and anthropology. (Same as BIOL 700, GEO 785, HIST 725, and MUSE 704.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 731 Museum Management (3). Lecture, discussion, and laboratory exercises on the nature of museums as organizations; accounting, budget cycles, personnel management, and related topics will be presented using, as appropriate, case studies and a simulated museum organization model. (Same as ANTH 780, BIOL 785, GEO 783, HIST 728, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
AMS 801 Introduction to American Literature (3). A survey of literary developments from the Pilgrims to the present. (Same as MUSC 759.) Prerequisite: One course in the field of music history and literature or consent of instructor. LEC
AMS 867 American Studies Museum Apprenticeship (1-4). Provides directed, practical experience in research, collection care and management, public education, and exhibits with emphasis to suit the particular requirements of each student. (Same as ANTH 799, BIOL 790, GEO 791, HIST 790, and MUSE 790) FL D
AMS 871 The History of Museums (3). An introduction to the field of museum studies through an examination of some of the classic and innovative works, issues, debates, and controversies in the history and the literature of American Studies. LEC
AMS 872 Theorizing America (3). Drawing from a broad range of perspectives (e.g., cultural theory, social theory, literary theory, etc.), this course will introduce students to current theoretical debates in American studies and the concepts that inform them. LEC
AMS 873 Research Methods in American Studies (3). An introduction to the range of interdisciplinary research methods in American studies. Emphasis will be placed on an examination of the assump-
tions, logics, and procedures involved in various approaches to understanding American society and culture. LEC

AMS 804 Research Seminar (3). An intensive application of theoretical and methodological issues to the development of specific substantive research problems. Students will be expected to design and implement a study that will be critically assessed in the seminar. LEC

AMS 805 American Pluralisms: Race, Ethnicity, and Religion in American Life (3). Analysis of the dynamics of intercultural and intergroup relations in America with special emphasis on the examination of major conceptual perspectives that have characterized the study of race, ethnicity, and religion in American life. LEC

AMS 808 Studies in: (3). Interdisciplinary study of different aspects of the American experiences in different semesters. LEC

AMS 835 Colloquium in the History of Gender (3). This colloquium will cover theoretical and topical readings on the history of manhood, womanhood, and gender systems. (Same as HIST 885 and WS 885.) LEC

AMS 836 Colloquium in United States Women's History (3). This colloquium will cover theoretical and topical readings on the history of women in the United States from the pre-contact period to the present. It is designed to familiarize students with the most important and current historiography in the field. (Same as HIST 896 and WS 896.) LEC

AMS 837 Comparative Colloquium in Women's History (3). This colloquium will approach the history of women from a comparative perspective through theoretical and topical readings on women in at least two different cultures. (Same as HIST 897 and WS 897.) LEC

AMS 896 Examination Preparation (1-12). THE

AMS 897 Directed Readings (1-4). Directed reading in an area of American culture in which there is no appropriate course in the offerings of the American Studies program or of the cooperating departments, but before the comprehensive examinations, the Ph.D. aspirant must satisfy one of the following options: (1) completion of 30 credit hours of graduate work in anthropology and related disciplines, including ANTH 701, ANTH 702, ANTH 703, and ANTH 704; (2) completion of the subdiscipline requirements; (3) completion of the M.A. thesis; and (4) passing the final M.A. examination. THE

AMS 900 Teaching Seminar (1-6). Directed and independent study in preparation for the doctoral comprehensive examinations. Graded on satisfactory/unsatisfactory basis. May be repeated. RSH

AMS 909 Thesis (1-6). Investigation of a topic for master’s thesis. Total enrollment in this course may not exceed six hours of credit. THE

AMS 990 Teaching Seminar (1-6). This seminar is designed to assist students in the preparation, presentation, and evaluation of teaching in American Studies. LEC

AMS 973 Seminar in United States Women's History (3). This research seminar will focus on the history of women in the United States from the pre-contact period to the present. Students will research and write a paper using primary sources, and present those papers to the seminar for evaluation. (Same as HIST 973 and WS 873.) LEC

AMS 996 Examination Preparation (1-19). Directed and independent study in preparation for the doctoral comprehensive examinations. Graded on satisfactory/unsatisfactory basis. May be repeated. RSH

AMS 997 Directed Readings (1-4). Directed reading in an area of American culture in which there is no appropriate course in the offerings of the American Studies program or of the cooperating departments, but in which there is a member of the graduate faculty competent and willing to direct a program of study. RSH

AMS 998 Seminar in: (3). Topics vary from semester to semester. Graduate students are consulted in selecting topics. LEC

AMS 999 Dissertation (1-12). THE

Anthropology

Chair: Jim Mielke, kuanthro@ku.edu
Graduate Advisor: Jane W. Gibson, jwg@ku.edu
Fraser Hall, 1415 Jayhawk Blvd., Room 622
Lawrence, KS 66045-7556, www.ku.edu/~kuanth
(785) 864-4103, fax: (785) 864-5224
Professors: Crawford, Frayer, Hanson, Janzen, Mielke, Moos, Stull, Yamamoto
Professors Emeriti: Johnson, Montet-White, Smith, Squier
Associate Professors: Dean, Gibson, Gray, Hofman, Hoopes
Assistant Professors: Dwyer, Jenkins, Morey, Radovanovic

The graduate program consists of 17 faculty members and about 60 students, giving a professor-student ratio of about one to four and allowing a great deal of direct interaction between faculty and students. The department awards M.A. and Ph.D. degrees and has successfully placed most of its Ph.D. graduates in professional positions.

The department offers graduate training in archaeology, biological anthropology, anthropological linguistics, and social/cultural anthropology. The department has expertise in applied anthropology, anthropological genetics, evolutionary studies, language contact and endangerment, medical anthropology, Native American linguistics, paleoanthropology, symbolic anthropology, visual anthropology, New World and European prehistory, and zooarchaeology. Geographic strengths include Asia, Europe, Latin America, Native North America, the Pacific, Sub-Saharan Africa, and contemporary United States.

The department is closely associated with the Laboratory of Biological Anthropology.

Admission

The Graduate Record Examination is recommended but not required for admission. The graduate program begins at an advanced level. Preparation for it through completion of an undergraduate major in anthropology is encouraged but not required. Some undergraduate preparation in fields closely related to anthropology, such as biology, sociology, psychology, linguistics, economics, geography, or geology, is strongly recommended, and undergraduate courses in such subjects as biology, statistics, philosophy, genetics, computer science, and history are of considerable value to the graduate student in anthropology. Proficiency in a modern foreign language and in statistics is of special importance to candidates for graduate work in anthropology and should be acquired during the undergraduate years. All students entering the program with only a bachelor’s degree must enroll in the M.A. program. Admission to the Ph.D. program is ordinarily contingent upon completion of the master’s degree in anthropology. A student with a master’s degree in anthropology from another institution may apply directly to the Ph.D. program.

Submit your application to the Graduate School online at www.graduat.ku.edu. Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Department of Anthropology
Fraser Hall, 1415 Jayhawk Blvd., Room 622
Lawrence, KS 66045-7556

M.A. Degree Requirements

The M.A. program is a general curriculum for students who wish to enter the Ph.D. program in anthropology or who plan to pursue graduate studies only to the M.A. level. Formal requirements for the M.A. include (1) completion of 30 credit hours of graduate work in anthropology and related disciplines, including ANTH 701, ANTH 702, ANTH 703, and ANTH 704; (2) completion of the subdiscipline requirements; (3) completion of the M.A. thesis; and (4) passing the final M.A. examination.

Ph.D. Degree Requirements

The Ph.D. in anthropology is awarded to candidates who have demonstrated specialized competence in one or more of the general fields and who have contributed to the body of knowledge and theory in the specialized field through independent, original research.

Research Skills. In the course of the graduate career, but before the comprehensive examinations, the Ph.D. aspirant must satisfy one of the following options:

1. Demonstrate a comprehensive reading and speaking knowledge of one foreign language relevant
Anthropology

The Department of Anthropology offers graduate training in archaeology, biological anthropology, anthropological linguistics, and social/cultural anthropology.

The Laboratory of Biological Anthropology specializes in population and molecular genetics.

to the student’s research interests in which there exists a significant research literature in anthropology.

2. Demonstrate proficiency in the reading of two foreign languages relevant to the student’s research interests in which there exists significant research literature in anthropology.

3. Demonstrate proficiency in the reading of one foreign language relevant to the student’s research interests in which there exists a significant research literature in anthropology and demonstrate competence in another research skill relevant to the student’s special research requirements in anthropology. (The latter requirement may be satisfied by a speaking knowledge of a language that the student will employ in fieldwork, but in which there is no written research literature.)

4. Demonstrate competence in two research skills relevant to the student’s special research requirements in anthropology, provided that the student

(a) Has met the undergraduate foreign language proficiency requirement of the College of Liberal Arts and Sciences of the university as either an undergraduate or a graduate student or
(b) Has met at another college or university a foreign language proficiency requirement that is accepted as fulfilling the requirement of KU’s College of Liberal Arts and Sciences.

Research skills referred to in options 3 and 4 may be selected from those approved by the Graduate School, or the student may propose to the committee a course of study by which he or she may acquire another research skill. Competence in a research skill is certified by a committee appointed by the department. Competence in a foreign language is tested and certified by authorized members of the appropriate department.

On completion of a Foreign Language or Other Research Skills requirement, the student should notify the graduate coordinator, who enters it in the student’s permanent record and notifies the Graduate School.

Field Statements. Students must become thoroughly familiar with the literature pertinent to their specialization and doctoral research problems. The student who submits field statements is asserting that he or she has achieved competence in limited areas defined by the subdiscipline, as demonstrated by bibliographies and written treatments of the research problems in those areas. The comprehensive examinations are based on the areas specified in the field statements.

Written and Oral Comprehensive Examinations. The student’s doctoral committee devises and judges the written comprehensive examinations, which may be taken either together or at different times. If the committee is satisfied with the caliber of the student’s field statements and written examinations, it may schedule the oral comprehensive examination, providing all other requirements have been fulfilled.

Dissertation Proposal. From the beginning of doctoral study, the student should plan to conduct a doctoral dissertation project. This is an independent piece of research, usually requiring fieldwork, and leading to a dissertation that contributes to anthropological knowledge.

Defense of the Dissertation. When the dissertation has been accepted by the dissertation committee, a final oral examination is held.

Handbook for Graduate Students

Detailed information, application deadlines, and general information may be found in The Graduate Program in Anthropology, available on request from the department, on the departmental Web page, or on the Graduate Student Organization Web page: www.ku.edu/~gsanth.

Anthropology Courses

ANTH 500 Topics in Archaeology: _____ (3).
ANTH 501 Topics in Sociocultural Anthropology: _____ (3).
ANTH 502 Topics in Anthropological Linguistics: _____ (3).
ANTH 503 Topics in Biological Anthropology: _____ (3).
ANTH 504 North American Archaeology (3).
ANTH 505 Prehistory of Eastern North America (3).
ANTH 506 Ancient American Civilizations: Mesoamerica (3).
ANTH 507 The Ancient Maya (3).
ANTH 508 Ancient American Civilizations: The Central Andes (3).
ANTH 510 An Introduction to Southwestern Archaeology (3).
ANTH 511 The Celts (5).
ANTH 512 Ethnobiology: _____ (3).
ANTH 513 La France avant la Gaule: France Before the Romans (3).
ANTH 514 The Near East in Prehistory (3).
ANTH 515 Topics in Old World Prehistory: _____ (3).
ANTH 516 Hunters and Gatherers (3).
ANTH 517 Geoarchaeology (3).
ANTH 518 Environment and Archaeology (3).
ANTH 519 Lithic Technology (3).
ANTH 520 Archaeological Ceramics (3).
ANTH 521 Zooarchaeology (3).
ANTH 522 Paleoenthnobotany (3).
ANTH 540 Demographic Anthropology (3).
ANTH 542 Biology of Human Nutrition (4).
ANTH 543 Anthropology of Food and Nutrition (3).
ANTH 544 Physical Anthropology of American Indians (3).
ANTH 545 Contemporary Health Issues in Africa (3).
ANTH 549 Human Paleontology: Fossil Apes to Australopithecus (3).
ANTH 550 Human Paleontology: Homo Erectus to Homo Sapiens (3).
ANTH 553 Cultural Diversity in the United States (3).
ANTH 555 Popular Images in Japanese Culture, Literatures, and Films (3).
ANTH 567 Japanese Ghosts and Demons (3).
ANTH 571 Violence, Aggression, and Terrorism in the Modern World (3).
ANTH 580 Feminism and Anthropology (3).
ANTH 582 Ethnobotany (3).
ANTH 586 Visual Anthropology (3).
ANTH 595 The Colonial Experience (3).
ANTH 648 Human Osteology (4).
ANTH 650 Human Reproduction: Biology and Behavior (3).
ANTH 652 Population Dynamics (3).
ANTH 661 Cultural Dynamics (3).
ANTH 662 Economic Anthropology (3).
ANTH 665 Women, Health, and Healing in Latin America (3).
ANTH 666 Anthropology of Religion (3).
ANTH 667 Primate Mythology (3).
ANTH 670 Contemporary American Culture (3).
ANTH 674 Political Anthropology (3).
ANTH 675 Anthropology of Law (3).
ANTH 680 Culture and Human Biology (3).
ANTH 684 Anthropology and the Health Sciences (3).
ANTH 695 Cultural Ecology (3).
ANTH 699 The Anthropology Museum (3).
ANTH 701 History of Anthropology (3). Development of the field of anthropology and its relation with intellectual history. Emphasis on method and theory in historical context. Required of all M.A.-level students in anthropology. Prerequisite: Consent of instructor or graduate standing.LEC
ANTH 702 Current Archaeology (3). An introduction to fundamental theoretical orientations and methodological approaches in world archaeology. Case studies illustrate data acquisition, dating methods, cultural history, paleoenvironmental models, and culture processes. Required of all M.A.-level students in anthropology. Prerequisite: Consent of instructor or graduate standing. LEC
ANTH 703 Current Biological Anthropology (3). The fundamental issues, methods, and theories in contemporary biological anthropology. Required of all M.A.-level students in anthropology. Prerequisite: Consent of instructor or graduate standing. LEC

THE UNIVERSITY OF KANSAS • 2005/07 GRADUATE SCHOOL CATALOG
ANTH 704 Current Cultural Anthropology (3). The fundamental issues, methods, and theories in contemporary cultural anthropology and anthropological linguistics. Required of all MA and PhD students in anthropology. Prerequisite: Consent of instructor or graduate standing. LEC

ANTH 705 Technological Change: (3). Studies in technological change through invention, evolution, and diffusion. Topic for semester to be announced. LEC

ANTH 710 History of American Archaeology (3). A survey of the development of method and theory in American archaeology, with emphasis on North America. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 715 Seminar in Plains Archaeology: (2-4). Problems in the archaeology of the Great Plains region, with an emphasis on prehistoric developments. LEC

ANTH 718 Seminar in Latin-American Archaeology: (3). In-depth examination of specific problems and issues in the study of Pre-Columbian societies of Mesoamerica, Central America, and South America. Topic for semester to be announced. Prerequisite: ANTH 506, ANTH 508, and/or consent of instructor. LEC

ANTH 720 Seminar in Old World Prehistory: (2-4). Studies of prehistoric cultures and their natural environments. Topic for semester to be announced. Prerequisite: Graduate standing in anthropology or consent of instructor. LEC

ANTH 730 Linguistics in Anthropology (3). The study of language as it concerns culture. Language systems are related to cultural language taxonomy, semantics, and linguistic analysis as an ethnographic tool. (Same as LING 730.) Prerequisite: Graduate standing. LEC

ANTH 740 Linguistic Data Processing (3). The tools and techniques necessary to analyze fieldwork data, including research design, recording and elicitation techniques, computational data processing and analysis, and field ethics. Techniques of research, field recording, and data analysis technology. Methods of phonetic transcription, grammatical annotation, and analysis of language context. Practice of techniques via short studies of at least one language. (Same as LING 740.) Prerequisite: LING 705 or permission of instructor. LEC

ANTH 741 Field Methods in Linguistic Description (3). The elicitation and analysis of phonological, grammatical, and discourse data from a language consultant. In-depth research on one language. Techni- ques of research design, methods of phonetic transcription, grammatical annotation, and analysis of language context. (Same as LING 741.) Prerequisite: LING 750 or permission of instructor. LEC

ANTH 747 North American Indian Languages (3). Introduction to the nature and distribution of North American Indian languages. Prerequisite: ANTH 306 or ANTH 430 or ANTH 730. LEC

ANTH 748 Language Contact (3). Theories and case studies of languages in contact. Areal and genetic linguistics, genesis of pidgins and creoles, multilingualism. Social, political, economic, and geographic factors in language change. (Same as LING 748.) Prerequisite: A course in linguistics. LEC

ANTH 749 Linguistics and Ethnolinguistics of China and Central Asia: (3). Selected topics in linguistic anthropology, focusing on dominant and/or minority languages of China, Central Asia, or a particular region of Central and Eastern Eurasia. Topics may include areal and subfields of linguistics, including language contact, typology, dialectology, and sociolinguistics. Topic for semester to be announced. (Same as LING 749.) Prerequisite: A course in linguistics. LEC

ANTH 750 Disease and Adaptation (3). The role of disease in human evolution, adaptation, and migration is examined. Topics include paleopathology, epidemics, and genetic/cultural adaptation to certain diseases. Grade equivalent of ANTH 450 with more advanced requirements. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 754 Biological Bases of Human Behavior (3). The role of behavioral genetics in normal behavior is examined in this seminar. There is special emphasis on the genetics of complex human behavior such as sensory perception, aggression, intelligence, prozoemias, kineses, and learning. Several abnormal conditions, such as schizophrenia, chromosomal aberrations, alcoholism, and brain dysfunction are discussed in terms of the genetic and environmental interactions. LEC

ANTH 756 Genetics of Isolates (3). The evolutionary effects of finite population size and reproductive isolation are discussed in this seminar. Stochastic processes, genetic distances, approaches to population structure, and measures of inbreeding are considered. Prerequisite: ANTH 602 or consent of instructor. LEC

ANTH 759 Dental Anthropology (3). An intensive study of human teeth. Principles of eruption, growth, genetics, anatomy, pathologies, measurements, casting, and cultural changes in teeth will be presented. Prerequisite: Consent of instructor. LEC

ANTH 761 Introduction to Medical Anthropology (3). An introduction to the sociocultural contexts of health and disease, including a survey of therapy systems in both Western and non-Western societies (e.g., Native American, African, Western allopathic medicine). This course should be of special interest to premedical students and majors in the allied health professions. Grade equivalent of ANTH 461 with more advanced requirements. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 762 Human Growth and Development (3). Consideration of comparative physical growth patterns throughout the human life cycle. Sex and population differences in skeletal, dental, and sexual maturation. Effect of genetic and environmental factors upon growth and maturation. Prerequisite: An introductory course in biological anthropology or consent of instructor. LEC

ANTH 764 Selected Topics in Human Paleontology (3). Intensive, high-level survey and critique of the application of modern biological theory of evolution and taxonomy to the problems of primate and human evolution. Prerequisite: Consent of instructor. LEC

ANTH 766 Topics in Biological Anthropology: (3). Topic for semester to be announced. Students may repeat the course for different topics. Prerequisite: Consent of instructor. LEC

ANTH 769 Seminar in Primate Studies (3). Survey of field and laboratory investigations of the comparative anatomy and behavior of nonhuman primates. LEC

ANTH 770 Research Methods in Physical Anthropology (3). A practical course in the use of special laboratory techniques of biological anthropological research and methods of data presentation. Prerequisite: Consent of instructor. LAB

ANTH 775 Seminar in Cultural Anthropology: (3-4).9. Intensive consideration of special problems in cultural anthropology. Topic for semester to be announced. LEC

ANTH 778 Seminar in Applied Cultural Anthropology (2). Selected problems in applying anthropological theory, methods, and findings in programs of directed change. LEC

ANTH 780 Social Organization (3). Comparative analysis of the structure, development, and function of human social groups. Emphasis on kinship, legal, economic, and political institutions. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 783 Symbolic Anthropology (3). An examination of anthropological approaches to religion, worldview, and other symbol systems in simple and complex societies. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 785 Topics in Ethnology: (3). Topic for semester to be announced. Usually the course will focus on selected problems in the social and cultural life of a people in a particular geographic region of the world. Coverage will include both the classical ethnological literature as well as special issues of current concern. Students may repeat the course for different topics. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 786 Ethnographic Documentary Production (3). This course combines classroom and fieldwork in applications of theories, ethics, and methods of visual representation. Students carry out team-based ethnographic fieldwork projects through which they learn about preproduction, video production, and nonlinear post-production of ethnographic video documentaries. Prerequisite: Successful completion of ANTH 564 or permission of instructor. LEC

ANTH 788 Symbol Systems: (3). Anthropological approaches to the study of worldview, religion, folklore, mythology, art, and other expressive behavior. Topic for the semester to be announced. Prerequisite: Graduate standing or consent of instructor. LEC

ANTH 789 Anthropology of Gender: Advanced Seminar in the Four Fields (3). This seminar is intended primarily for graduate students in anthropology or other disciplines that share an interest in any of the subdisciplines of anthropology (archaeology, linguistic anthropology, biological anthropology, and sociocultural anthropology) and/or anthropological theories and methods. Undergraduates pursuing Honors or other major research projects are also encouraged to participate. Students will receive training in the contemporary theories, research, and pedagogies informing the anthropology of gender. Class participants will explore how these materials intersect with their current theses or research projects and develop syllabi that incorporate them into this subdiscipline. (Same as WS 789.) Prerequisite: Permission of instructor. LEC

ANTH 794 Material Culture (3). The historical and cross-cultural study of artifacts as embodiments of technological, social, organizational, and ideological aspects of culture. LEC

ANTH 795 The Nature of Museums (3). The purpose of this course is to provide an overview of the kinds of museums, their various missions, and their characteristics and potentials as research, education, and public service institutions responsible for collections of natural and cultural objects. (Same as AMS 720, BHED 788, GOEI 782, HIST 720, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

ANTH 796 Museum Management (3). Lecture, discussion, and laboratory exercises on the nature of museum organizations, accounting, budget cycles, personnel management, and related topics will be
Anthropology: Applied Behavioral Science

presented using, as appropriate, case studies and a simulated museum organization model. (Same as AMS 791, BIOL 785, GEOG 783, HIST 729, and MUSE 703.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

ANTH 797 Introduction to Museum Public Education (3). Consideration of the goals of an institution’s public education services, developing programs, identifying potential audiences, developing audiences, and funding. Workshops and demonstrations are designed for students to gain practical experience working with various programs and developing model programs. (Same as ANTH 797, BIOL 784, GEOG 784, HIST 721, and MUSE 705.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

ANTH 799 Anthropology Museum Apprenticeship (1-6). Provides directed, practical experience in research, collection care and management, public education, and exhibits, with emphasis to suit the particular requirements of each student. Limit of six hours of credit for the M.A. degree. (Same as ANTH 799, BIOL 799, GEOG 723, HIST 799, and MUSE 799.) FLD

ANTH 810 Seminar in Ethnonlinguistics: _____ (3). An advanced study of the relations between language and culture. Subject will vary each semester; students may repeat the course more than once. (Same as LING 810.) LEC

ANTH 811 Quantitative Archaeology (3). Instruction in statistical methods for analyzing quantitative data in archaeological research. Topics will include techniques for handling nominal, ordinal, and ratio-scale variables, the collection and presentation of quantitative information, and the use of computers. Prerequisite: Graduate standing and college-level algebra and/or consent of instructor. LEC

ANTH 834 Culture and Nursing (3). This is a seminar exploring methods of assessment and their application to the practice of clinical nursing. Students will examine aspects of their own behavior which are related to professional socialization and membership in the dominant culture, as well as changing health behaviors and lifestyles of individuals who are members of other cultural groups. Such groups may be defined by ethnicity, occupation, social class, religious affiliation, foreign culture, or adherence to alternative therapies. Points of similarity as well as adequate health care will be discussed. Prerequisite: Consent of instructor. LEC

ANTH 849 Seminar in Archaeology: _____ (2-4). Subject matter of seminar to be announced for semester. LEC

ANTH 851 Data Analysis in Archaeology: _____ (1-6). A two-semester course designed to provide graduate students with basic principles in the analysis of archaeological data. Course content will include an introduction to archaeological systematics, analytical procedures, application of multivariate statistics, and computer applications. Topic for semester to be announced. FLD

ANTH 853 Theory and Current Problems in Archaeology (3). Consideration of scientific methodology, basic assumptions of anthropological archaeology, relationship of archaeology and anthropology, and current theoretical and methodological trends in archaeology. LEC

ANTH 876 Advanced Medical Anthropology: _____ (1-6). Under the direction of a professional anthropologist, undergraduate and graduate students are taught proper procedures for the excavation and laboratory analysis of data from a prehistoric or historic archaeological site. Data gathered may be used for additional graduate research. Enrollment by application; limited to twenty students. A fee for subsistence costs will be charged. FLD

ANTH 890 Training in Archaeological Field Work (1-6). Graduate students are taught techniques of archaeological field work, including survey and excavation, as well as laboratory procedures, including artifact classification and curation. FLD

ANTH 896 Graduate Research (1-9). Send transcripts of all completed college and university course work to

Applied Behavioral Science

The KU Program in Human Development and Family Life
Chair: Edward K. Morris, absc@ku.edu
Graduate Director: R. Mark Mathews
Dole Center, 1000 Sunnyside Ave., Room 4001
Lawrence, KS 66045-7555, www.ku.edu/~absc
(785) 864-4840, fax: (785) 864-5202

Professors: Fawcett, Greenwood, Mathews, Miller, Morris, Roberts, Semb, Sheldon, Sherman, Vernberg, Warren, White
Associate Professors: Jackson, Steele
Assistant Professors: Hanley, Thompson

The department’s graduate program trains scientists, practitioners and researchers in the discovery and production, translation and application, and communication of knowledge in the behavioral sciences. The department offers a Master of Arts (M.A.) in applied behavioral science and a Doctor of Philosophy (Ph.D.) in behavioral psychology. In both degree programs, the department requires (a) a sequence of courses that integrates the basic principles of behavior, experimental methods and research design, and conceptual foundations with (b) training in basic, applied, and intervention research. Among the areas of application are early childhood, education, developmental disabilities, adolescence, family enhancement, independent living, physical disabilities, gerontology, and health promotion and community development. Other areas are described in the graduate application materials available from the department and on the Web site.

Admission

Applications seeking admission to the master’s or doctoral program should contact the department for application forms, as well as for materials beyond those described here. Applications are submitted to the Graduate School, which records and forwards them to the department. Applicants submit a completed application form and two official transcripts of all undergraduate and any graduate course work. They also may submit copies of relevant scholarly or professional work, published or unpublished. Reports of Graduate Record Examination scores are encouraged but not required.

Submit your application to the Graduate School online at www.grad.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to

The University of Kansas
Department of Applied Behavioral Science
Dole Center, 1000 Sunnyside Ave., Room 4001
Lawrence, KS 66045-7555

Applications also must obtain letters of recommendation from three professionals familiar with their academic, scholarly, or professional records. These are
submitted directly to the department by the references, not by the applicants.

Among the department's application materials is a list of the faculty members and descriptions of their research, scholarly, and professional interests. Applicants select at least three faculty members whose interests match their own. These faculty members constitute the applicant's admissions committee; they review the application and supporting materials. An applicant is accepted when one of the faculty members consents to admit the student. This faculty member becomes the adviser of record and secures the signatures of three additional faculty members to serve on the student's master's or doctoral graduate committee.

For admission with full graduate standing, the department recommends that applicants complete 12 credit hours of undergraduate or graduate course work in behavior analysis, behavioral science, psychology, education, or related fields, and 6 hours in experimental methods, research design, or statistics. These hours may, however, be taken concurrently while enrolled in the department's graduate programs.

Many faculty advisers offer research and teaching assistantships. Information about graduate scholarships is available online at www.graduate.ku.edu. Applicants should inform their prospective advisers if they apply for a scholarship.

For admission in the fall semester, the application and supporting materials should be received by the Graduate School and the department by January 15. Later applications will receive consideration in the order of their receipt. Students may be admitted for the spring semester through the application procedures described above, but there is no filing deadline.

**M.A. in Applied Behavioral Science Degree Requirements**

The master's program trains highly competent scientist-practitioners in applied behavioral science. The program requires course work on the empirical and conceptual foundations of behavioral science and its research methods but emphasizes course work and supervised experience in behavioral assessment, analysis, intervention, and evaluation. Its objective is to advance empirically-based solutions to problems of societal importance.

**Course Requirements.** The M.A. degree requires 30 credit hours: 12 hours in four content areas and 3 hours in a practicum. Students must also conduct, write, and orally defend an empirically-based thesis. A supervised practicum course is required in each of the following areas:

1. Principles of Behavior I (3). The science of behavior (observation, experimentation), laboratory methods, basic behavioral principles (e.g., reinforcement, stimulus control), and their applications (e.g., early childhood, disabilities).
2. Research Methods I (3). Strategies and tactics of scientific research (objectivity, empiricism), the logic of experimentation (validity, reliability), measurement and direct observation, and experimental designs for single-subject and time-series analyses.
3. Conceptual Foundations I (3). The history and philosophy of behavioral science, contemporary advances in basic research for application, the analysis of everyday conduct (e.g., cognition, emotion), and current issues in the discipline and profession (e.g., relations between basic and applied research).
4. Applied Behavior Analysis I (3). The characteristics of applied behavioral research (assessment, analysis, intervention, evaluation), intervention research (clinical, community), applied procedures and programs, social validity, and ethical issues.
5. Principles of Behavior or Conceptual Foundations II (3). Advanced treatment of (a) the basic principles (behavioral choice stimulus equivalence) or empirical research in selected content domains (behavioral development, verbal behavior) or (b) the historical, comparative, and contemporary foundations of behavior science.
6. Research Methods II (3). Advanced treatment of the tactics and strategies of basic, applied, and intervention research (e.g., measurement, design), with an emphasis on conducting research in applied settings (e.g., community, school, organizations).
7. Applied Behavior Analysis II (3). Advanced or specialized reviews of applied and intervention research relevant to new approaches (e.g., ecobehavioral analysis, functional assessment), special problems (e.g., autism, substance abuse), atypical populations (e.g., adolescents, elders), and applied settings (e.g., schools, nursing homes).
8. Professional Development Seminar I (3). An overview of professional issues in basic and applied research (consent, deception, bias), professional communications (authorship, plagiarism, publications, presentations), and professional development (vita preparation, job search strategies).
9. Research or Intervention Practicum I and II (6). Two supervised practicum courses in (a) basic or applied research or (b) behavioral interventions.

**Master's Thesis.** Students complete an empirically-based master's thesis and pass an oral examination on it. With an adviser's approval, empirically-based theses from other programs may meet this requirement.

**Ph.D. in Behavioral Psychology Degree Requirements**

The doctoral program trains highly competent researchers in applied behavioral science (e.g., applied behavior analysis, applied psychology). Students are taught to discover and produce, translate and apply, and communicate knowledge in the behavioral sciences for understanding and solving problems of societal importance. The curriculum requires a sequence of instruction that integrates (a) courses in the basic principles of behavior, experimental methods and research design, and conceptual foundations with (b) training in basic, applied, and intervention research (e.g., assessment, analysis, intervention, evaluation).

The doctoral training program follows a junior colleague model. Students work closely with their advisers and join them in every aspect of professional development. This includes designing and conducting research, preparing manuscripts for presentation and publication, and presenting and publishing those manuscripts. Students typically work with one adviser but may work with other faculty members or have co-advisers. If the student's or adviser's interests change over the course of training, students are free to seek another adviser.

**Course Requirements.** The doctoral degree program requires students to take one course in eight content areas, along with two practicum courses. The areas and the practicum courses are:

1. Principles of Behavior I (3). The science of behavior (observation, experimentation), laboratory methods, basic behavioral principles (e.g., reinforcement, stimulus control), and their applications (e.g., early childhood, disabilities).
2. Research Methods I (3). Strategies and tactics of scientific research (objectivity, empiricism), the logic of experimentation (validity, reliability), measurement and direct observation, and experimental designs for single-subject and time-series analyses.
3. Conceptual Foundations I (3). The history and philosophy of behavioral science, contemporary advances in basic research for application, the analysis of everyday conduct (e.g., cognition, emotion), and current issues in the discipline and profession (e.g., relations between basic and applied research).
4. Applied Behavior Analysis I (3). The characteristics of applied behavioral research (assessment, analysis, intervention, evaluation), intervention research (clinical, community), applied procedures and programs, social validity, and ethical issues.
5. Principles of Behavior or Conceptual Foundations II (3). Advanced treatment of (a) the basic principles (behavioral choice stimulus equivalence) or empirical research in selected content domains (behavioral development, verbal behavior) or (b) the historical, comparative, and contemporary foundations of behavior science.
6. Research Methods II (3). Advanced treatment of the tactics and strategies of basic, applied, and intervention research (e.g., measurement, design), with an emphasis on conducting research in applied settings (e.g., community, school, organizations).
7. Applied Behavior Analysis II (3). Advanced or specialized reviews of applied and intervention research relevant to new approaches (e.g., ecobehavioral analysis, functional assessment), special problems (e.g., autism, substance abuse), atypical populations (e.g., adolescents, elders), and applied settings (e.g., schools, nursing homes).
8. Professional Development Seminar I (3). An overview of professional issues in basic and applied research (consent, deception, bias), professional communications (authorship, plagiarism, publications, presentations), and professional development (vita preparation, job search strategies).
9. Research or Intervention Practicum I and II (6). Two supervised practicum courses in (a) basic or applied research or (b) behavioral interventions.

**Liberal Arts & Sciences**

**THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG**
Research Skill. The Graduate School requires that doctoral students demonstrate proficiency in a Foreign Language or Other Research Skill (FLORS) independent of, but consistent with and contributing to, their research program. In the department, this may be met by demonstrating (a) proficiency in productive and receptive spoken language other than English or in sign language, (b) reading proficiency in two languages other than English, (c) competence in both computer programming and computer applications, (d) a record of substantive course work beyond that required to satisfy the doctoral requirements in applied behavioral science (e.g., research methods, quantitative methods, epidemiology, health psychology, law, linguistics, rehabilitation, public health), or (e) a record of publications in peer-refereed journals or presentations at professional meetings, or professional experiences beyond those required by the professional writing requirement (see below).

Teaching Requirement. Graduate students participate in the training and supervision of undergraduates. The requirement may be met by serving as a half-time teaching assistant for one semester or a quarter-time assistant for two semesters, in both cases assuming proportionate responsibility for class organization, teaching, grading, and office hours under a faculty member’s supervision. Students satisfy this requirement by working as paid graduate teaching assistants or by enrolling for 3 hours (.25 GTA) or 6 hours (.50 GTA) of credit in ABSC 941 Teaching and Conference.

Comprehensive Examination. Students take the comprehensive examination after completing the required courses and fulfilling the teaching and research skill requirements. The examination has four components:

1. Editorial Critiques. Students write three editorial reviews of published or unpublished journal articles, all of them empirical. The articles cover a range of topics and experimental designs. The first two are graded pass/fail by the student’s adviser; the third must be passed by two other faculty members.

2. Professional Writing Requirement. Students write three papers based on publications drawn from a standard pool or selected by the approval of the adviser and another faculty member. The questions require critical reviews of basic, applied, or conceptual literatures relevant to applied behavioral science, as well as to the student’s research. The papers are graded blindly by three faculty members.

Alternatively, students may submit a sole- or first-author article, published or in-press, in a professional, peer-reviewed journal for any of these papers. The articles may be reports of basic, applied, or intervention research; observational, empirical, or descriptive studies; critical reviews of the literature; or analyses of the field’s research methods, principles, concepts, or theories. Published or in-press chapters and in-submission grant proposals may be submitted as well, but the following publications are excluded: abstracts, book notes, commentaries, communications, editorials, letters to the editor, and technical notes. Although the manuscripts or research required may have been completed before students entered the program, the manuscripts must be completed under the supervision of the student’s adviser as part of the department’s comprehensive examination. The journal articles, chapters, and in-press manuscripts must be at least six manuscript pages long. A first-author publication or proposal must be accompanied by a letter from the student’s adviser stating that it meets the standards of the American Psychological Association for first authorship (i.e., primary responsibility for conceptualizing the project and preparing the manuscript; see the 2001 APA Publication Manual, pp. 6-7, 348-355). For in-press publications, students submit a letter confirming its final acceptance from the journal or book editor; for grant proposals, students submit a notice confirming its receipt from the granting agency. See the department’s Graduate Handbook for details.

3. Review Paper. Students write an extended, integrated, and critical review of a basic, applied, or conceptual literature relevant to applied behavioral science in preparation for an oral examination over it.

4. Oral Examination. Upon successful completion of the three editorial critiques and two of the three professional writing requirements, students take an oral examination over the review paper.

Dissertation. In consultation with the adviser, the student proposes an empirically-based dissertation and a dissertation committee. All four components of the comprehensive examination must be passed before the oral defense of the dissertation may be scheduled. The written dissertation must be orally defended. Any interested member of the College’s graduate faculty may attend.

Joint Ph.D./M.P.H. Degree in Applied Behavioral Science and Community Health Promotion

The department offers a joint Ph.D./M.P.H. degree in collaboration with the Master of Public Health program in the Department of Preventive Medicine and Public Health at KU Medical Center. The degree incorporates efficiencies in the elective and research requirements of both departments. This is the first degree in the nation to combine an M.P.H. with the strengths of advanced study in applied behavioral science. Faculty and student research teams address issues in community health and development, child and youth health and development, disabilities and independent living, and healthy aging. Separate admission is required in both the Ph.D. program of the Department of Applied Behavioral Science and M.P.H. program in the Department of Preventive Medicine and Public Health. For more information, see www.ku.edu/phdmp.

Clinical Child Psychology Program

The department sponsors a joint Ph.D. program in clinical child psychology with the Department of Psychology. It prepares graduates for careers as scientist-practitioners in clinical child, behavioral, and adolescent psychology. Students complete a well-defined, cohesive, and integrated curriculum of course work in psychology, practica, research activities, and a clinical internship. The program is accredited by the American Psychological Association in clinical psychology with an emphasis in child psychology. For information, see Clinical Child Psychology in this catalog and www.ku.edu/~clchild. Inquiries about the program, curriculum, applications, and admission requirements can be sent to clchild@raven.cc.ku.edu.

Behavior Analysis

Master’s Program. The department plans to offer a sequence of courses accredited by the Association for Behavior Analysis as a master’s-level behavior analysis program. The courses will also fulfill the requirements for the master’s degree in applied behavioral science (see www.abainternational.org).

Doctoral Program. The department offers a sequence of courses accredited by the Association for Behavior Analysis as a doctoral-level behavior analysis program. The courses fulfill most of the requirements for the department’s doctoral program (see www.abainternational.org).

Certification. The department’s program satisfies the 15 hours of psychosite course work (225 contact hours over six content areas) for students to become Board Certified Behavior Analysts™. The Behavior Analysis Certification Board® (BACB®) has pre-approved 13 courses (550 contact hours) that, in whole or in part, meet the requirement for admission to its national certification examination. The courses are ABSC 702, ABSC 710, ABSC 725, ABSC 745, ABSC 758, ABSC 761, ABSC 793, ABSC 940, and ABSC 971. Students must also obtain requisite supervised or mentored experi-
ence and have earned a master's degree to sit for the examination (see www.BACB.com).

Graduate Certificate Program

Community Health and Development. The department offers a program in promoting community health and development that leads to a certificate from KU’s Graduate School. Educational objectives include (a) promoting an understanding of the processes and methods for enhancing community health and development that draw on theoretical foundations in behavioral science, public health, and community psychology; (b) developing core competencies in this work (e.g., creating partnerships, community assessment, analyzing problems and goals, strategic planning, intervention, advocacy, evaluation, planning for sustainability); and (c) enhancing experience and competence through supported practice in addressing issues in community health and development (e.g., substance abuse, independent living, prevention of chronic diseases, youth development). The curriculum consists of three 3-hour graduate-level content and practicum courses across fall and spring semesters.

Psychology Licensure

The department's doctoral program in behavioral psychology does not satisfy requirements for licensure in psychology. Students wishing to meet these requirements should, with their advisers, consult the Association of State and Provincial Psychology Boards for state and province requirements, www.asspb.org. In developing a curriculum that fulfills these requirements, students should consider carefully whether the required courses and clinical experiences for state and province licensure are offered by the department and university, and are open to them.

Affiliated Research and Training Programs

For information about the Schiefelbusch Institute for Life Span Studies, Juniper Gardens Children’s Project, the Research and Training Center on Independent Living, the KU Work Group for Community Health and Development, and the Kansas Mental Retardation and Developmental Disabilities Research Center, see Schiefelbusch Institute for Life Span Studies in the Research and Academic Support chapter of this catalog.

Applied Behavioral Science Courses

- ABSC 509 Contemporary Behavioral Science: Historical, Conceptual, and Comparative Foundations (3).
- ABSC 535 Developmental Psychopathology (3).
- ABSC 542 Applied Gerontology (3).
- ABSC 555 Issues in Administering Early Childhood Services (2).
- ABSC 560 The Juvenile Justice System: A Behavioral and Legal Perspective (3).
- ABSC 565 Applied Developmental Psychology (3).
- ABSC 599 Honors and Thesis in Applied Behavioral Science (1-5).
- ABSC 606 Special Projects in the Community (1-10).
- ABSC 620 Drug Abuse: From Basic Research to Public Policy (3).
- ABSC 626 Psychology of Adolescence (3).
- ABSC 632 Advanced Child Behavior and Development (3).
- ABSC 671 Applied Behavior Analysis (3).
- ABSC 672 Applied Behavior Analysis, Honors (3).
- ABSC 675 Practicum in Infant-toddler Care and Early Intervention I (2-5).
- ABSC 676 Practicum in Infant-toddler Care and Early Intervention II (3-5).
- ABSC 677 Practicum in Preschool Education and Intervention I (3-5).
- ABSC 678 Practicum in Preschool Education and Intervention II (2-5).
- ABSC 679 Practicum in Behavior – Analytic Research in Early Childhood (3-6).
- ABSC 680 Practicum in Advanced Laboratory in the Development of Behavioral Treatments for Children with Autism (1-6).
- ABSC 685 Practicum in Community-based Residential or Day Treatment Programs for Disabled Adults (3-6).
- ABSC 687 Practicum in Behavioral Gerontology (1-6).
- ABSC 690 Practicum in Community Health and Development (1-6).
- ABSC 691 Practicum in Community Health and Development, Honors (1-6).
- ABSC 694 Practicum in Juvenile Problems (3-5).
- ABSC 695 Special Practicum in _____ (3-6).
- ABSC 696 Special Practicum in _____ (3-6).
- ABSC 698 Special Research Practicum in _____ (1-6).
- ABSC 699 Special Research Practicum in _____, Honors: _____ (3-6).
- ABSC 701 Parenting in Modern Society (3). The theoretical study of parenting and parent-child relationships, techniques for analyzing common parenting problems, designing appropriate interventions, fostering effective communication skills, understanding issues of diversity, and promoting parent education programs are some of the issues addressed in this course. Professional collaboration and support of families and children are emphasized throughout. Students develop analytical skills through reading, discussion, and application of theoretical and empirical research. (Formerly HDFL 701.) Prerequisite: ABSC/HDFL 160 or equivalent knowledge of child development or child psychology. LEC
- ABSC 702 Curriculum Development for Young Children (3). A survey of educational materials and activities that are appropriate for young children (birth to age 8). Students explore several components of effective curriculum (e.g., objectives, effective methods of activity presentation, teaching strategies) and learn to combine them to construct curriculums for a range of content and skill areas. By focusing on the functional components of curriculums, students learn to construct, critically evaluate, and modify them for both typically developing children and children with special needs. A BACB® pre-approved course. (Formerly HDFL 702) LEC
- ABSC 703 Leadership in Early Education Programs: Theory and Research (3). Effective leadership skills and professional roles associated with the administration of early childhood services and programs are examined in this course. Theoretical principles, empirical research, and professional responsibilities inherent in the provision of quality service, including needs assessment, organizational skills, delivery systems, human resource management, communication skills, grant writing, legal and ethical considerations, conflict resolution, and advocacy are explored through readings, discussion, and assigned projects. Not open to students who have completed ABSC 555. (Formerly HDFL 677). Prerequisite: ABSC/HDFL 160 or equivalent knowledge of child development or child psychology. LEC
- ABSC 704 Research Practicum in Clinical Child Psychology (3). This course provides students in the Clinical Child Psychology Program with the opportunity to enhance and consolidate their research activities by fulfilling one of the elective cluster course requirements. The research practicum involves a contract with a research adviser and the program director. The contract includes definable products and dates for completion to prepare research for submission for publication, develop a grant proposal, or conduct additional research project independent of other requirements in the program. The course is not to be taken as an overload, but is to be part of a full-time course schedule. May be repeated. (Same as PSYC 704.) (Formerly HDFL 704.) Prerequisites: Graduate standing in clinical child psychology and instructor permission. LEC
- ABSC 705 Pediatric Psychology (3). Discussion of behavior problems commonly encountered in the pediatric population, including reviews of data-based methodologies for remediation. Topics include general child rearing skills, bedtime problems, enuresis, encopresis, toilet training, self-injurious behavior, temper tantrums, behavior in community settings, child abuse, psychotropic drugs for children, adolescent behavior problems and selection of children’s play materials. (Formerly HDFL 705.) Prerequisite: ABSC/HDFL 160, ABSC/HDFL 632, or PSYC 602. LEC
- ABSC 706 Special Topics in Clinical Child Psychology: _____ (3). A course offering detailed discussion of the literature and research methods of a special topic within clinical child and pediatric psychology. Topic and instructor may change by semester and will be announced in the Timetable. May be repeated. (Same as PSYC 706.) (Formerly
The Language Acquisition Pre-

school serves normally develop-

ling, language-

impaired, and

English-as-a-

second-language children and

provides training and research opportunities in child language.

Some depart-

ments do not

offer all courses in any one semester. See

www.registrar.ku.

ed/timetable for current course offerings.

HDFL 706.) Prerequisite: Graduate standing in clinical child psychol-

ogy and instructor permission. LEC

ABSC 709 Biology and Behavior (3). A course on the role of physiolo-

gy and behavior in behavioral development and a focus on emphasis on their participation in the basic behavioral processes and in typical and atypical behavioral development. The course also addresses issues in measurement and current research. (Formerly HDFL 709.) Prerequisite: ABSC/HDFL 796; ABSC/HDFL 785. (Same as INS 871.) LEC

ABSC 710 Community Health and Development (3). This course ex-

tends knowledge and skills addressing issues in community health and development (e.g., substance abuse, adolescent pregnancy, child and youth development, prevention and education of violence), and educates students toward core competencies such as analyzing community problems and goals, strategic planning, intervention, and evaluation, and then apply these skills to issues that matter to the communities they serve. (Formerly HDFL 710.) (Same as INS 871.) LEC

ABSC 716 Experimental Problems in Community Settings (1-5). Re-

search in the experimental design and analysis of community settings. No more than 10 hours total. (Formerly HDFL 716.) Prerequisite: In-

structor permission. RSH

ABSC 719 Experimental Field Work in Community Settings (1-5). In-

struction in the methods and techniques of the experimental design and analysis of community settings through supervised participation in established community health programs. Emphasis is on gathering original experimental data. No more than 10 hours total. (Formerly HDFL 719.) Prerequisite: Instructor permission. RSH

ABSC 721 Biological Bases of Mental Retardation (4). This course deals with the physiological and biochemical substrates of mental retardation. Retardation is classified as a medical syndrome, rather than by behavioral patterns, but behavioral peculiarities are addressed where relevant. Attention is directed to both genetic causes such as aneuploidy (e.g., Mongolism) and molecular and metabolic errors (e.g., phenyle
tonuria), as well as to the environmentally produced retardation by nu-

tritional deficiency, prenatal rubella, and brain trauma. (Formerly HDFL 721.) Prerequisite: One course in biology or equivalent. (Formerly HDFL 721.) Prerequisite: Instructor permission. RSH

ABSC 723 Adolescent Adjustment (3). An overview of adolescence with primary emphasis on various adjustment difficulties and respect-

ive therapeutic approaches. Content to provide perspectives on relev-

ant practice, research, theory, and contemporary social forces. (For-

merly HDFL 723.) Prerequisite: Instructor permission. LEC

ABSC 725 Research Methods and Application (3). Surveys research methods used to identify, describe, understand, and intervene on socially important problems occurring across the life span (e.g., childhood, adolescence, elders) and in varied settings (homes, classrooms, group-

care facilities, and communities). Discusses research methods and con-

cepts (e.g., prediction, control, reliability, validity) within scientific, psy-

chological, and behavior-analytic frameworks. Presents strategies and tactics regarding descriptive and experimental methods, direct and indirect measurement, graphic and statistical analysis, and single-subject and group experimental designs. Emphasis on research writing and presentation. Provides opportunities to read secondary and primary sources, develop research questions, write and present research proposals. (Formerly HDFL 725.) Prerequisite: Instructor permission. RSH

ABSC 730 Developmental Neuropsychology (3). Course consists of lectures and discussion sessions on topics that describe the structural and functional maturation of the nervous system. The areas covered deal with the morphological, physiological, and biochemical changes in the developing central nervous system (including human infants), and with the interaction of the external environment with some of these maturational processes. Prerequisite: Introductory human development, psychology, or biology course. LEC

ABSC 735 Within Subjects Research Methodology and Direct Observa-

tion (3). A graduate level introduction to the logic of experimentation, direct observation strategies, and research conducted using individual (e.g., single subject) and time series experimental designs. An ABAC-accredited and BACB pre-approved course. (Formerly HDFL 735.) Prerequisites: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 741 Readings in Gerontology (5-5). Supervised readings in top-

ical areas of gerontology. A program of study, conferences, and reports are developed by the instructor and student. (Formerly HDFL 741.) Prerequisite: Instructor permission. RSH

ABSC 742 Research in Gerontology (1-49). Original investigations of some unsolved problems relating to adult development and aging. (Formerly HDFL 742.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. RSH

ABSC 756 Philosophical Bases of Early Childhood Education (3). Historical influences and current theoretical models of early childhood education are addressed through a survey and analysis of the literature. Not open to students who have completed ABSC 756. (Formerly HDFL 756.) Prerequisite: ABSC/HDFL 160 or permission of instructor. LEC

ABSC 765 Evaluating and Disseminating Scientific Material I (1-3). Intensive training in the evaluation and production of scientific cri-

tiques and reviews of current issues in the analysis of behavior, as dis-

seminated through the media. May be repeated. (Formerly HDFL 765.) Prerequisite: Instructor permission. LEC

ABSC 787 Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center on a specific topic of relevance to gerontolo-

gy for researchers and practitioners, providing a multidisciplinary (e.g., psychology, biology, sociology, communication) perspective on aging. The proseminar surveys contemporary and historical research and applied research, program, and policy issues as they relate to the care of the aged. (Formerly HDFL 787.) LEC

ABSC 788 Designing Early Education Environments (5). This course reviews empirically-supported strategies for designing effective and so-

cially valid care and education environments for young children with and without disabilities. Topics will include: early educational theory, individu-

alized curricula and goal selection strategies, various instructional ty-

pologies, embedding direct instruction teaching strategies, and teaching tactics (e.g., prompting, time delay, differential reinforcement), prevent-

ive and assessment-based behavioral management strategies, current best practice recommendations for design of the social and physical en-

vironment, and methods for assessing children’s, caregivers’, and teach-

ers’ programmatic preferences. Prerequisite: ABSC 796. LEC

ABSC 796 Laboratory in Behavioral Development and Modification: The Analysis of Behavior I (3). An introductory graduate laboratory course on the basic principles of behavior, and related procedures for producing be-

havioral change, with nonhuman subjects. The principles and procedures have special relevance to analogous processes in child development, both normal and abnormal. An ABAAccredited and BACB pre-approved course. (Formerly HDFL 796.) Prerequisite: Instructor permission. LAB

ABSC 797 Proseminar in Child Language (2). A review and discus-

sion of current issues in children’s language acquisition. May be re-

peated for credit. Students are graded S/F. (Same as LING 799, PSYC 799 and SPLH 799). Prerequisite: Instructor permission. LAB

ABSC 798 The Analysis of Behavior II: Conceptual Foundations, Ad-

vanced Principles, and Contemporary Issues (3). A graduate seminar on the conceptual, scientific, and professional foundations of behavioral analysis, with emphasis on their relation to application. The course addresses history and philosophy, advanced behavioral prin-

ciples, complex behavioral processes, analyses of various domains of behav-

ior (e.g., emotion, language, cognition), and the historical development of topics and techniques in applied behavioral analysis. Special current and professional issues. An ABAAccredited and BACB pre-approved course. (Formerly HDFL 798.) Prerequisite: ABSC 796 or instructor permission. LEC

ABSC 801 Design and Analysis of Community Development Methods (1-6). An examination of principles and practices of community devel-

opment and evaluation of methods used to promote community im-

provement. May be repeated if the content differs. (Formerly HDFL 801.) Prerequisite: Instructor permission. RSH

ABSC 804 Research in Community Health Promotion (1-6). Supervised, original investigations of problems relevant to community health, such as the prevention of substance abuse or promotion of child outcomes. As

appropriate, the course covers research design and research methods in a range of fields, including psychology, biology, sociology, communication) perspective on aging. The

ABSC 807 Design and Evaluation of Community Health Promotion Methods (1-6). An examination of the methods used to develop and evaluate community health promotion programs. The course addresses topics of interest to participants, such as substance abuse, adolescent pregnancy, and special populations of interest to participants, such as substance abuse, adolescent pregnancy, and special popu-

lations. May be repeated if the content differs. (Formerly HDFL 807.) Prerequisite: ABSC 806 and instructor permission. F/LI

ABSC 808 Functional Behavioral Assessment Practicum (1-6). This course provides supervised experience in the use of functional behav-

ioral assessment in home, clinic, or educational environments with young children presenting problem behaviors. (Formerly HDFL 808.) Prerequisite: ABSC 805 and instructor permission. F/LI

ABSC 809 Professional Issues: Clinical Child Psychology (1). Con-

sideration of special populations, defined by diagnosis, disability, or ori-

ented scientist-practitioner, and in the development of a professional identity. Topics include critical issues, including ethical, legal, cultural, empirical, and clinical aspects of research and practice. May be re-

peated. (Same as PSYC 809.) Prerequisite: Graduate standing in clinical child psychology. LEC

ABSC 810 Introduction to Developmental Assessment (3). A course covering the general principles of developmental assessment from birth through adulthood, with special emphasis on the nature and na-

ture of assessment instruments and the criteria for acceptance, reliabil-

ity, and stability of results. Selected assessment techniques for infants, preschool children, elementary school children, adolescents, and
ABSC 812 Behavioral and Personality Assessment of Children (3). Lecture, laboratory, field work, and supervision. Theory and applications in the psychological evaluation of children with standardized assessment techniques. The administration, scoring, interpretation, and reporting of behavioral and personality functioning in children. (Formerly HDFL 812.) (Same as PSYC 812.) Prerequisite: Graduate standing in clinical child psychology. LEC

ABSC 813 Behavioral Science Research Proseminar (1-3). A master’s level professional seminar in which faculty and students present research proposals, oral formal presentations of completed empirical research, reviews of the literature, and other areas of scholarship; and engage discussion about contemporary empirical, conceptual, and professional development. A total of six credits. (Formerly HDFL 813.) Prerequisite: Graduate standing in clinical child psychology. LEC

ABSC 814 Advanced Child and Family Assessment (3). Lecture, laboratory, field work, and supervision. Supervised experience in specialized psychosocial assessment approaches for children and families. Emphasis on interviewing, observation, psychometric scales, and consultation, rationale, administration, analysis, and reporting of mental health functioning of children and families. Experience with clinical populations, and communication with referral sources. (Formerly HDFL 814.) (Same as PSYC 814.) Prerequisite: Graduate student in clinical child psychology. LEC

ABSC 820 Advanced Child Development (3). A survey of the basic empirical research in the field of child development, exploring intelligence, cognition, perception, attention, personality, social behavior, and socialization processes. These literatures are integrated and their implications for social application are addressed. (Formerly HDFL 820.) (Same as PSYC 820.) Prerequisite: Instructor permission. A course relevant. LEC

ABSC 821 Behavior Analysis of Child Development (3). An advanced graduate seminar on the behavior-analytic approach to child development. Students examine the behavior-analytic view of child development and compare and contrast this approach with other systems for understanding development. Students also review and critically evaluate current and seminal literature related to several different developmental domains (e.g., motor, emotional, social, cognitive developmental) and explore implications for the application of current knowledge. An ABA-accredited and BACB pre-approved course. (Formerly HDFL 821.) Prerequisite: ABSC 798 and consent of instructor. LEC

ABSC 822 Children and Public Policy (3). This course examines how public policies affect the development of children. Includes examination of child and family policy in the United States and other countries, policy-related research on children, major policy issues affecting children, and child advocacy. (Formerly HDFL 822.) Prerequisite: Instructor permission. LEC

ABSC 824 Treatment of Severe Learning Problems (3). The course reviews new approaches to working with persons with retardation and autism; theoretical orientations and how they affect implementation of procedures; the role of behavioral and cognitive temporada in the selection of problems and target populations, analysis of problems and their applications to problems of human behavior in complex organizations such as businesses, industries, human service organizations, and governments. (Formerly HDFL 880.) Prerequisite: A course in child psychology or development. LEC

ABSC 828 Research in Early Intervention with Children (3). A seminar on current issues in assessment and intervention for young children who are at risk for or who have special needs. Provides foundation for evaluating and understanding research in early intervention. Includes historical, conceptual and legislative underpinnings of early intervention, risk factors affecting development, methodological issues in early intervention research, best practice standards, and applications to social, language, and pre-academic domains. (Formerly HDFL 828.) LEC

ABSC 834 Directed Readings in Community Health Promotion (1-5). Supervised reading in special areas of community health promotion such as the prevention of substance abuse and promotion of child outcomes. A program of study, conferences, and reports is developed by the instructor and student. (Formerly HDFL 834.) LEC

ABSC 835 Practicum in Clinical Child Psychology I (3). This advanced course in child development or instructor permission. LEC

ABSC 840 Theoretical Concepts of Human Development and Child Care Practice (3). Basic introduction to treatment concepts and procedures related to child development and child-care programs. The major goal is to provide a theoretical framework that is effective in dealing with various types of child deviancy. (Formerly HDFL 840.) Prerequisite: Graduate standing in clinical child psychology. LEC

ABSC 841 Legal, Ethical, and Professional Issues in Applied Behavioral Science (1-3). Seminar designed to provide an overview of topics such as guidelines for research with humans, human subjects procedures, use of animal subjects, deception in research, duties to refer, informed consent in special populations, data ownership and sharing, bias and fraud in research. A BACB pre-approved course. (Formerly HDFL 841.) Prerequisite: Graduate standing in applied behavioral science. LEC

ABSC 845 Rules of Evidence for Applied Research (3). A course on experimental problems specific to socially significant behaviors of humans. Emphasis on editing and critiquing research articles of the type submitted for publication in applied research journals. (Formerly HDFL 845.) LEC

ABSC 846 Practicum in Clinical Child Psychology I (1-3). Lecture, laboratory, field work, and supervision appointment. Psychological evaluation and treatment of children and their families; supervised, progressive experience in psychological interventions in clinical child psychology. (Same as PSYC 846.) (Formerly HDFL 846.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

ABSC 847 Practicum in Clinical Child Psychology II (1-3). A continuation of ABSC 846/PSYC 846. (Formerly HDFL 847.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

ABSC 848 Applied Gerontology: Practice and Intervention (3). A survey of intervention research in gerontology. Program evaluations designed to determine the effectiveness of interventions; current and seminal literature related to several different developmental domains (e.g., motor, emotional, social, cognitive developmental) and explore implications for the application of current knowledge. An ABA-accredited and BACB pre-approved course. (Formerly HDFL 848.) LEC

ABSC 856 An Interdisciplinary Approach to Intervention with the Handicapped (3). This course surveys knowledge from various disciplines that address developmental disabilities across the life span. Its focus is on designing strategies for individual intervention and treatment programs by an interdisciplinary team. Designed for students in social work, speech pathology, psychology, nutrition, audiology, special education, physical therapy, nursing, child development, behavior analysis, and related fields. (Formerly HDFL 707.) Prerequisite: A basic course in child development or instructor permission. LEC

ABSC 861 Applied Behavior Analysis (3). This advanced course extends knowledge and skill in analyzing behavioral problems, designing interventions, and planning applied research projects. Topics include the selection of problems and target populations, analysis of problems and goals, designing measurement systems, developing interventions, and disseminating products from applied behavioral research. Students use examples from their own applied research. An ABA-accredited and BACB pre-approved course. (Formerly HDFL 871.) LEC

ABSC 865 Applied Behavior Analysis in Complex Organizations (3). An examination of the theory, principles, and methods of behavior analysis and their application to problems of human behavior in complex organizations such as businesses, industries, human service organizations, and governments. (Formerly HDFL 888.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 866 Service System and Consumer Issues in Developmental Disabilities (3). This course provides a service-system perspective on developmental disabilities. Students learn (a) how service systems have developed for people with developmental disabilities; (b) about service systems from the perspective of the prevailing agency administrators, program evaluation, and public and private payment systems (e.g., health insurance, Medicaid, Medicare, CHIPs, Title V); and (c) from consumers, themselves, about the barriers they face in obtaining needed services. Finally, students learn about advocating for service-system change at a consumer, program, and policy level. Prerequisite: Graduate standing or instructor permission. LEC

ABSC 870 Practicum I in Behavioral Psychology (1-6). Lecture and supervised laboratory or field work for master’s students. Practice is offered by different instructors on different topics; may be repeated for credit if the content differs. Topics and instructors are announced in the Timetable. Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 871 Practicum I in Behavior Analysis: _____ (1-6). Lecture and supervised laboratory or field work for master’s students. Practice is offered by different instructors on different topics; may be repeated for credit if the content differs. Topics and instructors are announced in the Timetable. (Formerly HDFL 873.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. FLD

ABSC 872 Practicum II in Behavior Analysis: _____ (1-6). Lecture and supervised laboratory or field work for master’s students. Practice is offered by different instructors on different topics; may be repeated for credit if the content is different. Topics and instructors are announced in the Timetable. (Formerly HDFL 872.) LEC
A Directory of Courses appears on pages 5-6.

The Research and Training Center for Independent Living studies and develops self-advocacy and independent living systems for persons of all ages who have developmental disabilities.

ABSC 857 Practicum in Educational Psychological/Rehabilitative Services (1-6). A practicum course is for students who wish to obtain practical experience in services related to persons with retardation, autism, or physical disabilities in programs in various settings, such as the Ann Sullivan Center in Lima, Peru and the Algeria School in Paraguay. The course is designed to give interested students opportunities to work with professionals in these programs on a semester or summer basis. The course consists of participation in professional activities associated with the practicum program and a report of these activities to the instructor. (Formerly HDFL 798.) Prerequisite: Instructor permission. FLD

ABSC 874 Practicum in Consumer Evaluation of Behavior Programs (1-6). A practicum course designed to provide students with knowledge, background, and practical experience in the implementation of community health promotion projects and their evaluation. May be repeated for credit if the content differs. (Formerly HDFL 885.) Prerequisite: Instructor permission. FLD

ABSC 875 Practicum in Community Health Promotion (1-6). A practicum course designed to provide students with knowledge, background, and practical experience in the implementation of community health promotion projects and their evaluation. May be repeated for credit if the content differs. (Formerly HDFL 895.) Prerequisite: Instructor permission. FLD

ABSC 876 Practicum in Community Development (1-6). A practicum course designed to provide students with knowledge, background, and practical experience in the implementation of community improvement projects and their evaluation. May be repeated for credit if the content differs. (Formerly HDFL 900.) Prerequisite: Instructor permission. FLD

ABSC 877 Advanced Practicum in Gerontology (1-6). Supervised practical experience in working with elders in home, community, or institutional settings. Regular individual conferences with faculty are used to evaluate student progress. (Formerly HDFL 905.) Prerequisite: Graduate standing or instructor permission. FLD

ABSC 880 Early Childhood Practicum for Allied Professionals (1-6). Professionals in fields such as journalism, social welfare, and psychology may have career interests that include work with, or on behalf of, young children. This practicum provides students with individualized opportunities to work with young children in a group setting in order to extend their professional skills. (Formerly HDFL 915.) Prerequisite: Instructor permission. FLD

ABSC 881 Early Childhood Care and Intervention Practicum I (1-6). A course covering methods and techniques for the evaluation and intervention and curriculum design management of groups of young children. May be repeated for no more than a total of six credit hours. (Formerly HDFL 920.) Prerequisite: Instructor permission. FLD

ABSC 882 Early Childhood Care and Intervention Practicum II (1-6). A course to assess and teach skills in diagnosis and evaluation of particular problems in the developmental process of young children (1-5 years of age), and to design and implement interventions. May be repeated for no more than a total of six credit hours. (Formerly HDFL 925.) Prerequisite: ABSC 791 and instructor permission. FLD

ABSC 883 Early Childhood Administration Practicum (1-9). Experiences in understanding and developing parent satisfaction with care arrangements for their child(s), providing services to the young childPRESENTATION AND DISCUSSION ON THE RESEARCH IN PROGRESS ON THE IMPACT OF THE ENGLISH INSTRUCTION ON THE DEVELOPMENT OF CHILDREN WITH DEVELOPMENTAL DISABILITIES. (Formerly HDFL 930.) Prerequisite: ABSC 690, previous coursework in applied behavioral science or instructor permission. LEC

ABSC 884 Early Childhood Early Intervention Practicum (1-6). Laboratory teaching in an early childhood classroom that includes children who are developmentally delayed, demonstrate behavioral or learning difficulties, or have other developmental disabilities. Experience includes individualized programing for children with special needs, as well as group management and group curriculum planning. May be repeated for no more than a total of six credit hours. (Formerly HDFL 933.) Prerequisite: ABSC 791 and instructor permission. FLD

ABSC 885 Early Childhood Teacher Training Practicum (1-9). Experience in supervising staff who work in programs for young children. Supervision includes orienting, monitoring, and evaluating staff performance and opportunities for interaction with other professionals; experience in facilitating staff communication; and consulting on research projects. (Formerly HDFL 935.) Prerequisite: ABSC 791 and instructor permission. FLD

ABSC 886 Developmental Assessment Practicum: Early Childhood (1-6). This course provides direct experience in the developmental assessment of a selected age group, such as infants, preschool and elementary children, adolescents, or adults. It may be repeated by providing the age group specification is repeated. (Formerly HDFL 461.) Prerequisite: HDFL 810 or an equivalent course. FLD

ABSC 887 Clinical Practicum in Pediatric Psychology (1-6). Supervised experience with pediatric patients referred for behavior problems, including, for example, temper tantrums, enuresis, encopresis, and hyperactivity. Also includes evaluation and treatment of children with commonly encountered behavior problems. In addition, students observe pediatric staff performing appropriate physical exams and observe the interaction between the medical and the psychiatric. (Formerly HDFL 823.) Prerequisite: ABSC 705 and instructor permission. FLD

ABSC 888 Diversity Issues in Clinical Psychology (3). Review of individual differences pertaining to culture, ethnicity, race, gender, sexual orientation, age, etc., as these impact research, assessment, and treatment issues in clinical psychology. (Same as PSYC 888.) Prerequisite: Graduate status in clinical psychology, or consent of instructor. LEC

ABSC 890 Seminar in: (3). A seminar for master’s level students. It examines, along with current empirical and conceptual advances in research and theory. An ABA-accredited and BACB® pre-approved course. (Formerly HDFL 890.) Prerequisite: Master’s degree or instructor permission. LEC

ABSC 891 Research in: (1-6). Supervised research investigations in basic or applied behavioral science for master’s students. The course introduces observational measurement, research methods and designs, research in the conduct of research in the classroom, and the use of appropriate analysis of variance and covariance. May be repeated for credit if the content is different. (Formerly HDFL 895.) Prerequisite: Graduate standing or instructor permission. RSH

ABSC 892 Readings in: (1-3). An individual, supervised study of recent research and scholarship for master’s students. The course encourages students with special interests in areas of basic and applied behavioral science and its conceptual foundations. Designed for students whose needs cannot be met in other courses. May be repeated for credit if the content differs. Prerequisite: Graduate standing or instructor permission. RSH

ABSC 893 Special Topics in: (1-6). Supervised research experience for master’s students. It allows them to concentrate their studies on selected basic and applied problems of research and practice and to carry out independent research. May be repeated for credit if the content differs. (Formerly HDFL 722, HDFL 724, HDFL 725, HDFL 799.) Prerequisite: Graduate standing or instructor permission. LEC

ABSC 894 Student Project in: (1-6). A research and development project designed to enhance international experience in topic areas related to behavioral science for master’s students. May be repeated for credit if the content differs. Prerequisite: Graduate standing or instructor permission. LEC

ABSC 895 Master’s Thesis in Clinical Child Psychology (1-9). Supervised research experience for the thesis leading to a master’s degree. (Formerly HDFL 895.) (Same as PSYC 895.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. RSH

ABSC 899 Master’s Thesis in Applied Behavioral Science (1-9). Supervised research experience for the thesis leading to a master’s degree in applied behavioral science. May be repeated. (Formerly HDFL 898.) Prerequisite: Graduate standing in applied behavioral science or instructor permission. LEC

ABSC 905 Psychopathology in Children (3). Diagnosis and treatment of psychological problems in childhood and adolescence. Preference given to graduate students in child clinical psychology, school psychology, and counseling psychology. (Same as PSYC 805.) Prerequisite: Fifteen hours of graduate credit in psychology or consent of instructor. LEC

ABSC 908 Psychotropic Drugs: Effects Through the Life Span (3). This course covers basic pharmacological concepts, neuropharmacological principles, and the therapeutics of drug effects on behavior. Special attention is given to age and history as influences in pharmacological outcomes. (Formerly HDFL 908.) LEC

ABSC 913 Behavioral Science Research Proseminar (1-3). A doctoral level professional seminar in which faculty and students present research proposals; offer formal presentations of empirical research, review the literature, and other areas of scholarship; and engage discussion about contemporary empirical, conceptual, and professional issues in applied behavioral science. May be repeated for a total of eight credits. (Formerly HDFL 913.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. LEC

ABSC 920 Seminar in Language Development (5). The course pertains to recent research regarding infant speech development, vocabulary development, linguistic development, articulation, language, and language retardation. (Same as SPLH 966.) (Formerly HDFL 920.) LEC

ABSC 921 The History and Systems of Psychology (3). An advanced graduate seminar on the history of psychology and its systems, and their relationship to contemporary psychology. Pertinent issues in the history and philosophy of science are addressed (e.g., scientific revolutions), as are concerns in the historiography of psychology (e.g., presentism). (Formerly HDFL 891.) Prerequisite: Master’s degree or instructor permission. LEC

ABSC 931 Verbal Behavior (3). An advanced graduate seminar on the analysis of the verbal behavior of the proficient speaker and the biological, environmental, and motivational factors affecting it. Structural and developmental issues, as well as implications for language training and remediation are integrated throughout. The course is examined, along with current empirical and conceptual advances in research and theory. An ABA-accredited and BACB® pre-approved course. (Formerly HDFL 708, advanced coursework in psycholinguistics or linguistics, or instructor permission. LEC

ABSC 934 Directed Readings in Clinical Child Psychology (1-5). Designed to meet the needs of advanced students whose study in clinical child psychology cannot be met in a regular course. A research course in which advanced work is desired in a specialized area of study. (Formerly HDFL...
ABSC 935 Experimental Foundations of Applied Behavior Analysis (3). A graduate level introduction to basic behavioral research. This course surveys seminal and current research in the experimental analysis of behavior and relates this work to research and practice in applied behavior analysis. Topics include respondent conditioning, complex schedules, avoidance, and choice. Prerequisite: ABSC 798 and consent of instructor. LEC

ABSC 940 Measurement and Experimental Design for Applied Research (3). This is an advanced course on research methods helpful in the design, evaluation, and dissemination of behavioral analyses. The course surveys seminal and current research in measurement and experimental design and stresses the importance of these methods to behavioral research. May be repeated for credit if the content differs. Prerequisite: ABSC 935 or instructor permission. LEC

ABSC 941 Teaching and Conference (3-6). This course is used by graduate students fulfilling the doctoral program teaching requirement. Students assist in class preparation and organization, teach, grade, and office hours or serve as discussion section leaders or laboratory course supervisors. They meet regularly with the faculty members they are assisting. Students enroll for 3 hours for the equivalent of a 25% assistantship and 6 hours for a 50% equivalent. Prerequisite: ABSC 940, ABSC/HDFL 735 or 803, and ABSC/HDFL 871 or instructor permission. LEC

ABSC 942 Techniques of Data Analysis for Applied Research (3). This course examines data analysis procedures commonly used with both large group and single subject experimental designs. In addition to presenting specific data analysis techniques, the strengths and weaknesses inherent in the various techniques are carefully reviewed and evaluated. (Formerly HDFL 942.) Prerequisite: ABSC/HDFL 735 or HDFL 803 and an intermediate statistics course. LEC

ABSC 943 Advanced Practicum in Clinical Child Psychology III (1-3). Lecture, laboratory, field work, and supervision appointment. Advanced psychological intervention techniques for children, youth, and families; supervised successive experience in application of behavioral and psycho-therapeutic methods to behavioral and emotional problems. (Formerly HDFL 943.) Prerequisite: Graduate standing in clinical psychology and instructor permission. LEC

ABSC 944 Advanced Practicum in Clinical Child Psychology IV (1-3). A continuation of ABSC/HDFL 943 and PSYC 943. (Formerly HDFL 944.) Prerequisite: ABSC/HDFL 735 or HDFL 803 and an intermediate statistics course. LEC

ABSC 947 Advanced Practicum in Clinical Child Psychology V (1-3). A continuation of ABSC/HDFL 944 and PSYC 944. May be taken in more than one semester. (Formerly HDFL 947.) Prerequisite: Graduate standing in clinical psychology and instructor permission. LEC

ABSC 951 The Analysis of Cognition (3). A graduate seminar on the behavior analysis of cognition. Topics include consciousness, attention, perception, memory, language, rule-governed behavior, problem-solving, decision-making, generativity, creativity, and beliefs and attitudes. Comparisons and contrasts are drawn among different theoretical orientations (information-processing, parallel-processing, nonmeditational theories). Prerequisite: ABSC 798, advanced coursework in cognitive psychology, or instructor permission. RSH

ABSC 961 Advanced Seminar in Applied Behavior Analysis: _____ (3). An advanced seminar examining the literature and research methods in specialized areas of applied behavior analysis (e.g., developmental disabilities, community health, organizational development). May be repeated for credit if the content differs. An ABA-accredited and IACBP pre-approved course. (Formerly HDFL 971.) LEC

ABSC 963 Clinical Child Psychology Internship (1). Three consecutive enrolments covering a minimum of one semester in an approved clinical psychology field setting; supervised by qualified clinical child psychology faculty and field staff clinicians. Required of all clinical child psychology program students. An intensive guided exposure in application of clinical child psychology theory, methods, and practices. Integrates scientific and clinical aspects of field. (Formerly HDFL 963.) Prerequisite: Completion of Ph.D. comprehensive examinations, graduate standing in clinical child psychology, and permission of clinical child psychology faculty. LEC

ABSC 965 Evaluating and Disseminating Scientific Material II (1-3). Intensive training in the evaluation and production of scientific cri-

Liberals Arts and Sciences

934.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. RSH

ABSC 970 Practicum II in Behavioral Psychology (1-6). Advanced instruction and supervised laboratory or field work for doctoral students beyond ABSC 870. May be repeated for credit if the content differs. Prerequisite: Graduate standing in behavioral psychology or instructor permission. FLD

ABSC 971 Practicum II in Behavior Analysis: _____ (1-6). Advanced instruction and supervised laboratory or field work for doctoral students beyond ABSC 871. May be repeated for credit if the content differs. Topic and instructor are announced in the Timetable. Prerequisite: Graduate standing in applied behavioral science or instructor permission. FLD

ABSC 976 Therapeutic Interventions with Children (3-5). Clinical approaches to the therapeutic treatment of children with special emphasis on research findings and laboratory (practicum) experience. A survey of relationship therapies, operant strategies, system approaches, parent education and play therapy by the right therapist for a specific child with a particular problem. (Same as PSYC 976.) Prerequisite: Instructor permission. FLD

ABSC 992 Advanced Readings: _____ (1-9). An advanced individual, supervised study of recent research and scholarship for doctoral students. The course emphasizes current scholarship in selected areas of basic and applied behavioral science and its conceptual foundations. Designed for students whose needs cannot be met in other courses. May be repeated for credit if the content differs. (Formerly HDFL 930.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. LEC

ABSC 993 Advanced Special Topics: _____ (1-3). An advanced research and readings course for doctoral students. It allows them to concentrate their studies on selected basic and applied problems in behavioral science and carry out independent research. May be repeated for credit if the content differs. (Formerly HDFL 931.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. RSH

ABSC 994 Advanced Study Abroad Topics: _____ (1-9). An advanced course designed to enhance international experience in focal topics related to behavioral science for doctoral level students. May be repeated for credit if the content differs. Prerequisite: Graduate standing in behavioral psychology or instructor permission. LEC

ABSC 998 Doctoral Dissertation in Clinical Child Psychology (1-10). Research experience making an original contribution to literature in clinical child psychology. (Same as PSYC 998.) (Formerly HDFL 998.) RSH

ABSC 999 Doctoral Dissertation in Behavioral Psychology (1-9). Advanced supervised research that makes an original, empirical contribution to the literature in applied behavioral science leading to a doctoral degree in behavioral psychology. May be repeated. (Formerly HDFL 999.) Prerequisite: Graduate standing in behavioral psychology or instructor permission. THE

Art History
See History of Art.

Astronomy
See Physics and Astronomy.

Atmospheric Science
See Physics and Astronomy.

Biochemistry
See Biological Sciences: Molecular Biosciences.
The University of Kansas

Biological Sciences

Chair: James A. Orr
Haworth Hall, 1200 Sunnyside Ave., Room 2045
Lawrence, KS 66045-7534, (785) 864-4301

The Division of Biological Sciences includes the Departments of Ecology and Evolutionary Biology and Molecular Biosciences. The division administers the genetics program and the undergraduate program in biology. Both departments offer programs leading to Master of Arts or Doctor of Philosophy degrees. Each offers graduate study specialties (e.g., biochemistry and biophysics; molecular, cellular, and developmental biology; microbiology; neurobiology; ecology and population biology; entomology; plant biology; and systematics, biodiversity, and macroevolution). For information on specialties and details about degree requirements, see the descriptions under the individual departments.

Organization for Tropical Studies

KU is a charter member of the Organization for Tropical Studies, which provides tropical field experience and training in Costa Rica. Advance application and enrollment are necessary. Interested students should see their advisers at least four months before undertaking study in Costa Rica.

The McGregor Herbarium is one of the largest herbariums in the Great Plains. It contains one-quarter million specimens.

The Kansas Biological Survey, a state research agency for local field research. These areas include the Fitch Natural History Reservation (590 acres), the Rockefeller Experimental Tract (160 acres), the Breidenthal Biological Reserve (70 acres), the John H. Nelson Environmental Study Area (560 acres), 72 experimental fish ponds and a reservoir, and a Biotic Succession Facility. The Kansas Biological Survey, a state research agency at KU, operates state-of-the-art laboratories in support of aquatic ecotoxicology and water chemistry, floral and faunal inventories, remote sensing, and geographic information systems technologies. Field studies also are carried out by faculty and students in diverse areas, including the Neotropical Americas, Africa, Asia, and Antarctica. KU is a charter member of the Organization for Tropical Studies, which provides tropical field experience and training in Costa Rica and South Africa.

Admission

General information on admission and financial aid is available online at www.ku.edu/~eeb. Send inquiries to the graduate program coordinator. The departmental graduate committee reviews the record of each applicant. The committee considers the candidate’s overall undergraduate record in the context of the institution(s) from which the record was received. A minimum overall grade-point average of 3.0 on a 4.0 scale is required for regular admission. The student’s academic record in the specialization is also important. Students must provide certified scores on the Graduate Record Examination for the general test. Non-English-speaking applicants must provide certified scores on the Test of English as a Foreign Language. Faculty recommendations, honors, awards, undergraduate research experience, publications, and professional experience are considered.

Motivation, enthusiasm, and realistic career goals as evidenced by the applicant’s statement-of-goals essay are particularly important. Students must have a faculty sponsor before admission. Applicants are encouraged to correspond with one or more potential faculty sponsors when they apply.

The number of students admitted is limited. Qualified candidates may be denied admission because of lack of a faculty sponsor, financial support, or research facilities. The master’s degree is not a prerequisite for entering a Ph.D. program. Those planning to earn a Ph.D. should apply directly to the Ph.D. program.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to
Two options leading to the Master of Arts are offered. The student and the advisory committee determine the precise requirements for both.

**Options I (Thesis) and II (Nonthesis).** Option I is research oriented and requires a thesis or its equivalent. Option II emphasizes broader graduate training rather than concentration on research. For each option, the M.A. committee must have at least three graduate faculty members, two of whom must be in EEB. No faculty member outside the department is required.

**Option I.** Option I requires the following:
1. A minimum of 30 graduate hours in courses numbered 500 or above in ecology and evolutionary biology and related fields; no more than 10 hours in thesis or graduate research may count toward the 30 hours. One semester of BIOL 701 Topics in: Colloquium is required. Students may be required to take courses specified by departmental requirements or the committee at the beginning of the degree program.
2. A thesis on original research.
3. Acceptable presentation of research results in the departmental colloquium.
4. Passing a general examination in the candidate’s major subject.

**Option II.** Option II requires the following:
1. A minimum of 36 graduate credit hours in courses numbered 500 or above; between 6 and 12 hours can be in graduate research conducted with one or more faculty members involving work on a research problem that requires use of literature, laboratory or field techniques, and preparation of a report. One semester of BIOL 701 Topics in: Colloquium is required. Students may be required to take courses specified by departmental requirements or the committee at the beginning of the degree program.
2. Passing a general examination in the candidate’s major subject. Normally, students who do not plan to pursue graduate studies beyond the master’s level select this option.

**General Examination.** Students working toward the M.A. degree (both thesis and nonthesis options) must take a general examination in the semester of final enrollment in course work when the thesis work (or library investigation, etc.) is nearing completion. This examination is administered by three members of the Graduate Faculty, two of whom must be in EEB, and should not be taken on the same day as the student’s research presentation. The general examination is not a defense of the thesis, although questions may arise directly or indirectly related to the student’s research. Its structure is similar to the Ph.D. oral comprehensive examination, although the length of the examination and depth and breadth of knowledge required is less than that expected at a Ph.D. examination. To pass the examination, a student must receive a majority of passing votes from the examining committee. In certain unusual situations, students in the Ph.D. program may not be able to complete the Ph.D. If the advisory committee determines that the student’s accomplishments in the Ph.D. program merit a master’s degree, the student’s major adviser may petition the graduate committee to request that the M.A. degree be granted. Other modifications of the standard procedures for the master’s general examination are also possible; students may petition the graduate committee for consideration for exceptions.

**Research.** Upon completion of their work, students in M.A. Option I must submit a thesis on original research and hold an acceptable presentation of their research results to the public in standard departmental colloquium format. Students in M.A. Option II must work with one or more faculty members on a research problem, that requires use of literature, laboratory, or field techniques. They must submit a comprehensive written report approved by the advisory committee. Examples include a literature review of a critical issue in a scientific discipline, original research, or other creative activity approved by the advisory committee.

**Additional Requirements for the M.A. in Entomology.** In addition to EEB requirements, students seeking the M.A. in entomology must take BIOL 500 Biology of Insects and BIOL 502 Laboratory in Insect Biology and Diversity unless they have taken equivalent courses. Students who have taken a course equivalent to BIOL 502 elsewhere are still encouraged to take BIOL 502 to familiarize themselves with the local insect fauna. Students also must take at least one of the following courses: BIOL 708 External Morphology of Insects, BIOL 711 Insect Systematics, or BIOL 716 Insect Physiology and Internal Morphology.

**Additional Requirements for the M.A. in Botany.** In addition to EEB requirements, students seeking the M.A. in botany must take a graduate-level course in at least two of the following courses: (1) plant ecology, (2) plant systematics or morphology, (3) plant development or physiology.

**Ph.D. Degree Requirements: Ecology and Evolutionary Biology, Botany, or Entomology**

All degree aspirants should have broad backgrounds in biology, including genetics, morphology/anatomy, physiology, ecology, evolution/population biology, and systematics. Deficiencies may be corrected by course work.

**Requirements.** In addition to the general requirements of the Graduate School, the basic requirements for the Ph.D. degree include the following:

**The equivalent of at least three academic years of full-time graduate study.** Students who work as teaching or research assistants or have other obligations may need more than three years. In their first semester, EEB graduate students must enroll in and attend one semester of BIOL 701 Topics in: Ecology and Evolutionary Biology Colloquium; they also are expected to attend departmental colloquia in subsequent semesters. Students must take a graduate-level course in statistics (or have equivalent knowledge) and graduate-level courses in ecology, evolution, and systematics. Students may be required to take courses specified by the committee at the beginning of the degree program.

**Fulfillment of the Foreign Language or Other Research Skills requirement:**

(a) Exhibit reading knowledge of two foreign languages. Students without prior experience must enroll in a 3-hour reading course in a major modern language and earn a final grade of A or B. Students with prior knowledge of a language may choose instead to translate, in a set amount of time, a pre-approved passage from the scientific literature in that language. Approval must be obtained from the instructor of the reading course, an appropriate representative from a language department, or a qualified individual from EEB or another department.

(b) Exhibit fluency in one foreign language. If the student is a native English speaker (or if a student who is not a native English speaker chooses a language other than English), fluency in reading, writing, and speaking a foreign language is determined by an EEB faculty member (or an appropriate language department faculty member) who is fluent in the language. The faculty member indicates fluency by submitting a letter to the graduate committee.

If the student is not a native English speaker, the student’s committee determines fluency in reading, writing, and speaking English. The student’s adviser then indicates fluency by submitting a letter to the graduate committee.

(c) Exhibit reading knowledge of one foreign language and fulfill the requirements for one other research skill (see d, below).

(d) Fulfill the requirements for two other research skills. Other research skills must meet the Graduate School expectation of “a research skill component distinct from, but strongly supportive of, the dissertation.” A student should identify a skill that meets this definition and successfully complete a course principally associated with that skill and/or complete a substantial project involving that skill. Students with no prior experience should take a course recommended by the department. Students with prior experience might choose to develop a project. A qualified faculty
A KU professor, with the help of a co-worker, made the 1981 discovery of a white-headed flightless steamer duck, the first species of duck found since 1917. The Natural History Museum and Biodiversity Research Center studies the life of the planet for the benefit of the earth and its inhabitants, documenting the fantastic diversity of life on earth, uncovering its intricate patterns, telling the grand stories that emerge, and educating the next generation of biodiversity scientists.
The department adheres to Graduate School minimum admission requirements. Applicants are evaluated and ranked on the basis of overall and science grade-point averages, transcripts, three recommendation letters, Graduate Record Examination scores and, when applicable, Test of English as a Foreign Language and Test of Spoken English scores.

Laboratory space, financial resources, grants, and the number of students leaving the program largely determine the number of students entering the program each year. The department usually maintains a full enrollment.

The departmental Web site, www.molecularbiosciences.ku.edu has information about application procedures. You may apply directly online. Applications must include (1) a completed application form; (2) two copies of all academic transcripts (international students must provide one copy in English and one in the native language); (3) a one- to two-page résumé; (4) Graduate Record Examination scores (we require the general test and recommend the subject test in biochemistry, cell and molecular biology; biology; or chemistry; GREs must have been taken with two years of the initial semester); (5) Test of English as a Foreign Language scores from international students; (6) three letters of recommendation from qualified individuals; (7) a statement of aims describing the applicant’s interests and professional goals; and (8) an application fee (see Admissions in the General Information chapter of this catalog).

All files must be complete and received by the graduate program assistant by January 15 each year. First consideration is given to those who meet this deadline. Applicants are informed of decisions after February 15.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to The University of Kansas Graduate Application Processing Center 1450 Jayhawk Blvd., Room 313 Lawrence, KS 66045-7535

Send all other requested application materials to The University of Kansas Department of Molecular Biosciences Haworth Hall, 1200 Sunnyside Ave., Room 2034 Lawrence, KS 66045-7534

M.A. Degree Requirements

General Requirements for All M.A. Students. Refer to each discipline for specific course requirements. General requirements include (1) a minimum of 30 hours of graduate credit; (2) a minimum of one laboratory rotation for each new graduate student; (3) attendance at the departmental seminar every semester, independent of discipline; (4) a graduate committee established by the beginning of the second year; (5) a minimum of one annual graduate committee meeting until completion of the degree. The following thesis options are available:

1. Write a thesis resulting from original research on a laboratory problem.
2. Publish a research paper in a national, refereed journal. Acceptance of the paper for publication constitutes publication for conferral of the degree.
3. Write a library thesis on a topic approved by the student’s graduate committee.

Specific M.A. Requirements: Biochemistry and Biophysics. One laboratory rotation during the first semester of graduate study and all of the following courses are required: BIOL 701 Topics in Seminar Procedures, BIOL 772 Gene Expression, BIOL 750 Advanced Biochemistry, BIOL 752 Cell Biology, BIOL 901 Graduate Seminar in Biochemistry and Biophysics
With more than 7 million plant and animal specimens in its collections and more research and collection support from the National Science Foundation than any other university biodiversity science institution, KU’s Natural History Museum and Biodiversity Research Center ranks among the top five such institutions in the nation.

The Kansas Biological Survey provides information to individuals, state agencies, and community groups.

(One required), plus electives to satisfy the 30-hour requirement. Electives are determined in consultation with the graduate adviser and graduate committee.

**Specific M.A. Requirements: Microbiology.** Candidates for the M.A. in microbiology must fulfill departmental major requirements for a B.A. or B.S. degree in microbiology, or the equivalent. These courses are required: One laboratory rotation during the first semester of graduate study; BIOL 701 Topics in Seminar Procedures; BIOL 904 Graduate Seminar in Microbiology (must attend and participate every semester); and at least three graduate courses selected from BIOL 811 Advanced Molecular and Cellular Immunology, BIOL 812 Mechanisms of Host-Parasite Relationships, BIOL 813 Advanced Bacterial Physiology, BIOL 814 Advanced Molecular Virology, BIOL 815 Advanced Molecular Genetics; plus electives to satisfy the 30-hour course requirement. No more than 6 of these hours can be below the 700 level. At least two courses must be in chemistry, biochemistry, or areas outside the department approved by the major adviser and graduate committee.

**Specific M.A. Requirements: Molecular, Cellular, and Developmental Biology.** One laboratory rotation during the first semester and all of the following courses are required: BIOL 701 Topics in Seminar Procedures, BIOL 772 Gene Expression, BIOL 750 Advanced Biochemistry, BIOL 752 Cell Biology, BIOL 902 Graduate Seminar in Molecular, Cellular, and Developmental Biology (one required), plus electives to satisfy the 30-hour course requirement. Electives are determined in consultation with the graduate adviser and graduate committee.

**Ph.D. Degree Requirements**

**General Requirements for All Ph.D. Students.** All Graduate School requirements in this catalog must be fulfilled. Refer to each discipline for specific course requirements. General requirements include (1) at least three individual laboratory rotations during the first two semesters of graduate study, (2) attendance at the weekly departmental seminar every semester, independent of discipline, (3) a FLORS requirement (see discipline’s degree requirements), (4) a minimum of two semesters of graduate teaching, (5) a graduate committee established before the beginning of the fall semester of the second year, (6) a minimum of one annual graduate committee meeting, (7) a written preliminary examination in the form of a research proposal completed by the end of the spring semester of the second year of graduate study (BIOL 925), (8) a comprehensive oral examination held no later than October 1 of the fall semester of the third year of graduate study (successful completion of the comprehensive oral examination admits the student to candidacy for the Ph.D. degree), (9) a dissertation based on original research presented to the dissertation examination committee for evaluation and presented and defended in a formal public lecture, (10) a seven-year time limit to complete the degree.

**First-year Curriculum for All Students.** The minimum number and types of first-year courses include BIOL 701 Topics in Seminar Procedures (fall semester); laboratory rotation (fall and spring semester); plus one course from each of these areas during the first academic year: (1) biochemistry (may be fulfilled by either BIOL 658 Biochemistry I or BIOL 750 Advanced Biochemistry), (2) cell/developmental biology/immunology (may be fulfilled by either BIOL 752 Cell Biology or BIOL 811 Advanced Molecular and Cellular Immunology), (3) genetics (may be fulfilled by either BIOL 815 Advanced Molecular Genetics or BIOL 772 Gene Expression).

**Specific Ph.D. Requirements: Biochemistry and Biophysics.** Refer to the first-year curriculum above. Three laboratory rotations are required during the first two semesters. All of the following courses are required: BIOL 701 Topics in Seminar Procedures, BIOL 772 Gene Expression, BIOL 750 Advanced Biochemistry, BIOL 752 Cell Biology, BIOL 901-BIOL 904 Graduate Seminars, BIOL 918 Modern Biochemical and Biophysical Methods, and BIOL 952 Introduction to Molecular Modeling. The graduate committee may recommend that additional courses be taken. The FLORS requirement must be met by demonstrating training in a specific research technique or completing one of the following courses: BIOL 925 Research Grant Proposal Preparation, BIOL 719 Light and Electron Microscopy, BIOL 841 Biometry I, or BIOL 703 Radioisotopes and Radiation Safety in Research.

**Specific Ph.D. Requirements: Microbiology.** Refer to the first-year curriculum above. Three laboratory rotations are required during the first two semesters. All of the following courses are required: BIOL 701 Topics in Seminar Procedures, BIOL 811 Advanced Molecular and Cellular Immunology, BIOL 812 Mechanisms of Host-Parasite Relationships, BIOL 813 Advanced Bacterial Physiology, BIOL 814 Advanced Molecular Virology, BIOL 815 Advanced Molecular Genetics, and BIOL 904 Graduate Seminar in Microbiology (must attend and participate every semester). The graduate committee may recommend that additional courses be taken. The FLORS requirement must be met by one of the following courses: BIOL 750 Advanced Biochemistry, CHEM 627 or higher, a course in computer science listed in this catalog under Research Skills, a course in electron microscopic methods, a course in radioisotope techniques (e.g., BIOL 702, BIOL 703), or a course in tissue culture techniques (BIOL 756).

**Note:** Ph.D. students in microbiology must take a 2-hour written examination at the end of the first year of graduate study, usually in May. The content of the examination is general microbiology as covered in BIOL 400. A committee whose membership rotates among the microbiology section’s graduate faculty prepares the examination. The examination must be passed with an overall score of at least 65 percent before the student can progress to the doctoral qualifying (comprehensive) examination. A student who fails in a second attempt to pass the examination at the beginning of the succeeding fall semester may not continue as a Ph.D. candidate and is not eligible for a teaching assistantship after that semester.

**Specific Ph.D. Requirements: Molecular, Cellular, and Developmental Biology.** Refer to the first-year curriculum above. Three laboratory rotations are required during the first two semesters. All of the following courses are required: BIOL 701 Topics in Seminar Procedures, BIOL 772 Gene Expression, BIOL 690 Control Mechanisms in Development, BIOL 750 Advanced Biochemistry, BIOL 752 Cell Biology, and BIOL 901-BIOL 904 Graduate Seminars. The graduate committee may recommend that additional courses be taken. The FLORS requirement must be met by demonstrating training in a specific research technique or completing one of these courses: BIOL 925 Research Grant Proposal Preparation, BIOL 719 Light and Electron Microscopy, BIOL 841 Biometry I, or BIOL 703 Radioisotopes and Radiation Safety in Research.
## Biological Sciences Courses

### Courses by Topics

#### Anatomy and Histology
- BIOL 519 Comparative Anatomy
- BIOL 561 Histological Technique
- BIOL 608 Developmental Plant Anatomy
- BIOL 640 The Biology and Evolution of Fossil Plants
- BIOL 641 Laboratory in Paleobotany
- BIOL 708 External Morphology of Insects
- BIOL 716 Insect Physiology and Internal Morphology

#### Biochemistry
- BIOL 600 Introductory Biochemistry, Lectures
- BIOL 636 Biochemistry I
- BIOL 637 Introductory Biochemistry, Laboratory
- BIOL 638 Biochemistry II
- BIOL 659 Biochemistry Laboratory
- BIOL 672 Gene Expression
- BIOL 688 The Molecular Biology of Cancer
- BIOL 718 Laboratory in Molecular Biology
- BIOL 759 Cell and Tissue Culture Laboratory
- BIOL 768 Plant Molecular Biology
- BIOL 770 Plant Biochemistry
- BIOL 775 Chemistry of the Nervous System
- BIOL 911 Research Topics in Plant Physiology and Biochemistry
- BIOL 918 Modern Biochemical and Biophysical Methods
- BIOL 952 Introduction to Molecular Modeling

#### Botany
- BIOL 555 General Plant Physiology
- BIOL 602 Plant Ecology
- BIOL 603 Systematic Botany
- BIOL 606 Ecological Plant Physiology
- BIOL 607 Field and Laboratory Exercises in Plant Ecology
- BIOL 608 Developmental Plant Anatomy
- BIOL 610 Plant Kingdom
- BIOL 640 The Biology and Evolution of Fossil Plants
- BIOL 641 Laboratory in Paleobotany
- BIOL 742 Plant Population Biology
- BIOL 751 Plant Communities of North America
- BIOL 767 The Vegetation of the Earth
- BIOL 770 Plant Biochemistry
- BIOL 911 Research Topics in Plant Physiology and Biochemistry
- BIOL 968 Seminar in Vegetation Geography

#### Cell Biology
- BIOL 688 The Molecular Biology of Cancer
- BIOL 690 Control Mechanisms in Development
- BIOL 752 Cell Biology
- BIOL 756 Cell and Tissue Culture Laboratory
- BIOL 930 Ultrastructure and Cellular Mechanisms

#### Developmental Biology
- BIOL 590 Principles of Embryology
- BIOL 688 The Molecular Biology of Cancer
- BIOL 690 Control Mechanisms in Development
- BIOL 710 Insect Development

#### Ecology
- BIOL 525 Aquatic Entomology
- BIOL 602 Plant Ecology
- BIOL 606 Ecological Plant Physiology
- BIOL 607 Field and Laboratory Exercises in Plant Ecology
- BIOL 620 Physiological Ecology
- BIOL 625 Behavioral Ecology and Sociobiology
- BIOL 660 Limnology
- BIOL 661 Stream Ecology
- BIOL 662 Aquatic Ecology Laboratory
- BIOL 667 Chemical Communication in Sex, Feeding, and Fighting
- BIOL 714 Community and Ecosystem Ecology
- BIOL 742 Plant Population Biology
- BIOL 751 Plant Communities of North America
- BIOL 782 Principles of Biogeography
- BIOL 786 Fundamentals of Tropical Biology
- BIOL 944 Topics in Quantitative Ecology: ______

#### Entomology
- BIOL 500 Biology of Insects
- BIOL 565 Social Insects
- BIOL 525 Aquatic Entomology
- BIOL 613 Biology of Honeybees
- BIOL 616 Medical Entomology
- BIOL 706 External Morphology of Insects
- BIOL 709 Immature Insects
- BIOL 710 Insect Development
- BIOL 711 Insect Systematics
- BIOL 716 Insect Physiology and Internal Morphology

#### Evolution
- BIOL 743 Population Genetics
- BIOL 782 Principles of Biogeography
- BIOL 847 Phylogeny
- BIOL 850 Evolutionary Mechanisms

#### Field Courses
- BIOL 667 Field and Laboratory Exercises in Plant Ecology
- BIOL 797 Field Course in Vertebrate Paleontology

#### General Biology
- BIOL 595 Human Genetics
- BIOL 701 Topics in: ______

#### Genetics
- BIOL 690 Control Mechanisms in Development
- BIOL 742 Plant Population Biology
- BIOL 743 Population Genetics
- BIOL 747 Quantitative Genetics
- BIOL 872 Gene Expression II
- BIOL 905 Advanced Molecular Genetics
- BIOL 906 Advanced Genetics

#### Invertebrate Biology
- BIOL 500 Biology of Insects
- BIOL 565 Social Insects
- BIOL 575 Aquatic Entomology
- BIOL 540 General Invertebrate Zoology
- BIOL 621 Medical Parasitology
- BIOL 622 Paleontology

#### Methods
- BIOL 561 Histological Technique
- BIOL 570 Introduction to Biostatistics
- BIOL 667 Field and Laboratory Exercises in Plant Ecology
- BIOL 670 Natural History Museum Techniques
- BIOL 702 Laboratory Practice: Radiation Safety Procedures
- BIOL 703 Radioisotopes and Radiation Safety in Research
- BIOL 704 Research Animal Methods
- BIOL 756 Cell and Tissue Culture Laboratory
- BIOL 785 Museum Management
- BIOL 798 Principles and Practices of Museum Collection Management
- BIOL 799 Natural History Museum Apprenticeship
- BIOL 841 Biometry I
- BIOL 842 Biometry II
- BIOL 888 Topics in Evolutionary Morphology: ______
- BIOL 943 Multivariate Data Analysis

#### Microbiology
- BIOL 503 Immunology
- BIOL 504 Immunology Laboratory
- BIOL 506 Pathogenic Microbiology
- BIOL 507 Pathogenic Microbiology Laboratory
- BIOL 512 General Virology
- BIOL 513 Virology Laboratory
- BIOL 516 Microbial Physiology
- BIOL 517 Microbial Physiology Laboratory
- BIOL 518 Microbial Genetics
- BIOL 519 Microbial Genetics Laboratory
- BIOL 669 Current Progress in Microbiology
- BIOL 612 Fundamentals of Microbiology
- BIOL 721 Microbial Genetics
- BIOL 811 Advanced Molecular and Cellular Immunology
- BIOL 812 Mechanisms of Host-Parasite Relationships
- BIOL 813 Advanced Bacterial Physiology
- BIOL 814 Advanced Molecular Virology
- BIOL 815 Advanced Molecular Genetics
- BIOL 890 Advanced Study in Microbiology
- BIOL 904 Graduate Seminar in Microbiology

#### Physiology and Animal Behavior
- BIOL 555 General Plant Physiology
- BIOL 556 General Plant Physiology Laboratory
- BIOL 606 Ecological Plant Physiology
- BIOL 607 Field and Laboratory Exercises in Plant Ecology
- BIOL 620 Physiological Ecology
- BIOL 646 Mammalian Physiology
- BIOL 647 Mammalian Physiology Laboratory
- BIOL 652 Comparative Animal Behavior
- BIOL 654 Comparative Animal Behavior, Laboratory
- BIOL 716 Insect Physiology and Internal Morphology
- BIOL 775 Chemistry of the Nervous System
- BIOL 776 Mammalian Neuroanatomy
- BIOL 777 Integrative and Developmental Neurobiology
- BIOL 911 Research Topics in Plant Physiology and Biochemistry

#### Population Biology
- BIOL 712 Population Biology
- BIOL 742 Plant Population Biology
- BIOL 743 Population Genetics

#### Special Topics
- BIOL 701 Topics in: ______
- BIOL 801 Topics in: ______
- BIOL 899 Master’s Thesis
- BIOL 985 Advanced Study
- BIOL 999 Doctoral Dissertation
The University of Kansas

Systematics
BIOL 540 General Invertebrate Zoology
BIOL 503 Systematic Botany
BIOL 640 The Biology and Evolution of Fossil Plants
BIOL 641 Laboratory in Paleobotany
BIOL 711 Insect Systematics
BIOL 746 Principles of Systematics
BIOL 782 Principles of Biogeography
BIOL 647 Phylogenetics

Vertebrate Biology
BIOL 704 Research Animal Methods
BIOL 780 Fisheries
BIOL 781 Fisheries, Laboratory
BIOL 790 Paleontology of Lower Vertebrates
BIOL 791 Paleontology of Higher Vertebrates
BIOL 792 Ichthyology
BIOL 793 Ornithology
BIOL 794 Mammalogy
BIOL 795 Biology of Amphibians
BIOL 796 Biology of Reptiles
BIOL 797 Field Course in Vertebrate Paleontology

Two KU professors have been studying the spread and adaptation of the African honeybee in South America.

A variety of field facilities is available for research, including the 618-acre Nelson Environmental Study Area.

Biological Sciences Courses
BIOL 500 Biology of Insects (3).
BIOL 502 Laboratory in Insect Biology and Diversity (2).
BIOL 503 Immunology (3).
BIOL 504 Immunology Laboratory (2).
BIOL 505 Social Insects (3).
BIOL 506 Pathogenic Microbiology (3).
BIOL 507 Pathogenic Microbiology Laboratory (2).
BIOL 509 Biology of Spiders (2).
BIOL 510 Comparative Anatomy (5).
BIOL 511 Biology of Spiders Laboratory (1).
BIOL 512 General Virology (3).
BIOL 513 Virology Laboratory (2).
BIOL 516 Microbial Physiology (3).
BIOL 517 Microbial Physiology Laboratory (2).
BIOL 518 Microbial Genetics (3).
BIOL 519 Microbial Genetics Laboratory (2).
BIOL 525 Aquatic Entomology (5).
BIOL 532 Biology of Fungi (4).
BIOL 536 Cell Structure and Function (Honors) (3).
BIOL 540 General Invertebrate Zoology (4).
BIOL 550 Introduction to Systematics (3).
BIOL 555 General Plant Physiology (3).
BIOL 561 Histological Technique (2).
BIOL 570 Introduction to Biostatistics (3).
BIOL 571 Introduction to Biostatistics Laboratory (1).
BIOL 583 Herpetology (5).
BIOL 590 Principles of Embryology (3).
BIOL 592 Ichthyology (4).
BIOL 594 Forest Ecosystems (3).
BIOL 595 Human Genetics (3).
BIOL 599 Senior Seminar: _____ (1).
BIOL 600 Introductory Biochemistry, Lectures (4).
BIOL 602 Plant Ecology (3).
BIOL 603 Systematic Botany (3).
BIOL 606 Ecological Plant Physiology (3).
BIOL 607 Field and Laboratory Exercises in Plant Ecology (2).
BIOL 608 Developmental Plant Anatomy (4).
BIOL 609 Current Progress in Microbiology (1).
BIOL 610 Plant Kingdom (4).
BIOL 611 Molecular Systematics and Evolution (4).
BIOL 612 Fundamentals of Microbiology (3).
BIOL 613 Biology of Honeybees (3).
BIOL 616 Medical Entomology (3).
BIOL 620 Physiological Ecology (3).
BIOL 622 Paleontology (3).
BIOL 623 Paleontology Laboratory (1).
BIOL 625 Behavioral Ecology and Sociobiology (3).
BIOL 630 Conservation and Wildlife Biology (5).
BIOL 636 Biochemistry I (3).
BIOL 637 Introductory Biochemistry Laboratory (2).
BIOL 638 Biochemistry II (3).

BIOL 640 The Biology and Evolution of Fossil Plants (3).
BIOL 641 Laboratory in Paleobotany (1).
BIOL 644 Comparative Animal Physiology (3).
BIOL 646 Mammalian Physiology (4).
BIOL 647 Mammalian Physiology Laboratory (2).
BIOL 652 Comparative Animal Behavior (3).
BIOL 654 Comparative Animal Behavior, Laboratory (1).
BIOL 656 Ecosystem Ecology (3).
BIOL 659 Biochemistry Laboratory (3).
BIOL 660 Limnology (3).
BIOL 661 Stream Ecology (3).
BIOL 662 Aquatic Ecology Laboratory (2).
BIOL 667 Chemical Communication in Sex, Feeding, and Fighting (3).
BIOL 668 Evolutionary Ecology (3).
BIOL 669 Biology of Freshwater Invertebrates (3).
BIOL 670 Natural History Museum Techniques (2-5).
BIOL 672 Gene Expression (5).
BIOL 673 Cellular and Molecular Neurobiology (3).
BIOL 678 The Molecular Biology of Cancer (3).
BIOL 690 Control Mechanisms in Development (3).
BIOL 692 Developmental Genetics (3).
BIOL 695 Animal Communication and Sensory Ecology (3).
BIOL 699 Divisional Honors Research Colloquium (1).

BIOL 700 Conservation Principles and Practices (3). This course will acquaint the future museum professional with problems in conserving all types of collections. Philosophical and ethical approaches will be discussed, as well as the changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and on the methods by which they can be remedied. Storage and care of objects will also be considered. (Same as AMS 714, GEOL 780, HIST 722 and MUSE 706.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

BIOL 701 Topics in: _____ (1-3). Advanced courses on special topics in biology, given as needs arise. Lectures, discussions, readings, laboratory, or field work. Students may select sections according to their special interests. LEC

BIOL 702 Laboratory Practice: Radiation Safety Procedures (0.75). An introduction to the basic properties of radiotopes, and the fundamentals of safety practices needed for the safe use of low-levels of radioactive materials. Risks associated with radioactivity and applicable state and federal regulations are discussed. (Normally the content of the first ten hours of BIOL 703.) Prerequisite: Senior standing in one of the sciences. LAB

BIOL 703 Radiotopes and Radiation Safety in Research (1.25). An introduction to the properties of radioactive materials, and their interaction with matter; methods of radiation detection and measurement; protective measures, applicable state and federal regulations, design and implementation of safety management systems in the research laboratory, design of tracer experiments, and the risks associated with radiation exposure. Prerequisite: BIOL 702 or concurrent enrollment in BIOL 702, algebra and two semesters of either physics or chemistry. LEC

BIOL 704 Research Animal Methods (3). Lectures, discussions, and laboratory sessions. Selection of proper animal models for specific research studies. Various influences that alter research data. Routine techniques including restraint, sample collection, injection, anesthesia and euthanasia. Prevention and handling of common research animal problems or diseases. Proper and humane animal care as defined by the Federal Animal Welfare Act. Prerequisite: Senior or graduate standing in one of the biological sciences or permission of instructor. LEC

BIOL 705 Current Trends in Curation and Collection Management (2). Seminar course to provide students with a working knowledge of the primary issues and current trends in building, administration, and care of scientific collections. Topics include permits, collecting, accessioning, cataloging, preservation, preventive conservation, and access to collections and data. The course format consists of readings, lectures, guest speakers, discussions, and visits to scientific collections on campus. (Same as MUSE 710.) LEC

BIOL 706 External Morphology of Insects (4). A study of external structure common to all insect orders, with detailed comparative laboratory studies of representative species. Prerequisite: BIOL 500, BIOL 502 or equivalent, or permission of instructor. LEC

BIOL 709 Immature Insects (2). The classification, structure, and ecological distribution of immature insects, especially larval of Holometabola. Prerequisite: BIOL 502 and consent of instructor. LEC

BIOL 710 Insect Development (3). A study of the embryonic and postembryonic development of insects. Emphasis is placed on developmental physiology of the early embryonic stages, the morphogenesis of organ systems, and the action of hormones in postembryonic development. Laboratory includes demonstrations and histological and experimental work. Prerequisite: Consent of instructor or BIOL 500. LEC

BIOL 711 Insect Systematics (4). A study of the diversity of insects, including the classification of all living and fossil orders and the more
common families primarily on the basis of external morphology. The bi-
ology, ecology, phylogeny, and geological history of each order will be co-
est. In addition, the lectures and laboratory sections of the course:
BIOI 500, BIOI 502 or equivalent, or permission of instructor. LEC
BIOI 712 Population Biology (3). Study of ecological, evolutionary,
and genetic factors affecting the size, distribution, and structure of nat-
ural populations of organisms. Discussion periods will include read-
ing assignments from the literature. Prerequisite: BIOI 500, 502 or other-
graduate students in biology who did not have an undergraduate course in
population biology. Consent of instructor. LEC
BIOI 714 Community and Ecosystem Ecology (3). Study of factors deter-
ingen community, ecosystem structures, energy flow in ecosystems, and functional analysis of ecosystems. Discussion
periods will include reading from current scientific literature. Prerequi-
site: Intended for students in biology who have not had an under-
graduate course in community ecology. Consent of instructor. LEC
BIOI 716 Insect Physiology and Internal Morphology (3). Emphasizing
the interdependence of structure and function, this course deals with the
mechanisms and integration of the internal life-supporting systems of in-
sects. Prerequisite: BIOI 502 and BIOI 600 or consent of instructor. LEC
BIOI 717 Insect Ecology and Behavior (3). Lectures and laboratory
demonstrations. A study of insect population dynamics, life history
strategies, co-evolutionary interactions, foraging, and reproductive and
social behaviors. Approaches from basic population biology and behav-
ioral ecology are emphasized. Prerequisite: A course in ecology or be-
havior, or consent of instructor. LEC
BIOI 718 Laboratory in Molecular Biology (5). Practical experience in
recombinant molecular cloning. Given concurrently with BIOI 418.
Prerequisite: BIOI 416 or course in biochemistry or microbiology. Training in radiation safety required. LAB
BIOI 719 Light and Electron Microscopy (3). A lecture and laboratory
class emphasizing practical use of light microscopes and scanning and transmission electron microscopes. A variety of ap-
proaches using light microscopy will be employed, including bright-
field, phase, fluorescence, DIC, polarization, and darkfield optics. A vari-
ety of techniques will be used to prepare specimens and view them
using scanning and transmission electron microscopy. Video and com-
puter-aided analysis of images as well as conventional photographic
techniques will be included. Prerequisite: Permission of instructor. LEC
BIOI 720 Scientific Illustration (3). Lectures, demonstrations, and
studio participation. Instruction in the preparation of illustrations for
scientific publications, theses, and oral and poster presentations. Em-
phasis in basic drafting and layout skills, and pen and ink and tone
renderings intended for publication. Attention given to preparation of
photographs for publication and oral presentations. Instruction pro-
vided in use of specialized optical equipment for drawing. Prerequisite:
Upper division or graduate standing and permission of instructor. LEC
BIOI 721 Microbial Genetics (3). Bacteria and viruses as models of ge-
netic systems. Mutagenesis and repair. Transformation, transductions,
and recombination. Molecular biology of gene expression. This course is
the graduate level equivalent of BIOI 518 and MCRB 510. Graduate students
will be assigned additional and more advanced studies. Prerequisite: An
introductory microbiology course or permission of instructor. LEC
BIOI 742 Plant Population Biology (3). A survey of the major areas of
plant population biology including competition, demogruphy,
pollination ecology, gene flow, natural selection and mating systems.
Each topic is introduced by a lecture and is further explored by discus-
sion of the current literature. Prerequisite: BIOI 412 or equivalent. LEC
BIOI 743 Population Genetics (3). Description and discussion of genetic
variation in natural populations. The effects and interaction of selection,
migration, mutation, mating systems, and finite population size on the main-
tenance of genetic variation. Discussion of the interface with evolution and
population ecology. Prerequisite: BIOI 404 and BIOI 412 or equivalent. LEC
BIOI 745 Laboratory in Experimental Ecology (3). A series of seven
laboratory modules emphasizing quantitative methods and experimental
analysis. Each module requires data collection analysis, and written in-
terpretation. Topics covered include basic population ecology, intro-
duction to using computers, statistical analysis, and the use of
microcomputers, is emphasized. Topics include ecological modeling, ecological genetics, phylo-
ecology, community structure, mating and reproduction and
pollination ecology. Prerequisite: BIOI 412 or BIOI 414. LAB
BIOI 746 Principles of Systematics (3). Lectures; historical and philo-
sophical foundations of modern systematics; theory and practice of
classifications; character analysis; phylogenetic reconstruction; formula-
lation and testing of systematic hypotheses; species concepts and specia-
tion; the evolution of new species and evolutionary trends, par-
cularly the origins of asymmetric diversity patterns, macroevolution,
adaptation, coevolution, and the evolution of higher taxa; roles of pale-
ontology and morphological evolution, historical, and chromosom-
ic and biogeography. Laboratory work: practical applications of
nomenclature, development of keys, descriptions and systematic revi-
sions, character analysis, phylogenetic reconstruction, hypothesis testing,
interpretation of biogeographic patterns. (Three hours lecture and two
hours laboratory per week.) Prerequisite: BIOI 628 or equivalent. In-
tended for graduate students planning to specialize in systematics. LEC
BIOI 747 Quantitative Genetics (3). A discussion of genetic traits for
which individual gene differences do not separate a population into quali-
tatively distinct groups. Includes the use of biometrical techniques. Prerequisite:
BIOI 500, BIOI 502 or equivalent, or permission of instructor. LEC
BIOI 749 Topics in Stable Isotopes in the Natural Sciences (2-3). Isotopic compositions of substances provide powerful insights
into many topics in the natural sciences. A variety of practical ap-
proaches to and interpretations of isotopic data will be presented. An
understanding of isotope chemistry is required. (Concepts necessary
to understand pertinent articles will be taught during the first class
meetings.) May be repeated. (Same as GEOG 749) LEC
BIOI 750 Advanced Biochemistry (3). The structures and dynamics of
proteins and nucleic acids will be developed in terms of well-under-
stood examples which will also be used to discuss the function of
major classes of proteins. The application of structural and dynamical
principles to biological membranes and their function will also be dis-
cussed. Prerequisite: A general biochemistry course. LEC
BIOI 751 Plant Communities of North America (3). Physiognomic
and floristic analysis of the vegetation, with emphasis on the Southeast;
distribution of communities in relation to climate, substratum, and distur-
bance; recognition of dominant elements of vegetation through study of
specimens and illustrative material. Prerequisite: BIOI 602. LEC
BIOI 752 Cell Biology (3). A lecture course emphasizing biochemical
developmental, and molecular aspects of cell structure and function.
Prerequisite: Completion of a graduate level course in biochemistry or
permission of instructor. LEC
BIOI 753 Advanced Genetics (3). An advanced course in modern ge-
netic analysis using mainly eukaryotic systems. Course material will con-
sist mainly of primary literature in the field of Genetics. Topics covered in-
clude: genomic structure and genome projects; nature of mutations; mu-
tant analysis; genetic recombination and mapping; analysis of gene func-
tion; genetic buffering; RNA splicing and epigenetics, and the genetics of model
organisms. This course is meant for graduate students in the Molecular
Biosciences and Genetics programs. Prerequisite: A course in Genetics
and a course in biochemistry, or permission of the instructor. LEC
BIOI 754 Brain Diseases and Neurological Disorders (3). Major brain
diseases and neurological disorders such as stroke, Alzheimer’s Disease,
Parkinson’s Disease, Huntington’s Disease, Multiple Sclerosis, Epilepsy,
Schizophrenia, etc. will be discussed in terms of the etiology, molecular,
and cellular basis of potential therapeutic interventions. Graduate stud-
ents are required to present original research paper assigned by the in-
structor to the class in addition to the other assignments for all the stu-
dents enrolled. Prerequisite: BIOL 150, or consent of instructor. LEC
BIOI 756 Cell and Tissue Culture Laboratory (3). An introduction to
current laboratory methods of cell and tissue culture, intended to pro-
vide an understanding of and substantial experience in several aspects of
animal cell growth, cell synchrony, cell nutrition, the production and selec-
tion of mutant cell lines, the production and use of heterologous and interspecific hybrids, cell transformation in vitro, the cultivation and characterization of
differentiated cells in culture, enzyme induction, and cell karyotyping. LAB
BIOI 767 The Vegetation of the Earth (3). A study of the physical
vegetation in its natural condition and as affected by man. Included are
aspects of its economic and cultural usefulness and the problem of its
preservation. Prerequisite: BIOL 634. LEC
BIOI 768 Plant Molecular Biology (3). Gene expression in chloro-
plasts, mitochondria, and plant nuclei, and regulatory interactions among
these genomes. Special topics include the molecular biology of the photo-
synthetic apparatus, nitrogen fixation, stress and development, viruses
and virosomes, transposable genetic elements and gene evolution, and
gene transfer and plant genetic engineering. Prerequisite: A course in bio-
chemistry, cell or molecular biology, or permission of instructor. LEC
BIOI 770 Plant Biochemistry (3). A detailed study of plant biochem-
istry with emphasis on metabolic and regulatory processes particularly char-
acteristic or unique in plants. Prerequisite: BIOL 630 or equivalent. LEC
BIOI 772 Gene Expression (3). A study of the structure and expression
of genes in prokaryotes and eukaryotes. Emphasis on the mechanisms of
DNA, RNA, and protein biosynthesis. This course meets concurrently with
BIOI 672 and is open to graduate students seeking more advanced treat-
ment of techniques in molecular biology that students receive in BIOI 672.
Prerequisite: A course in biochemistry or consent of instructor. LEC
BIOI 775 Chemistry of the Nervous System (3). A detailed study of the
molecular aspects of nervous system function. The course will cover
with special emphasis on the uptake, storage, release, biosynthesis and metabolism of specific neurotransmitters. Drugs affecting these processes and current research on receptor isolation and receptor localization in synapses will be discussed from a chemical viewpoint. (Same as CHEM 775, MDCM 775, and P&TX 775) Prerequisite: BIOL 600 or equivalent or consent of instructor. LEC
BIOI 776 Mammalian Neuroanatomy (3). Lectures, video tape dem-
onstrations, and laboratory dissection of mammalian nervous system with some
attempts to human material. For pre-health science students
and patience with difficult anatomical dissec-

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
BIOL 777 Integrative and Developmental Neurobiology (3). Cellular processing of neural information both at the local level and in long distance integration. Local connectivity functions, and integration of these functions among the various areas to produce coherent movement and perceptions will be discussed. A description of forces guiding the development of the nervous system in form a coherent working system in both invertebrate and vertebrate animals will be presented, as well determinants of brain sexual dimorphism. Prerequisite: An upper level course in physiology or BIOL 520. LEC.

BIOL 780 Fisheries (2). Philosophy and practice of conservation as it applies to major world fisheries. Species principally utilized, factors affecting production, methods for appraisal and management of the fishery. Historical and prospective roles of the fisheries in relation to human food supplies and recreational needs. Prerequisite: BIOL 412. LEC.

BIOL 781 Fisheries, Laboratory (2). Training in field and laboratory techniques for fishery research and management. Prerequisite: Concurrent or prior enrollment in BIOL 780. LAB.

BIOL 782 Principles of Biogeography (3). A synthesis of historical and ecological biogeography of plants and animals, treating vicariance, dispersal, and community patterns; lectures, readings, discussions. A course in systematics and a course in ecology are recommended. LEC.

BIOL 783 Herpetology (3). A study of amphibians and reptiles. This lecture course will explore the taxonomic diversity of amphibians and reptiles, and current areas of active research in herpetology. Topics will be considered within a phylogenetic framework, and include discussion on systematics, biogeography, tetrapod origins, skeletal systems, growth, circulatory system, locomotion, thermal and water regulation, hibernation, ecology, sexual behavior, parental care. Students taking the course at the 700 level will have additional work required of them. Prerequisite: BIOL 152 Principles of Organismal Biology, and/or BIOL 413 History and Diversity of Organisms. LEC.

BIOL 784 Introduction to Museum Public Education (1). Consideration of the goals of an institution's public education services, developing programs, identifying potential audiences, developing audiences, and funding. Workshops and demonstrations are designed for students to gain practical experience working with various public educational techniques. Prerequisite: At least 300 level course in biology. LEC.

BIOL 785 Museum Management (5). Lecture, discussion, and laboratory exercises on the nature of museums as organizations; accounting, budget cycles, personnel management, and related topics will be presented using, as appropriate, case studies and a simulated museum organization model. (Same as AMS 797, ANTH 797, GEOL 784, HIST 721, and MUSE 705.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC.

BIOL 786 Fundamentals of Tropical Biology (1-8). The tropical environment and biotic/ecological relations, communities and evolution in the tropics. Primarily a field course, taught in Costa Rica; two sessions per year, February-March, July-August. FLD.

BIOL 787 Introduction to Museum Exhibits (3). This course will consider the role of a museum in integrated museum management, research, and public service. Lecture and discussion will focus on issues involved in planning and producing museum exhibits. Laboratory exercises provide first-hand experience with basic planning and production techniques. Emphasis will be placed on the management of an exhibit program in both large and small museums in the major disciplines. (Same as AMS 700, GEOL 781, HIST 723, and MUSE 703.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC.

BIOL 788 The Nature of Museums (3). The purpose of this course is to provide an overview of the kinds of museums, their various missions, and their characteristics and potentials as research, education, and public service institutions responsible for collections of natural cultural objects. (Same as AMS 720, ANTH 796, GEOL 782, HIST 720, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC.

BIOL 789 Field Course in Entomology (1-6). Field experiences in various habitats, with an emphasis in ecology, systematics, behavior, and collection techniques. FLD.

BIOL 790 Paleontology of Lower Vertebrates (3). General account of the osteology, geological distribution, and evolution of the principal groups of fishes, amphibians, reptiles, and birds. Lectures and laboratory. (Same as GEOL 725.) LEC.

BIOL 791 Paleontology of Higher Vertebrates (3). Evolution of mammals, and anatomical modifications involved in the process as ascertained from the fossil record. Lectures and laboratory. (Same as GEOL 725.) LEC.

BIOL 792 Ichthyology (4). A study of fishes. Lecture topics include the structure and function of fishes; the adaptations of fishes to the aquatic environment; and a survey of major fish groups with emphasis on evolutionary relationships and biogeography. Laboratory topics include a survey of fishes using specimens, and the use of keys to identify fishes with emphasis on the Kansas fish fauna. A research paper using primary scientific literature is required. Prerequisite: Graduate standing or permission of the instructor. LEC.

BIOL 793 Ornithology (3). A study of birds; recognition of species; field and laboratory observations; behavior, phylogeny, and speciation. Prerequisite: BIOL 413. LEC.

BIOL 794 Mammalogy (3). A study of mammals, with emphasis on systematics, biogeography, and natural history. Lectures, laboratory, and field study. Prerequisite: BIOL 100 or BIOL 413. LEC.

BIOL 795 Biology of Amphibians (3). Evolutionary biology of amphibians with emphasis on systematics, morphology, reproductive strategies, and distribution; lectures and laboratory. Prerequisite: BIOL 664 or permission of instructor. LEC.

BIOL 796 Biology of Reptiles (3). Evolutionary biology of reptiles with emphasis on systematics, morphology, reproductive strategies, and distribution; lectures and laboratory. Prerequisite: BIOL 664 or permission of instructor. LEC.

BIOL 797 Field Course in Vertebrate Paleontology (3-6). Training in the techniques of collecting vertebral fossils, description and interpretation of the stratigraphy of fossiliferous sediments, and interpretation of the adequacy and bias of samples. FLD.

BIOL 798 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museum collections, their associated data, and their use in scholarly research; cataloging, storage, fumigation, automated information management and related topics will be presented for museums of art, history, natural history and anthropology. (Same as AMS 799, ANTH 799, GEOL 723, HIST 725, and MUSE 704.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC.

BIOL 799 Natural History Museum Apprenticeship (1-4). Provides directed, practical experience in collection care and management, exhibiting, and administration with emphasis to suit the particular requirements of each student. Full time for one semester or half time for two semesters. (Same as AMS 799, ANTH 799, GEOL 723, HIST 799, and MUSE 799.) FLD.

BIOL 801 Topics in... (1). Advanced courses on special topics in biology, given as need arises. Lectures, readings, discussions, laboratory or field work. Students may select sections according to their special interests. LEC.

BIOL 802 The Art of Becoming a Professional Scientist (3). Discusses aspects of graduate education that are directed at the post-Ph.D. phases of a career, but that must be initiated early in the graduate student program of study. One 3-hour discussion per week. LEC.

BIOL 806 Major Patterns in Insect Evolution (5). Extensive reading and discussion of the primary literature on topics relating to major patterns in the evolutionary history of insects, including the fossil history of insects, the monophyly of arthropods, the origin of wings, the changing role of insects in ecological communities, the origins of social behavior, modes and mechanisms of specification, and patterns of species diversity. Assigned readings require a solid background in evolutionary theory and insect biology, especially morphology, development, and classification. Prerequisite: Permission of instructor. LEC.

BIOL 810 Seminar in Biochemistry (1). Presentation and discussion of specific areas of recent research in biochemistry. This course may be taken more than once. LEC.

BIOL 811 Advanced Molecular and Cellular Immunology (3). Covers recent advances in immunobiology and immunobiology. Topics include structure and function of antibodies, B cell and T cell idiotypes, type, induction and regulation of the immune response through cell interactions and cytokine action, and the role of immune activity in disease states such as hypersensitivity, autoimmunity, and cancer. Prerequisite: An introductory course in immunology, or course in immunology. LEC.

BIOL 812 Mechanisms of Host-parasite Relationships (3). Lectures. Emphasis is on virulence factors of microorganisms and the host response to infection. Topics will include pathogens of intracellular and extracellular parasites, bacterial adhesins, and toxins, and the role of innate and acquired immunity in host resistance and the response to infection. Prerequisite: A course in biochemistry, or consent of instructor. LEC.

BIOL 813 Advanced Bacterial Physiology (3). Lectures. The intermediary reactions catalyzed by bacterial enzymes and their regulation, requiring processes. Thermodynamic considerations of these processes are discussed. Knowledge of calculus is recommended. Prerequisite: Ten hours of microbiology and one year of organic chemistry. LEC.

BIOL 814 Advanced Molecular Virology (3). The course concentrates on evaluation of current literature concerning all aspects of molecular biology, biochemical characterization, and pathogenic mechanisms involved in host-virus interactions. Students will be expected to present articles and participate in discussions. Prerequisite: A course in microbial genetics and a course in virology, or consent of instructor. LEC.

BIOL 815 Advanced Molecular Genetics (3). A literature based course that covers recent advances in microbial genetics and molecular biology. Topics include transcription, translation, repair, genetic exchange mechanisms, regulation of gene expression, and recombinant DNA techniques. Prerequisite: A course in microbial genetics, or taken concurrently. LEC.

BIOL 840 Scientific Communication (2). Principles of English communication skills for the professional scientist. The course explores the form, function, and practice (including ethics) of scientific communication, emphasizing elements of writing and speech that are important to
clearly and precision. The course covers written and verbal communica-
tion of primary research results as well as composing correspondence, 
a curricular vitae, reviews, etc. Prerequisite: BIOL 843. LEC

BIOL 8431 Biometry I (5). The application of statistical methods to data 
from various fields of biological research. Special emphasis is placed on 
practical computational procedures. Prerequisite: College algebra. LEC

BIOL 8421 Biometry II (3). This course is primarily devoted to special 
advanced topics in analysis of variance, and regression analysis. Polynomial regression and multiple linear regres-
sion will be presented as will the general linear model. Elementary ma-
trix algebra will be developed as needed. Prerequisite: BIOL 841. LEC

BIOL 8471 Phylogenetics (3). An introduction to the theory and practice 
of phylogenetic systematics. Includes principles of character analysis 
including determination of homology and determination of character polar-
yzing. Testing alternate phylogenetic trees, and reconstructing trees using 
computer techniques. Also includes principles of constructing phylog-
netic classifications and the nature of taxa in the phylogenetic system. 
Other topics, such as the nature of species and principles of biogeogra-
phy are included. Prerequisite: Twenty hours natural history. LEC

BIOL 8721 Gene Expression II (3). Second semester of a two-semester 
lecture course on gene expression. Emphasis on control of gene ex-
pression at the transcriptional and post-transcriptional levels. Prerequi-
site: BIOL 772 or consent of instructor. LEC

BIOL 8881 Topics in Evolutionary Morphology: _____ (2). Presentation 
and discussion by graduate students and faculty of selected topics cen-
tering on observed changes in structure and function of organisms from 
a phylogenetic point of view. Presentation will include results of original 
research when possible and appropriate, and otherwise, will be 
based on syntheses of recent literature. RSH

BIOL 8901 Advanced Study in Microbiology (1-10). Original investiga-
tion by students at the master’s degree level. Prerequisite: Ten or 
more hours of microbiology and consent of department. RSH

BIOL 8951 Human Genetics (3). A lecture course providing balanced 
coverage of Mendelian and molecular genetics of humans; includes 
discussions and presentations on current issues in human and medical 
genetics. Prerequisite: A course in genetics. LEC

BIOL 8991 Master’s Thesis (1-10). Research which is to be incorporated 
into an M.A. thesis. Not more than ten hours may be earned. THE

BIOL 9011 Graduate Seminar in Biochemistry and Biophysics (1). Ad-
crased course examining current research topics in biochemistry and 
bio-physics. Extensive student/faculty interaction is emphasized. Utiliz-
ing lectures, class discussion of assigned readings of research reports, 
and oral presentations. Prerequisite: Enrollment in graduate school, 
and departmental admission. LEC

BIOL 9021 Graduate Seminar in Molecular, Cellular, and Developmental 
Biology (1). Advanced course examining current research topics in 
their biology, cellular, and developmental biology. Extensive student/fac-
ulty interaction is emphasized utilizing lectures, class discussion of as-
signed readings of research reports, and oral presentations. Prerequi-
site: Enrollment in graduate school, and departmental permission. LEC

BIOL 9031 Graduate Seminar in Neurobiology (1). Advanced course ex-
aming current research topics in neurobiology. Extensive student/fac-
ulty interaction is emphasized utilizing lectures, class discussion of as-
signed readings of research reports, and oral presentations. Prerequi-
site: Enrollment in graduate school, and departmental permission. LEC

BIOL 9041 Graduate Seminar in Microbiology (1). Advanced course ex-
aming current research topics in microbiology. Extensive student/fac-
ulty interaction is emphasized utilizing lectures, class discussion of as-
signed readings of research reports, and oral presentations. Prerequi-
site: Enrollment in graduate school, and departmental permission. LEC

BIOL 9051 Advanced Molecular Genetics (1-3). A review of current lit-
erature in molecular genetics. RSH

BIOL 9061 Advanced Genetics (1-3). May be repeated for credit up to six 
hours. Review of current literature and genetic theory of selected topics 
such as population, molecular, quantitative, and physiological genetics. RSH

BIOL 9131 Physiology and Biophysical Chemistry I (1-6). Directed research on selected topics. Prerequisite: BIOL 770 or equivalent. RSH

BIOL 9181 Modern Biochemical and Biophysical Methods (4). This course 
emphasizes techniques for solving problems of structure and function of 
biochemical molecules. Students will complete several modules that 
consist of lectures relating to theory and practical aspects of each 
methodological approach, and apply these techniques to solving a specific 
problem. Students will submit a paper describing the results of the data 
and conclusions. Enrollment by permission of instructor only. LEC

BIOL 9251 Research Grant Proposal Preparation (3). Formulates, strate-
gies, and styles of research grant proposal writing. Prerequisite: Com-
pletion of three semesters of the biochemistry or genetics program 
curriculum, and/or consent of instructor. LEC

BIOL 9301 Ultrastructure and Cellular Mechanisms (2). Two lectures and 
one seminar-recitation. A detailed consideration of electron microscopic 
analyses of cell structure as related to cell function. Prerequisite: BIOL 415. LEC

BIOL 9431 Multivariate Data Analysis (3). Matrix formulation of multi-
variable models and data. Specific methods covered include Principal 
Components Analysis, Factor Analysis, Multiple Group Discriminant 
Analysis and Canonical Analysis, and Canonical Correlation Analysis. 
Prerequisite: BIOL 842 or knowledge of elementary matrix algebra. LEC

BIOL 9441 Topics in Quantitative Ecology (1-3). Presentation and 
discussion by instructor and students of mathematical and statistical con-
cepts in ecology. Topics are selected from texts or sets of readings. LEC

BIOL 9501 Evolutionary Mechanisms (3). Reading and discussions of 
evolutionary mechanisms from the genetic, ecologic, and systematic 
viewpoints. Prerequisite: BIOL 412. LEC

BIOL 9521 Introduction to Molecular Modeling (3). Introduction to the 
ory and practice of contemporary molecular modeling, including molecu-
lar mechanics, molecular dynamics, computer graphics, data analysis, 
use of structure and sequence databases, docking, and homology mod-
eling. Weekly computer laboratory section aimed at allowing particip-
ants to pursue independent research projects that incorporate modeling 
aspects. Lectures, laboratory manuals, program descriptions, and 
technical notes are presented on course web page. (Same as MDCM 952.) Prerequisite: Graduate standing or consent of instructor. LEC

BIOL 9681 Seminar in Vegetation Geography (2-3). (Same as GEOG 937.) LEC

BIOL 9851 Advanced Study (1-10). Individual investigations; labora-
tory, field or museum; or reading assignments in specialized topics not 
only treated in other courses. RSH

BIOL 9991 Doctoral Dissertation (1-12). Original research that is to be 
incorporated into a Ph.D. dissertation. THE

Botany

See Biological Sciences: Ecology and Evolutionary Biology.

Chemistry

Chair: Joseph A. Heppert, jheppert@ku.edu

Malott Hall, 1251 Wescoe Hall Dr., Room 100
Lawrence, KS 66045-7582, www.chem.ku.edu

Associate Chair, Graduate Programs: Brian B. Laird, 
blaird@ku.edu, 6046 Malott Hall, (785) 864-4632

Professors: Borovik, Bowman-James, Busch, Carlson, 
Chu, Dunn, Givens, Heppert, Hier, Johnon, Laird, 
Lunte, Wilson

Professors Emeriti: Burgstahler, Everett, Harmony, 
Huysen, Iwamoto, Kuwana, Landgrebe, K.B. Schowen, 
R. Schowen

Associate Professors: Benson, Hanson, Kuczera, Rivera 
Assistant Professors: Barry, Berrie, Desaire, Limburg, 
Malinakova, Mure, Robinson, Thompson, Tunge

The department’s graduate program, its Ph.D. pro-
gram in particular, is aimed at producing graduates 
with the basic knowledge, skills, and experimental 
t raining necessary to move them into productive ca-
era in academic, industrial, and government posi-
tions. The department’s faculty and graduate students 
work collegially, not only in the search for new knowl-
edge at the frontiers of chemistry, but also toward the
solution of problems of fundamental societal concern. Although the department believes it is essential to provide graduate students with a knowledge base spanning the traditional areas of analytical, inorganic, organic, and physical chemistry, it nurtures its particular strengths in several important research areas at the interface of chemistry and the biological/medical sciences. The Department of Chemistry at KU is a worldwide leader in graduate training and research in bioanalytical chemistry, and its additional interactions with the pharmaceutical and biological sciences have led to strong graduate research programs in diverse areas such as bio-inorganic, bio-organic, and biophysical chemistry. At the same time, the department recognizes its “central science” role by maintaining strong research and Ph.D. programs in areas that interface closely with molecular biosciences, physics, mathematics, and computer science, for example, in theoretical chemistry, molecular modeling, and laser spectroscopy. The entering Ph.D. student can be assured of finding vigorous programs spanning a full range of chemical studies, and the graduating Ph.D. student can be equally confident that his or her training and skills will be marketable commodities.

The department’s M.S. program is a traditional companion to the Ph.D. program and shares the same basic goals and programmatic flavor. It is available to and encouraged for students who prefer a course program with less depth and a research (thesis) project that is manageable in two to four semesters. Although the majority of entering graduate students choose the Ph.D. track, which is the most desirable degree for those who wish to work as independent scientists in academic, industrial, or institutional settings, the M.S. continues to serve a useful and essential role for students with other ambitions. Research support facilities include the Biochemical Research Service Laboratory, the Instrumentation Design Laboratory, the Mass Spectrometry Laboratory, the Molecular Graphics and Modeling Laboratory, the Nuclear Magnetic Resonance Laboratory, the X-ray Crystallographic Laboratory, and the Glassblowing Shop. Anschutz Library contains more than 300,000 books and periodicals spanning the fields of chemistry, biochemistry, physics, geology, and pharmacy.

Admission

Prerequisites. Before beginning graduate work, students should complete an undergraduate program of two semesters of general chemistry with laboratories, two semesters of organic chemistry with laboratory, one semester of analytical chemistry, and two semesters of physical chemistry or the equivalent.

Application. To apply for admission, students must submit a completed Graduate School application form, two transcripts, Graduate Record Examination scores, and three recommendations for the program from individuals familiar with the applicant’s academic background and abilities. International applicants must supply a score from the Test of English and a Foreign Language examination and Test of Spoken English. Applications should be received by April 15 to be considered for fall semester.

To apply, complete the appropriate chemistry department online inquiry form at www.chem.ku.edu/graduate. From there, you will be directed to the Graduate School’s online application form at www.
Before taking the oral comprehensive examination for the Ph.D., each student must accumulate a total of 8 points on cumulative examinations within two after entering graduate school (four semesters, not including summers). A grade of Pass is worth 2 points and a Fail is worth 0 points. During the first year only, two borderline or marginal performances may receive 1 point each. Six points must be in the student's major area, except for students in chemical education, who need 4 points in chemical education and 4 points in the chosen traditional research area. Students who do not accumulate 8 points within two years are not allowed to continue in the Ph.D. program.

3. A comprehensive oral examination must be completed. The student must prepare a written, original research proposal before the examination is scheduled. The proposal must be presented and defended orally at the examination; however, the examination is comprehensive in nature. The student must be prepared for questions on a wide range of topics within the discipline. It should be noted that requirements (1) and (2) must be completed before the comprehensive oral examination can be taken. Failure to pass the oral examination before the beginning of the fourth year of graduate study leads to ineligibility for support by departmental or research funds.

4. A dissertation based on original work of high quality in one of the principal fields of chemistry must be completed.

5. A final oral examination and defense of the dissertation must be completed.

For further details, see the general requirements for the Ph.D. degree in the General Information chapter of this catalog.

Chemistry Courses

CHEM 516 Analytical Chemistry (3).
CHEM 517 Analytical Chemistry Laboratory (2).
CHEM 622 Fundamentals of Organic Chemistry (3).
CHEM 624 Organic Chemistry I (3).
CHEM 625 Organic Chemistry Laboratory (2).
CHEM 626 Organic Chemistry II (3).
CHEM 627 Organic Chemistry II Laboratory (2).
CHEM 628 Organic Chemistry I, Honors (3).
CHEM 630 Organic Chemistry II, Honors (3).
CHEM 635 Instrumental Methods of Analysis (2).
CHEM 636 Instrumental Methods of Analysis Laboratory (2).
CHEM 640 Biological Physical Chemistry (3).
CHEM 646 Introduction to Physical Chemistry (4).
CHEM 647 Physical Chemistry I Laboratory (2).
CHEM 648 Molecular Physical Chemistry (3).
CHEM 649 Physical Chemistry II Laboratory (2).
CHEM 667 Systematic Inorganic Chemistry (3).
CHEM 668 Advanced Inorganic Laboratory (2).
CHEM 680 Topics in Chemistry: ______ (1-5).
CHEM 690 Environmental Chemistry (3).
CHEM 696 Junior/Senior Seminar (1).
CHEM 698 Undergraduate Research Problems (1-6).
CHEM 699 Undergraduate Honors Research (2-6).
CHEM 711 Applied Electronics for Scientists (4). Lecture and laboratory course for chemists and other scientists or engineers with little or no background in electronics who need a working knowledge of electronic devices, circuits, and instruments; electronic principles; digital and analog systems in scientific instrumentation; signal conversion and optimization techniques. Prerequisite: CHEM 516 or equivalent, one year of physics; limited enrollment, see instructor. LEC

CHEM 716 Practicum in Facilitating Learning in the Chemistry Laboratory (1). The course provides discussions of the diverse group of undergraduate laboratories, the laboratory curriculum, and laboratory teaching strategies. Strategies to facilitate learning through interactions among students and between student and TA will be discussed. The course includes reading assignments, peer review, and instructor feedback of teaching performance of TAs. Students participating in class discussion once per week. Prerequisite: Permission of instructor. LAB

CHEM 718 Mathematical Methods in Physical Sciences (3). Review of all complex variable theory; introduction to the partial differential equations of physics; Fourier analysis; and special functions of mathematical physics. (Same as PHYS 718.) Prerequisite: Two semesters of junior-senior mathematics. LEC

CHEM 720 Bibliography of Chemistry (1). A course on the use of the library as a research tool and the study of bibliographic techniques of literature searching. Emphasis on the literature of chemistry. Prerequisite: Consent of department. LEC

CHEM 731 Fundamentals and Methods of Analytical Chemistry (3). An introductory graduate level course in analytical chemistry, in which the principles of electrochemistry, spectroscopy, and separation science are utilized to solve analytical problems in inorganic, organic, and biochemistry. Prerequisite: An undergraduate course in analytical chemistry, a year of organic chemistry, and a year of physical chemistry.

CHEM 737 Coordination and Organometallic Chemistry (3). An examination of the basic foundations of coordination chemistry and organometallic chemistry including symmetry methods, bonding, magnetism, and reaction mechanisms. Prerequisite: Two semesters of organic chemistry and one semester of physical chemistry in which quantum chemistry is introduced. The latter course may be taken concurrently with CHEM 737. LEC

CHEM 740 Principles of Organic Reactions (2). A consideration of the structural features and driving forces that control the course of chemical reactions. Topics will include acid and base properties of functional groups; qualitative aspects of strain, steric, inductive, resonance, and solvent effects on reactivity; stereochemistry and conformations; an introduction to orbital symmetry control; basic thermodynamic and kinetic concepts; and an overview of some important classes of mechanisms. Prerequisite: Two semesters of undergraduate organic and one semester of physical chemistry or concurrent enrollment. LEC

CHEM 742 Physical Organic Chemistry I (3). An examination of the methods used to probe the mechanisms of organic reactions and of the chemistry of some important reactive intermediates. Topics will include isotope effects, kinetics, linear free energy relationships, solvent effects, a continuing discussion of orbital symmetry, rearrangements, carbocations, carbanions, carbenes, radicals, excited states, and strained molecules. Prerequisite: CHEM 740. LEC

CHEM 750 Quantum Chemistry and Spectroscopy (3). An introductory study of the application of quantum mechanics to atomic and molecular systems. Includes an introduction to the basic principles of quantum theory, description of electronic structure of atoms and molecules, and the foundations of spectroscopy. Contains a brief presentation of group theory and its applications to the analysis of molecular symmetry, spectra and structure. Prerequisite: Two semesters of physical chemistry. LEC

CHEM 752 Statistical Thermodynamics (3). Thermodynamics and introduction to equilibrium statistical mechanics with emphasis on problems of chemical interest. The course consists of two roughly equal parts: 1) An advanced overview of the laws and concepts of thermodynamics with application to specific problems in phase and chemical equilibrium; and 2) Introduction to equilibrium statistical mechanics for both classical and quantum systems. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 754 Chemical Kinetics and Dynamics (3). Chemical kinetics and introduction to chemical reaction dynamics. The course consists of two parts: 1) An advanced overview of chemical kinetics including reaction mechanisms and rate laws with applications to unimolecular and bimolecular reactions, catalysis, and energy transfer; and 2) An introduction to reaction rate theory including transition state theory, Marcus electron transfer theory, and collision theory. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 763 Organic Synthesis I (3). A discussion of fundamental reactions for the formation of carbon-carbon bonds, oxidation, reduction, and functional group interconversion. Prerequisite: CHEM 740. LEC

CHEM 786 Spectroscopic Identification of Organic Compounds (3). The use of techniques such as infrared, nuclear magnetic resonance, and ultraviolet spectroscopy, and mass spectrometry for elucidating the structure of organic molecules. A lecture and workshop course. Prerequisite: CHEM 628 and CHEM 627, or CHEM 707. LEC

CHEM 787 Advanced Laboratory Techniques for the Preparation and Purification of Compounds (3). A laboratory course that includes many of the important procedures and methods of organic and inorganic synthesis. Prerequisite: CHEM 627. LAB
CHEM 775 Chemistry of the Nervous System (3). A study of the overall concept of central nervous system functioning. A brief introduction to neurotransmitters, and neurophysiological techniques as well as a relatively detailed discussion of the chemistry of neurotransmitters is included. (Same as BIOL 775, MDCM 775, and P&TX 775.) Prerequisite: One year of undergraduate organic chemistry. LEC

CHEM 901 Analytical Chemistry Colloquium (1). Review of important aspects of analytical chemistry not covered in the regular graduate courses. LEC

CHEM 903 Chemical Education Colloquium (1). Colloquia in various topics of current interest are presented by students, faculty, and visiting scholars. LEC

CHEM 807 Inorganic Chemistry Colloquium (0-1). Review of important aspects of inorganic chemistry not covered in the regular courses. LEC

CHEM 810 Physical Chemistry Colloquium (1). Colloquia on various topics of current interest are presented by students, faculty, and visiting scientists. LEC

CHEM 811 Organic Chemistry Colloquium (1). Credit on presentation of colloquium. LEC

CHEM 812 Chemical Seminar (1-2). Individual studies of certain advanced phases of chemistry not covered in the regular graduate courses. RSH

CHEM 899 Master's Thesis (1-10). Research work (either experimental or theoretical) in chemistry for students working toward the M.S. degree. THE

CHEM 901 Advanced Analytical Chemistry Colloquium (1). Review of significant aspects of analytical chemistry not covered in the regular graduate courses. Open to advanced graduate students. LEC

CHEM 902 Inorganic Preparations (2-4). A laboratory course covering a variety of advanced preparative techniques used in inorganic chemistry. Prerequisite: CHEM 737 or equivalent. LAB

CHEM 903 Survey of Methods of Analysis (2). An advanced treatment of selected electroanalytical techniques and methodology. Theory is augmented by applied laboratory work. Prerequisite: CHEM 731 or equivalent. LEC

CHEM 904 Analytical Separations (3). An advanced treatment of analytical separations techniques. The theory of separation science will be augmented with discussion of practical aspects of instrumentation and experimentation. Prerequisite: CHEM 731 or permission of instructor. LEC

CHEM 906 Advanced Topics in Inorganic Chemistry (2-3). A course covering various special topics in inorganic chemistry. Prerequisite: announcement of course content and prerequisites will be made at the end of the previous semester. This course may be taken more than once. LEC

CHEM 907 Advanced Inorganic Chemistry Colloquium (1). Review of important aspects of inorganic chemistry not covered in the regular courses. Open to advanced graduate students. LEC

CHEM 908 Spectrochemical Methods of Analysis (3). Lecture and laboratory course; general concepts of encoding chemical information as electromagnetic radiation; major instrumental systems for detecting, interpreting, and presentation of the radiation signals; atomic emission, absorption, and fluorescence; ultraviolet, visible, infrared, and microwave absorption; molecular luminescence; scattering methods; mass spectrometry; magnetic resonance; automated spectrometric systems. Prerequisite: CHEM 731 and CHEM 750. LEC

CHEM 910 Advanced Physical Chemistry Colloquium (1). Colloquia on various topics of current interest are presented by students, faculty, and visiting scientists. Open to advanced graduate students. LEC

CHEM 911 Advanced Organic Chemistry Colloquium (1). Credit on presentation of a colloquium. Open to advanced graduate students. LEC

CHEM 912 Advanced Chemical Seminar (1). Individual studies of certain advanced phases of chemistry not offered in the regular graduate courses. Open to advanced graduate students. RSH

CHEM 913 Chemical Kinetics (2-3). A study of the rates of chemical reactions in terms of the classical collision theory, transition-state theory and introductory scattering theory. Topics from the mechanism of gas and liquid phase reactions, fast reactions in solutions, molecular and ionic beam reactions, photochemistry, and other areas of current interest will be discussed. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 914 Computational Methods in Physical Sciences (3). Advanced computer programs in physical science. General discussion and illustration of problem organization and solution by numerical and other methods with examples from physics, astronomy, and other physical sciences. Students will design, write, validate, and document a computer program to solve a CHYM 751 and PHYS 815.) Prerequisite: Six hours of computer science courses numbered 300 or above, and six hours of physics and/or astronomy courses numbered 300 or above. LEC

CHEM 915 Intermediate Quantum Mechanics (3). The mathematical and physical principles of quantum chemistry, including vector spaces, operators and operator algebra, matrix theory, eigenvalue problems, postulates of quantum mechanics, the Schrodinger equation, angular momentum, approximation methods, and atomic and molecular systems. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 916 Molecular Spectroscopy (3). Quantitative molecular spectroscopy and its chemical applications. The basic principles of the molecular energy levels, selection rules, and spectral transition intensities, and spectral interpretation will be discussed and applied to nuclear and electron magnetic resonance, rotational, vibrational, vibrational-rotation, Raman, electronic and Mossbauer spectroscopy. Prerequisite: CHEM 750 or its equivalent. LEC

CHEM 917 Advanced Statistical Mechanics (3). Advanced equilibrium statistical mechanics and nonequilibrium statistical mechanics. Topics include: the theory of liquids, critical phenomena, linear response theory and time correlation functions, Langevin dynamics, and molecular hydrodynamics. (Same as PHSX 971.) Prerequisites: CHEM 909 or its equivalent. LEC

CHEM 918 Advanced Quantum Mechanics (3). An advanced discussion of the principles and methods of quantum mechanics and recent development of quantum chemistry, including subjects on ab initio atomic and molecular structure calculations, quantum scattering theories, quantum optics, Lie group theoretical methods, and advanced numerical methods for solving the time-dependent Schrodinger equation. Prerequisite: CHEM 915 or its equivalent. LEC

CHEM 919 Advanced Topics in Physical Chemistry (1-3). A discussion of special topics such as group theory, chemical bonding theory, microwave spectroscopy, electron paramagnetic resonance, mass spectrometry, X-ray crystallography, nuclear chemistry, radiation chemistry, high temperature chemistry, biophysical chemistry, irreversible thermodynamics, transport phenomena, scattering theory, etc. One or more topics will be covered in a given semester and an announcement of the course content and prerequisites will be made at the end of the previous semester. This course may be taken more than once. LEC

CHEM 920 Mass Spectrometry (3). An introduction to mass spectrometry. The various ionization techniques and mass analyzers will be discussed, and many examples of different mass spectral data will be introduced. Prerequisite: CHEM 731 or permission of instructor. LEC

CHEM 925 Bioanalysis (3). A course covering important aspects in modern chemical measurement with particular emphasis placed on bioanalysis. This course will survey the modern analytical challenges associated with the ongoing efforts in genomics and proteomics and discuss future trends in methods in instrumentation. Prerequisite: CHEM 731 or permission of instructor. LEC

CHEM 959 Advanced Topics in Analytical Chemistry (3). A course covering special advanced topics in analytical chemistry not included in other graduate courses. An announcement of course content and prerequisites will be made at the end of the previous semester. This course may be taken more than once. LEC

CHEM 963 Organic Synthesis II (3). A survey of important techniques in organic chemistry with respect to scope, limitations, mechanism, and stereochemistry. Emphasis will be placed on new synthetic methods and application of such methods to the synthesis of structurally interesting compounds, particularly natural products. Prerequisite: CHEM 763. LEC

CHEM 966 Physical Organic Chemistry II (3). A detailed consideration of the mechanistic features of some important classes of organic reactions. Discussions will include nuclear orbital theory, linear free energy relationships, and acid-base catalysis. Prerequisite: CHEM 742 and one semester of physical chemistry. LEC

CHEM 971 Advanced Topics in Organic Chemistry (1-3). A brief introduction to underlying theoretical principles will be given and many examples of applications from the literature will be discussed in detail. Prerequisites: CHEM 901 and permission of instructor. LEC

CHEM 980 Advanced Topics in Chemical Education (1-3). A course covering special advanced topics in chemical education not included in other graduate courses. An announcement of course content and prerequisites will be made at the end of the previous semester. This course may be repeated when topic varies. LEC

CHEM 981 Research (1-10). Original investigation on the graduate level. Prerequisite: Forty hours of chemistry including appropriate preparation in the field of specialization. RSH

CHEM 982 Inorganic Structure and Mechanisms (3). The use of quantum theory and group theory in interpreting bonding and physical and chemical properties in inorganic compounds. Lab: included in this class. Prerequisites: CHEM 815 and PHYS 815.) Prerequisite: Six hours of chemistry courses numbered 300 or above, and six hours of physics and/or astronomy courses numbered 300 or above. LEC

CHEM 984 Physical Methods (3). A survey of modern spectroscopic and non-spectroscopic physical methods in chemistry with emphasis on methods applicable to inorganic compounds. For each method, a brief introduction to underlying theoretical principles will be presented, and many examples of applications from the literature will be discussed in detail. Prerequisite: CHEM 982. LEC

CHEM 986 Bioinorganic and Catalytic Chemistry (3). A survey of metalloproteins and metalloenzymes and their structures and functions, including recent advances in biomimetic modeling. Principles
and applications of heterogeneous and homogeneous catalytic processes emphasizing catalysis at transition metal centers. LEC CHEM 991 Postdoctoral Research in Chemistry (1-5). Advanced level research in collaboration with a faculty member involving projects in chemistry or related areas. Prerequisite: Doctoral degree or equivalent in an appropriate related area and consent of instructor. RSH CHEM 996 College Teaching Experience in Chemistry (3). A student will engage in a semester-long, planned instructional activity that shall include college classroom teaching under supervision. The planning will be done with the adviser and/or member of the faculty who will supervise the experience. The activity will be done under the supervision of a chemistry department faculty member or by an individual or individuals designated by the candidate’s committee. Prerequisite: 1) CHEM 716, 2) two semesters as a graduate teaching assistant or doctoral candidate status, and 3) CHEM 980 or permission of coordinator. LEC CHEM 999 Doctoral Dissertation (1-10). Research work (either experimental or theoretical) in chemistry for students working toward the Ph.D. degree. THE

**Chemistry**

Director: Mabel L. Rice, mabel@ku.edu
Dole Center, 1000 Sunnyside Ave., Room 3031
Lawrence, KS 66045-7555, www.clp.ku.edu
(785) 864-5470

Graduate Adviser: Susan J. Kemper, skemper@ku.edu, 3088D Dole Center, (785) 864-0748

Participating Faculty Members: Atchley (Psychology), Aufer (Speech-Language-Hearing: Sciences and Disorders), Barlow (Speech-Language-Hearing: Sciences and Disorders), Brady (Institute for Life Span Studies), Cats (Speech-Language-Hearing: Sciences and Disorders), Colombo (Psychology), Fey (Hearing and Speech), Greenhout (Psychology), Jongman (Linguistics), Kemper (Psychology), Loeb (Speech-Language-Hearing: Sciences and Disorders), McCluskey-Fawcett (Psychology), Pye (Linguistics), Rice (Speech-Language-Hearing: Sciences and Disorders), Rosen (Linguistics), Sereno (Linguistics), Simpson (Psychology), Storkel (Speech-Language-Hearing: Sciences and Disorders), Vitevitch (Psychology), Warren (Institute for Life Span Studies), Wilcox (Speech-Language-Hearing: Sciences and Disorders), Yamamoto (Linguistics, Anthropology)

Professors Emeriti: Hart (Bureau of Child Research, Institute for Life Span Studies), Schiefelbusch (Speech-Language-Hearing: Sciences and Disorders)

The graduate program in child language offers the first specialized degree in this new area of study. The program crosses traditional academic boundaries to give students the theoretical, empirical, and methodological competence necessary to study basic and applied issues in language acquisition. This multidisciplinary program is a cooperative endeavor of faculty members from the Departments of Applied Behavioral Science, Linguistics, Psychology, and Speech-Language-Hearing: Sciences and Disorders.

Students study four areas: (1) core theoretical and experimental work on language acquisition, (2) relevant methods and theories in linguistics and psycholinguistics, (3) theoretical perspectives on developmental psychology, and (4) the nature of disordered language development and methods and techniques for language intervention. Each student is advised by a support committee of three faculty members. Enrollment in a seminar in language acquisition is required of all students in addition to participation in research activities. Opportunities for individual research projects include the projects of participating faculty members and the research teams of the Schiefelbusch Institute for Life Span Studies, the Speech-Language-Hearing Clinic, and the clinical/research facilities of the KU Medical Center.

Graduates are candidates for teaching and research positions, clinical positions providing service to communicatively disabled persons, and research work in business and governmental sectors.

The child language doctoral program reports to the College of Liberal Arts and Sciences in collaboration with participating departments. The 22-member faculty is drawn from the participating departments. The Institute for Life Span Studies provides additional instructional, research, and clinical experiences.

**Admission**

Students must submit three letters of recommendation, two copies of all undergraduate and graduate transcripts, and scores from the Graduate Record Examination (verbal, quantitative, analytical). Applicants should have earned bachelor’s degrees that include course work in linguistics, psychology, speech pathology, and statistics with minimum grade-point averages of B. Preference is given to those with master’s degrees in linguistics, psychology, education, special education, or speech and hearing sciences or to applicants who have relevant postbaccalaureate work experience. No one is admitted for a terminal M.A. degree. Admission materials are reviewed by a subcommittee of the advisory council. The admissions committee supervises the admission process and recommends applicants to the advisory council.

Submit your application to the Graduate School online at www.gradute.ku.edu. Send transcripts of all completed college and university course work to

**The University of Kansas**
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

**The University of Kansas**
Child Language Program
Dole Center, 1000 Sunnyside Ave., Room 3031
Lawrence, KS 66045-7555

**Degree Requirements**

For the Ph.D. degree, the student must complete all requirements of the Graduate School and the College of Liberal Arts and Sciences. These include residence, research skills, comprehensive oral examination, preparation of a dissertation, and the final oral examination and defense of the dissertation. Three options for fulfilling the research skills requirement are available. (1) Competence in the use of computers can be demonstrated by course work or by a successful demonstration of proficiency. Competence in both programming skills and computer applications is required. (2) Proficiency in a language other than English or reading knowledge of two languages other than English can be demonstrated. (3) A record of professional research experience or publication may be used to demonstrate research skills.

For students entering without the master’s degree, the requirements for the M.A. are at least 8 credit hours of core courses in language acquisition, 9 hours of supplemental courses in linguistics, speech-language-phonetics, developmental psychology, or language intervention, 6 hours of statistics, and 6 hours of thesis. Continuous enrollment in the Child Language Proseminar is
required. Within three years of entering the program, students normally complete the required 30 graduate credit hours, prepare an M.A. thesis, and pass a final general examination and defense of the thesis.

Ph.D. post-master’s requirements include a minimum of 36 additional graduate credit hours. These should include at least 8 hours of additional core courses, 15 hours of additional supplemental courses, 9 hours of additional statistical and methodological courses, and a minimum of 6 hours of dissertation. Continuous enrollment in the proseminar is required.

After completing the research skills requirement and the major portion of the course work, the doctoral student must pass a written preliminary examination and a comprehensive oral examination. The written examination covers four areas: (1) language acquisition, (2) psycholinguistics, (3) developmental psychology, (4) disordered language development or language intervention. The comprehensive oral examination covers the major field, taking one of five forms: (1) a defense of the written preliminary examinations, (2) a defense of a completed research project, (3) a prospectus for a future research project, (4) a discussion of a major review paper, or (5) a review of a research grant proposal and a simulated site visit defense of the proposal.

All students are expected to be engaged continuously in research on child language. Research involvement is documented with appropriate enrollment in research, thesis, and dissertation credit hours, and in the proseminar in child language.

**Courses**

See course listings for the cooperating departments.

**Chinese**

See East Asian Languages and Cultures.

**Classics**

Chair: Pamela Gordon

Wescoe Hall, 1445 Jayhawk Blvd., Room 2099

Lawrence, KS 66045-7590, www.ku.edu/~classics

(785) 864-2396

Graduate Adviser: Anthony Corbeill

2100 Wescoe Hall, (785) 864-2393

Professors: Corbeill, Lombardo, Younger

Professors Emeriti: Banks, Lind, Phillips, Rosen

Associate Professors: Gordon, Shaw, Welch

Assistant Professor Emerita: Price

The Department of Classics offers advanced course work in the ancient civilizations of Greece and Rome. Students are expected to study the classical languages (Greek and Latin) and literatures as well as the art and archaeological remains of the Greek and Roman worlds.

**Admission**

The B.A. in Classics or another field in the humanities is required. Candidates for graduate teaching assistantships in Latin or Greek must have 15 junior/senior hours in Latin and/or Greek. Well-qualified candidates with fewer hours in ancient languages will be considered for admission and may be offered positions as graduate teaching assistants in nonlanguage courses. The Graduate Record Examination is not required.

Submit your application to the Graduate School online at www.graduated.ku.edu. Send transcripts of all completed college and university course work to

**The University of Kansas**

Graduate Application Processing Center

1450 Jayhawk Blvd., Room 313

Lawrence, KS 66045-7535

Send all other requested application materials to

**The University of Kansas**

Department of Classics

Wescoe Hall, 1445 Jayhawk Blvd., Room 2099

Lawrence, KS 66045-7590

**M.A. Degree Requirements**

**Course Requirements**

1. The degree program consists of 30 hours, whether one chooses the thesis or nonthesis option.

2. The student may stress either Latin or Greek or a combination of both. Students who take only one of the ancient languages on the graduate level must present at least 10 hours of elementary course work in the other; this requirement may also be satisfied by passing a departmental examination.

3. Students may select their 30 hours from graduate courses in Greek, Latin, classics, and certain courses in philosophy, history, history of art, and linguistics. A maximum of 12 hours may be taken in nonlanguage courses.

4. Students who elect to write an M.A. thesis must complete at least 24 hours on the graduate level, in addition to 6 hours of Thesis (LAT 899 or GRK 899). In consultation with the graduate adviser, each student selects a thesis committee of three members.

5. The student selecting the nonthesis option must complete 30 hours of courses on the graduate level. In two of these courses, students must prepare research papers that meet the approval of the appropriate instructors and the graduate adviser. These papers will be placed on file in the department office.

**Language Requirements.** Incoming graduate students take a diagnostic reading examination in Greek or Latin or both if they plan to take graduate-level courses in both languages. Students who take only one of the ancient languages at the graduate level must demonstrate a basic knowledge of the other. By the end of the first year of graduate study, the student must also demonstrate a reading knowledge of German, Italian, or French by using the established university procedures for determining graduate language proficiency (as defined under Doctoral Degree Requirements, Research Skills in the General Information chapter).

**Examinations.** A written general examination is required of all M.A. students. For further information, see the departmental handbook.

**Classics Courses**

CLSX 501 The History of the Latin Language (3).

CLSX 502 Development of Ancient Greece, ca. 1000-300 B.C. (3).

CLSX 525 Aegean Archaeology and Art (3).

CLSX 526 Greek Archaeology and Art (3).

CLSX 527 Roman Archaeology and Art (3).

CLSX 528 Archaeology and Art of Greece and Rome (3).

CLSX 529 Archaeology and Art of the Ancient Near East (3).

CLSX 570 Study Abroad Topics in Greek and Roman Culture: (1-3).

CLSX 575 Readings in: (1-3).

CLSX 576 Topics in Greek and Roman Literature: (3).
CLAUS 577 Topics in the Archaeology and Art of the Ancient Mediterranean: (3).
CLAUS 675 Studies in: ______ (1-3).
CLAUS 717 Investigations in Greek Drama I (3). Attendance at CLAUS 384 required, plus one seminar per week, discussing the scholarly background of the major lecture, as well as the problems and aims of teaching Greek drama in English to undergraduates. No knowledge of Greek is required. RSH
CLAUS 718 Investigations in Greek Drama II (3). A continuation of CLAUS 717. Attendance at CLAUS 388 plus one seminar per week. No knowledge of Greek is required. RSH
CLAUS 790 Practicum in the Teaching of Classics (0.5). Required of all assistant instructors and teaching assistants in the teaching of Classics courses. May be repeated up to three semester hours credit in total. FLD

● Greek Courses
GRK 508 Early Greek Philosophy (3).
GRK 701 Archaic Poetry (3). Close reading of texts from Homer, Hesiod, Pindar, the lyric poets. LEC
GRK 702 Drama (3). Close reading of texts from Aeschylus, Sophocles, Euripides, Aristophanes. LEC
GRK 703 History and Oratory (3). Close reading of texts from Herodotus, Thucydides, Xenophon, Attic orators. LEC
GRK 704 Philosophy (3). Close reading of texts from Plato, Aristotle, the Pre-Socratics. LEC
GRK 705 Readings in Classical Greek (3). Extensive reading in a variety of Greek authors. LEC
GRK 790 Practicum in the Teaching of Greek (0.5). Required of all assistant instructors and teaching assistants in the teaching of Greek. May be repeated up to three semester hours credit in total. FLD
GRK 798 Studies in: ______ (1-3). Selected readings for qualified students who desire special work on a flexible basis. May be repeated for credit, the maximum being twelve hours. Prerequisite: Undergraduate proficiency in Greek or equivalent. RSH
GRK 899 Thesis (1-4). THE

● Latin Courses
LAT 700 Advanced Latin Prose Composition (3). An examination of the grammar, syntax, and style of the Latin language through exercises in composition. Prerequisite: Consent of instructor. LEC
LAT 701 Epic Poetry (3). Close reading of texts from Vergil, Lucretius, Ovid. LEC
LAT 702 Lyric and Elegy (3). Close reading of texts from Catullus, Horace, Ovid, Propertius, Tibullus. LEC
LAT 703 History, Oratory, Philosophy (3). Close reading of texts from Livy, Tacitus, Cicero, Seneca, Augustine, Boethius. LEC
LAT 704 Drama, Satire, and Novel (3). Close reading of texts from Plautus, Terence, Horace, Petronius, Seneca, Juvenal, Apuleius. LEC
LAT 705 Readings in Classical Latin (3). Extensive reading in a variety of Latin authors. LEC
LAT 790 Practicum in the Teaching of Latin (0.5). Required of all assistant instructors and teaching assistants in the teaching of Latin. May be repeated up to three semester hours credit in total. FLD
LAT 791 Seminar in the Teaching of Latin (3). An introduction to teaching required of all assistant instructors and teaching assistants. Topics to include: pronunciation, etymology, Latin style, testing methods, and the selecting of texts. LEC
LAT 798 Studies in: ______ (1-3). Selected readings for qualified students who desire special work on a flexible basis. May be repeated for credit, the maximum being twelve hours. Prerequisite: Undergraduate proficiency in Latin or equivalent. RSH
LAT 899 Thesis (1-4). THE

Clinical Child Psychology

Director: Michael C. Roberts
Dole Center, 1000 Sunnyside Ave., Room 2010 Lawrence, KS 66045-7555, www.ku.edu/~clchild (785) 864-4226
Core Faculty: Jackson, Roberts, Steele, Vernberg, and Faculty of the Departments of Applied Behavioral Science and Psychology (see department listings)
The Clinical Child Psychology Training Program leading to the doctoral degree is affiliated with the Departments of Applied Behavioral Science and Psychology. It is accredited by the American Psychological association in recognition of the broad and general traditions of clinical psychology with an emphasis on children. It uses the resources of both departments and includes a core faculty with specialty interests in clinical child and pediatric psychology.

The goal of doctoral training is to develop scientist-practitioners capable of conducting research and interventions for a variety of human problems, particularly those involving children and families. Such work involves understanding, prevention, and treatment of mental health and physical health problems from a psychological perspective. The training program emphasizes the acquisition of general knowledge and skills in the behavioral, social, cognitive, and biological bases of psychology, and a thorough knowledge of research methodology and statistical analyses. A particular strength is the developmental perspective presented through many aspects of training. In clinical training, students take courses in assessment and intervention, child psychopathology, behavioral and family therapy, and ethical/legal issues. Special consideration is given to ethnic and cultural diversity issues, prevention, public sector and social interventions, and professional issues. Didactic and practical experiences prepare the graduate for the multitude of roles open to clinical child psychologists. Students can assume positions in research/teaching in universities, medical schools, and internship training sites, and direct service delivery in mental health centers, hospitals, and schools.

This implements the recommendations of the national conferences on training and follows an articulated model of training in a comprehensive, integrated format. Course work and research/practical experiences provide the bases in development, psychopathology, assessment and diagnosis, and intervention in mental health work with children, adolescents, and families.

Students can complete course work, practica, and research requirements for the doctorate in four years of full-time study followed by a required one-year predoctoral internship at an approved site, although some take longer. Students are expected to, and indeed want to, participate maximally in research and clinical experiences. A master’s thesis, qualifying examination, and doctoral dissertation are formal milestones of progress in addition to regular evaluation in courses, practica, and yearly faculty review.

All students are assigned to a faculty member for academic advising. By mutual agreement, students may work with or be supervised in research and clinical work by any faculty member of the program or the sponsoring departments. For research and clinical practicum, faculty members and students are actively involved in community settings including the Bert Nash Mental Health Center, the Intensive Mental Health Program (elementary therapeutic classrooms) of the Lawrence School District, KU Medical Center, Children’s Mercy Hospital, and other agencies.

Applications may be made through either department. Submit your application to the Graduate School online at www.graduat.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to
The University of Kansas
Clinical Child Psychology
Dole Center, 1000 Sunnyside Ave., Room 2010
Lawrence, KS 66045-7555

Admission is highly competitive. All completed files are reviewed and incoming students selected by an admissions committee of advanced students and faculty members, headed by the training director. Essential requirements are a bachelor’s degree from an accredited institution and a record of achievement that shows a strong promise of success in course work and in research and clinical work. Applicants should have at least 15 credit hours in psychology, including statistics and research methodology. Highly rated applicants have experience appropriate to their level in psychological research and applied interactions with children. Criteria include transcripts and grade-point average from previous educational institutions, scores on the Graduate Record Examination (verbal, quantitative, analytical, and advanced test in psychology), statement of career interests, statement of experience in research and with clinical populations, statement of interests in clinical and research work with faculty, a writing sample, and three letters of recommendation. Financial aid is available.

Clinical Child Psychology Curriculum
The following curriculum meets criteria for APA accreditation and KU Graduate School requirements.

**Psychology Core**
1. Biological Aspects
   - PSYC 501 Biological Foundations of Psychopathology
2. Cognitive/ffective Aspects
   - PSYC 780 Cognitive Development
3. Social Aspects
   - ABSC 825/PSYC 825 Social Development or
   - PSYC 777 Social Psychology: Theory, Research and Clinical Applications
4. History of Psychology
   - PSYC 805 History of Psychology or
   - ABSC 921 The History and Systems of Psychology
5. Cultural and Ethnic Diversity
   - PSYC 888 Diversity Issues in Clinical Psychology or
   - PRE 875 Cross Cultural Counseling

**Clinical Child Psychology Specialty Skills**
Psychotherapy, Psychodiagnosis, and Psychological Assessment. Required:
- ABSC 940 Measurement and Experimental Design for Applied Research
- ABSC 847/PSYC 847 Practicum in Clinical Child Psychology II
- PSYC 850 Psychological Clinic I (Abilities Assessment)
- ABSC 812/PSYC 812 Behavioral and Personality Assessment of Children
- ABSC 814/PSYC 814 Advanced Child and Family Assessment
- PSYC 870 Statistical Methods in Psychology I or
- PRE 811 Analysis of Variance
- PSYC 790 Statistical Methods in Psychology II or
- PRE 904 Regression Analysis
Alternate to PSYC 791/ PRE 904 include
- ABSC 735 Subject Research Methodology and Direct Observation and
- ABSC 796 Laboratory in Behavioral Development and Modification: The Analysis of Behavior I or
- ABSC 940 Measurement and Experimental Design for Applied Research

Special Research Skill. Demonstrated computer competence or additional statistical or data analysis course.

Elective Cluster. Combination of 9 or more credit hours forming a specialty cluster of knowledge and skills.

Master’s Degree and Thesis. The master’s degree requires a thesis consisting of empirical research and a minimum of 30 hours of course work (24 of which must be nontesis credit hours). A minimum of 6 credit hours in ABSC 897/PSYC 897 Master’s Thesis in Clinical Child Psychology is required.

Ph.D. Preliminary Examination: The Task. The program uses the Task system for its preliminary examination in applied/critical area, research/methodology, or teaching. Details are available from the program director.

Ph.D. Oral Comprehensive Examination. Upon completion of all course requirements for the Ph.D. and of the Task, except for dissertation and internship, the student must pass the oral comprehensive examination. Details are available from the program director.

Doctoral Dissertation. The Ph.D. dissertation must be based on an original, empirical investigation. A minimum of 12 hours in dissertation in clinical child psychology is required.

Predoctoral Internship. An 11-month clinical internship at a setting accredited by the American Psychological Association is required. Students enroll in ABSC 963/PSYC 963 for a total of 3 credit hours.

**Courses**
See the course listings for the Departments of Applied Behavioral Science and Psychology.

**Communication Studies**
Chair: Robert Rowland
Bailey Hall, 1440 Jayhawk Blvd., Room 112
Lawrence, KS 66045-7574, www.ku.edu/~coms
(785) 864-9868
Graduate Adviser: Denn W. Parson,
116D Bailey Hall, (785) 864-9874
Professors: Asuncion-Lande, Carlin, Downs, Hummert, Keyton, Parson, Rowland
Courtes Professors: Kemper, Shelton
Professors Emeriti: Baumgartel, Conboy, Crockett, Kerkman, Linkugel
Associate Professors: Baym, Beisecker, Friedman, Gold, Runkel, Pennington
Assistant Professors: Banwart, Dennis, Harris, Manolescu, Monberg, Russo

**Admission**
All domestic and Ph.D. applicants on the Lawrence or KU Edwards campus must submit the Graduate Record Examination. International students who apply to Lawrence must submit the Test of English as a Foreign Language scores. International students who have earned a U.S. degree must submit GRE scores.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send the application (paper or online), application fee, GRE scores and two sets of official transcripts to
The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
M.A. Degree Requirements

Concentration in Communication Studies. For course work areas, see Ph.D. requirements.
1. Satisfactory completion of these required courses:
   Communication Studies (30 hours total)
   - COMS 850 Introduction to Research Methods ................. 3
   - COMS 851 Communication Research: Historical and Descriptive
     (3) or COMS 852 Communication Research: Experimentation
     and Quantitative Analysis (3) ........................................ 3
   - COMS 859 Proseminar in Communication Studies ............. 3
   - COMS 899 Master's Thesis ........................................... 6
2. At least 6 hours in each of two areas of communication.
3. Three additional credit hours from any communication studies courses or from outside the department.
4. Final oral examination.

A nonthesis option is available in communication studies. Requirements for this option include
1. Satisfactory completion of these required courses:
   Communication Studies (6 hours total)
   - COMS 859 Proseminar in Communication Studies .......... 3
   - COMS 850 Introduction to Research Methods ................. 3
2. At least 9 hours in each of two areas of communication.
3. Six hours of electives.
4. General examination. Each student must complete an examination over the two course work concentrations. The examination is structured as follows:
   (a) One hour written over required courses.
   (b) Two hours written over the first major area of communication.
   (c) Two hours written over the second major area of communication.
   (d) One hour oral examination.

KU Edwards Campus M.A. Program

The M.A. also is offered on the KU Edwards Campus in Overland Park. The requirements for the degree at the Edwards Campus are the same as for the program on the Lawrence campus. Edwards Campus classes are taught by the same faculty members who teach regularly in Lawrence. Courses are scheduled during the evenings to accommodate working professionals.

Ph.D. Degree Requirements

Concentration in Communication Studies. Requirements include the following:
1. COMS 859, COMS 958, and COMS 959 under Basic Communication Theory (9 hours). (COMS 859 is waived for students with the M.A. in communication).
2. A minimum of 27 hours of additional subject matter courses.
   (a) These courses must represent two emphases.
   (b) These areas are developed by the student in consultation with the adviser and the director of graduate study.
   (c) If a student holds a master’s degree in communication studies (or equivalent), appropriate course work from this degree may be used to fulfill the subject matter course requirements. However, the total number of hours from the M.A. program used to satisfy items 2c, 3, and 4 must not exceed 24 hours.
3. Eighteen hours of electives, which may be chosen from another department or any phase of the program itself. These 18 hours may be distributed and need not be all in the same department. They may be used to broaden or intensify the program, as long as they constitute a meaningful course of study. Only 6 hours may be in independent study. Students with master's degrees from other universities satisfy this requirement with 18 hours from their master’s programs.
4. A minimum of 15 hours of research methodology.
   (a) Courses required of all students:
     COMS 850 Introduction to Research Methods ................. 3
     COMS 851 Communication Research: Historical and Descriptive
     or COMS 852 Communication Research: Experimentation
     and Quantitative Analysis (3) ........................................ 3
   (b) Choose 9 additional hours from the following courses appropriate to the student’s research/dissertation interest ........ 9

Experimental and Quantitative Empirical Methods
   COMS 850 Communication Research: Quantitative Analysis (3)
   COMS 956 Principles of Analysis of Variance (3)
   COMS 957 Principles of Correlational and Multivariate Analysis (3)
   PRE 905 Multivariate Analysis (3)
   PRE 906 Confirmatory Factor Analysis and Multivariate Statistical
     Modeling (3)

Historical/Critical
   HIST 805 The Nature of History (3)
   ENGL 908 Seminar in Literary Criticism: .......... (3)
   COMS 955 Seminar in Rhetorical Criticism (3)
   TH&F 920 Practicum in Criticism (3)
   COMS 930 Seminar in Speech: Textual Criticism (3)
   COMS 951 Seminar in Movement Theory and Genre Criticism (3)
   COMS 952 Seminar in Mythic and Narrative Approaches to
     Rhetorical Criticism (3)

Qualitative/Empirical
   ANTH 730 Linguistics in Anthropology (3)
   SOC 813 Field Methods and Participant Observation (3)
   COMS 848 Communication Audits in Organizations (3)
   COMS 855 Qualitative Research Methods in Communication
     Studies (3)

In lieu of 3 hours of methodological course work, a student may elect to enroll in 3 hours of applied research in which he or she produces original research using one of the above methods. The final paper must meet the approval of the student’s adviser and must be submitted to a professional society for presentation on a convention program or to a professional journal for possible publication.

In lieu of 3 hours of methodological course work, a student may elect to demonstrate a high level of writing competence in one foreign language if she or he can show that knowledge of this language directly relates to his or her research and academic interests. Competence levels are determined through consultation with the appropriate language department or program.

5. Ph.D. dissertation (18 or more hours).
6. Satisfactory completion of the oral and written comprehensive examination.
7. Final oral examination.

● Communication Studies Courses
   COMS 530 Internship in Communication Studies (1-3).
   COMS 551 Seminar in Leadership Strategies and Applications (3).
   COMS 552 Leadership Studies Practicum (1-3).
   COMS 534 Interpersonal Communication in Organizations (3).
   COMS 535 American Public Address, Puritans to 1900 (3).
   COMS 536 American Public Address, 1900 – Present (3).
   COMS 537 Communication in Conflict Resolution (3).
   COMS 538 Persuasion Theory and Research (3).
   COMS 539 Argumentation (3).
   COMS 543 Group Leadership Practicum (1-3).
   COMS 544 Advanced Interpersonal Communication: Theories and
     Research (3).
   COMS 545 Narratives in Oral Communication (3).
   COMS 546 Communication Across the Life Span (3).
   COMS 547 Communication and Culture (3).
   COMS 548 Theories of the Interview (3).
   COMS 549 Communication in Service and Sales (3).
   COMS 550 Ethical Issues in Public Communication (3).
   COMS 551 The Rhetoric of Black Americans (3).
   COMS 552 The Rhetoric of Women’s Rights (3).
   COMS 553 Communication in Political Campaigns (3).
   COMS 559 Seminar in: .......... (1-3).
   COMS 560 Seminar in: .......... (1-3).
The outstanding debate program at KU holds several national distinctions, including the first pair of national distinctions for the debate program at the University of Kansas. COMS 547 Issues in Intercultural Communication (3). COMS 667 Interpersonal Communication in Multinational Organizations (3). COMS 669 Human Conflict and Peace (3).

COMS 710 Survey of Theory and Research in Organizational Communication (3). This course examines the theoretical and philosophical underpinnings of organizational communication research. Course topics cover variable analytic traditions and systems theory, as well as cultural, critical, and various interpretive approaches to understanding communication in organizational contexts. Prerequisite: COMS 310 and permission of the instructor. LEC

COMS 730 Writing and Speaking for Decision Makers (3). Theory and application of communication strategies for corporate communication. This course presents rhetorical analysis of organizational situations and audiences, focusing on corporate decision-makers. Included are informative and persuasive communication strategies such as proposal presentations, responses to requests for proposals, grant proposals, and persuasive presentations for adoption, implementation, or evaluation of organizational programs. Course is limited to Regents Center students. LEC

COMS 741 Special Topics in Communication Studies: (2-3). Examination of special topics in Communication Studies. Prerequisite: Instructor consent. LEC

COMS 784 Proseminar in Communication and Aging (1). A weekly forum for students and faculty to discuss professional issues and interdisciplinary research in communication and aging. May be repeated for credit. (Same as PSYC 784.) (Same as SPLH 784.) Prerequisite: Consent of instructor. LEC

COMS 787 Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (psychology, biology, sociology, and communication) perspective on aging. The proseminar surveys contemporary basic and applied research, service programs, and policy and management issues in gerontology. (Same as ABSC 578; AME 675; RC 575; PSYC 787.) LEC

COMS 807 Rhetoric, Politics and the Mass Media (3). This course investigates the ways in which rhetorical strategies (persuasive and linguistic usage) permeate the relationship between politics and politicians and the mass media. We will analyze media coverage of political debates, the presidential use of radio, television and press conferences, the network evening news coverage of political events, the influence of political advertising to see how political decisions are influenced by and influence the media. LEC

COMS 810 Organizational Communication: Theory and Research (3). This course examines the theoretical and philosophical underpinnings of organizational communication research. Course topics cover variable analytic traditions and systems theory, as well as cultural, critical, and various interpretive approaches to understanding communication in organizational contexts. Prerequisite: COMS 310 and permission of instructor. LEC

COMS 835 Impression Formation and Interpersonal Behavior (3). Intensive investigation of the processes involved in impression formation and of the effects of established impressions upon interpersonal communication. (Same as PSYC 845.) Prerequisite: COMS 535 or PSYC 670. LEC

COMS 843 Changing Communication Behavior (3). Study of theory, research, and methods related to changing communication behavior in teaching, training, consulting, coaching, and/or counseling contexts. LEC

COMS 844 Seminar in Interpersonal Communication (3). This class will address current theory and research in interpersonal communication. Issues addressed will include verbal or nonverbal communication in families, close relationships, initial interactions, and the like. LEC

COMS 846 Communication and Aging (3). Examination of the interrelationship between communication and the aging process. The course will include current research and theory on such topics as intergenerational communication, language and age identity, age-stereotyping and communication, media and aging, age and health communication, and others of current interest in the field. LEC

COMS 848 Communication Audits in Organizations (3). The principal thrust of this course is a hands-on analysis of the communication in 1-2 organizations. Students work with a consulting group to analyze systems and patterns of communication, communication channels, job satisfaction, organizational commitment, and communication strategies. Experience is gained in organizational research methods, instrument development, organizational analysis, feedback techniques, and the like. LEC

COMS 850 Introduction to Research Methods (3). An introduction to methodological approaches to the study of communication. Approaches considered will include (a) humanistic message analysis and evaluation; (b) ethnographic and observational techniques; (c) survey construction and execution; and (d) experimental design and procedures. Special focus on issues of validity, reliability, and ethics. LEC

COMS 851 Communication Research: Historical and Descriptive (3). An introduction to types of historical and descriptive research in human communication. Library resources and methods of research will be covered. Emphasis will be placed upon preparing a research prospectus and upon writing the research report. LEC

COMS 852 Communication Research: Experimental and Quantitative Analysis (3). An introduction to the process of research in communication studies, including consideration of basic principles in research design, methods of observation and measurement, and the application of appropriate statistical techniques. Prerequisite: COMS 755 or equivalent. LEC

COMS 856 Communication Research: Quantitative Analysis (3). An intermediate overview of statistical techniques commonly used in communication studies, including consideration of basic principles in statistical tests such as t-test, correlation, chi-square, and other nonparametric techniques of data analysis. Additionally, factorial analysis of variance, multiple regression, and factor analysis will be covered, along with the appropriate statistical techniques. Prerequisite: COMS 850 and an introductory course in statistics. LEC

COMS 859 Proseminar in Communication Studies (3). An overview and integration of communication studies based upon an examination of selected basic writings in the discipline. LEC

COMS 860 New Communication Technology and the Work Place (3). An examination of changes in the work place and for workers associated with new communication technologies such as e-mail, voice mail, teleconferencing, and computer-supported decision-making. Emphasis is on changes in organizational communication patterns, participant responses to the technologies, and evaluation of the outcomes of implementing work place communication technologies. To be taken by Regents Center students. LEC

COMS 898 Investigation and Conference (For Master's Candidates) (1-8). (Limited to eight hours credit toward the M.A. degree.) Directed research and experimentation for M.A. students in some phase of speech science or the teaching of speech and drama. RSH

COMS 899 Master's Thesis (1-6). THE

COMS 907 Seminar in Political Communication (3). This course will focus on contemporary political communication theory and illustrate how such theories are exemplified in modern political contexts: political arguments and developing consensus, communication strategies in Congressional and bureaucratic decision-making, the rhetorical presidency, the dissemination of political information, political narrative, and political campaigns. LEC

COMS 930 Seminar in Speech (1-4). Special problems in speech. Prerequisite: Twelve hours of credit in the department. LEC

COMS 932 Theories of Rhetoric: Classical (3). An intensive study of the rhetorical theories of classical writers from 466 B.C. to the decline of Roman oratory. Principal emphasis will be on Isocrates, Plato, Aristotle, Quintilian, Cicero, and the like. LEC

COMS 933 Theories of Rhetoric: Neo-Classical (2-3). A study of the development of rhetorical theory from 325 A.D. to the twentieth century. Notable departures from the classical tradition will be examined. Special concentration on the writings of Augustine and the tradition of medieval preaching. Alcuin, Ramsus, Bacon, Campbell, Whately, Blake, John Quincy Adams, and the elocutionary movement. LEC

COMS 938 Seminar in Language and Discourse (3). This seminar uses interdisciplinary readings to examine central theoretical questions regarding language and communication. The course moves from considering major theoretical positions to current research in communication on discourse. Methodological issues in the study of language and discourse are also addressed. LEC

COMS 939 Seminar in Persuasion (2-3). Examination of selected topics in persuasion, with emphasis on the application of recent theories and experimental research to the analysis of persuasive discourse. Prerequisite: COMS 538 or equivalent. LEC

COMS 939 Seminar in Argumentation (2-3). Examination of special problems in argumentation, with emphasis on the relationship of systems of argumentation to their philosophic presuppositions. Discussion of the writings of Toulmin, Natsun, Johnstone, Perelman, Dewey. Prerequisite: COMS 539 or equivalent. LEC

COMS 941 Seminar in Health Communications (3). This course is a survey of the many disciplines of study found in the field of health communication. Emphasizes include decision making regarding health-related behaviors, the influence of interpersonal messages, negotiating treatment with health care providers, coping with medical difficulties, the critical examination of medical research, news, and health campaigns, and the impacts of new technologies. SEM

THE UNIVERSITY OF KANSAS • 2005/07 GRADUATE SCHOOL CATALOG
COMS 942 Seminar in Small Group Communication (2-3). Study of communication in face-to-face and co-acting groups. Analysis of research in communication and group interaction. Prerequisite: COMS 756. LEC

COMS 943 Seminar in Human Relations Training Theory (3). Concepts and practices of various approaches to teaching and training in human relations. Theories of group development and the trainer role. Current issues in training; sensitivity approaches, instrumented groups, theory of structured exercises, laboratory planning. Prerequisite: COMS 942. LEC

COMS 944 Practicum in Human Relations Instruction (3). Supervised practicum in application of approaches to teaching and training in human relations. Prerequisite: COMS 943 and consent of instructor. LEC

COMS 945 Seminar in Social Support (3). This course is a survey of the many disciplines of the fundamental form of communication known as social or emotional support or comforting. Emphases include measuring, receiver-, and interactional-oriented approaches, as well as support contexts, dilemmas, structures, features, and positive effects on physical and mental health. SEM

COMS 946 Seminar in Communication and Intergroup Relations (3). Conceptual and theoretical frameworks for exploring and understanding relations between individuals from different societal groups (e.g., cultural/ethnic, gender, age). Focus on issues of identity, power relations as manifested in interpersonal, mass media, and organizational contexts. The course will include methodological and applied implications for studying different groups, both within the U.S. and around the world. LEC

COMS 947 Communication in Cultural Innovation and National Development (3). An examination of the role of speech and other types of communication in the introduction of change within cultures and the diffusion of innovation between cultures. Specific communication problems concerning agriculture, education, international aid, military assistance, and public health will be discussed. LEC

COMS 948 Seminar in Organizational Communication (2-3). Analysis of speech communication functions in the organizational structures of business, industry, labor, military, education, government, and professional agencies. Development of conceptual schemes for conducting research and training programs on speech systems which characterize the operation of organized groups. LEC

COMS 949 Communication Strategies and Human Resources (3). Leadership and human resource theories are analyzed in terms of the development of communication strategies in organizations. Applications are made to teambuilding, training, group development, motivation, and organizational development. LEC

COMS 950 Seminar in Public Address: Theory and Practice (3). The study of public address by historical periods or by topics. LEC

COMS 951 Seminar in Movement Theory and Genre Criticism (3). This course examines the theoretical and methodological underpinnings of approaches to rhetorical analysis focusing on social movements and rhetorical genres. It will review existing theory on these topics, develop a methodological approach to both forms of critical analysis, and test each methodological approach via case studies. Prerequisite: COMS 755 or consent of instructor. LEC

COMS 952 Seminar in Mythic and Narrative Approaches to Rhetorical Criticism (3). This course examines the theoretical and methodological underpinnings of approaches to rhetorical analysis focusing on narrative rhetoric, with a special emphasis on myth as a type of narrative. It will review existing theory on these topics, consider a number of alternative methodological approaches, and test each methodological approach via case studies. Prerequisite: COMS 755 or consent of instructor. LEC

COMS 953 Seminar in Organizational Rhetoric (3). This course focuses on theoretical and methodological materials related to the use of rhetoric in an organizational setting. It will review existing theory and methodological development on this topic, paying special attention to the distinction between rhetoric used within an organization and rhetoric focused on audiences external to the organization. Multiple case-studies will be considered to illuminate the functioning of both internal and external organizational rhetoric. Prerequisite: COMS 755 or consent of instructor. LEC

COMS 954 Computer Applications in Communication Research (3). An introduction to the principles of digital computer operation and survey of their applications to problems in communication research. Topics considered will include the features of computer installations in general and at KU, flow-charting, FORTRAN and other computer languages, and numerical and non-numerical applications. Practical programming experience will be required of all students during the course. LEC

COMS 955 Seminar in Rhetorical Criticism (3). A study of contemporary and historical writings on rhetorical criticism. Emphasis is placed upon the development of critical methodology for future research and writing. Prerequisite: COMS 755. LEC

COMS 956 Principles of Analysis of Variance (3). An examination of experimental designs based on the analysis of variance. Topics considered will include factorial designs, trend analysis, confounding, counterbalanced designs, and analysis of covariance. Prerequisite: COMS 756. LEC

COMS 957 Principles of Correlational and Multivariate Analysis (3). An examination of procedures to identify relationships in descriptive data. The focus will be on multivariate procedures. Topics considered will include multiple and partial correlation, factor analysis, and discriminant analysis. Prerequisite: COMS 756. LEC

COMS 958 Comparative Theories of Speech Communication (3). A descriptive and comparative analysis of theories of communication applicable to speech behavior. Prerequisite: COMS 859 or equivalent. LEC

COMS 959 Theories of Rhetoric: Contemporary (3). A study of the writings on rhetorical theory in the twentieth century. Principal emphasis will be on the psychological treatment of rhetoric. L. Richards and Kenneth Burke, and the relationship in the twentieth century between rhetoric and dialectic, rhetoric and poetic. Prerequisite: COMS 859 or equivalent. LEC

COMS 997 Research in Communication (1-6). Supervised research under the direction of a faculty member on a topic of mutual interest to the faculty and graduate student. RSH

COMS 998 Investigation and Conference (For Doctoral Candidates) (1-8). (Limited to eight hours credit toward the Ph.D. degree.) Directed research and experimentation for Ph.D. students in some phase of speech science or the teaching of speech and drama. RSH

COMS 999 Doctoral Dissertation (1-12). THE

Communicative Disorders: Intercampus Program

The Intercampus Program in Communicative Disorders comprises the Department of Speech-Language-Hearing; Sciences and Disorders on the Lawrence campus and the Department of Hearing and Speech on the KU Medical Center campus. Audiology courses are listed under Communicative Disorders: Intercampus Program in the School of Allied Health chapter of this catalog. Speech-Language Pathology courses are listed below.

Speech-Language-Hearing: Sciences and Disorders, Lawrence:

Chair: Hugh Cats, cats@ku.edu
Dole Center, 1000 Sunnyside Ave., Room 3001
Lawrence, KS 66045-7555
www.ku.edu/~sphl, (785) 864-0630

Hearing and Speech, KU Medical Center:

Chair: John Ferraro, ferraro@kumc.edu
3051 H.C. Miller Building, Mail Stop 3039, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.alliedhealth.kumc.edu/programs/hearing
(913) 588-5937

Professors: Barlow, J. Brandt, Cats, Ferraro, Fey, Rice, Wilcox

Courtesy Adjunct Professors: Brady, S. Brandt, McCall, Steele, Storms

Professors Emeriti: Bowline, Diehrich, Marston, McLean, McReynolds, Michel, Salmon, Schiefelbusch

Associate Professors: Carpenter, Chertoff, Jackson, Loeb, Widen

Clinical Associate Professor: Wegner

Assistant Professors: Auer, Ferguson, Storkel

Clinical Assistant Professors: Bunce, Daniels

Clinical Instructors: Banks, Gatts, Haring, Keener, Kieffer, Schroeder

The Intercampus Program in Communicative Disorders is directed by a committee of faculty members of professorial rank from each of the cooperating departments. The committee is responsible for instruction, curriculum planning, student selection and advising, clinical practicum policies, and course scheduling. Its recommendations are subject to review by the departments and are channeled through the departments to the Graduate School. The program offers the Master of Arts and Doctor of Philosophy degrees in speech-language pathology and the M.A., Doctor of Audiology (Au.D.), and Ph.D. in audiology. The Lawrence depart-
ment collaborates with the Departments of Applied Behavioral Science, Linguistics, and Psychology to offer a Ph.D. in child language. Although the committee directs a broad set of activities related to the intercampus program, it is not a degree-granting agency. All degrees are conferred by the Graduate School.

**Intercampus Programs**

Students pursuing graduate degrees in the programs administered by the intercampus committee take course work on the Medical Center campus in Kansas City and on the main campus in Lawrence. A student may live in either community. Block scheduling of courses reduces the frequency of commuting.

Submit your application to the Graduate School online at www.graduated.ku.edu. Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Department of Speech-Language-Hearing
Dole Center, 1000 Sunnyside Ave., Room 3001
Lawrence, KS 66045-7555

**Master’s Degree Programs**

**Requirements for the Master of Arts Degree with a Major in Speech-Language Pathology**

**Program with Thesis.** Prerequisites:

- An acceptable bachelor’s degree.
- Thirty-four hours of credit in speech pathology, including SPLH 120, SPLH 261, SPLH 320, SPLH 465, SPLH 466, SPLH 565, SPLH 566, SPLH 574, SPLH 660, SPLH 662, SPLH 663, SPLH 668, and SPLH 671, or their equivalents.
- Twenty hours of credit in allied fields, including courses in physiology, linguistics, and psychology.

Degree Requirements:

1. At least 33 hours of credit in speech pathology and audiology including SPLH 660 Research Methods in Speech-Language Pathology, SPLH 660 Evaluation of Speech and Language, SPLH 864 Advanced Clinical Practice in Speech-Language Pathology (7 credit hours), SPLH 865 Field Study in Speech-Language Pathology (5 credit hours), 4-6 hours in SPLH 890 Master’s Thesis, plus additional elective hours to attain a total of 42 to 48 hours of credit for the degree.
2. A minimum of 375 clock hours of clinical practice. At least 250 of these clock hours must be accumulated at the graduate level.
3. Completion of an acceptable thesis.
4. An oral examination at the end of the program.

**Program without Thesis.** The nonthesis program has the same degree requirements as those described above for the M.A., except that the thesis is replaced with a 3-hour enrollment in a research-related course or seminar.

**Requirements for the Master of Arts Degree with a Major in Audiology**

1. Credit in the following courses: AUD 810, AUD 811, AUD 812, AUD 813, AUD 814, AUD 815, AUD 817, AUD 818, AUD 819, AUD 820, AUD 821, AUD 822, AUD 829, AUD 843, AUD 851, and AUD 940.
2. Supervised clinical practicum, 375 total clock hours with a minimum of 250 clock hours at the graduate level.
3. Completion of an acceptable thesis, for students choosing the thesis option.
4. An oral examination at the end of the program.

**Thesis/Nonthesis Option.** The student should choose either the thesis or the nonthesis option in the fall term of the first year. Students who select the thesis option should enroll in AUD 899 as directed by the thesis adviser for each semester in which thesis work is in progress. The total number of thesis hours ranges from the required minimum of 4 to a maximum of 6 credit hours.

**Requirements for the Master of Science in Education Degree with a Specialization in Deaf Education.** For information, see Special Education in the School of Education chapter of this catalog.

**Au.D. Degree Requirements: Audiology**

The Doctor of Audiology (Au.D.) program prepares students to meet the academic and clinical requirements for the Certificate of Clinical Competence awarded by the American Speech-Language-Hearing Association. General requirements for the degree are the same as those listed for the Ph.D. degrees in Audiology and Speech-Language Pathology, with the exception that Au.D. students are not required to complete a doctoral dissertation. Instead, consistent with ASHA certification standards, a minimum of 2,000 hours of supervised, clinical practicum hours is required for completion of the degree.

**Ph.D. Degree Requirements: Speech-Language Pathology or Audiology**

The Ph.D. programs in speech-language pathology and in audiology offer post-baccalaureate study of normal and disordered aspects of communication. Application materials must include verbal, quantitative, and analytical Graduate Record Examination scores. Students may be admitted with bachelor’s degrees, although most have some form of master’s degree. Incoming students who do not have master’s degrees, or the equivalent, and students who have nonthesis master’s degrees must initiate a thesis-equivalent research project, under the direction of a three-member committee, during the first year of enrollment. This project must be completed before the comprehensive oral examination.

**Program Guide Beyond the Baccalaureate Level.**

Upon admission to the Ph.D. program, the student and his or her adviser choose a doctoral advisory committee. This committee begins its function as soon as possible and approves the student’s program by no later than the end of the second semester of residence. The three-person committee must include the student’s adviser and at least one additional member from the intercampus executive committee. The committee works with the student in planning a program consonant with the career goals of the student and the resources of the department. The committee is responsible for guiding the student’s progress through the selected program of study.

To meet Graduate School requirements, the Ph.D. aspirant must pass an oral comprehensive examination. Before being admitted to this examination, the student must have satisfied (1) the majority of course requirements (defined by the advisory committee) in the student’s emphasis area (a minimum of 40 graduate credit hours in the major interest, which may include hours accumulated toward a master’s degree), (2) 15 graduate hours in research, (3) a minimum of 12 graduate hours in a correlative area outside the student’s major emphasis, and (4) satisfactory performance on a written preliminary examination encompassing the student’s emphasis area and research skills. Students also must complete the FLORS requirement as outlined in the Ph.D. Handbook of the Intercampus Program.
After the student has passed the comprehensive examination, she or he must complete a research project approved by a committee of three faculty members and write a dissertation based on that research. The dissertation is expected to be a scholarly work that reflects the student’s ability to conduct independent, original research. A minimum of 10 hours of dissertation credit is required. Completion of the dissertation is followed by the final oral examination and defense of the dissertation. Additional information about the department and about faculty research interests is contained in a departmental brochure available upon request.

**Ph.D. Degree Requirements: Child Language**

For information on the Ph.D. in Child Language, see Child Language in this chapter of the catalog.

**Scholarships, Assistantships, Fellowships**

Students in the speech-language pathology and audiology programs may apply for teaching, clinical, and research assistantships, U.S. Office of Education fellowships, Veterans’ Administration Hospital traineeships, and other types of financial assistance.

● **Speech-Language-Hearing: Sciences and Disorders Courses**

For courses in Audiology, see the School of Allied Health chapter of this catalog.

**SPLH 565 Language Sample Analysis Lab (1).**

**SPLH 566 Language Development (3).**

**SPLH 660 Research Methods in Speech-Language-Hearing (3).**

**SPLH 662 Principles of Speech Science (3).**

**SPLH 663 Principles of Hearing Science (3).**

**SPLH 666 Introduction to Audiological Assessment and Rehabilitation (4).**

**SPLH 669 Audiology I (3).**

**SPLH 670 Beginning Clinical Practice in Audiology (1-3).**

**SPLH 671 Introduction to Speech-language Pathology (4).**

**SPLH 672 Clinical Practice in Speech-language Pathology (3).**

**SPLH 699 Principles of Speech Perception (3).**

**SPLH 761 Aural Rehabilitation (3).** Study of the communication problems associated with hearing loss. Introduction to aural rehabilitative intervention related to speech, language, and academic achievement in children with early hearing loss, as well as, communication for adults with acquired hearing loss. Prerequisite: SPLH 660 or equivalent. LEC

**SPLH 764 Seminar in: _____**

**SPLH 774 Probationary Seminar in Communication and Aging (1).** A weekly forum for students and faculty to discuss professional issues and interdisciplinary research in communication and aging. May be repeated for credit. (Same as COMS 784.) Prerequisite: Consent of instructor. LEC

**SPLH 799 Probationary Seminar in Child Language (2).** A review and discussion of current issues in children’s language acquisition. May be repeated for credit. Students are graded S/F. (Same as ABSC 797, LING 799 and PSYC 799.) (Formerly HDFL 797.) LEC

**SPLH 816 Language Development (3).** Study of language acquisition in children, including the morphologic, syntactic, and semantic components. Methods of language measurement, the role of comprehension, and pragmatic aspects of language use will be included. Not open to students who have credit for SPLH 566. Laboratory by appointment. LEC

**SPLH 820 Developmental Phonological Disorders (2).** Focuses on speech and non-speech characteristics of children with developmental phonological disorders. Emphasis placed on collection and phonetic transcription of speech samples, phonological analysis of transcribed data, and decision-making processes in assessment and intervention. LEC

**SPLH 822 Dysphagia/Apraxia (2).** This course describes the neuromotoric bases of motor-speech processes, the diagnosis, classification, assessment, prognosis, and treatment of dysphagia(s) and ADH(s). LEC

**SPLH 824 Fluency Disorders (2).** The nature of stuttering in children and adults is discussed. Theories regarding etiology, development, and maintenance of the disorder are presented. Emphasis is placed on various clinical approaches to assessment, measurement, and intervention. LEC

**SPLH 826 Phonatory Disorders (2).** This course reviews the function of the laryngeal and respiratory mechanisms including the parameters and processes of phonation. Primary content addresses diagnosis, description, and treatment of organic and non-organic disorders of phonation. LEC

**SPLH 828 Speech Disorders in Special Populations (2).** This course reviews anatomy and physiology of the velopharyngeal mechanism and associated disorders considered. Anatomy, physiology, and rehabilitation associated with cleft palat, pharyngolaryngeal abnormalities discussed. Emphasis is on the speech problems of infants following medical management. Populations include individuals with laryngectomies, glottostomies, and tracheotomies. LEC

**SPLH 832 Dysphagia (2).** This course covers normal and disordered swallowing. Evaluation and treatment of swallowing disorders, the dysphagia team, and dysphagia in special populations are considered. LEC

**SPLH 836 Genetics of Communication and Learning Disorders (2).** This course focuses on the description, assessment, and treatment of communication problems associated with particular genetic syndromes (e.g., Down’s, Turner’s syndromes). Also covered are current data about the genetic factors involved in nonsyndromic communication and learning problems, such as those commonly seen in the schools. Ethical and practical issues in these areas are discussed. LEC

**SPLH 840 Language Disorders of Children: Infants and Toddlers (2).** This course examines factors relating to language disorders in the birth to three population. Apraxia risks, as well as those with known etiologies, are considered. Information on assessment, intervention, and service delivery models is addressed. Issues relating to Public Law 99-457 are also examined. LEC

**SPLH 842 Language Disorders of Children: Preschool (3).** This course examines language disorders of preschool-age children in the late preschool years. The course includes information on incidence, characteristics, assessment, and intervention. Theoretical issues and their implication for language intervention are also examined. LEC

**SPLH 844 Language Disorders of Children: School Age (2).** This course examines language development during the school years and how problems in this development interact with school performance. Emphasis is placed on the role of the speech-language pathologist in the early identification, assessment, and remediation of language-learning problems. LEC

**SPLH 846 Language Disorders of Adults (2).** Neurological aspects of language processes, classification of aphasia, and assessment of language deficits are discussed. Management approaches including intervention strategies and rehabilitation are also considered. LEC

**SPLH 848 Language Disorders of Special Populations (2).** This course focuses on the unique language impairments of individuals with mental retardation, autism, cerebral palsy, hearing impairments, dual sensory impairments, and other communication disorders (e.g., ADHD). Language characteristics as well as assessment and intervention strategies are studied. LEC

**SPLH 850 Language Disorders Secondary to Closed Head Injury and Dementia (2).** Neuropsychology and relevance of brain injury are discussed. Characteristics and intervention strategies relating to traumatic brain injury and dementia are studied. LEC

**SPLH 852 Augmentative and Alternative Communication (2).** This course describes augmentative and alternative communication (AAC) assessment and intervention issues as they apply to children and adults with both congenital and acquired speech and/or language disabilities. Populations of study include children, assessment strategies and procedures, intervention strategies, and AAC information resources. LEC

**SPLH 854 Reading Disorders (2).** This course addresses the perceptual, linguistic, and cognitive processes utilized in written communication. Acquired and developmental disorders of written language are examined in relation to issues concerning characteristics, etiology, early identification, assessment, and remediation. LEC

**SPLH 860 Evaluation of Speech and Language (2).** Provides a general framework for speech and language evaluations. Issues related to initiation and termination of treatment are discussed. Practice is provided in evaluating norm- and criterion-referenced information used in diagnostic, referral, and treatment decisions. LEC

**SPLH 861 Seminar in Research Methodology in Speech Pathology and Audiology:** (3). This seminar is concerned with the design, instrumentation, execution, and reporting of research in audiology and speech pathology. SPLH 780 or its equivalent and some statistics are recommended before entering this seminar. LEC

**SPLH 862 Clinical Processes (1).** Orients student to clinical procedures, policies, requirements, and expectations of program. Therapy models, planning, and philosophies are discussed along with implementation and evaluation of therapy procedures. Professional issues are also considered. May be repeated for credit. LEC

**SPLH 864 Advanced Clinical Practice in Speech-language Pathology (2).** Students conduct supervised clinical work in a variety of settings. May be repeated for credit. Prerequisite: Department approval. Group and individual conferences with staff required. FLD

**SPLH 866 Field Study in Speech-language Pathology (5-12).** The field study provides work experiences in clinical settings. The student takes this course near the end of the degree program. As...
Computer Science
See Electrical Engineering and Computer Science in the School of Engineering chapter of this catalog.

Croatian and Serbian
See Slavic Languages and Literatures.

Czech
See Slavic Languages and Literatures.

Drama
See Theatre and Film.

East Asian Languages and Cultures
Chair and Graduate Adviser: Keith McMahon
Wescoe Hall, 1445 Jayhawk Blvd., Room 2118
Lawrence, KS 66045-7590, www.ku.edu/~ealc
(785) 864-3100
Professors: Johnson, McMahon
Associate Professors: Childs, Gerbert
Associate Professor Emeritus: Kuo
Assistant Professors: Eda, Stevenson

The Department of East Asian Languages and Cultures is the only department in Kansas offering a regular program of instruction in the languages, literatures, and cultures of East Asia.

The areas of East Asia covered represent two of the oldest continuous civilizations of the world. The great historical contributions of China and Japan in areas such as literature, philosophy, and art are widely recognized and studied throughout the world. Today, the highly advanced industries of Japan, the enormous human resources of China, and the rapidly growing economies of Korea and Taiwan have contributed to the development of extremely valuable socio-political and economic ties between these areas and the United States. The program trains people who will devote themselves to becoming effective links between the Far East and the United States.

Graduate Record Examination verbal and analytical test scores are required. Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of East Asian Languages and Cultures
Wescoe Hall, 1445 Jayhawk Blvd., Room 2118
Lawrence, KS 66045-7590

Master's Program
The department offers a master's degree in East Asian languages and cultures. The student declares his or her concentration in one of three options.
1. Chinese language and literature.
2. Japanese language and literature.
3. East Asian cultures.
Students of Chinese or Japanese language and literature gain in-depth knowledge of these ancient civilizations, which have produced some of the world’s greatest literature.

Students of East Asian cultures develop a broad interdisciplinary knowledge of East Asia. This concentration is for students pursuing professional or noncollege teaching careers, for students in the early stages of language training, or for students who have already acquired competence in an East Asian language.

**Prerequisites.** Entrance requirements for students pursuing a concentration in either Chinese or Japanese language and literature include:

1. Three years of the modern language and, for Chinese language students, one year of classical Chinese or the demonstrated equivalent. Students not meeting this prerequisite may be admitted with deficiencies provided they achieve this level of proficiency outside the minimum of 30 graduate credit hours required for the degree.

2. Two lecture courses dealing with East Asia.

Entrance requirements for students pursuing a concentration in East Asian cultures are:

1. At least two years of an East Asian language. Students not meeting this prerequisite may be admitted with deficiencies provided they achieve this level of proficiency outside the minimum of 30 graduate credit hours required for the degree.

2. Two lecture courses dealing with East Asia.

**Requirements for Chinese or Japanese Language and Literature Concentration**

1. A minimum of 30 graduate credit hours.
   (a) Fourth-year level of language courses.
   (b) At least 18 credit hours must be taken in the department while in residence.
   (c) Six of these 18 credit hours must demonstrate research capacity in the student's major language in lecture courses or seminars.
   (d) EALC 700 Introduction to East Asian Studies and the relevant bibliography course must be included.
   (e) No more than 3 hours of directed readings courses may be included in the required 30 hours.
   (f) Students are expected to take at least one course at the 500 level or above in the literature of their concentration.
   (g) Students must take one course that deals wholly with an East Asian country outside their concentration.

2. A thesis (3 credit hours) involving significant use of materials in the student's major language.

**Requirements for East Asian Cultures Concentration**

1. A minimum of 30 graduate credit hours.
   (a) Third-year level of language courses.
   (b) At least 24 credit hours, taken in the department in residence.
   (c) EALC 700 Introduction to East Asian Studies must be included in the student's curriculum.
   (d) Students are expected to select one of the East Asian cultures for concentration and to include in their programs at least two courses dealing wholly with an East Asian culture outside their concentrations.
   (e) Students may take not more than 3 hours of directed readings.
   (f) Students may, in consultation with the department graduate advisor, take other credits in a discipline or disciplines closely related to their studies. East Asian area courses are offered in anthropology, geography, history, history of art, linguistics, philosophy, political science, religious studies, sociology, and theatre and film.
   (g) Students must take one course at the 500 level or above in the literature or thought of the country of their concentration.

2. A thesis (3 credit hours) that must deal with a subject in the concentration chosen by the student.

**East Asian Courses in Other Departments**

**Anthropology**

ANTH 565 Popular Images in Japanese Culture, Literatures, and Films

ANTH 567 Japanese Ghosts and Demons

**Economics**

ECON 583 Economic Issues of East Asia

**Geography**

GEOG 596 Geography of China

GEOG 796 Asian Regions: ___

**History**

HIST 510 Topics in: ___

HIST 583 Imperial China

HIST 584 Modern China

HIST 587 Early Modern Japan

HIST 589 Japan Since 1945

HIST 592 Hans, Turks, and Mongols: The Nomad Factor in History

HIST 593 Modern Korea

HIST 606 Seminar in: ___

**History of Art**

HA 503 Japanese Prints

HA 545 Early Chinese Art

HA 687 Art of Modern China

HA 705 Major Artist: ___

HA 786 Calligraphy of China and Japan

HA 786 Masters of Sung and Yuan Dynasty Painting

HA 786 Masters of Ming and Ch'ing Dynasty Painting

HA 787 Chinese Painting

HA 788 Proseminar in Japanese Art

HA 789 Proseminar in Chinese Art

HA 822 Seminar in Buddhist Art: ___

HA 824 Seminar in Edo Period Painting: ___

HA 825 Seminar in Zen Painting and Calligraphy

HA 836 Seminar in Japanese Literature Art

HA 980 Seminar in Chinese Art: ___

HA 990 Seminar in Japanese Art: ___

**Philosophy**

PHIL 508 Chinese Thought

**Political Science**

POLS 656 Governments and Politics of East Asia

POLS 657 Government and Politics of Southeast Asia

POLS 680 The Politics and Problems of Developing Countries

POLS 676 International Relations of Asia

POLS 678 Chinese Foreign Policy

POLS 956 The Governments and Politics of Asia

POLS 957 Political Processes in Southeast Asia

POLS 960 Politics of Developing Countries

POLS 976 International Relations of Asia

**Religious Studies**

REL 508 Religion in China

REL 509 Religion in Japan

REL 733 Seminar in Eastern Religious Texts: ___

REL 762 Seminar in Eastern Religious Thought: ___

REL 776 Seminar in Religion and Society in Asia: ___

**Sociology**

SOC 833 Traditional Rural China and the Communist Revolution

**Theatre and Film**

TH&F 325 Asian Theatre and Film

TH&F 710 Styles of Acting: Classical Japanese

TH&F 810 Advanced Studies in Japanese Acting

TH&F 827 Japanese Theatre and Film

For additional courses in the above disciplines, see appropriate sections in this chapter of the catalog.

● Chinese Courses

CHIN 504 Advanced Modern Chinese I (5).

CHIN 508 Advanced Modern Chinese II (5).

CHIN 512 Advanced Chinese I (2).

CHIN 513 Advanced Chinese II (2).

CHIN 542 Introduction to Classical Chinese I (3).

CHIN 544 Introduction to Classical Chinese II (3).

CHIN 562 Modern Chinese Literature I (3).

CHIN 564 Modern Chinese Literature II (3).

CHIN 580 Introduction to Chinese Research Materials (1).

CHIN 598 Readings in: ___ (1-3).

CHIN 660 History of Chinese Literature (3).

CHIN 690 Seminar in Chinese Texts (1-3).

CHIN 801 Directed Readings and Research in Chinese (1-4). Advanced language training for the study of Chinese sources in the humanities or social science field of the student. Prerequisite: Consent of instructor. I SH

CHIN 880 Advanced Chinese Research Materials (2). A detailed examination of various Chinese language reference works and research materials. Emphasis will be placed on the use of different types of reference works to carry out research strategies. Prerequisite: CHIN 504 or equivalent and CHIN 880. LEC
EALC 508 Religion in China (3).
EALC 509 Religion in Japan (3).
EALC 510 Education in Japan (3).
EALC 520 Entrepreneurship in East Asia (3).
EALC 527 Asian Theatre and Film (3).
EALC 530 Chinese Culture (3).
EALC 536 Traditional Cultures of Japan (3).
EALC 563 Chinese Cultural History of Korea (3).
EALC 565 Popular Images in Japanese Culture, Literatures, and Films (3).
EALC 567 Japanese Ghosts and Demons (3).
EALC 570 The Structure of Japanese (3).
EALC 572 Structure of Chinese (3).
EALC 575 Love, Sexuality, and Gender in Japanese Literature (3).
EALC 583 Imperial China (3).
EALC 584 Modern China (3).
EALC 585 Reform in Contemporary China (3).
EALC 586 Ancient and Medieval Japan (3).
EALC 587 Early Modern Japan (3).
EALC 588 Japan, 1853-1945 (3).
EALC 589 Japan Since 1945 (3).
EALC 590 Topics in East Asian Languages and Cultures: (1-9).
EALC 591 Topics in East Asian Languages and Cultures: (1-9).
EALC 592 Huns, Turks, and Mongols: The Nomad Factor in History (3).
EALC 593 Modern Korea (3).
EALC 594 Law and Society in Traditional China (3).
EALC 595 Business and Industry in Japan (3).
EALC 596 Defining Japan: Marginalized Groups and the Construction of National Identity (3).
EALC 597 Japanese Theatre History (3).
EALC 598 History and Structure of the Japanese Language (3).
EALC 600 Biography of a City: (3).
EALC 620 Daily Life in China from the Opium War to the Present (3).
EALC 636 Women in Japanese Literature (3).
EALC 642 Chinese Thought (3).
EALC 644 Japanese Thought (3).
EALC 646 Chinese Law (3).
EALC 656 Government and Politics of East Asia (3).
EALC 666 Political Economy of East Asia (3).
EALC 676 International Relations of Asia (3).
EALC 678 Chinese Foreign Policy (3).
EALC 700 Introduction to East Asian Studies (1). Required of all N.A. students in the Department regardless of concentration. Introduction to resources in East Asian languages and literature. LEC
EALC 710 Styles of Acting: Classical Japanese (3). A study of acting styles associated with traditional theatrical genres in Japan: No, Kyogen, and Kabuki. Exercises in chanting and movements, and rehearsal of selected scenes. (Same as TH&F 710.) LAB
EALC 712 Readings in Traditional Japanese Literature (3). A survey of Japanese literature from earliest times to 1868. Students will study the major writers in each genre, with special emphasis on an individual research topic. A knowledge of Japanese is not required. (Not open to students with credit in EALC 312) LEC
EALC 714 Readings in Traditional Chinese Literature (3). A general survey of representative literary works of major genres in traditional China. Lectures, assigned readings, and discussions in English. A knowledge of Chinese is not required. (Not open to students with credit in EALC 314) LEC
EALC 716 Readings in Modern Japanese Literature (3). A survey in English of contemporary Japanese literature. Students will become familiar with the major authors, schools, and genres. An individual research project will be carried out in an area of the student’s special interest. (Not open to students with credit in EALC 316) LEC
EALC 718 Readings in Modern Chinese Literature (2-3). A general survey of the important writers of the 20th century and their works. Lectures, readings, and discussions in English. A knowledge of Chinese is not required. (Not open to students with credit in EALC 318) LEC
EALC 732 Seminar in Eastern Religious Thought: (3). Analysis of the religious thought of selected thinkers of India, China, and/or Japan, traditional and modern. May be taken more than once if subject matter varies sufficiently. (Same as REL 762.) Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC
EALC 733 Seminar in Eastern Religious Texts: (3). Analysis of a selected religious text or texts from India, China, or Japan, in translation, which may be taken more than once if subject matter varies sufficiently. (Same as REL 733.) Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC

EALC 747 Teaching about East Asia (2). An advanced survey of the history, culture, and contemporary affairs of China, Japan, and Korea, specifically designed for K-12 educators who wish to incorporate East Asian topics into their classroom teaching. Pedagogical methods and resources for the study of East Asia will be emphasized. Topics covered will address relevant benchmarks in the state curricular standards in social studies, themes from the Advanced Placement world history examination, and the national standards in world history. (Same as HIST 747.) Prerequisite: Approval of the instructor. LEC
EALC 762 Readings in Japanese Religion (3). A high-level introduction to the traditional religions of Japan, with special emphasis on Japanese Buddhism. Texts to be used will include translations of original documents as well as secondary studies. Those students who have competence in Japanese will be required to do some readings in that language, but a knowledge of the language is not a prerequisite. LEC
EALC 766 Japanese People: Their Culture and Literature (3). A study of Japanese people’s life cycle through a combination of theoretical and scientific observations of Japanese as a cultural group and personal literary descriptions of them. An individual research paper is required. (Not open to students with credit in EALC 366.) LEC
EALC 776 Seminar in Religion and Society in Asia: (3). Analysis of the selected Asian religions and their relationships to selected Asian societies. May be taken more than once if subject matter varies sufficiently. (Same as REL 776.) Prerequisite: REL 507, REL 508, REL 509, or permission of the instructor. LEC
EALC 790 Topics in East Asian Languages and Cultures: (1-3). Special topical courses covering a number of disciplines. Credit descriptions and prerequisites will vary. MAY be repeated for up to 12 total credits. RSH
EALC 801 Directed Readings (1-5). Designed to meet the needs of advanced students whose study in East Asian studies cannot be met with regular courses. Prerequisite: Consent of instructor. RSH
EALC 899 Thesis (1-6). An inquiry into the source material upon a specific subject. THE

JPN 504 Advanced Modern Japanese I (3).
JPN 505 Advanced Modern Japanese II (3).
JPN 509 Business Japanese (3).
JPN 524 Introduction to Classical Japanese I (3).
JPN 544 Introduction to Classical Japanese II (3).
JPN 562 Modern Japanese Texts I (3).
JPN 564 Modern Japanese Texts II (3).
JPN 569 Advanced Business Japanese (3).
JPN 580 Introduction to Japanese Research Materials (1).
JPN 598 Readings in: (1-3).
JPN 690 Seminar in: (1-3).
JPN 801 Directed Readings and Research in Japanese (1-4). Advanced language training for the study of Japanese sources in the humanities or social science field of the student. Prerequisite: JPN 564 or consent of instructor. RSH
JPN 880 Advanced Japanese Research Materials (2). A detailed examination of various Japanese language reference works and research materials. Emphasis will be placed on the use of different types of reference works to carry out research strategies. Prerequisite: JPN 508 or equivalent and JPN 580. LEC

KOR 504 Advanced Modern Korean I (5).
KOR 508 Advanced Modern Korean II (5).

Korean Courses

KOR 504 Advanced Modern Korean I (5).
KOR 508 Advanced Modern Korean II (5).

East Asian Languages & Cultures: Economics

The Policy Research Institute brings university expertise in metropolitan studies, public policy, international relations, and economics to the state, region, nation, and globe.


Ecology and Evolutionary Biology

See Biological Sciences: Ecology and Evolutionary Biology.

Economics

Chair: Joseph Sicilian
Director of Graduate Studies: Gautam Bhattacharyya
Summerfield Hall, 1300 Sunnyside Ave., Room 213 Lawrence, KS 66045-7585, www.econ.ku.edu
(785) 864-3501
Professors: Barnett, Cornet, EHodirip, Iwata, Rosenbloom, Weiss
Associate Professors: Asiedu, Bhattacharyya, Comilli, Earnhart, Faorot, Ginther, Juhi, Keating, Sicilian, Zhang
Assistant Professors: Jin, Ju, Skiba, Wu

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
The economics department offers a Master of Arts degree and a Doctor of Philosophy degree, and in conjunction with the law school, a program in which one can obtain the Master of Arts and Juris Doctor degrees. These programs help students prepare for careers in education, government, and business.

**Admission**

The applicant ordinarily must have an undergraduate grade-point average of B and a high B in economics and mathematics. Applicants to the M.A. and M.A./J.D. programs should have a minimum of 6 semester credit hours of calculus, a calculus-based statistics course, and one semester each of microeconomics and macroeconomics beyond the introductory level. Applicants to the Ph.D. program should also have a total of 15 hours of calculus and a course in linear algebra. A course in real analysis is recommended. Applicants who lack the necessary preparation may be admitted provisionally and are asked to remedy any deficiencies during the first year.

All applications for admission without financial aid should be received by May 1 for the fall semester, November 1 for spring, and May 1 for summer session.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to:

**The University of Kansas**
**Graduate Application Processing Center**
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

**The University of Kansas**
**Graduate Secretary, Department of Economics**
Summerfield Hall, 1300 Sunnyside Ave., Room 213
Lawrence, KS 66045-7585

**Test of English as a Foreign Language or International English Language Testing System Scores.** Students whose native language is not English usually have difficulty in the program unless their English is excellent. The department requires a score of at least 570 on the individual paper-based TOEFL or 23 on the computer-based TOEFL (or the equivalent on other tests) for regular admission, or a IELTS minimum band score of 6.5 with no score below 6.0. Provisional admission is possible with a TOEFL score between 520 and 570 (20 to 23 on the computer-based TOEFL) or IELTS band scores of 5.5 with no score below 5.0.

**M.A. Degree Requirements**

The Master of Arts degree program serves students with little previous background in economics as well as students who majored in economics as undergraduates. The program provides maximum flexibility for students to pursue their own special interests.

Candidates for the M.A. degree must complete a minimum of 30 semester credit hours of graduate work, consisting of 9 hours of required core classes, ECON 700, ECON 701, ECON 715, and 21 hours of electives. At least 18 hours (including the required core classes) must be in economics, but students may take up to 12 hours in related areas, such as business administration, computer science, political science, or mathematics. No more than 9 hours may be taken at the 300 and 600 levels. At initial enrollment, each candidate must file a preliminary plan of study with the graduate adviser. This plan may be revised.

**Thesis and Nonthesis Options.** Candidates may pursue either a thesis or a nonthesis track. Students electing the thesis track must complete a program of 24 hours of formal course work and 6 hours of thesis under the supervision of a thesis supervisor. This work is to be devoted to the completion of a satisfactory thesis. An oral examination is held upon completion of the thesis. Students electing the nonthesis track must complete 30 hours of formal course work and two research papers demonstrating the ability to analyze the literature of economics and to write up the results. Normally, this requirement is satisfied through submission of required papers during the normal course of study.

**Written Comprehensive Examination.** All candidates for the M.A. must demonstrate proficiency in the application of economic theory through a written examination taken during the last semester of enrollment.

**M.A. (Economics)/J.D. Combined Program**

Under this program, a student can obtain both the Juris Doctor and the Master of Arts in economics in three years and one summer session. The requirements for the combined degree are as follows:

1. Admission to the combined degree program must be approved by the School of Law, the Department of Economics, and the College of Liberal Arts and Sciences.
2. The program requires 100 credit hours of course work, of which 82 hours must be completed in the law school and 18 hours in the Department of Economics. The department gives credit toward the master’s degree for 12 hours of pertinent law school work, and 8 credit hours of economics count toward the J.D. degree. The 8 hours of economics courses that count toward the law degree can be chosen from certain courses numbered 500-799 and from all 800-900 level courses. Prerequisites continue to apply, as does the requirement that all students seeking the M.A. degree must have taken several foundational courses that do not count toward a graduate degree in economics—microeconomics, macroeconomics, and calculus. Further, ECON 700, ECON 701, and ECON 715 must be included in the M.A. program. The student takes only law classes the first year and spreads out the 18 hours of credit in economics in the following semesters (e.g., one course per semester).
3. This M.A. is a nonthesis degree, but the program must contain a research component represented by the completion of some independent work or seminars.
4. A final general examination in economics is required of all candidates for this degree.

**Ph.D. Degree Requirements**

**Course Requirements.** In addition to meeting the requirements of the Graduate School, the Ph.D. candidate in economics must complete a minimum of 48 credit hours of course work, at least 42 of which must be in economics.

1. All Ph.D. candidates must complete these core courses in economic theory and quantitative methods:

   - ECON 801 Microeconomic Theory
   - ECON 802 General Equilibrium and Welfare Economics
   - ECON 810 Macroeconomics I
   - ECON 811 Macroeconomics II
   - ECON 817 Econometrics I
   - ECON 818 Econometrics II

2. Course work beyond the core courses listed in (1) is a matter of choice for the student in consultation with the graduate adviser. The graduate adviser develops a program to assist the student in specialized inter-
economics. Each program must include a sufficiently broad range of topics in economics to prepare the student for comprehensive examinations.

**Written Examinations.** Ph.D. degree aspirants must pass a written departmental preliminary examination on completion of the core courses in microeconomics, macroeconomics, and general equilibrium. Students with the proper background in mathematics and economics normally take this test after the first year of course work. This examination may be attempted no more than three times.

Each student must also demonstrate competence in two specializations within economics. This is done by completing two courses in each of these areas. Additionally, each student must complete a seminar paper in one of the two areas. Usually this paper becomes part of the student’s doctoral thesis.

**Comprehensive Oral Examination.** Upon completion of most course work and other requirements for the doctorate, including research skills and residence requirements (but not the dissertation and final oral examination requirements), students must pass the comprehensive oral examination satisfactorily.

**Research Skills.** Each student is expected to attain language or other research skills necessary to meet degree requirements. The nature of these skills is determined by the content of the courses in the program and by the advice of the graduate adviser and the dissertation supervisor. In particular, a knowledge of mathematics beyond the level of elementary calculus is a practical necessity for successful completion of the program; students are expected to acquire such knowledge during their period of study.

**Dissertation.** Following course work and written and oral examinations, the candidate must organize and write a dissertation on some chosen topic, under faculty supervision.

**Final Oral Examination.** The candidate must defend the dissertation successfully in a final oral exam.

**Specializations**
- Econometrics.
- Economic Development and Planning.
- Economic History.
- Economic Theory.
- Industrial Organization and Regulation.
- International Economics.
- Labor Economics.
- Macroeconomics.
- Natural Resource Economics.
- Public Finance.

**Financial Aid**
Although a limited number of university fellowships are available to outstanding students, financial assistance is mainly provided through the economics department in the form of half-time teaching and research assistantships. The duties of a teaching assistant involve leading discussion groups in principles of economics. Some advanced students are offered assistantships with full responsibility in the classroom.

Typically, students in the M.A. and M.A./J.D. programs do not receive financial assistance during the first year of enrollment.

All applications for financial aid should be submitted as early as possible. February 1 is the deadline. Awards are announced on or before April 1. Students expecting to receive financial aid should have Graduate Record Examination aptitude scores forwarded as soon as possible—in no case later than February 1. To be considered for financial aid, international students must send Test of Spoken English scores by February 1.

**Facilities and Services**
In addition to KU computing and library facilities described in the Research and Academic Support chapter, students in the M.A. and Ph.D. programs may use the department’s computer laboratory, which provides access to a variety of databases and econometric software packages useful for economics research.

**Economics Courses**
- ECON 505 History of Economic Analysis (3).
- ECON 510 Energy Economics (3).
- ECON 515 Income Distribution and Inequality (3).
- ECON 520 Microeconomics (3).
- ECON 521 Microeconomics, Honors (3).
- ECON 522 Macroeconomics (3).
- ECON 523 Macroeconomics, Honors (3).
- ECON 524 Managerial Economics (4).
- ECON 525 Managerial Economics, Honors (4).
- ECON 530 American Economic Development (3).
- ECON 534 Economic History of the Caribbean Region (3).
- ECON 535 Economic History of Europe (3).
- ECON 536 Economic Issues in Europe (3).
- ECON 540 Recent American Economic History (3).
- ECON 550 Environmental Economics (3).
- ECON 560 Economic Systems (3).
- ECON 562 The Russian Economy (3).
- ECON 563 Current Economic Issues of East Europe (3).
- ECON 564 Topics in Applied Economics: (3).
- ECON 582 Economic Growth and Development (3).
- ECON 583 Economic Issues of East Asia (3).
- ECON 584 Economic Development of Latin America (3).
- ECON 585 Elements of Economic Planning (3).
- ECON 586 Economic Issues in China (3).
- ECON 587 Economic Development of Africa (3).
- ECON 590 Game Theory (3).
- ECON 595 Regional Economics (3).
- ECON 600 Money and Banking (3).
- ECON 604 International Trade (3).
- ECON 605 International Finance (3).
- ECON 609 Sports Economics (3).
- ECON 610 Resource Economics and Environmental Policy (3).
- ECON 620 Elements of Mathematical Economics (3).
- ECON 622 Public Finance (3).
- ECON 630 Industrial Organization and Antitrust Policy (3).
- ECON 631 Economics of Regulation (3).
- ECON 635 Science and Technology in Economic Growth (3).
- ECON 640 Labor Economics (3).
- ECON 670 Economics of Future Markets (3).
- ECON 675 Introduction to Welfare Economics (3).
- ECON 695 Regional Economic Analysis (3).
- ECON 700 Survey of Microeconomics (3). A comprehensive survey of microeconomics, including the theories of consumption, production, distribution, pricing, and resource allocation. Prerequisite: ECON 520 and MATH 116 or MATH 121; and completion of ECON 142 and ECON 144, ECON 520, and ECON 522 with a grade-point average of at least 3.0 or graduate standing. LEC.
- ECON 701 Survey of Macroeconomics (3). A comprehensive survey of the modern theory of national income determination with particular emphasis on the foundation of macroeconomic models and their empirical implementation. Prerequisite: ECON 522 and MATH 116 or MATH 121. LEC.
- ECON 705 Development of Economic Thought (3). The development of economic thought from the time of the pre-Socratics through the modern period. Consideration is given to the works of the English Classical school, the school of Vienna, the historical school, the Lausanne school, and Cambridge school. In addition, the development of economic thought in the United States during the period is treated. Prerequisite: ECON 520 and ECON 522. LEC.
ECON 715 Elementary Econometrics (3). An elementary analysis of the problems of estimation, prediction, and hypothesis testing in the context of stochastic linear models, in a finite dimensional, distribution-free, random vector space. Theory of least squares, hypothesis testing, and goodness of fit. Prerequisite: ECON 520 and ECON 522 with a grade-point average of at least 3.00 (B) or consent of instructor. LEC

ECON 716 Econometric Forecasting (3). An analysis of econometric forecasting techniques, including time-series models, single-equation regression models, and multiple-equation regression models. The course will examine forecasts of (a) macroeconomic variables, such as interest rates, investment, GNP, and the rate of inflation; and (b) market variables, such as price and quantity. Prerequisite: ECON 715 or ECON 817. LEC

ECON 721 Product and Industrial Organization (3). Advanced study of product and industrial organization. Topics include vertical integration, collusion, multi-plant and multi-product operations, regulated industries, tying arrangements, and the empirical links between monopoly power and profitability. Prerequisite: ECON 630 or equivalent. LEC

ECON 735 Science and Technology in Economic Growth (3). An analytical and historical exploration of the roles that science and technology have played in the economic growth of industrial societies. Topics covered include factors influencing the pace and character of technological innovation, national systems of innovation, the diffusion of new technologies, measurement of the benefits of new technologies, and the role of national technology in growth. Prerequisite: ECON 520, or ECON 524, or consent of instructor. LEC

ECON 740 Theory of Economic Growth and Development (3). Advanced study of the theory of economic growth and development. Recent growth theory, theory of underdevelopment, production possibilities, and plans for development. Prerequisite: ECON 520 and ECON 522. LEC

ECON 741 Economic Planning (3). A study of the techniques employed in the preparation of a national economic plan and of the policies required for its implementation. Special attention is given to the purposes of a plan, development strategies, investment requirements, and project appraisal. The development plans of several countries are examined. Prerequisite: ECON 520 and ECON 522. LEC

ECON 750 The Theory of International Finance (2-3). This course examines the modern, financial-asset market approach to exchange rate determination as well as dynamic exchange rate models. Possible topics may include exchange rate overshooting, exchange rate crises, and international policy coordination. Prerequisite: ECON 605 and MATH 116. LEC

ECON 760 The Theory of Public Finance (3). An analysis of governmental fiscal activity and its economic effects with emphasis on the determination and incidence of budget policy. Prerequisite: ECON 520 and ECON 522; ECON 622 recommended. LEC

ECON 761 Public Sector: Urban and Regional Finance (3). An analysis of the American state and local finance scene with special emphasis on urban, regional tax and expenditure problems and issues. Prerequisite: ECON 520 and ECON 522; ECON 622 recommended. LEC

ECON 765 Advanced American Economic Development (3). A study of the process of economic growth as it has occurred in the American economy, with emphasis on both the 19th and 20th century structural changes that accompanied growth and the impact of technological change are among the major topics considered. Prerequisite: ECON 520, ECON 522 and ECON 530, or consent of instructor. LEC

ECON 766 Economic History (3). The development of market economies and economic institutions. The course will focus on Europe, but will include comparisons with other developed nations. Topics include: long-run economic growth, the rise of capitalism, agriculture and industry, the causes and consequences of technological change; changes in income distribution and economic organization; and the social and cultural effects of economic change. Prerequisite: ECON 520, ECON 522, and ECON 535 or ECON 530, or consent of instructor. LEC

ECON 768 The Industrial Revolution (3). An examination of the development of the industrialization of England and its impact on the North Atlantic economy. Consideration will be given to the effects of demographic and technical changes upon economic structure and the changing economic relationships between nations. Prerequisite: ECON 520 and ECON 522 or consent of instructor. LEC

ECON 769 Financial Economics (3). An introduction to the economic analysis of choice under uncertainty and asset pricing theory. Topics include the Arrow-Debreu model of complete markets; capital asset pricing model; stochastic dominance; portfolio frontiers; mutual fund separation theorems; arbitrage pricing theory; valuation of divisible-period models and multiple-period models will be discussed. Students should have some background in elementary linear algebra, calculus, and probability theory. Prerequisite: DSCI 301 and ECON 700 or equivalent. LEC

ECON 770 Economics of the Labor Market (3). A theoretical and empirical analysis of labor supply and demand, human capital, information and labor mobility, unemployment, discrimination, and union behavior and influence. Prerequisite: ECON 520, and MATH 121 or MATH 115 and MATH 116. LEC

ECON 800 Optimization Techniques I (3). Advanced study of the maximization of a scalar (vector) function subject to equality and inequality constraints. Introduction to optimization, including convexity, constrained optimization, and Lagrange techniques. Prerequisite: ECON 700. LEC

ECON 801 Microeconomics I (3). An introduction to microeconomics. Topics include: market structure and the determination of prices and output, consumer demand, theory of the firm, and production functions; perfect competition, monopoly, oligopoly, and imperfect competition under alternative pricing strategies. Prerequisite: ECON 700 and ECON 701. LEC

ECON 802 Microeconomics II (3). An introduction to microeconomics. Topics include: theory of firm behavior, market structure and the determination of prices and output, consumer demand, theory of the firm, and production functions; perfect competition, monopoly, oligopoly, and imperfect competition under alternative pricing strategies. Prerequisite: ECON 801. LEC

ECON 803 Growth Theory (3). The study of Harrod-Domar growth models; the Solow model; Uzawa's two sector model; n-sector growth models; the Ranis-Fei development models; and other application of growth theory to public policy. Prerequisite: ECON 700 and ECON 701. LEC

ECON 805 Optimization Techniques II (3). Advanced study of the maximization of an integral (vector of integrals) subject to differential equality (inequality), integral equality (inequality), and finite equality (inequality) constraints. Characterization of optimal paths by way of first and second derivatives. Existence of optimal paths. Prerequisite: Consent of instructor. LEC

ECON 810 Macroeconomics I (3). A survey of basic macroeconomic models, including Classical and Keynesian as well as more recent ones. Topics also cover monetary and fiscal stabilization policies, the role of rational expectations, and basic economic growth models. The identification of inflation and unemployment are examined both theoretically and empirically. Prerequisite: ECON 809 or consent of instructor. LEC

ECON 811 Macroeconomics II (3). Structure of dynamic models and intertemporal optimization. Monetary and real business cycle theories and long-run economic growth. Microeconomic foundations of macroeconomic theories of explicit and implicit contracts, and implications of overlapping generations models. Prerequisite: ECON 810. LEC

ECON 817 Econometrics I (3). An intensive study of the general linear model and distribution theory associated with the multivariate normal; stochastic difference equation; autocorrelation, errors in variables. Prerequisite: MATH 628. LEC

ECON 818 Econometrics II (3). The study of estimation and hypothesis testing within the context of the simultaneous equations model. Prerequisite: ECON 817. LEC

ECON 820 Applied General Equilibrium (2-3). A study of numerical applications of Walrasian general equilibrium theory to problems in public finance, international trade, and macroeconomics. The Arrow-Debreu model will be reviewed with emphasis on the use of Kalai's fixed point theorem to prove existence of equilibrium. Fixed point algorithms used to solve the general equilibrium model will be studied. The Shoven-Whalley method for introducing taxes into the general equilibrium model will be extended to open economy models with tariffs and quotas. Finally, dynamic macroeconomic models will be studied and financial assets will be introduced in perfect foresight models. Prerequisite: ECON 817. LEC

ECON 825 Tutorial (0). This course is designed to provide extra assistance for graduate students in economics. RSH

ECON 830 Game Theory and Industrial Organization (3). A comprehensive introduction to game theory and the theory of industrial organization. Basic game theoretic equilibrium concepts will be introduced in the context of static games, games of incomplete information, and dynamic games. These concepts will be applied to the theory of industrial organization. Topics may include mechanism design, market failure, monopoly, imperfect competition and oligopoly, limit pricing, predatory pricing, innovation and technical change, advertising and signaling theory, collusion and coordination, regulation under incomplete information, agency and auditing problems, incentives in hierarchies, job market signaling, insurance markets, nonlinear pricing and monopoly, and bargaining and long term relations. Prerequisite: ECON 801 and 802. RSH

ECON 831 Economics of Regulation (3). This course provides an analytical introduction to the study of the economic analysis of government regulation of industry. Special emphasis will be placed on public utility regulation. Prerequisite: ECON 700. LEC

ECON 835 Comparative Economic Systems (3). Comparative studies of the organization, operation, and performance of economic systems. Theoretical issues involving the comparison of different economic systems will be covered. Theoretical characteristics of different economic systems such as capitalist economies, socialist economics, and centrally planned economies, will be developed. Case studies of economic institutions and economic performance in various countries will be examined. Prerequisite: ECON 700 and ECON 701. LEC

ECON 840 Microeconomic Issues in Development Economics (3). This course will examine the process and policies of economic development from a microeconomic perspective. Selected topics may include:
ECON 842 Theory of Economic Planning (3). Formal construction of the foundations of economic planning with emphasis on concise discussion of the logic behind the techniques utilized in economic planning. Topics that will be studied include: social welfare, short-term planning, price guided planning procedures, non-price guided planning procedures, long-term planning objectives, and characteristics of optimal plans. Prerequisite: ECON 802 or consent of instructor. LEC

ECON 844 Macroeconomic Issues in Development Economics (3). This course will examine the process and policies of economic development from a macroeconomic perspective. Topics will include the theory of growth in the world economy, the role of foreign trade in economic development, inflation and stabilization in developing economies, the problem of foreign debt, the relationship between financial and real development, and various development policies. Prerequisite: ECON 810 or consent of instructor. LEC

ECON 850 The Advanced Theory of International Finance (3). This is an advanced course in international finance. Possible topics include optimizing, equilibrium models of exchange rate determination, empirical tests of international asset-pricing models, international policy coordination, and properties of different international monetary arrangements. Prerequisite: ECON 701. LEC

ECON 851 The Theory of International Trade (3). The study of the pure theory of international trade, with special emphasis on the theory of the general equilibrium in the international economy, comparative statics, and stability conditions. Prerequisite: ECON 700 and ECON 701. LEC

ECON 855 Natural Resources (3). Advanced analysis of the economic relationships between natural resource and the environment. Emphasis is on the analytical techniques useful for solving the economic problems of natural resource allocation over time. Prerequisite: ECON 700. LEC

ECON 860 Advanced Public Finance (3). A rigorous treatment of the economics of the public sector. Emphasis will be placed on government expenditure determination. Possible topics include tax incidence, optimal taxation, dynamic analysis of fiscal policy, public goods, and cost benefit analysis. Prerequisite: ECON 801 or permission of instructor. LEC

ECON 866 Selected Problems in American Economic History (3). A critical study of selected aspects of American economic history with particular emphasis upon the testing of hypotheses that have been advanced to explain the growth and development of the American economy. Prerequisite: ECON 766. LEC

ECON 880 Selected Topics in Economic Theory: (1-3). An advanced course in economic theory that will study selected topics in economic theory such as consumer theory, linear economics, decision theory, stability of economic equilibrium, comparative statics, etc. Prerequisite: Consent of instructor. LEC

ECON 899 Master’s Thesis (1-10). THE

ECON 901 Advanced Economic Theory I (3). Advanced study of current general equilibrium analysis, the mathematical tools involved in such analyses, and implications to other branches of economic theory. Prerequisite: ECON 802 and ECON 810. LEC

ECON 902 Advanced Economic Theory II (3). A continuation of the advanced study of general equilibrium analysis. Prerequisite: ECON 801. LEC

ECON 910 Economic Theory Seminar-workshop (1-3). This seminar-workshop is designed to study advanced research topics in the areas of microeconomic and macroeconomic theory, and also provide assistance in the preparation and development of the dissertations of Ph.D. candidates in these areas of specialization. LEC

ECON 911 Applied Macroeconomics (3). An advanced exploration of the macroeconomic foundations of macroeconomics, neoclassical macroeconomics with and without money, Keynesian and neo-Keynesian macroeconomics, and economic stabilization, inflation, and unemployment. Prerequisite: ECON 802 and ECON 810. LEC

ECON 912 Advanced Macroeconomics (3). An analysis of economic policy in dynamic economic models. The effects of various policies on the equilibrium, stability, and adjustment paths of the models will be considered. Both open and closed economies will be analyzed. Prerequisite: ECON 810. MATH 320 is recommended. LEC

ECON 913 Monetary Economics (3). This course examines how money, monetary policy, and monetary institutions influence the macroeconomy. Modern theories of money demand are presented and applied to the function of commercial banks, non-bank financial intermediaries, and central banks in the money supply process is addressed. Interrelationships between the tools, the instruments, the operating procedures, the intermediate targets, and the goals of policy are examined. Additional topics may include the monetary transmission mechanism, the effect of uncertainty on optimal policy decisions, the rules versus discretion debate, the monetary implications of fiscal policy, the term structure of interest rates, the causes and consequences of bank runs and financial panics, and the optimal method of constructing weighted monetary aggregates. Prerequisite: ECON 811 or consent of instructor. LEC

ECON 915 Advanced Econometrics I (3). The study of selected topics in applied cross-section econometrics for uses mainly in applied microeconomics, labor economics, public finance, and applied macroeconomics. Topics include traditional econometrics of production and demand, latent variable models, panel data studies, probabilistic choice models, censored and truncated models, sample selection, disequilibrium models, duration studies, and semi- and non-parametric models. Prerequisite: ECON 818, or consent of instructor. LEC

ECON 916 Advanced Econometrics II (3). A study of selected topics in applied time-series econometrics for use mainly in applied macroeconomics, international finance, and development economics. Topics include empirical applications of ARCH models, VAR models (study of impulse response function and variance decomposition), unit-root cointegration and long memory models. Bayesian unit root analysis, estimation and inference of dynamic general equilibrium models, model calibration and simulation are also possible topics of this course. Prerequisite: ECON 818, or consent of instructor. LEC

ECON 917 Advanced Econometrics III (3). A study of structural and nonlinear time series approaches to econometric modeling and inference. The course emphasizes techniques needed to use economic theory in system-wide econometrics. Emphasis is placed on selection of functional form for approximation to theoretical functions and the use of duality theorems for derivation of the resulting econometric systems of equation. Inference with those models will be by nonlinear parametric, semi-parametric, and nonparametric methods. Prerequisite: ECON 818. LEC

ECON 920 Econometrics Seminar-workshop (1-3). This seminar-workshop is designed to study advanced research topics in the area of econometric theory and application, and also provide assistance in the preparation and development of the dissertations of Ph.D. candidates in this area of specialization. LEC

ECON 925 Economic Dynamics (3). A study of the concepts of equilibrium, economic fluctuations, dynamic economic analysis, changing economies, and disaggregated and aggregated economies. Prerequisite: ECON 802. LEC

ECON 930 Economic History Seminar-workshop (1-3). This seminar-workshop is designed to study advanced research topics in the area of economic history, and also provide assistance in the preparation and development of the dissertations of Ph.D. candidates in this area of specialization. LEC

ECON 940 Economic Seminar-workshop in: (1-3). This seminar-workshop is designed to study advanced research topics in the specified area of applied economics (public finance, monetary analysis, environment-energy, economic growth and development, urban economics, health care economics, natural resources, labor-manpower, international trade and finance, comparative economic systems, Soviet economics), and also provide assistance in the preparation and development of the dissertations of Ph.D. candidates with dissertations in a specific area of applied economics. LEC

ECON 950 Special Problems in Economics (1-3). LEC

ECON 955 Advanced Topics in Natural Resources (3). Rigorous analysis of an Arrow-Debreu economy with natural resources and extensions (including optimal growth, planning procedures, and uncertainty). Investigation of current research topics in theoretical and applied resource economics. Required course for Ph.D. candidates writing dissertations in natural resources. Prerequisite: Consent of instructor. ECON 927 recommended. RSH

ECON 970 Advanced Labor Economics (3). A survey of recent labor economics research. Topics include labor supply and demand, human capital investment, and unemployment. Prerequisite: ECON 770. LEC

ECON 999 Doctoral Dissertation (1-10). THE

English

Chair: James Hartman, jehartma@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 3116
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(785) 864-4520

Associate Chair: Tom Lorenz, tlorenz@ku.edu
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Coordinator of Graduate Studies: Philip Barnard, philb@ku.edu
3102 Wescoe Hall, (785) 864-4520

Professors: Atkins, Bergeron, Boyd, Carothers, Casagrande, Cherniss, Contoski, Devitt, Fowler, Graham, Hardin, S. Harris, Hartman, Johnson, Landsgberg, Lim, Quinn, Scott

Clement

Associate Professors Emeriti: Arnold, Cook, Lichter, Oruch
Assistant Professors: Curtis, Davidson, Unferth
Assistant Professors Emeriti: Cohn, Colyer, Warders

The department offers a full graduate program, leading to the M.A. (four options) and Ph.D. degrees.

Admission
To be admitted, a student must have a strong undergraduate record, particularly in the humanities. A grade-point average of at least 3.3 (on a 4.0 scale) normally is required. College courses should include at least 18 hours of junior/senior work in literature, and the student is encouraged to have a reading knowledge of an appropriate foreign language. Applicants are expected to have some familiarity with British and American literary history and with the work of the major writers in English. More important than factual knowledge, however, is the ability to read significant texts sensitively and intelligently and to write good English prose. Candidates for admission must furnish the department with Graduate Record Examination scores in support of their applications.

Submit your application to the Graduate School online at www.grad.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of English
Wescoe Hall, 1445 Jayhawk Blvd., Room 3116
Lawrence, KS 66045-7590

M.A. Degree Requirements
While being continuously enrolled, a student has a total of five years to complete the master’s. The candidate’s program of studies should be arranged in consultation with the coordinator of graduate studies or a member of the departmental committee on graduate studies.

Students who elect to write a master’s thesis (a thesis is required for Option III; Options Ia, Ib, and II are either thesis or nonthesis) must enroll in ENGL 899, normally for 6 hours. Those who do not must demonstrate their ability to do original investigation by earning grades of A or B in at least one seminar.

M.A. candidates in Options Ia, Ib, and II must take at least 15 hours of their course work, in addition to ENGL 800, at the 700, 800, and 900 levels.

Option Ia—Literature. The 30 hours of credit required for the degree must include ENGL 800, a graduate course in language and philology, a graduate course in English literature before 1660, and one graduate course in each of four of the following five fields: English literature 1660-1800, 19th-century English literature, American literature to 1900, literature after 1900, and a general field embracing courses in composition studies, creative writing, and literary criticism.

Option Ib—Literature and Literary Theory. The 30 hours of credit must include ENGL 800, a graduate course in language and philology, a graduate course in English literature before 1660, and one graduate course in each of three of the following five fields: English literature 1660-1800, 19th-century English literature, American literature to 1900, literature after 1900, and a general field embracing courses in composition studies, creative writing, and literary criticism, plus two graduate courses chosen from ENGL 508, ENGL 707, ENGL 708, ENGL 709, ENGL 781, and ENGL 908.

Option II—Language, Literature, and Composition. The 30 hours of credit must include ENGL 800; at least 12 hours of courses in literature, including at least 3 hours each in English literature before 1800, English literature after 1800, and American literature; and at least 9 hours in language and composition, normally ENGL 780, ENGL 785, and ENGL 787. For those taking seminars rather than writing a thesis, the minimum is 12 hours in language and composition.

Option III—Creative Writing and Literature. The 30 hours of credit must include four graduate courses in English or American literature, three graduate courses in creative writing, an original thesis in prose fiction, poetry, drama, or nonfiction prose (6 hours), and one elective chosen from graduate courses in the Department of English or approved courses in another department (3 hours). Candidates for admission to Option III must submit samples of their creative writing along with their applications.

No matter the option chosen, the student also must demonstrate reading knowledge of one of the following foreign languages: French, German, Greek, Hebrew, Italian, Japanese, Latin, Russian, Old English, or Spanish. In each option, a final oral examination is required; in Options I and II, the examination covers a list of required and selected texts, whereas the examination for Option III consists of a defense of thesis.

Ph.D. Degree Requirements
Students entering the program with the B.A. have, while being continuously enrolled, eight years to complete the M.A. and Ph.D. combined. Students entering with the M.A. have five years to complete the Ph.D.

Requirements for the degree of Doctor of Philosophy in English:
1. Prerequisites for admission to graduate standing match those of the Master of Arts degree. Each doctoral aspirant must receive written permission from the graduate committee to pursue the Ph.D. A student is not ordinarily permitted to proceed beyond the master’s degree without a grade-point average of at least 3.5 (on a 4.0 scale) and strong recommendations from graduate professors. Admission to the doctoral program also is based on evaluation of at least two papers submitted in graduate courses.
2. Ph.D. candidates must earn 24 hours of credit in appropriate formal graduate courses beyond the M.A. At least 15 hours (in addition to ENGL 800 if not taken for the M.A.) of this course work must be taken from among courses offered by the Department of English at the 700 level and above. ENGL 997 and ENGL 999 credits cannot be included among the 24 hours.
3. Required courses: ENGL 800 and two seminars offered by the Department of English at KU beyond...
English

the M.A. Students with master’s degrees earned elsewhere may be required by the coordinator of graduate studies, acting on behalf of the graduate committee, to take additional course work.

4. A reading knowledge of two of the following languages: French, German, Greek, Hebrew, Italian, Japanese, Latin, Russian, Old English, or Spanish, or demonstrated fluency in one of these.

5. A comprehensive examination, to be completed after satisfaction of formal course requirements. This oral examination, not to exceed three hours in length, consists of three sections: a literary period or movement and two other parts from among an adjacent or parallel literary period or movement, an author or group of related authors not in any literary period or movement chosen, a genre, criticism and literary theory, composition theory, and English language.

6. In the semester following the comprehensive examination, a 90-minute oral field examination, which is to provide formal direction for the dissertation.

7. At least one year of supervised quarter-time teaching for qualified candidates except for those who do not plan to undertake teaching careers or who have already had extensive teaching experience.


English Courses

ENGL 506 Science Fiction (3).
ENGL 508 Contemporary Literary Theory (3).
ENGL 520 History of the Book (3).
ENGL 526 African Literature: _____ (3).
ENGL 530 Irish Culture (3).
ENGL 536 Readings in the Holocaust (3).
ENGL 551 Fiction Writing II (3).
ENGL 552 Poetry Writing II (3).
ENGL 553 Screenwriting II (3).
ENGL 554 Playwriting II (3).
ENGL 555 Writing Non-Fiction (3).
ENGL 562 Advanced Technical Writing I (3).
ENGL 563 Advanced Technical Writing II (3).
ENGL 564 Advanced Technical Editing (3).
ENGL 567 Modern Drama: _____ (3).
ENGL 569 The Modern Tradition (3).
ENGL 570 Topics in American Literature: _____ (1-3).
ENGL 571 American Indian Literature: (3).
ENGL 572 Women and Literature: _____ (3).
ENGL 573 U.S. Latina/o Literature: _____ (3).
ENGL 574 African American Literature: _____ (3).
ENGL 575 Literature of the American South (3).
ENGL 579 American and British Poetry since 1945 (3).
ENGL 580 Rhetoric and Writing: _____ (3).
ENGL 587 American English (3).
ENGL 590 Studies in: _____ (1-3).
ENGL 592 Survey of: _____ (3).
ENGL 596 Technical Communication Internship (1-3).
ENGL 610 The Literature of England to 1500 (3).
ENGL 620 Renaissance English Literature: _____ (3).
ENGL 626 Shakespeare: The Earlier Plays (3).
ENGL 627 Shakespeare: The Later Plays (3).
ENGL 633 Milton (3).
ENGL 640 British Literature of the Restoration and Early 18th Century (3).
ENGL 641 British Literature of the Mid- to Later 18th Century (3).
ENGL 646 British Drama of the Restoration and 18th Century (3).
ENGL 648 The Eighteenth-century British Novel (3).
ENGL 650 Poetry of the Romantic Period (3).
ENGL 655 Poetry of the Victorian Period (3).

ENGL 658 The Nineteenth-century British Novel (3).
ENGL 660 British Poetry of the 20th Century (3).
ENGL 664 The Age of Yeats and Joyce (3).
ENGL 666 The Modern British Novel (3).
ENGL 677 The American Novel in the 19th Century (3).
ENGL 678 The Modern American Novel (3).
ENGL 679 American Poetry of the 20th Century (3).
ENGL 707 Literary Criticism to 1800 (3). An introduction to the major writings of literary criticism, in their historical context, from Plato and Aristotle to Samuel Johnson. LEC
ENGL 708 Literary Criticism after 1800 (3). An introduction to modern criticism, in its historical context, from Wordsworth and Coleridge to the present. The emphasis will be on major critics and predominant schools. LEC
ENGL 709 Critical Theory: Problems and Principles: _____ (3). Study of a topic (such as mimesis, influence, deconstruction) that is important in critical theory. May be repeated for credit as topic varies. LEC
ENGL 710 Introduction to Old English (3). A study of the grammatical features of the earliest form of written English, with readings in Old English prose and poetry. LEC
ENGL 712 Beowulf (3). Prerequisite: An introductory course in Old English. LEC
ENGL 714 Middle English Literature (3). Reading of selected works in Middle English (exclusive of the works of Chaucer). LEC
ENGL 720 Chaucer: _____ (3). Intensive study of either the Canterbury Tales or Troilus and Criseyde and the earlier poems. May be repeated for credit up to a maximum of six hours. LEC
ENGL 751 Fiction Writing III (1-3). Practice in the writing of fiction under the direction of a member of the department working in conjunction with one or more writers in residence. Membership is limited to students who submit, well in advance of enrollment, manuscripts showing unusual ability. May be repeated for credit up to a maximum of six hours. LEC
ENGL 752 Poetry Writing III (1-3). Practice in the writing of poetry under the direction of a member of the department working in conjunction with one or more writers in residence. May be repeated for credit up to a maximum of six hours. LEC
ENGL 753 Writers Workshop (1-3). An intensive course in writing prose fiction and/or verse. Criticism of manuscripts through group meetings and individual conferences with the instructor. Membership is limited to students who submit manuscripts showing special ability in at least one of the creative writing forms. May be repeated for credit to a maximum of six hours. LEC
ENGL 767 Studies in Modern Drama: _____ (3). Reading of selected works in modern and contemporary drama. May be repeated for credit as the topic changes. LEC
ENGL 770 Studies in Life Writing: _____ (3). This course focuses on or surveys individual writers in the tradition of life writing; or intensively examines topics such as "Autobiography," "Memoir and Diary," "Biography," "Slave Narrative," "Letters," "Personal Essays," or "Autobiographical Fictions." Special emphasis within a topic, such as period, genre, or ethnicity, is possible. May be repeated for credit up to a maximum of six hours. LEC
ENGL 774 Topics in Literatures of Africa and the African Diaspora: _____ (3). An intensive study of the literatures of Africa and/or African diaspora (people of African descent dispersed around the world). This study will focus on the major characteristics of a particular period, genre, mode, and/or theme in literatures such as African, Caribbean, Afro-Brazilian, African American, African Canadian, Black British. Critical theories pertinent to writers and their work will be covered. Topics may include studies in drama, poetry, or the novel; migration narratives; literature of a particular era, such as the Harlem Renaissance, Negritude, or the Black Arts Movement; representations of gender, etc. As topics vary by semester, the course may be repeated for credit. Undergraduates with adequate preparation may enroll with permission from instructor. (Same as AAAS 774.) LEC
ENGL 780 Composition Studies (3). This course surveys the field of composition studies, examining major issues and theories in the study of writing. The course may include theories from classical to contemporary rhetoric, composition theory from the twelfth century, and the most current debates in the study of writing. LEC
ENGL 781 Criticism and the Teaching of Literature (3). A survey of selected critical theories and of the applicability of those theories to the teaching of literature. LEC
ENGL 785 History of the English Language (3). Historical study of the phonology, morphology, syntax, vocabulary, and semantics of English; the relation between linguistic and cultural change. LEC
ENGL 787 Modern English Grammar (3). A study of contemporary English: phonology, morphology, syntax, and usage. The emphasis is structural, but "traditional" grammar is referred to for contrast, example, and clarification. LEC
ENGL 790 Studies in: _____ (3). Examination of a significant topic in literature or the English language. May be repeated for credit as the topic varies. LEC

Contemporary poets read from their work and speak to classes at KU through the visiting artist program.

KU’s Center for European Studies facilitates the interdisciplinary study of Western Europe through teaching, scholarship, study abroad, and international exchanges.

Chimères, a journal of French and Italian literature, is published by graduate students in the department.
ENGL 800 Introduction to Graduate Study in English (3). Acquaintance with resources and practice in techniques that are essential to other graduate courses. Major concerns: writing and documentation of scholarly papers; basic reference and bibliographical aids; critical approaches to literature and literary historiography; and the place of language and rhetoric in English studies today. LEC

ENGL 801 Study and Teaching of Writing (3). A survey of major concerns in the study of writing, especially as applied to teaching composition. Practices in writing pedagogy are also discussed, and students’ teaching of composition is observed and explored. Required of and approved by the comprehensive examining committee at the completion of the examination. Does not count toward the residence requirement. Prerequisite: Consents of the Coordinator of Graduate Studies. RSH

ENGL 908 Topics in Composition Studies and Rhetoric: (1-12). THE

ENGL 909 Seminar in English Language: (1-6). THE

ENGL 911 Seminar in Medieval English Literature: (1-6). THE

ENGL 916 Seminar in Chaucer: (1-6). THE

ENGL 920 Seminar in Renaissance English Literature: (1-6). THE

ENGL 922 Seminar in Milton: (1-6). THE

ENGL 926 Seminar in Shakespeare: (1-6). THE

ENGL 931 Seminar in Restoration and 18th-century British Literature: (1-6). THE

ENGL 932 Seminar in 19th-century British Literature: (1-6). THE

ENGL 972 Seminar in American Literature: (1-6). THE

ENGL 974 Seminar in Literatures of Africa and the African Diaspora: (1-6). THE

ENGL 980 Seminar in Renaissance and 18th-century British Literature: (1-6). THE

ENGL 997 Preparation for the Comprehensive Examination: (1-6). Individual work in (a) language, (b) literature, (c) composition, or (d) the teaching of English, by properly qualified graduate students under the direction of appropriate members of the Graduate Faculty as assigned by the Coordinator of Graduate Studies. Limited to 6 hours of credit toward the M.A. degree; only one three-hour enrollment may substitute for a formal course in satisfying a field distribution requirement. Normally offered only for up to three credit hours in any one enrollment. Permission of the supervising faculty member and of the Coordinator of Graduate Studies required for enrollment. RSH

ENGL 999 Doctoral Dissertation (1-12). THE

European Studies

No graduate program in European studies is offered. The following courses may be taken for graduate credit.

European Studies Courses

EURS 500 Seminar in European Studies (1-5).
EURS 501 Senior Thesis in European Studies (1-5).
EURS 502 Senior Honors Thesis in European Studies (1-5).
EURS 503 Europe Today (1-5).
EURS 504 The European Union (1-5).
EURS 505 Studies in Exile Literature (1-5).
EURS 506 Culture and Politics of the Cold War in Western Europe (1-5).
EURS 507 Research in European Collections (1-5).
EURS 508 Politics and Economics of Cultural Production in Western Europe (1-5).
EURS 509 Introduction to the Study of Southern European Societies (1-5).
EURS 510 Scandinavian Life and Civilization (1-5).
EURS 511 Topics in European Studies: (1-5).
EURS 512 Irish Culture (1-5).
EURS 536 Economic Issues in Europe (1-5).
EURS 550 Classics of Peace Literature (1-5).
EURS 565 The Literature of Human Rights (1-5).
EURS 580 Directed Study (1-5).
EURS 581 Discussion Section in French (1-5).
EURS 582 Discussion Section in German (1-5).
EURS 583 Discussion Section in Italian (1-5).
EURS 584 Discussion Section in Spanish (1-5).

Evolutionary Biology

See Biological Sciences: Ecology and Evolutionary Biology.

French and Italian

Chair: Van Kelly
Wescoe Hall, 1445 Jayhawk Blvd., Room 2104
Lawrence, KS 66045-7590, www.ku.edu/~frenital
(785) 864-9062
Graduate Adviser: Caroline Jewers,
2068 Wescoe Hall, (785) 864-9076
Professors: Kozma, Pasco
Professors Emeriti: Dinneen, Johnson
Associate Professors: Booker, Fourny, Jewers, Kelly
Assistant Professors: Gillespie, Hayes, Scott
The department offers a full graduate program leading to the M.A. and Ph.D. degrees with a major in French.

Admission

A minimum of 26 credit hours of French is required for admission, including college preparatory work, of which 8 hours must be advanced undergraduate course work in French literature. Results of the Graduate Record Examination general test are required for domestic applicants.

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Department of French and Italian
Wescoe Hall, 1445 Jayhawk Blvd., Room 2104
Lawrence, KS 66045-7590

M.A. Degree Requirements
1. Thirty credit hours, including
(a) FREN 700 Old French
(b) FREN 720 Introduction to Graduate Studies in French
(c) FREN 610 Theme et Version or FREN 620 Expository French Writing
(d) two seminars of 3 hours each or a thesis (FREN 899, 6 hours)
2. A reading knowledge of Greek, Latin, German, or a second Romance language.
3. Comprehensive written and oral examinations.

Ph.D. Degree Requirements
Prerequisite. Completion of the M.A. degree at KU or a comparable institution. Applicants holding the M.A. in a discipline other than French may be required to take a qualifying examination.

Requirements. The following requirements are in addition to those of the Graduate School and those outlined above for the master’s degree in French.

1. Thirty credit hours beyond the M.A. (excluding dissertation hours).
2. FREN 810 Criticism and Critical Methods.
3. A knowledge of a non-Romance language and of a Romance language other than French. The language presented for the M.A. is accepted as one of these. For one language, the candidate must demonstrate proficiency equivalent to completion of a second-semester course or complete the final graduate reading course in that language. For the other language, the student must demonstrate proficiency equivalent to completion of a fourth-semester course.
4. A satisfactory command of written and spoken French and a reasonable familiarity with the history and civilization of France.
5. The completion of at least one year of half-time teaching in the department.
6. Such courses as the department may prescribe to ensure a broad grasp of the major field and the proper preparation for original research in the specific area of the dissertation. The comprehensive examinations in French are both written and oral.

Completion and defense of a satisfactory dissertation.

Departmental Assistance
The department offers graduate teaching assistantships to students pursuing graduate degrees. In addition, graduate students are eligible to apply for Graduate School Fellowships (see Fellowships and Scholarships in the Graduate School and International Programs chapter) and for KU Direct Exchange Scholarships to France. The department also offers a number of awards for excellence in academic work and teaching.

French Courses
FREN 500 Advanced French Phonetics (3).
FREN 530 Studies in Film: _____ (3).
FREN 592 French Culture Through Film I, Beginnings to 1950 (3).
FREN 593 French Culture Through Film II, 1950–Present (3).
FREN 600 Studies in: _____ (3).
FREN 610 Thème et Version (3).
FREN 620 Expository French Writing (3).
FREN 680 Language Teaching and Advanced Conversation (2-3).
FREN 681 Language Teaching for Oral Proficiency (1).
FREN 700 Old French (3). Introduction to grammar and structure through the reading of representative works. LEC
FREN 701 History of the French Language (3). Major aspects of development and growth. Conducted in English. LEC
FREN 702 Provençal (3). Introduction to grammar and structure of the language through a reading of representative works from the Troubadour period. LEC
FREN 703 Structure of Modern French (3). Linguistic analysis of the phonological, morphological, and syntactic structure of modern French. Description in terms of current theories and models. Application of linguistic analyses to the teaching of French. LEC
FREN 710 Explication de Texte (3). Methods of textual analysis. Close study of limited number of texts. LEC
FREN 720 Introduction to Graduate Studies in French (3). An introduction to the skills required of students doing graduate degrees in French literature; areas covered are 1) introduction to literary theory and criticism, 2) bibliography and research methods, and 3) training in preparation of critical essays and theses. Required of all M.A. candidates unless specifically released by department. LEC
FREN 730 Introduction to French Poetry (3). A detailed introduction to versification, rhetoric, image and symbol as they apply to the study of poetry. Texts will be chosen from one or more periods of French literature and will include poems in verse and prose. Considerations and readings on the history of French poetry, on the composition of recitales, on poetic theory, and on the relation of poetry to other genres and media may be incorporated. LEC
FREN 740 Medieval French Literature (3). Literary history of the period, with discussion of representative works read for the most part in the original old French. LEC
FREN 750 French Literature of the Sixteenth Century (3). A survey of the major writers, covering Rabelais, Sève, Louise Labé, Marguerite de Navarre, Ronsard, Du Bellay, Montaigne, and d’Aubigné. LEC
FREN 763 French Drama of the Seventeenth Century (3). Development of baroque and classical French drama, with emphasis on Corneille, Molière, and Racine. LEC
FREN 765 Nondramatic French Literature of the Seventeenth Century (3). Esthetics of baroque and classicism. Emphasis on Descartes, Pascal, La Rochefoucauld, Mme de Lafayette, although other authors may be studied. LEC
FREN 770 French Literature of the Eighteenth Century (3). Special attention paid to Montesquieu, Voltaire, Diderot, and Rousseau; also development of novel and drama. LEC
FREN 782 French Novel of the 19th Century (3). Emphasis on major novelists of the century: Balzac, Stendhal, Flaubert, and Zola. LEC
FREN 785 French Romantic Movement (3). Major Romantic writers viewed in context of intellectual, esthetic, and social milieu of period 1800-1850. LEC
FREN 787 French Post-Romanticism (3). Literary movements developing out of reaction to Romanticism: Realism, Naturalism, Parnassianism. LEC
FREN 790 Contemporary French Writers (3). Major 20th century authors, stressing Proust, Gide, Giraudoux, Claudel, Sartre, and Camus. LEC
FREN 792 Proust (3). Principal movements, structures, and tensions of A la recherche du temps perdu. LEC
FREN 799 Master’s Seminar (1). To meet Master’s degree requirement for continual enrollment. This course will be graded satisfactory/unsatisfactory. FLD
FREN 800 Studies in: _____ (3). Study of topics not limited to one century. LEC
FREN 810 Criticism and Critical Methods (3). Literary criticism from historical, theoretical, and practical point of view. LEC
FREN 812 Studies in the French Novel: _____ (3). Selected topics to be specified. Study of form, movements, or themes in the French Novel, not limited to one century. May be repeated for credit. LEC
FREN 814 Studies in the French Short Story: _____ (3). Selected topics to be specified. Study of form and theory of the French short story, not limited to one century. LEC
French & Italian; Geography

FREN 842 Arthurian Literature in France (3). Origins and development of Arthurian legend; analysis of major texts. Prerequisite: FREN 700. LEC

FREN 848 Studies in Medieval French Literature (3). Various movements, themes, or genres. May be repeated for credit. Prerequisite: FREN 700. LEC

FREN 850 Early Renaissance Literature (3). Emphasis on Rabelais, Marguerite de Navarre, Marot, Maurice Scève and Louise Labé. LEC

FREN 858 Studies in Sixteenth-century French Literature (3). Various movements, themes, or genres. May be repeated for credit. LEC

FREN 868 Studies in Seventeenth-century French Literature (3). Various movements, themes, or genres. May be repeated for credit. LEC

FREN 871 Literature of the Enlightenment in France (3). Philosophical thought in 18th century as reflected in literature. Emphasis on philosophies, with discussion of external influences. LEC

FREN 872 Novel of the Eighteenth Century in France (3). Origins and development to Revolution; thematic analysis with attention to critical attitudes and their influence upon evolution of novel as genre. LEC

FREN 878 Studies in Eighteenth-century French Literature (3). Various movements, themes, or genres. May be repeated for credit. LEC

FREN 887 Symbolist Movement in France (3). Works of major symbolist poets, including Baudelaire, Verlaine, Rimbaud, Mallarmé, and Valéry. LEC

FREN 888 Studies in Nineteenth-century French Literature (3). Various movements, themes, or genres. May be repeated for credit. LEC

FREN 897 New Directions in the French Novel (3). Samuel Beckett to the nouveau roman. LEC

FREN 898 Studies in Twentieth-century French Literature: _____ (3). Various movements, themes, or genres. May be repeated for credit. LEC

FREN 899 M.A. Thesis (1-6). THE

FREN 900 Seminar in French: _____ (3). Topics in literary, linguistic, and cultural research. May be repeated for credit with departmental permission. LEC

FREN 910 Bibliography and Research Methods (3). Methods and means of research. Practice in compiling bibliography, wherever possible in conjunction with work done concurrently in another course. Limited to doctoral aspirants. LEC

FREN 995 Investigation and Conference (1-3). Readings and research projects in French language, literature, and culture. Directed work to fulfill needs not met by available courses. One-three hours credit in any semester. Maximum credit for M.A.: Three hours. By special departmental permission only. RSH

FREN 999 Ph.D. Dissertation (1-10). THE

● Italian Courses

ITAL 502 Dante’s Divine Comedy I (3).

ITAL 503 Dante’s Divine Comedy II (3).

ITAL 695 Studies in Italian Literature (1-3).

Geography

Chair: Terry Slocum
Associate Chair: William C. Johnson
Lindley Hall, 1475 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7613, www.geog.ku.edu
(785) 864-5143

Graduate Adviser: J.R. Shortridge,
207 Lindley Hall (785) 864-5538

Professors: Dienes, Dobson, Johnson, Price, J. Shortridge

Professors Emeriti: McColl, Nunley

Associate Professors: Braaten, Egbert, Feddema, Herlihy, McCleary, Myers, Scolum, Sorensen, Terwilliger, Tucker

Assistant Professors: Brown, Brunsell, Li, O’Lear, B. Shortridge

The graduate curriculum emphasizes solid general training but encourages commitment to concentrations. Students are encouraged to take extradepartmental course work that complements their degree programs. Credit-hour requirements below are considered a minimum for degree programs. Programs are tailored by the student and adviser to conform to the student’s interests and needs, as well as the general degree requirements.

The central thrust of the department and the chief capabilities and interests of the staff fall within the following research-teaching areas: (1) geographic information science, including cartography, geographic information systems, and remote sensing; (2) physical geography, including climatology, geomorphology, soils, and plant geography; and (3) cultural/regional geography, including Africa, East Asia, Russia, Latin America, and the United States.

Admission

Applicants without prior training in geography are welcome but are required to improve their basic knowledge of the several broad divisions within geography: systematic, methodological, and regional. Courses taken to remedy such deficiencies may not count toward graduate degrees. Graduate Record Examination scores (verbal, quantitative, and analytical) are required of all applicants.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Geography
Lindley Hall, 1475 Jayhawk Blvd., Room 213
Lawrence, KS 66045-7613

Handbook for Graduate Students

Detailed information on departmental regulations is included in Graduate Study in Geography at the University of Kansas, available from the departmental office.

M.A. Degree Requirements

The program continues the general training of the undergraduate degree but also provides for concentration in preparation either for employment or further study. The student takes courses in several areas of the discipline as well as at least three courses in an acceptable concentration. The 30-credit-hour minimum for the M.A. thesis program may include 6 hours outside the department and a maximum of 6 hours for the master’s thesis. The nonthesis option requires a minimum of 36 hours of courses and seminars and is not intended to serve as a foundation for the Ph.D. Both degrees require a final oral examination. Students with 6 or more hours of Incomplete are denied permission to enroll until these hours are reduced to the allowable limit (5 hours).

Ph.D. Degree Requirements

The aspirant is expected to demonstrate proficiency in research and achieve a teaching competence in geography. The student may concentrate in one area or may offer a concentration in a second area in the department or an outside discipline. Whatever the choice, the student develops the plan of research and study with the advice and supervision of professors in the chosen area(s) of concentration who also sit on the student’s examination and dissertation committees. A minimum of 30 hours of course and seminar work in addition to dissertation credit usually is required beyond the M.A.
There are several options for satisfying the Foreign Language or Other Research Skills requirement (see Doctoral Degree Requirements, Research Skills in the General Information chapter of this catalog), which must be completed before the aspirant can be admitted to the comprehensive examinations. Possible options for meeting the requirement include those below.

1. Demonstrate a reading knowledge of two foreign languages relevant to the student’s research interest. For each language, the student must attain a level of competence to satisfy the Graduate School.

2. For a single foreign language, demonstrate a reading, writing, and speaking capability sufficient to enable the aspirant to do field work without an interpreter. An examination for competence, including written and oral portions, is conducted by a member of the department having expertise in that language or by an examiner from the appropriate language department.

3. Demonstrate a reading knowledge in one foreign language and a satisfactory capability in one research skill as listed below under 4a, 4b, 4c, and 4d.

4. Demonstrate a satisfactory capability in two research skills from the list below. The requirements are to be approved by the adviser with the agreement of the student affairs committee.

(a) Computer science: complete a computer course in electrical engineering and computer science (e.g., C++, Fortran, or visual Basic) and create a substantial computer program that illustrates a geographic application of that language. Both the course and the computer program must be approved by the computer programming committee of the Department of Geography.

(b) Mathematics: pass 9 hours of courses at the 500 level or above.

(c) Statistics: pass 9 hours of courses outside the geography department at the 500 level or above.

(d) Demonstrate research capability in a field relevant to the aspirant’s field(s) of specialization within geography. Examples are economics, sociology, psychology, geology, anthropology, and history. This involves at least 9 credit hours of graduate-level work, normally at KU, including a minimum of one research seminar.

The Graduate School’s requirement for two semesters (or one semester and one summer) of residence in full-time academic pursuits also must be fulfilled before taking the comprehensive examinations.

For additional Ph.D. requirements, please see Doctoral Degree Requirements in the General Information chapter of this catalog.

Geography Courses

GEOG 510 Human Factors (4).
GEOG 511 Intermediate Cartography: _____ (1-6).
GEOG 513 Cartographic Design (3).
GEOG 514 Visualizing Spatial Data (4).
GEOG 515 Behavioral Systems (3).
GEOG 516 Applied Multivariate Analysis in Geography (3).
GEOG 517 Data Handling and Map Symbolization (3).
GEOG 519 History of Cartography (3).
GEOG 521 Microclimatology (3).
GEOG 531 Topics in Physical Geography: _____ (1-3).
GEOG 532 Geoaeroculture (3).
GEOG 535 Introduction to Soil Geography (4).
GEOG 536 Landscape Ecology (3).
GEOG 537 Elements of Plant Geography (3).
GEOG 541 Geomorphology (4).
GEOG 550 Environmental Issues in Africa (3).
GEOG 551 Intermediate Economic Geography (3).
GEOG 552 Topics in Urban/Economic Geography: _____ (1-3).
GEOG 553 Geography of African Development (3).
GEOG 556 Geography of the Energy Crisis (3).
GEOG 557 Cities and Development (3).
GEOG 570 Geography of American Indians (3).
GEOG 571 Topics in Cultural Geography: _____ (1-3).
GEOG 572 Political Geography (3).
GEOG 573 Advanced Geographic Analysis (3).
GEOG 575 Geography of Population (3).
GEOG 576 Cultural Geography of the United States (3).
GEOG 579 Geography of American Foodways (3).
GEOG 591 Geography of Latin America (3).
GEOG 592 Middle American Geography (3).
GEOG 593 Central American Peoples and Lands (3).
GEOG 594 Geography of the Former Soviet Union (3).
GEOG 595 Geography of Eastern Europe (3).
GEOG 596 Geography of China (3).
GEOG 597 Geography of Brazil (3).
GEOG 657 Geographic Models (3).
GEOG 658 Topics in Geographic Information Science: _____ (1-6).
GEOG 670 Cultural Ecology (3).
GEOG 710 Information Design (3).
GEOG 711 Advanced Cartography: _____ (3).
GEOG 712 Cartographic Practice (3).
GEOG 713 Practicum in Cartography (1-6).
GEOG 714 Field Experience (3).
GEOG 727 Atmospheric Storms (3).
GEOG 731 Geophysical Fluid Dynamics (3).
GEOG 735 Climate and Climatic Change (3).
GEOG 737 Integrated Environmental Modeling (3).
GEOG 739 Geophysical Fluid Dynamics (3).
GEOG 745 Geographical Information Science: _____ (1-6).

Geography has long been a foremost cultural and regional geographers in the nation are faculty members at KU.
for graduate students. Fee required. Prerequisite: Junior-senior standing and fifteen hours of geography or consent of instructor. FLD

GEOG 716 Advanced Geostatistics (3). An introduction to the practical application of numerical statistical techniques. Potential topics include: spatial regression, interpolation, clustering, and advanced nonparametric statistics. Knowledge of a statistical package and GIS is assumed. Prerequisite: GEOG 516 or equivalent and GEOG 358 or equivalent. LEC

GEOG 717 Advanced Geographic Information Systems (4). Critical evaluation of the growth of geographic thought from antiquity to the present, emphasis on structure of modern geography. Prerequisite: Twenty hours of geography or consent of instructor. LEC

GEOG 726 Remote Sensing of Environment I (4). An overview of techniques for computer analysis of digital data from earth orbiting satellites for environmental applications. Topics covered include: data formats, image enhancements and analysis, classification, thematic mapping, and environmental change detection. The laboratory exercises provide hands-on experience in computer digital image processing in the department's NASA Earth Science Remote Sensing Laboratory. Prerequisite: Introductory statistics and GEOG 526 or equivalent. LEC

GEOG 731 Topics in Physical Geography: _____ (1-3). An investigation of special topics in physical geography. May include specific under the headings of geomorphology, climatology, soils, vegetation, quaternary, paleoenvironments, hydrology, etc. May be repeated. RSH

GEOG 733 Advanced Biogeography Field and Laboratory Techniques (3). This course provides graduate students with practical experience in field data collection techniques and laboratory data analysis methods. During the first half of the semester, students will work in the field using a variety of methods for measurement characteristics as color, density, biomass, leaf area, and canopy architecture. Students will gain experience in the use of field instruments including a spectroradiometer, and techniques for quantification biological attributes. The laboratory analyses component will include: data summary, data entry, correlation, regression, MANOVA, cluster analysis, and data display, and reporting. Recommended: GEOG 516 or multivariate statistics equivalent. LEC

GEOG 735 Soil Genes, Classification, and Distribution (3). An analysis of the origin, classification, and distribution of major soil groups of the world. Field trips required. Prerequisite: GEOG 535, or consent of instructor. LEC

GEOG 741 Advanced Geomorphology (1-3). Detailed discussions of processes and landforms characteristic of specific environments. Considered during separate semesters will be general geomorphology, and arid, glacial, and shoreline geomorphology. Course may be taken more than once. (Same as GEOL 741.) Prerequisite: GEOG 541. LEC

GEOG 749 Topics in Stable Isotopes in the Natural Sciences: _____ (2-3). Isotopic compositions of substances provide powerful insights into many topics in the natural sciences. Applications of isotopic analyses of carbon, hydrogen, oxygen, and nitrogen to selected research topics such as plant resource use, food web analysis, paleoecology, paleolatitude reconstruction, hydrology, and soils genesis will be examined. Knowledge of isotope chemistry is not required. (Concepts necessary to understand pertinent articles will be taught during the first class meeting.) Same as ECOL 749. LEC

GEOG 751 Analysis of Regional Development (3). An analytical approach to spatial organization of economic activities and aspects of growth and development. Location theory and the geography of trade and migration is required. Prerequisite: GEOG 551, or a course in economics, or consent of instructor. LEC

GEOG 752 Topics in Urban/Economic Geography: _____ (1-3). An investigation of special topics in urban/economic geography. May include specific coursework under the headings of energy, economic development, international trade, environmental perception, housing, transportation, and migration. May be repeated. LEC

GEOG 756 Energy Problems and the Economic-physical Environment (2-3). This course investigates the economic, social, political, and environmental conditions of energy production, transport, and use: total energy consumption and mix, relations to the level and structure of the economy, substitutability of fuel and energy sources, resource endurance in an international setting. Prerequisite: GEOG 551 or a course in economics or consent of instructor. LEC

GEOG 758 Geographic Information Science (4). This course integrates topics in geographical information science (GISci) with spatial analytical techniques to solve spatial problems. Focuses on the most current research in GISci and its relevance to the environmental sciences, natural resource management, and spatial decision-making. Students are expected to apply the concepts and techniques learned in this class to their own research projects. Prerequisite: GEOG 516 and GEOG 526 or consent of instructor. LEC

GEOG 771 Topics in Cultural Geography: _____ (1-3). An investigation of special topics in cultural geography. May include specific course methodology, material culture, foodways, religion, and similar topics. May be repeated. LEC

GEOG 772 Problems in Political Geography (3). Case studies of regional and national power settings with particular emphasis upon the geographical analysis of political developments in unstable areas of the world. Prerequisite: GEOG 102 or GEOG 357. LEC

GEOG 773 Humanistic Geography (3). A discussion and project-oriented course focused on ways of studying the character and meaning of places. Concepts examined include place identity, place-making, landscapes as text, sense of place, vernacular regions, and alternate representations of space. Prerequisite: Graduate standing or fifteen hours of geography or consent of instructor. LEC

GEOG 775 Seminar in Population Geography (3). Evaluation of problem formulation data gathering, research methods, and substantive knowledge in the geography of human populations. Concurrent auditing of GEOG 575 plus an additional meeting each week is required. Prerequisite: GEOG 516 and GEOG 541. LEC

GEOG 790 North American Regions: _____ (3). A detailed description and analysis of selected regions of North America. Prerequisite: An introductory geography course or background in United States or Canadian history, social science, or culture or consent of instructor. LEC

GEOG 791 Latin American Regions: _____ (3). A description and analysis of the principal sources of geographic information pertaining to portions or all of Latin America. Prerequisite: GEOG 591 or concurrent auditing of GEOG 591, or consent of instructor. LEC

GEOG 794 Regions of the Former U.S.S.R. (3). A description and analysis of geographic data pertaining to the successor states to the U.S.S.R. Prerequisite: Fifteen hours of Geography courses or background in Russian, East European or Middle East studies, or consent of instructor. LEC

GEOG 795 European Regions: _____ (2-3). A course designed to give graduate students field experience in soil mapping and in the evaluation of soils for loss through processes of erosion. Prerequisite: GEOG 535 or equivalent or consent of instructor. LEC

GEOG 802 Urban Geographic Information Systems (3). An advanced survey of urban GIS/LIS focusing on: (1) the wide range of change of applications from Automated Mapping/Facilities Management (AM/FM) to topologically related GIS; (2) generic analytical functions in both raster and vector modalities; and (4) software employed, hardware platforms, and institutional settings. A limited experience in the use of GIS is provided from exercises employing ARC/INFO software. Prerequisite: Some experience with DOS based computing. LEC

GEOG 805 Introduction to Graduate Study (2). A course required of all M.A. candidates to introduce geography as a research discipline. The course focuses on writing and editing, library materials, and the history and philosophy of the discipline. LEC

GEOG 808 Problems in Production Cartography (1-3). Advanced instruction in the theory and practice of producing maps and other related graphics for classroom instruction and research projects. Emphasis will be on current photo-mechanical and automated techniques. Prerequisite: By appointment. Consent of instructor. LEC

GEOG 835 Practicum in Soil Mapping and Soil Erosion (3). This course is designed to give graduate students field experience in soil mapping and in the evaluation of soils for loss through processes of erosion. Prerequisite: GEOG 535 or equivalent or consent of instructor. FLD

GEOG 858 Environmental Geographic Information Systems (4). An introduction to the use of GIS for environmental inventory, monitoring, and modeling. This course integrates the principles of landscape ecology with the analytical tools of GIS, remote sensing, and spatial analysis. Students will be taught GIS methodologies used to address real world problems and the use of GIS spatial analysis techniques to characterize landscapes and their change. Prerequisite: GEOG 516 and GEOG 558 or equivalents, multivariate analysis recommended. LEC

GEOG 890 Geographic Internship (1-6). Supervised professional experience. The student submits to the program committee a proposal describing the internship prior to enrollment. Up to two semesters of full-time, 16-hour scheduled meetings with the adviser provide assistance, guidance and evaluation of progress in the professional experience. A written summary of the experience or outcomes of the research project are prepared independently by the student, a representative of the host agency, and the adviser. Total credit not to exceed six hours. Prerequisite: Twelve hours of graduate level geography courses and consent of program committee. FLD

GEOG 898 Readings in Geography (1-4). RSH

GEOG 899 Master's Thesis (1-10). THE

GEOG 911 Seminar in Cartography: _____ (1-4). Study of selected topics in cartography. Can be repeated for different topics. Prerequisite: GEOG 513 and GEOG 717 or consent of instructor. LEC

GEOG 912 Seminar in Quantitative Methods (2-3). LEC

GEOG 926 Seminar in Remote Sensing (2-4). Study of selected topics in remote sensing theory and application. May include independent or group research and/or development work. Topic will be specified in advance. Prerequisite: GEOG 726 or consent of instructor. LEC
GEOG 935 Seminar in Soil Geography (2-3). Subject matter varies but focuses on modern concepts and trends in soil geography. Sample topics include classification, paleopedology, and soil genesis. Field trip and fee may be required. Prerequisite: GEOG 755 or consent of instructor. LEC

GEOG 937 Seminar in Vegetation Geography (1-3). (Same as BIOL 968.) LEC

GEOG 939 Seminar in Fluvial Systems (2-3). Study of selected topics in theory and method of fluvial systems. Samples include hydraulic geometry, the nature of alluvial sediments, and basin case studies. Topic will be specified in advance. Prerequisite: GEOG 739 or equivalent, or consent of instructor. LEC

GEOG 957 Seminar in Urban and Economic Geography (2-3). LEC

GEOG 958 Seminar in Geographic Information Systems (2-4). Study of selected topics in analysis of digital geographic data. May include research and/or developmental work. Prerequisite: GEOG 738 or equivalent, or consent of instructor. LEC

GEOG 970 Seminar in Cultural Geography: _____ (2-3). Study of selected topics in the theory and method of cultural geography. Samples include religious patterns, folk architecture, and place-defining novels. Topic will be specified in advance. Prerequisite: GEOG 770 or consent of instructor. LEC

GEOG 972 Seminar in Political Geography (2-3). Study of selected topics in the theory and method of political geography. Samples include insurgent states, electoral patterns, and political ecology. Topic will be specified in advance. Prerequisite: GEOG 772 or consent of instructor. LEC

GEOG 975 Seminar in Population Geography (2-3). Study of selected geographic topics and problems dealing with the distribution of human populations. Prerequisite: GEOG 775 or consent of instructor. LEC

GEOG 980 Seminar in Geographic Information Science (2-3). Study of selected geographic topics and problems dealing with the distribution of human populations. Prerequisite: GEOG 775 or consent of instructor. LEC

GEOG 990 Seminar in Regional Geography: _____ (1-3). LEC

GEOG 992 Seminar in Historical Geography: _____ (1-3). (Selected areas to be specified.) LEC

GEOG 998 Research in Geography (1-5). RSH

GEOG 999 Doctoral Dissertation (1-10). THE

Geology
Chair: Robert H. Goldstein, (785) 864-2738
Lindley Hall, 1475 Jayhawk Blvd., Room 120
Lawrence, KS 66045-7613, www.ku.edu/~geology
(785) 864-4974
Graduate Adviser: Roger L. Kaesler,
121 Lindley Hall, (785) 864-2751
Professors: Goldstein, Kaesler, McElwee, Steeples, Van Schmus, Walker
Professors Emeriti: Angino, Dellwig, Dort, Enos, Hambleton, Merrill, Robison, Rowell
Research Professor: Dreischoff
Courtesy Professors: Butler, Carr, Doveton, Franseen, Gerhard, Krishitala, Martin, Sopholeous, E. Taylor, T. Taylor, Watney, Whittemore
Associate Professors: Black, Devlin, Gonzalez, Hasiotis, Kamola, Lieberman, Macpherson, McClellan, Walton
Courtesy Associate Professor: Miller
Assistant Professors: Rogers, Stockli, M. Taylor, Tsolias
Courtesy Assistant Professor: Macfarlane

The department offers the M.S. degree and the Ph.D. in geology but permits specialization in a number of areas of geology and in geophysics and hydrogeology. Active areas of instruction and research include geochemistry, geomorphology, geochemistry, microbial biochemistry, paleontology, sedimentology, tectonics, and petroleum geology. Students also may work with faculty supervisors at the Kansas Geological Survey and at Kansas State University.

Admission
Admission is based on academic records including grade-point average and general preparedness in geology and supporting sciences, letters of recommendation, and the applicant’s stated academic and professional interests and goals. Results of the aptitude tests of the Graduate Record Examination are required. An attempt is made to balance the interests of students with the availability of faculty members to supervise them and laboratory space in which they may work. Consequently, new admissions in areas of geology that are heavily subscribed or in which the department has little expertise may be limited. As a result, some students who meet KU’s minimum standard for admission may be refused. Students who do not hold master’s degrees in geology normally are admitted to pursue the master’s degree. Students with exceptional records may be invited to study for the Ph.D. without first earning the M.S. degree.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to

The University of Kansas
Department of Geology
Lindley Hall, 1475 Jayhawk Blvd., Room 120
Lawrence, KS 66045-7613

Support for Students
All prospective students are considered for employment and financial aid. Employment may be in the form of teaching assistantships or research assistantships. Research assistantships may be supported with funds from external grants, from Geology Associates endowments, from the Natural History Museum and Biodiversity Research Center, or from the Kansas Geological Survey, which is on campus. Duties, compensation, and conditions of awards are prescribed as much as possible before enrollment. The department also receives funds from corporations and endowments to support fellowships, which permit students to enroll full time without specific research or teaching duties. Graduate students in geology are eligible for scholarships from the Geology Associates Program. Endowed scholarships include the Angino, Hall, Henbest, Holdren, Ireland, McGee, Moore, Patterson, Peoples, and Walters scholarship funds. Other scholarships are awarded from donations from individuals and corporations. Scholarships are awarded on the basis of academic excellence; some funds are designated for protected minorities or women.

Through the Selig Fund and other donations, the department supports graduate student field work. Through the McCollum Fund and other donations, the department underwrites partially some other research expenses, such as purchase of time on analytical equipment. Funding requires an acceptance and dissertation proposal. Students who have no other sources of research support from the department or university are given preference. Degree-seeking students may apply for loans from the Fritz, Horner, and Johns loan funds.

Degree Requirements
Details of the regulations on graduate study are included in the department’s Ground Rules for Graduate Students, available from the department office.

Prerequisites include credit in one year each of general biology, general chemistry, general physics, and calculus, plus junior- or senior-level courses in mineral-
ogy, petrology, structural geology, paleontology, stratigraphy, geophysics, and a summer course in field geology. Students planning to specialize in geophysics also should have more advanced backgrounds in calculus and physics. Incoming graduate students meet with a departmental advisory review committee before enrollment to identify deficiencies and strengths and to set up curricula aimed at providing a broad background in geology at the intermediate to advanced level during the first year. Some deficiencies may be waived at this time if they are deemed nonessential.

The science of geology has many subdisciplines, and the department tailors each student’s curriculum to the needs of the individual. There is no departmental core curriculum or list of required courses.

**Thesis Option (M.S. Degree).** The master’s degree curriculum requires completion of 30 credit hours, including up to 6 credit hours for thesis research and an acceptable master’s thesis. The student sets the curriculum in consultation with a three-member advisory committee selected from the graduate faculty and approved by the graduate adviser. Course work counted toward the degree must be distributed so as to provide a comprehensive general knowledge of geology in addition to specialized knowledge required for the thesis. It may include courses in departments other than geology. Although the department does not award a master’s degree in geophysics, students can specialize in geophysics at the master’s level. A similar arrangement is possible in the Department of Physics and Astronomy. This specialization is overseen by a committee with representatives from the Department of Physics and Astronomy and the Kansas Geological Survey as well as the Department of Geology. The committee recommends requirements for the specialty degree and coordinates educational activities in geophysics. Research is supervised by departmental faculty members as well as by adjunct faculty members who are staff members of the Kansas Geological Survey. Similar arrangements can be made for students wishing to specialize in hydrogeology or paleontology.

The student must maintain a 3.0 grade-point average in geology and supporting science courses and pass a final oral general examination with emphasis on the areas of geology relevant to the thesis project. This examination may be repeated once, if necessary.

**Nonthesis Option (M.S. Degree).** A student may complete an M.S. degree program based primarily on course work and specialized skills. For this degree, a minimum of 36 credit hours of graduate-level study must be completed, including two written reports based on small projects. The student determines the structure of the project in consultation with an advisory committee of five faculty members. A student must declare an intention to follow the nonthesis option during the first semester of graduate study. The nonthesis degree is a terminal degree and normally cannot lead to doctoral study. In addition to maintaining a 3.0 grade-point average in course work, the student must demonstrate proficiency in the areas of geology covered by the program. This is accomplished by satisfactory performance on a series of written examinations assembled and administered by the advisory committee. These constitute the final examination for the degree and may be repeated once, if necessary.

During or after the period of residence, a student who wishes to change to an M.S. (thesis) program or a Ph.D. program must petition the graduate studies committee.

**Ph.D. Requirements**

Doctoral students can specialize in any area of faculty expertise, including hydrogeology and geophysics. Prospective Ph.D. candidates are subject to the same initial requirements as master’s students. The master’s degree is not a prerequisite for doctoral aspirants. A student with a good background and a good performance during the first two semesters may be invited to proceed directly toward the doctorate.

The student’s advisory committee and the student construct a curriculum that offers the best preparation for the chosen field of interest and satisfies the Graduate School’s research skills requirement. Each student is expected to enroll in courses in supporting fields to develop a multidisciplinary approach to geology.

**Research Skills.** The department does not require specific foreign languages or other research skills for the Ph.D. Instead it gives the advisory committees authority to develop curricula that prepare students for their chosen fields. With the approval of the advisory committee, the student may meet the Graduate School’s research skills requirement by taking a curriculum or by completing a combination of languages, research skills, and courses. The curriculum in lieu of research skills is normally at least three graduate-level courses outside the department that are relevant to the specialty. The curriculum must be approved by the graduate adviser, and a list of these courses must be in the student’s file. This curriculum or the research skills must be completed before the oral comprehensive examination can be taken.

**Admission to Candidacy.** To be admitted to Ph.D. candidacy, a student must pass an oral comprehensive examination on the specialty in geology in which the student is doing doctoral research and on other relevant areas of geology or supporting sciences. The student must prepare and have approved a research proposal based on the doctoral research project before the oral comprehensive examination. The examination is based on the material presented in the proposal and its application to geology in general. The examination is conducted by a five-member faculty committee; one member of the committee must be from a department other than geology and is appointed by the Graduate School on the recommendation of the department. This committee is also responsible for conducting a final oral examination based on the doctoral dissertation. A three-person committee supervises research and preparation for the dissertation.

**Shared Doctoral Program with Kansas State University.** The department has a shared education program whereby doctoral students may study under the direction of a faculty member of the Department of Geology at Kansas State University, with a KU faculty member as co-chair of the dissertation committee. After one year of course work in Lawrence to fulfill the residence requirement, students may enroll at Kansas State University. Degrees are awarded by KU.

For specific information on departmental practices in shaping individual curricula, in controlling general examinations, and in evaluating dissertation proposals, contact the department graduate adviser.
Overall, KU has 26 graduate programs that are ranked among the top 25 in the nation in the 2006 edition of U.S. News’ “America’s Best Graduate Schools.” Thirteen KU programs rank in the top 10 among public universities.

KU has special-ized German collections in Watson Library, Spencer Library, and Wescoe Hall.
GEOL 754 Contaminant Transport (3). A study of the transport of conservative and non-conservative pollutants in subsurface waters. Case studies are designed to illustrate and develop a conceptual understanding of such processes as diffusion, advection, dispersion, retardation, chemical reactions, and biogeneration. Computer models are developed and used to quantify these processes and gain an appreciation of modeling limitations. (Same as GE 770.) Prerequisite: GEOL 561 or equivalent and departmental approval. LEC

GEOL 761 Regional Field Geology (1-5). A detailed field study of a carefully selected area that includes features of several phases of geology. Field trip. Prerequisite: GEOL 561 or equivalent and departmental approval. LEC

GEOL 763 Tectonics and Regional Geology (3). Topics vary with demand and include fundamental features of plate tectonics, interpretation and distribution of regional geology with emphasis on tectonic setting and processes, regional geology, and tectonics of selected mountain belts. Prerequisite: GEOL 562, GEOL 512, or GEOL 551, and GEOL 572. LEC

GEOL 771 Advanced Geophysics (1-3). Topics to vary with demand and include heat flow, wave propagation, synthetic seismograms, groundwater exploration, geothermal exploration, electrical methods in exploration, rock mechanics-tectonophysics, rock magnetism, geomagnetism, paleomagnetism, geophysical inverse theory, and others upon sufficient demand. May be repeated for different topics. (Same as PHSX 727.) Prerequisite: GEOL 572 or GEOL 573/PHSX 528 or consent of instructor. LEC

GEOL 772 Geophysical Data Analysis (3). Fourier analysis, sampling theory, prediction and interpolation of geophysical data, filtering theory, correlation techniques, deconvolution. Examples will be chosen from various fields of geophysics. (Same as PHSX 722.) Prerequisite: MATH 250/250, ARCE 250/250, CE 250/250, GE 250/250, EEC 250/250, EPFX 250/250, GEOL 562 or GEOL 572 or GEOL 573 or PHSX 528. LEC

GEOL 773 Seismology (3). General theory of seismic waves, wave field extrapolation (migration) by finite difference methods, construction of travel-time curves, reflection and attenuation of coefficients, earthquake source modeling, distribution and forecasting of earthquakes. (Same as PHSX 723.) Prerequisite: MATH 250/250, ARCE 250/250, CE 250/250, GE 250/250, EEC 250/250, EPFX 250/250, GEOL 562 or GEOL 572 or PHSX 528. LEC

GEOL 774 Finite Difference Methods for Geophysics (2-3). Application of finite difference methods to solve the partial differential equations that commonly occur in the study of geophysics. Representative examples will be drawn from groundwater flow, gravity and magnetics modeling, and seismic wave propagation. Emphasis will be on obtaining actual solutions for practical problems. Prerequisite: MATH 250, or MATH 320, or consent of the instructor. LEC

GEOL 775 Near-Surface Seismology (3). Theoretical and applied study of all aspects of near-surface reflection, refraction, and surface wave seismology from design and acquisition to interpretation. Prerequisite: MATH 250, GEOL 572, or consent of the instructor. LEC

GEOL 780 Conservation Principles and Practices (3). This course will acquaint students with museology problems in conserving all types of collections. Philosophical and ethical approaches will be discussed, as well as the changing practices regarding conservation treatment. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and how these problems can be remedied. Storage and care of objects will also be considered. (Same as AMS 714, BIOL 700, HIST 722 and MUSE 708.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

GEOL 781 Introduction to Museum Exhibits (3). This course will consider the role of exhibits as an integrated part of museum collection management, research, and public service. Lecture and discussion will focus on issues involved in planning and producing museum exhibits. Laboratory exercises will provide first-hand experience with basic preparation techniques. Emphasis will be placed on the management of an exhibit program in both large and small museums in the major disciplines. (Same as AMS 700, BIOL 780, HIST 723, and MUSE 703.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

GEOL 782 The Nature of Museums (3). The purpose of this course is to provide a broad view of museums, their various missions, and their characteristics and potentials as research, education, and public service institutions responsible for collections of natural and cultural objects. (Same as AMS 720, ANTH 797, BIOL 785, HIST 720, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

GEOL 783 Museum Management (3). Lecture, discussion, and laboratory exercises on the nature of museums as organizations; accounting, budget cycles, personnel management, and related topics will be presented using, as appropriate, case studies and a simulated museum organization model. (Same as AMS 731, ANTH 796, BIOL 786, HIST 728, and MUSE 703.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

GEOL 784 Introduction to Museum Public Education (3). Consideration of the goals of an institution’s public education services, developing programs, identifying potential audiences, developing audiences, and funding. Workshops and demonstrations are designed for students to gain practical experience working with various programs and developing model programs. (Same as AMS 797, ANTH 797, BIOL 784, HIST 721, and MUSE 785.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

GEOL 785 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museum collections, their associated data, and their use in scholarly research; cataloging, storage, furnishing, automated information management and related topics will be presented for museums of history, natural history, and anthropology. (Same as AMS 730, BIOL 798, HIST 725, and MUSE 704.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

GEOL 791 Advanced Topics in Geology (1-5). Selected offerings in geology. Intended primarily for graduate students and qualified seniors. May include lectures, discussions, reading, laboratory and field work. May be taken more than once. LEC

GEOL 891 Special Studies in Geology (1-9). May be repeated. LEC

GEOL 899 Master's Thesis (1-12). THE

GEOL 921 Advanced Invertebrate Palaeontology (1-3). Detailed study of systematics, morphology, stratigraphic distribution and palaeoecology of major groups of organisms in the fossil record. Specific group or groups covered will vary according to student and faculty needs and interests. May be repeated. Prerequisite: An introductory course in invertebrate palaeontology. LEC

GEOL 932 Carbonate Petrology (3). Study of the physical and chemical factors important in the genesis and diagenesis of carbonate rocks. Includes the application of principles learned from research on modern marine environments to the interpretation of ancient carbonates. Various analytical techniques are covered with emphasis on thin section petrography. Prerequisite: GEOL 531 and GEOL 732. LEC

GEOL 933 Sandstone Petrology (3). Description, classification, and interpretation of sedimentary rocks, emphasizing petrographic methods applied to terrigenous rocks and interpretation of provenance of sedimentary sequences. Prerequisite: GEOL 511 and GEOL 531 or GEOL 532. LEC

GEOL 991 Seminar in: (1-5). A review of the principles of the geological sciences. Fields considered are: geomorphology, igneous petrology, metamorphic petrology, invertebrate palaeontology, groundwater, geochemistry, stratigraphy, sedimentation, micropalaeontology, mineralogy, structural geology, and geophysics. Several may be taken concurrently. May be taken more than one semester. LEC

GEOL 999 Doctoral Dissertation (1-12). THE

Germanic Languages and Literatures

Chair: William Keel, german@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 2080
Lawrence, KS 66045-7590, www.ku.edu/~german
(785) 864-4657

Graduate Director: Leonie Marx,
2076 Wescoe Hall, (785) 864-9177

Professors: Baron, Keel, Marx

Professors Emeriti: Dick, Huelbsogen, Maurer

Associate Professor: Holmes

Associate Professor Emeritus: Fullenwider

Assistant Professors: Crawford, Koch, Taleghani-Nikazm

The department offers a full graduate program leading to the M.A. and Ph.D. degrees. In the Ph.D. program, a student may elect one of three specializations: German literature, Germanic philology, or Germanic linguistics.

Admission

In addition to the general requirements of the Graduate School, a student should have the equivalent of an undergraduate German major at KU.

Submit your application to the Graduate School online at www.grad.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
Send all other requested application materials to
The University of Kansas
Department of Germanic Languages and Literatures
Wescoe Hall, 1445 Jayhawk Blvd., Room 2080
Lawrence, KS 66045-7590

**M.A. Degree Requirements**

**Nonthesis Degree**

1. Thirty credit hours of graduate work in German. This requirement may be reduced for students in high standing, subject to the rules of the Graduate School. GERM 701, GERM 711, GERM 721, and at least one literature course from each of the following periods:

   - (a) Age of Goethe or Romanticism
   - (b) 19th century
   - (c) 20th century

   or, in exceptional cases, equivalent seminars (GERM 960-GERM 966) must be included in the minimum. Equivalent courses may be substituted with the approval of the departmental graduate committee. The remaining 12 hours in the program may be taken from departmental course offerings in literature, philology, and linguistics at the graduate level.

2. A reading knowledge of Danish, Dutch, or French.

3. A written and oral examination.

   *New teaching assistants normally must enroll in GERM 700 or GERM 800 concurrently with their first semester of teaching.*

**Thesis Degree**

1. Thirty credit hours of graduate work in German, of which 3 hours must be in GERM 899 Master’s Thesis. This requirement may be reduced for students in high standing, subject to the rules of the Graduate School. GERM 701, GERM 711, GERM 721, and at least one literature course from two of the following literary periods:

   - (a) Age of Goethe or Romanticism
   - (b) 19th century
   - (c) 20th century

   or, in exceptional cases, equivalent seminars (GERM 960-GERM 966) must be included in the minimum. Equivalent courses may be substituted with the approval of the departmental graduate committee. The remaining 9 hours may be taken from departmental course offerings in literature, philology, and linguistics at the graduate level.

2. A reading knowledge of Danish, Dutch, or French.


4. A written and oral examination.

   *New teaching assistants normally must enroll in GERM 700 or GERM 800 concurrently with their first semester of teaching.*

**Ph.D. Degree Requirements**

In addition to the general requirements for the Doctor of Philosophy degree established by the Graduate School concerning research skills, the oral comprehensive examination, the dissertation, and the final examination, a student must meet the following specific departmental requirements:

1. Normally a minimum of 27 credit hours (excluding GERM 999 Doctoral Dissertation) beyond that required for the M.A. Three courses should be in the student’s specialization; six courses should be in other areas. Students in philology or linguistics must have two courses in post-1400 literature; students in post-1400 literature must have two courses in philology or linguistics.

2. A reading knowledge of French and another modern language, Latin, or Greek. Students specializing in medieval philology or older literature must select Latin as the second language for reading knowledge.

3. At least one semester of half-time teaching or the equivalent (normally GERM 700 or GERM 800 is required concurrently with the first semester of teaching).

4. A three-part written departmental preliminary examination. To be admitted to the Ph.D. oral comprehensive examination required by the Graduate School, the candidate must have passed all parts of the Ph.D. preliminary examination.

**Max Kade Center for German-American Studies**

Director: Frank Baron, german@ku.edu,
Sudler House, (785) 864-7343 or 7342

The center collects materials on German culture in the United States and fosters scholarship in German-American, especially dialect, literary, and interdisciplinary cultural studies, including dissertation research. The materials—10,000 books, as well as magazines, journals, and other writings—were produced or brought to this country by German-speaking immigrants and exiles from Nazi Germany. Among the holdings are the libraries of the former Turner societies of Milwaukee and Lawrence. The center sponsors lectures, symposia, workshops, and conferences, publishes the *Yearbook of German-American Studies* for the Society of German-American Studies, and houses the Linguistic Atlas of Kansas German Dialects.

**Special Library Collections in German**

- The Rainer Maria Rilke Collection comprises more than 1,200 volumes, including all first editions, critical editions, translations, bibliographies, criticism, and various materials on the reception of his works.
- The Engel German Library is an endowed departmental library housing an expanding collection of reference works, standard editions, basic secondary literature, current German periodicals, newspapers and magazines, as well as tape recordings, records, slides, and audio-visual equipment.

**German Courses**

- GERM 504 German Poetry (3).
- GERM 560 Interpretation of Literature (3).
- GERM 568 German Literature from 1750-1805 (3).
- GERM 572 German Literature from 1805-1890 (3).
- GERM 576 German Literature from 1890 to the Present (3).
- GERM 588 Deutsche Kulturkunde I (3).
- GERM 590 Deutsche Kulturkunde II (3).
- GERM 604 Introduction to the Germanic Languages (3).
- GERM 608 German Literature from the Beginning to 1750 (3).
- GERM 614 Course in Representative Authors: _____ (3).
- GERM 618 Topics in German Literature: _____ (3).
- GERM 618 Topics in German Language and Linguistics: _____ (3).
- GERM 620 Topics in German Culture and Folklore: _____ (3).
- GERM 626 Diplomatic Usage in Modern Colloquial and Literary German (3).
- GERM 628 Translation Into German (Advanced) (3).
- GERM 630 Advanced German Grammar (3).
- GERM 632 Deutscher Stil (Advanced German Composition) (3).
- GERM 653 Investigation and Conference: _____ (1-3).
- GERM 653 Language Teaching for Oral Proficiency (1).
- GERM 700 Practicum for Graduate Teaching Assistants (1). Practical introduction to basic problems and techniques of teaching German. Required of assistant instructors in their first semester of teaching in the department. LEC
GERM 701 Introduction to the Study of Literature (3). Introduction to methods of literary research and presentation of seminar papers. Exercises in the use of basic guides to the study of German language and literature, in the documentation of scholarly research, and in the writing of interpretative essays, based on reading and discussion of selected works from different periods of the departmental “Basic Reading List.” LEC

GERM 703 Methods of Literary Criticism (2). Differentiation of critical methods. Exercises in textual criticism. LEC

GERM 704 German Stylistics (3). Stylistic analysis of literary texts; writing in German. LEC

GERM 705 German Phonetics (3). A systematic study of German phonetics. Prerequisite: Graduate standing or consent of instructor. LEC

GERM 711 History of the German Language (3). A comprehensive introduction to the basic concepts of German philology and various aspects of historical linguistics, including the nature of language and linguistic change, discoveries of the pioneer philologists of the 19th century up to the present day, and the beginnings of a national German language. LEC

GERM 712 The Structure of Modern Standard German (3). A descriptive study of the phonetics/phonology and grammar of contemporary standard German. Special emphasis on problems of teaching German to English-speaking students. LEC

GERM 716 Topics in German Literature: _____ (3). Intensive study of a selected topic in German literature. May be repeated. Offered only in conjunction with GERM 716 when taught by a Max Kade Distinguished Visiting Professor. Graduate students will be assigned additional work. IND

GERM 721 Introduction to Middle High German Literature (3). The elements of Middle High German as required for reading medieval texts in the original. Intensive reading and literary study of at least one text in full. LEC

GERM 732 Early Modern Period (3). Reading and discussion of major literary works of the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 734 Age of Goethe (3). Reading and discussion of major literary works in the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 736 Post-Romantic Nineteenth Century (3). Reading and discussion of major literary works in the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 738 Twentieth Century (3). Reading and discussion of major literary works in the period; combined with lectures and background readings on literary, cultural, and political history. LEC

GERM 751 Special Topics in Culture: _____ (3). Intensive study of a selected topic in German culture. May be repeated. LEC

GERM 753 Investigation and Conference: _____ (1-3). To be taken only in exceptional cases. Permission of the instructor who will supervise the student’s work is required. RSH

GERM 754 Studies in Humanism, Renaissance, and Reformation Literature: _____ (3). LEC

GERM 755 Studies in Baroque Literature: _____ (3). LEC

GERM 756 Studies in Enlightenment Literature: _____ (3). LEC

GERM 760 Studies on Writers of the Age of Goethe: _____ (3). LEC

GERM 762 Studies in Romanticism: _____ (3). LEC

GERM 764 Studies in the Literature of the 19th Century: _____ (3). LEC

GERM 766 Studies in the Literature of the 19th Century: _____ (3). LEC

GERM 901 Gothic Literature (3). Reading of selected Gothic texts. Historical and descriptive study of Gothic phonology and grammar, with an introduction to comparative Old Germanic grammar. Prerequisite: GERM 711. LEC

GERM 902 Old Saxon Literature (3). Introduction to the elements of its grammar and discussion of its role in the Germanic family of languages. Selected readings from the Heiland and discussion of the entire work. Prerequisite: GERM 711. LEC

GERM 903 Old High German (3). Reading and discussion of selected prose texts and poetic documents; phonological and grammatical features of the Old High German dialects. Prerequisite: GERM 711. LEC

GERM 905 Seminar in Germanic Philology: _____ (3). LEC

GERM 952 Seminar in Medieval German Literature: _____ (3). LEC

GERM 953 Investigation and Conference: _____ (1-3). To be taken only in exceptional cases. Permission of the instructor who will supervise the student’s work is required. RSH

GERM 954 Seminar in Humanism, Renaissance, and Reformation Literature: _____ (3). LEC

GERM 955 Seminar in Baroque Literature: _____ (3). LEC

GERM 956 Seminar in Enlightenment Literature: _____ (3). LEC

GERM 960 Seminar on Writers of the Age of Goethe: _____ (3). LEC

GERM 962 Seminar in Romanticism: _____ (3). LEC

GERM 964 Seminar in the Literature of the 19th Century: _____ (3). LEC

GERM 966 Seminar in Problems in Literature since 1890: _____ (3). LEC

GERM 967 Seminar in Special Topics: _____ (3). LEC

GERM 999 Doctoral Dissertation (1-10). THE

Scandinavian Courses

SCAN 570 Scandinavian Life and Civilization (3).

SCAN 660 Representative Authors in English (3).

SCAN 661 Topics in Scandinavian Languages and Linguistics: _____ (3).

SCAN 753 Investigation and Conference: _____ (1-3). Independent study and directed reading on special topics. Permission of the instructor is required. RSH

SCAN 906 Old Norse (3). Introduction to the grammar and reading of the prose literature of the “saga-age” (1100-1350). Varied selections from the literature provide the context in which the language is discussed. LEC

SCAN 907 Readings in Old Norse Literature (3). Intensive discussion of a single longer saga or several shorter works, or a combination of these on a single theme. Dialectal differences between W. Norse and older Germanic dialects will be noted. Prerequisite: SCAN 906. LEC

Gerontology

Gerontology Center Director: David J. Ekerdt
Dole Center, 1000 Sunnyside Ave., Room 3090
Lawrence, KS 66045-7555, www.ku.edu/~kugeron
(785) 864-4130

Graduate study in gerontology at KU consists of two programs, (1) Master of Arts and Doctor of Philosophy degrees in gerontology, and (2) a Graduate Concentration in gerontology. Both programs are interdisciplinary. They are administered through the Gerontology Center, a component of the Schiefelbusch Institute for Life Span Studies.

M.A. and Ph.D. Program

The Doctor of Philosophy degree in gerontology was approved by the Kansas Board of Regents during the 1996-97 academic year. KU is one of only six universities nationwide offering the Ph.D. in gerontology. KU’s gerontology graduate program is unique in that it is an interdisciplinary research degree emphasizing social and behavioral gerontology. Faculty affiliated with the program include members of the Departments of Applied Behavioral Science; Communication Studies; Psychology; Speech-Language-Hearing; Sociology; and Health, Sport, and Exercise Sciences. The graduate program in gerontology gives students a broad, advanced educational experience in gerontology. It provides a common focus for all students, yet allows each
Gerontology

student to design a course of study appropriate for her or his career objectives. Courses give students a multi-disciplinary perspective on the issues and problems of aging. The program prepares students for academic and research careers in gerontology, as well as for professional careers in private and public institutions and agencies providing services to older individuals. Students seeking a terminal M.A. in gerontology are not admitted; the M.A. is offered only to those pursuing a Ph.D.

Application and Admission. Any student who has completed at least a B.A. or B.S. degree at an accredited institution of higher education may apply to the Ph.D. program. Required application materials include a résumé, a personal statement of professional and educational goals in gerontology, two copies of all undergraduate and graduate transcripts, three letters of recommendation, and scores from the Graduate Record Examination. Applicants whose first language is not English must submit proof of proficiency in English. GRE and other scores should be from the last two years. Application forms and further information are available from the graduate adviser or on the program’s Web site.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Gerontology Program
Dole Center, 1000 Sunnyside Ave., Room 3090
Lawrence, KS 66045-7555

Program Requirements. For the Ph.D., the student must complete all requirements of the Graduate School and the College of Liberal Arts and Sciences, including residency, research skills, comprehensive oral examination, preparation of a dissertation, and the final oral examination.

Each student designs his or her own curriculum with the assistance of a support committee of three gerontology faculty members. All students are expected to acquire multidisciplinary training in gerontology by taking courses in the sociology, psychology, and biology of aging.

Students may enter the program with an acceptable master’s degree from KU or another institution. The admissions committee reviews master’s-level preparation for doctoral-level research. An acceptable level of preparation includes basic training in statistics, program assessment, or policy analysis and completion of an empirical research study or thesis.

Students entering the program without an acceptable master’s degree must complete the M.A. in gerontology before the Ph.D. The requirements for the M.A. in gerontology are as follows:

1. Gerontology proseminar.
2. Six hours of core courses in gerontology (selected from at least two of the following areas: biology of aging, psychology of aging, social gerontology).
3. Twelve hours of supplemental courses in gerontology and related fields.
4. Six hours of basic statistics courses.
5. Three hours of methodology.
6. Six hours of thesis credit.

For students who enter the program with master’s degrees or who complete the M.A. in gerontology, minimum requirements for the Ph.D. are as follows:

1. Gerontology proseminar.
2. At least 6 hours of core courses in gerontology (selected from at least two of the following areas: biology of aging, psychology of aging, social gerontology).
3. At least 12 hours of additional supplemental courses in gerontology and related fields.
4. Six hours of advanced statistics courses.
5. Six additional hours of methodology.
6. Completion of written and oral comprehensive examination.
7. Six hours of dissertation credit. completion of dissertation, and final oral examination.

A list of courses meeting requirements in gerontology, statistics, and methodology is available from the graduate adviser.

Evaluation of Satisfactory Performance. The gerontology proseminar and core courses should be completed during the first two semesters. Students normally are expected to complete the M.A. degree in two years. The maximum time limit for completing all requirements for the M.A. degree is three years. Students normally are expected to complete the Ph.D. within three years of entering the program or of completing the M.A. The maximum time limit for completing all requirements for the doctoral degree is eight years after admission to the doctoral program with an acceptable master’s degree or after completion of the M.A. degree in gerontology. Students who complete the M.A. degree in gerontology at KU and subsequently begin doctoral studies have a total enrolled time of 10 years to complete both degrees.

Written Preliminary Examination. Upon completion of the M.A., a major portion of the course requirements, and the research skills requirement, each student must pass a written preliminary examination. This examination covers two content areas reflecting the student’s area of concentration and integrates theoretical and methodological issues in gerontology.

Comprehensive Oral Examination. The comprehensive oral examination covers gerontology. The examination can take one of five forms: (1) a defense of the written preliminary examination, (2) a defense of a completed research project, (3) a defense of a prospectus for a future research project, including the dissertation, (4) a discussion of a major review paper written by the student, (5) a review of a research grant proposal and a simulated site visit defense of the proposal.

Dissertation Preparation and Final Oral Examination. Upon passing the comprehensive oral examination, the student becomes a candidate for the doctorate. The Graduate School designates a dissertation committee based on the recommendation of the program. The dissertation committee includes at least three members of the gerontology program faculty.

After passing the comprehensive oral examination, the candidate must be continuously enrolled until all requirements for the degree have been met. When the completed dissertation has been accepted by the committee, but before it has been bound, and all degree requirements have been met, the program requests the Graduate School to schedule the final oral examination,
allowing a minimum of two weeks to verify the requirements and publicize the examination. At least five months must elapse between successful completion of the comprehensive oral examination and the final oral examination.

**Foreign Language or Other Research Skills Requirement.** The Graduate School requires doctoral students to demonstrate competence in a research skill “distinct from the dissertation but strongly supportive thereof.” The program advisory committee establishes requirements for research skills, including the following options: (1) demonstrated proficiency in a spoken language other than English that is relevant to research in gerontology, (2) demonstrated reading proficiency in two languages other than English that are relevant to research in gerontology, (3) competence in both computer programming and computer applications with relevance to research in gerontology, (4) a record of professional experience, publication, or presentation at professional meetings or a record of course work in a substantive area such as statistics beyond that required to satisfy the master’s or doctoral degree requirements in gerontology.

**Research Experience.** All students are expected to be continuously involved in research under the supervision of the graduate adviser and support committee. Research involvement includes the design, execution, and dissemination of research on aging.

**Gerontology Graduate Concentration**

The graduate certificate in gerontology allows students to combine a research interest in aging with graduate study in a specific academic department. Completion of the certificate enables students to apply their specialized knowledge of the social, psychological, demographic, and biomedical aspects of aging to their own professional disciplines. Successful completion of the certificate is indicated on the student’s KU transcript. The student also receives a letter attesting to the successful completion of a coordinated program in aging. The certificate represents an additional credential for graduate students from a variety of academic disciplines who are preparing for careers in research and teaching or professional practice.

**Admission.** Any KU student in a degree-granting department or school at the master’s or doctoral level is eligible to apply for admission to the Graduate Certificate Program in Gerontology. Nondegree-seeking students also may apply. Apply to the gerontology faculty adviser. A faculty adviser knowledgeable in aging is designated to oversee the student’s progress.

**Concentration Requirements.** A detailed description is available from the Gerontology Center. Students complete 15 hours of course work including a research practicum or field placement. The certificate enables students to integrate knowledge of gerontology into their academic disciplines or professional training. Course work includes the gerontology proseminar, courses in the biology of aging, the psychology of aging, communication and aging, and social gerontology, as well as gerontology electives. These requirements are based on the recommendations of the Association for Gerontology in Higher Education for graduate certification programs.

**Courses**

See course listings for the Departments of American Studies, Psychology, and Sociology in this chapter of the catalog; the Department of Health, Sport, and Exercise Sciences in the School of Education chapter; and the School of Social Welfare chapter.

**Greek**

See Classics.

**Haitian**

See African and African-American Studies.

**Hebrew**

See Religious Studies.

**Health Policy and Management**

See the School of Medicine chapter of this catalog.

**History**

Chair: Jeffrey Moran
Wescoe Hall, 1445 Jayhawk Blvd., Room 3001
Lawrence, KS 66045-7590, www.history.ku.edu
(785) 864-3569
Director of Graduate Studies, Eve Levin,
2016 Wescoe Hall, (785) 864-9463
Professors: Bailey, Bhana, Boyarin, J. Clark, Epstein, Kuznesof, Saul, Sweets, Wilson, Worster
Associate Professors: Corteguera, DeKosky, Earle, Levin, Lewin, Moran, Naper, Rath, Rosenthal, Sax, Sivan, Sponholtz, Tsutsui
Assistant Professors: Brooks, K. Clark, Cushman, Greene, Jenkins, Kelton, MacGonagle, Nelson, Tuttle, Vicente, Warren

**Fields of Study**

The department has the following established fields, each with subdivisions:

- Ancient/Medieval History.
- Modern European History.
- Great Britain and the Empire.
- Russian and East European History.
- East Asian History.
- Latin American History.
- U.S. History.
- Native American History.
- History of Science and Medicine.
- Environmental History.
- Military/Diplomatic History.
- History of Women and Gender.

Students may be permitted to pursue programs in additional fields appropriate to the expertise of the faculty, with the approval of the department’s graduate board.

**Application Deadline**

The application deadline for admission and financial aid is December 1, to begin the program the following fall semester.

**Admission**

The department accepts applications for both the M.A. and the Ph.D. degrees. Students who currently have only the B.A. degree but plan to study for the Ph.D. should apply for admission to the M.A. program.
History

Applicants are not required to have a B.A. in history to be eligible for admission. Because scholarly work in many fields of historical study depends on competence in one or more foreign languages, the department encourages applicants to have a reading competence in at least one foreign language before enrolling.

For complete information on required materials, visit the department Web site, www.history.ku.edu, and select Graduate Program, or contact the department. The department requires a completed application checklist, statement of purpose, résumé or curriculum vitae, and writing sample. All graduate applicants must take the Graduate Record Examination general test and have a copy of the results forwarded to the department.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Department of History
Wescoe Hall, 1445 Jayhawk Blvd., Room 3001
Lawrence, KS 66045-7590

Department degree requirements are currently being revised. Consult the department for current information.

M.A. Degree Requirements

The master's program in history requires satisfactory completion of 30 credit hours of graduate courses including at least 6 hours in history research seminars and the passing of a comprehensive oral examination.

Soon after admission, the student should select a faculty member as his or her adviser. The adviser directs the student's work and advises the student about selecting Option A or Option B.

Option A. Three fields of history. The fields are the equivalent of secondary fields drawn from three different major fields. With the consent of departmental advisers, when a student's program warrants a substitution, she or he may substitute an allied field outside the department that provides vital support for the program (e.g., substituting international relations for U.S. diplomatic history). At least 9 hours of course work must be taken in each of the three fields.

Option B. A major field and one secondary field. At least two history faculty members must serve on the student's M.A. committee for the major field. At least 18 hours of course work in the major field and 9 hours in the secondary field must be taken.

Each student must take HIST 805 The Nature of History or HIST 699 Philosophy of History.

Nine hours of work in courses numbered 801 or higher and 6 hours of research seminar are required. Normally, at least 3 hours of seminar under each program should be taken with the student's program adviser, who chairs the oral examining committee.

All master's candidates must produce two publishable, article-length papers (approximately 30 pages) in the two required seminars. The final oral examination for the master's degree includes questions concerning the papers as well as coverage of the student's major and secondary fields.

Ph.D. Degree Requirements

Students normally must complete the M.A. degree before they are eligible to enter the Ph.D. program. Students who enter the M.A. program may either complete the degree or petition for direct admission to the Ph.D. program. This petition first must be endorsed by the student's adviser and the field committee and then be approved by the department's graduate board.

In addition to the general requirements of the Graduate School, the following departmental requirements must be met. A minimum of 11 courses (33 credit hours) is required for the Ph.D. Students may choose between two options for their course work.

Track A. Students offer a major and two secondary fields. The major field includes six courses (18 credit hours). The secondary fields include two courses (6 credit hours), for a total of 12 credit hours; one of the secondary fields may be taken in a discipline outside the department, but a student may offer all three fields in history. Students must take HIST 805 or its equivalent.

Track B. Students select two major fields, for which they take a total of eight courses (24 credit hours), and one secondary field, for which they take two courses (6 credit hours). The secondary field may be taken in a discipline outside the department, but a student may offer all three fields in history. Under the major fields, students may choose a 4/4 or a 5/3 configuration for their eight courses. Students must take HIST 805 or its equivalent.

For both Track A and Track B, the major and secondary fields are those listed in this catalog or approved by the graduate board.

The department requires proficiency, at the level the student's committee deems necessary, in one or two foreign languages appropriate to the student's fields of specialization. Students should present satisfactory evidence of proficiency in the first language before enrollment in the second semester of work toward the Ph.D. Appropriate proficiency in the second language (if necessary) must be achieved before the student may take the oral comprehensive examination.

Before taking the oral comprehensive examination, students must complete (in addition to the language requirement) a minimum of five colloquia and seminars, including two in the major field(s) and one in each secondary field. At least two of the five must be research seminars, preferably taken with different faculty members, including the anticipated dissertation supervisor.

The comprehensive examination consists of written examinations covering each of the student's fields, followed by an oral examination covering all of the fields.

History Courses

HIST 500 History of the Book (3).
HIST 501 Heroic and Archaic Ages of Ancient Greece (3).
HIST 502 Development of Ancient Greece, ca. 1000-300 B.C. (3).
HIST 503 The Ancient History of the Near East (3).
HIST 504 Canon Law, English and Continental (3).
HIST 505 Studies in Greek Civilization: _____ (3).
HIST 506 Roman Republic (3).
HIST 507 Early Roman Empire (3).
HIST 508 Late Roman Empire (284-527) (3).
HIST 509 Multinational Corporations: The Role of Money and Power (3).
HIST 510 Topics in: _____ (2-3).
HIST 511 Roman Decline and Medieval Origins (3).
HIST 512 The Medieval Empire (3).
HIST 513 Early Medieval Culture (3).
HIST 514 Roman and Germanic Law (3).
HIST 515 The Crusades in Cross-cultural Perspective (3).
HIST 516 Later Medieval Culture (3).
HIST 517 Foundations of European Law (3).
HIST 518 Economic and Social History of Europe, 1750-1914 (3).
HIST 519 European Intellectual History of the Seventeenth Century (3).
HIST 520 The Age of the Renaissance (3).
HIST 521 The Age of the Reformation (3).
HIST 522 The Age of Religious Wars, 1540-1648 (3).
HIST 523 Europe between Absolutism and Revolution (3).
HIST 524 The French Revolution (3).
HIST 525 Modern France: From Napoleon to de Gaulle (3).
HIST 526 Nineteenth-century Europe, 1870-1914 (3).
HIST 527 Recent European History, 1870 to the Present (3).
HIST 528 Economic History of Europe (3).
HIST 529 Intellectual History of 19th-century Europe (3).
HIST 530 History of American Women—Colonial Times to 1870 (3).
HIST 531 History of American Women—1870 to Present (3).
HIST 532 History of Women and Work in Comparative Perspective (3).
HIST 533 The History of Women and the Family in Europe, from 1500 to the Present (3).
HIST 534 Origins of Modern Germany—Reformation to 1648 (3).
HIST 535 Modern German History—1648-1848 (3).
HIST 536 Modern German History—1848 to the Present (3).
HIST 537 France from the Renaissance to the French Revolution (3).
HIST 538 European Intellectual History of the Eighteenth Century (3).
HIST 539 Britain and Ireland to 1200 C.E. (3).
HIST 540 Medieval Britain (3).
HIST 541 British History, 1500-1660 (3).
HIST 542 English Law, Historical and Comparative Aspects (3).
HIST 544 Britain and Ireland from 1200 to 1500 (3).
HIST 545 British History, 1660-1832 (3).
HIST 546 History of Cartography (3).
HIST 547 The Intellectual History of Europe in the Twentieth Century (3).
HIST 548 British History, 1832 to the Present (3).
HIST 549 Social and Economic History of Britain from 1700 (3).
HIST 550 The British Empire (3).
HIST 551 Spain and its Empire, 1450-1700 (3).
HIST 552 Irish Culture (3).
HIST 553 Muslims, Christians, and Jews in Medieval Iberia (3).
HIST 554 Poland from Kings to Communists to Solidarity and After (3).
HIST 555 Aspects of British Political Thought (3).
HIST 556 Aspects of British Political Thought, Honors (3).
HIST 557 Nationalism and Communism in East Central Europe from 1772 to the Present (3).
HIST 558 Religion in Britain Since the Reformation: A Survey (3).
HIST 559 Religion in Britain Since the Reformation: A Survey, Honors (3).
HIST 560 United States Environmental History in the 20th Century (3).
HIST 561 U.S. Environmental Thought in the 20th Century (3).
HIST 562 Medieval Russia (3).
HIST 563 Imperial Russia and the Soviet Union (3).
HIST 564 Russia in the 18th Century, 1680-1801 (3).
HIST 565 Oil, The Great Powers, and the Persian Gulf, 1900 to the Present (3).
HIST 566 Russia in the 20th Century (3).
HIST 567 The Middle East in the 19th and 20th Centuries (3).
HIST 570 The Middle East Since World War II (3).
HIST 571 The Spanish Borderlands in North America (3).
HIST 572 The United States Borderlands: People, Place, Past (3).
HIST 573 Latin America in the 19th Century (3).
HIST 574 Slavery in the New World (3).
HIST 575 History of Mexico (3).
HIST 576 History of Central America (3).
HIST 577 History of the Caribbean (3).
HIST 578 Social History of South America (3).
HIST 579 The History of Brazil (3).
HIST 580 Economic History of Latin America (3).
HIST 581 Topics in Third World History: ______ (3).
HIST 583 Imperial China (3).
HIST 584 Modern China (3).
HIST 585 Reform in Contemporary China (3).
HIST 586 Ancient and Medieval Japan (3).
HIST 587 Early Modern Japan (3).
HIST 588 Japan, 1853-1945 (3).
HIST 589 Japan Since 1945 (3).
HIST 590 Cultural History of Korea (3).
HIST 591 Food in History: West and East (3).
HIST 592 Huns, Turks, and Mongols: The Nomad Factor in History (3).
HIST 593 Modern Korea (3).
HIST 594 Law and Society in Traditional China (3).
HIST 595 Business and Industry in Japan (3).
HIST 596 Defining Japan: Marginalized Groups and the Construction of National Identity (3).
HIST 597 Japanese Theatre History (3).
HIST 598 Sexuality and Gender in African History (3).
HIST 599 The Rise and Fall of Apartheid (3).
HIST 600 West African History (3).
HIST 601 Oral History (3).
HIST 602 Religion in Britain, 1785-1925 (3).
HIST 603 History of Tibet (3).
HIST 606 Childhood and Youth in America (3).
HIST 607 The Family in History: Comparative Perspectives (3).
HIST 608 History of Sexuality (3).
HIST 609 History of Women and Reform in the United States (3).
HIST 610 American Colonial History (3).
HIST 611 Early American Indian History (3).
HIST 612 History of Federal Indian Law and Policy (3).
HIST 613 Slavery and Freedom in the Age of Jackson (3).
HIST 615 Modern America, 1920-1945 (3).
HIST 616 Contemporary America, 1941-Present (3).
HIST 617 America in the 1960s (3).
HIST 618 History of the American West to 1900 (3).
HIST 619 History of the American Indian (3).
HIST 620 History of Kansas (3).
HIST 621 The American West in the 20th Century (3).
HIST 622 History of the Plains Indians (3).
HIST 627 Growing Up in America (3).
HIST 628 American Economic Development (3).
HIST 629 United States Diplomatic History I (3).
HIST 630 United States Diplomatic History II (3).
HIST 631 The Contemporary Afro-American Experience (3).
HIST 634 The Scientific Revolution in the 16th and 17th Centuries (3).
HIST 636 Agriculture in World History (3).
HIST 639 Modern Revolution in Biology and Medicine, Harvey to the Present (3).
HIST 640 Entrepreneurship in East Asia (3).
HIST 646 Witches in European History and Historiography (3).
HIST 649 History of Feminist Theory (3).
HIST 651 History of American Business (3).
HIST 653 American Constitutional History to 1887 (3).
HIST 654 American Constitutional History Since 1887 (3).
HIST 660 Biography of a City: ______ (3).
HIST 666 Contemporary America, 1941-Present, Honors (3).
HIST 696 Seminar in: ______ (3).
HIST 699 Philosophy of History (3).
HIST 705 Globalization in History (3). A study of the increasing interaction among world societies since 1500 and an investigation of the long-term developments behind current world problems. Major topics include western expansion since 1500, the spread of state sovereignty, the formation of a world economy, and spread of international institutions. The current world problems investigated will vary, but may include issues such as environmental crises, human rights, migration, free trade and the spread of consumer culture, ethnicity and nationalism, and international intervention within states. (Same as INTL 705.) LEC
HIST 710 Colloquium in Medieval Latin (3). An introduction to Medieval Latin for students pursuing medieval studies. The material covered will include selections from various literary works, the Vulgate, law codes, legal documents, and other sources from the period 300-1500. May not be retaken for credit. Prerequisite: Four semesters of college Latin or the equivalent, and/or consent of instructor of Ancient-Medieval graduate adviser. LEC
HIST 720 The Nature of Museums (3). The purpose of this course is to provide an overview of the kinds of museums, their various missions, and their characteristics and potentials as research, education, and public service institutions responsible for collections of natural and cultural objects. (Same as AMS 720, ANTH 795, BIOL 788, GEOL 782, and MUSE 702.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
HIST 721 Introduction to Museum Public Education (3). Consideration of the goals of an institution’s public education services, developing programs, identifying potential audiences, developing audiences, and funding. Workshops and demonstrations are designed for students to gain practical experience working with various programs and developing model programs. (Same as AMS 797, ANTH 797, BIOL 784, GEOL 784, and MUSE 705.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC
HIST 722 Conservation Principles and Practices (3). This course will acquaint the future museum professional with problems in conserving all types of collections. Philosophical and ethical approaches will be discussed, as well as the changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and how these problems can be remedied. Storage and display objects will also be considered. (Same as AMS 714, BIOL 790, GEOL 780, and MUSE 707.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 723 Introduction to Museum Exhibits (3). This course will consider the role of exhibits as an integrated part of museum collection management, research, and public service. Lecture and discussion will focus on issues involved in planning and producing museum exhibits. Laboratory exercises will provide hands-on experience with basic preparation techniques. Emphasis will be placed on the management of an exhibit program in both large and small museums in the major disciplines. (Same as AMS 700, BIOL 797, GEOL 781, and MUSE 703.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 725 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museum collections, their associated data, and their use in scholarly research; cataloging, storage, fumigation, automated information management and related topics will be presented for museums of art, history, natural history and anthropology. (Same as AMS 730, BIOL 798, GEOL 785, and MUSE 708.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 727 Practical Archival Archives (3). Study of the principles and practices applicable to the preservation, care, and administration of archival records. Developmental experience will be an integral part of this course. (Same as MUSE 707.) LEC

HIST 728 Museum Management (3). Lecture, discussion, and laboratory exercises on the nature of museums as organizations; accounting, budgeting, personnel management, museum interpretation, museum development, and related topics will be presented, using, as appropriate, case studies and a simulated museum organization model. (Same as AMS 731, ANTH 796, BIOL 785, GEOL 785, and MUSE 701.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

HIST 747 Teaching about East Asia (2). An advanced survey of the history, culture, and contemporary affairs of China, Japan and Korea, specifically designed for K-12 educators who wish to incorporate East Asian topics into their classroom teaching. Pedagogical methods and resources for the study of East Asia will be emphasized. Topics covered will address relevant benchmarks in the state curriculum standards in social studies, themes from the Advanced Placement world history examination, and the national standards in world history. (Same as EALC 747.) Prerequisite: Approval of the instructor. LEC

HIST 799 Museum Studies Apprenticeship (1-6). Provides directed, practical experience in the collection, care, use, and/or management of historical materials. (Same as AMS 790, ANTH 799, BIOL 799, GEOL 773, and MUSE 799.) Prerequisite: Consent of instructor. FLD

HIST 800 Readings in: ____________________________ (1-6). Prerequisite: Consent of instructor. RSH

HIST 801 Colloquium in: ____________________________ (1-6). Prerequisite: Completion of a six-hour research seminar. SEM

HIST 802 Seminar in: ____________________________ (0). Research Seminar on selected topics. SEM

HIST 805 The Nature of History (3). Analysis of what historians do and how the profession of history has developed in terms of training, concepts, and practices in both research and teaching. Consideration also of the major controversies that have developed over historiographical method and historical interpretation, giving greatest emphasis to American and European historiography by providing a relationship to the leading concepts of world history. LEC

HIST 806 Studies in: ____________________________ (1-3). The core course for each thematic major field in the graduate program in History. The course, offered in a colloquium style format, will serve as an introduction to the principal standard literature in the field, and will consider the full range of methodologies or approaches appropriate to the field. LEC

HIST 807 Professional Development Colloquium (3). This course will help train future professional historians to teach, analyze concepts, present papers, publish articles, and write research or project proposals to prepare for positions in academia or in public history. It involves evaluating teaching materials, designing a course (preparing syllabi, lectures, and exams), exposure to classroom technologies, understanding professional ethics, developing multicultural curricula, dealing with issues of classroom diversity (including such topics as gender, minority status, disability) and behavior problems (such as plagiarism), creating a placement file and job interviewing, preparing a conference panel and delivering a presentation, working with historical societies, commissions, and the general public, and exploring alternatives to the traditional academic careers. Recommended for all History Graduate Students. LEC

HIST 808 Colloquium in Comparative History: ____________________________ (3). A readings-oriented course which explores themes in two or more geographical and/or chronological fields of history. The benefits and disadvantages of comparative methodologies will be analyzed. Topics will vary each term but may include the examination of such subjects as the history of urbanization, labor, colonialism, immigration, the family, political thought, or other topics. Varies by semester. LEC

HIST 812 Seminar in Historical Editing (3). This seminar is oriented toward those advanced graduate students who wish to improve their editing skills. Students who enroll may edit their own writing, the writing of other class members, or "old texts." Editing will be practiced as though the product were to be published. Those who have publishing commitments are especially encouraged to enroll. The format of class meetings will be flexible and every effort will be made to center class work around the individual needs of those who enroll. LEC

HIST 820 Colloquium on Popular Culture in Latin America (3). This course examines the history and theory of popular culture in 19th and 20th century Latin America from a cross-disciplinary perspective. Some of the topics covered will include: the historical development of urban popular culture from broadsides and newspapers to radio and telenovelas; the politics of music from the tango to the new song movement; folk art vs. High art in the definition of national identity; cultural imperialism; sports and public rituals as spectacles for the working class; relationship between mass culture and the novel; gender roles and social order as revealed in forms of popular culture; and the politics of the New Latin America Cinema. Discussions will be in English. No prerequisites. LEC

HIST 821 Colloquium on Iberian and Latin American Democracy (3). The principal purpose of the colloquium is to understand the evolution of government in the Iberian Peninsula and Latin America, with a special focus on efforts to promote democracy and regular, meaningful elections in the nineteenth and twentieth centuries. We will read basic literature on the Iberian background, the colonial experience, caudillismo, and militarism as well as on democratic theory, political ideology, political participation, and electoral politics. LEC

HIST 822 Colloquium in the Urban History of Latin America (3). Explores the growth of the city and urban culture from the Spanish conquest to the present. Focus on such topics as crime, public health, leisure activities, unions, social welfare and related topics will be examined. (3). This seminar will examine the urban landscape in Latin America, with an emphasis on key developments of the past century. LEC

HIST 823 Colloquium on Colonial Latin America (3). Explores the historiography and major themes and problems of the history of colonial Latin America. Ordinarily this will involve reading and discussion of historiographical articles, major books, and selected field work. Focus will be on comparative approaches and perspectives. A long historiographical paper will be required. LEC

HIST 824 Seminar on Labor in Latin America (3). Major problems in class conflict resulting from industrialization of peripheral economies. Focus on such topics as labor movements, worker-inspired revolutions, women in the labor force, labor unions, and the labor movement in Latin America. LEC

HIST 825 Seminar in Latin American Foreign Relations (3). This seminar considers the foreign relations of Latin American countries, with an emphasis on the history of Latin American involvement in the world order, with special emphasis on the relationship between Latin America and the United States. LEC

HIST 826 Seminar in Twentieth-century South America (3). Research seminar which examines major topics in the recent history of the Andean and Southern Cone countries. Topics such as the role of the military in the dirty wars and the rise of military regimes, the social collapse of Colombia, Argentina and Peru, and the persistence of traditional cultures in the face of capitalist transformations will be thoroughly explored. LEC

HIST 827 Colloquium in the Social History of Latin America (3). Explores the history and theory of social history as practiced in the major departments. Focus will be on the development of electoral systems. LEC

HIST 830 Colloquium in Eighteenth- and Nineteenth-century Britain (3). This course examines the varied and popular responses to the creation of a capitalist economy (agrarian and industrial) in Britain between 1750 and 1890. LEC

HIST 831 Colloquium in Twentieth-century Britain (3). This course examines the main developments in the political, social, and cultural history of Britain since 1890. The aim is to trace the relationship between political movements and socio-cultural attitudes and institutions. LEC

HIST 833 Colloquium in British History, 1500-1660 (3). This course will engage with recent scholarship on the Renaissance and Reforma-, the Civil War and the English Republic. LEC

HIST 834 Colloquium in the History of the British Empire (3). This course will explore the relationship of the British Empire to the growth of economic power and the development of the British Empire as a world power. LEC

HIST 836 Colloquium in British Political Thought (3). This course provides an introduction to the British tradition in political thought through a close reading of a number of classic texts, interpreted in their historical settings. LEC

HIST 837 Colloquium in British Religious History (3). This course will deal analytically and synoptically with religion in Britain from the
reformation to the present with special reference to the Church of England, and will focus on the themes of ecclesiocracy, ecclesiastical polity, and the role of the state. LEC

HIST 844 Colloquium on East Central Europe, 1772-1914 (3). The colloquium begins with a study of the peoples of East Central Europe in World War I, and in the dissolution of the Austro-Hungarian, German and Russian Empires; it ends with the collapse of Communism and the problems of the transition to free market, and democracy. The major areas of study are the political, economic, and social development of Poland, Czechoslovakia, and Hungary; minority problems and policies, and foreign policies in the interwar period, their different experiences in World War II, and their place in Western and Soviet war aims; their varied histories under Communism, especially reformist and dissident movements, and finally their reactions to its collapse. LEC

HIST 847 Colloquium in Russian History (3). A group readings course that begins with Russia in the medieval period and continues through the end of the twentieth century. Topics may vary each term, but may include such subjects as political, social, religious, gender, or intellectual history. The course will focus on significant interpretative issues and the historiography that address them. Basic familiarity with the chronology and the main problems of Russian history is assumed. LEC

HIST 848 Colloquium in 20th-century Russia (3). The focus will be on reading and discussion of historical literature on the end of Imperial Russia, the Russian revolutions, and the Soviet Union and its aftermath. LEC

HIST 853 Research Seminar: The Atlantic World in the Early Modern Period (3). This graduate seminar will focus on interactions between the so-called Old and New Worlds in the three centuries following Columbus. The course will pay particular attention to the changes in the lives of Europeans, Africans, and the peoples of the Americas as a result of the emergence of transatlantic economies, empires, and cultural systems. LEC

HIST 856 Colloquium in Modern European History I – Renaissance to 1648 (3). This course will concentrate upon a number of selected topics in the history of Europe between the Renaissance and 1648. Emphasis will be placed upon certain problems within this period and the recent historiography that deals with them. The first in a sequence of colloquia in Modern European History. Required of European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 857 Colloquium in Modern European History II – 1610-1789 (3). This course will concentrate upon a number of selected topics in the history of Europe between the end of the Thirty Years’ War and the outbreak of the French Revolution. Emphasis will be placed upon certain problems within this period and the recent historiography that deals with them. The second in a sequence of colloquia in Modern European History. Required of European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 858 Colloquium in Modern European History III – 1748-1914 (3). From the origins of the French Revolution through the outbreak of World War I. The third in a sequence of colloquia in Modern European History. Required of European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 859 Colloquium in Modern European History IV – 1870-Present (3). From the consolidation of the major national states in western Europe (Italy and Germany) through the two World Wars and into the contemporary era. The fourth in a sequence of colloquia in Modern European History. Required of European history graduate students and students majoring in other fields whose secondary fields correspond to this time frame. LEC

HIST 879 Colloquium on North American Environmental History (3). In-depth analysis of significant works in the field. Prerequisite: Consent of instructor. LEC

HIST 890 Colloquium in American History 1492-1800 (3). Study of the leading interpretations of major issues in the history of Colonial and Revolutionary America, including appropriate attention to new approaches and techniques in research. The first course in a sequence of colloquia in United States history. Required of all U.S. history graduate students. LEC

HIST 891 Colloquium in 19th-century U.S. History (3). Study of the leading interpretations of major issues in the history of the United States in the 19th century. The third course in the sequence of colloquia in United States history. LEC

HIST 892 Colloquium in 20th-century U.S. History (3). Study of the leading interpretations of major issues in the history of the United States in the 20th century. The third course in the sequence of colloquia in United States history. LEC
THE UNIVERSITY OF KANSAS

History; History of Art

HIST 955 Seminar in East Asian History (3). A research seminar in East Asian history. Prerequisite: Open only to graduate students having a reading knowledge of at least one East Asian language.LEC

HIST 962 Seminar in American History (1-12). A research and thesis seminar offered by several members of the Standing Field Committee in United States History. Students seeking advanced degrees in United States history will enroll in the seminar for theses and dissertation credit. May be repeated. LEC

HIST 964 Seminar in American Colonial History (3). An intensive, research-oriented study of American history from the 1580s to the 1760s. The course will cover both British America and New France. May be repeated. LEC

HIST 965 The American Revolutionary Experience (3). An intensive, research-oriented study of American history from 1760 to 1800. May be repeated. LEC

HIST 971 Recent American History, 1920 to the Present (3). LEC

HIST 973 Seminar in United States Women's History (3). This research seminar will focus on the history of women in the United States from the pre-contact period to the present. Students will research and write a paper using primary sources, and present those papers to the seminar for evaluation. (Same as AMS 975 and WS 873) LEC

HIST 974 Seminar in American History: _____ (3). A research course focusing on selected topics in history. LEC

HIST 975 Seminar in American Diplomatic History (3). An intensive study of United States foreign policy during a selected period. LEC

HIST 980 Seminar in the Trans-Mississippi West (1-5). LEC

HIST 981 Seminar in Environment and History (3). An inquiry into major issues and methods in environmental history, viewed from the American and modern world perspective. LEC

HIST 982 Colloquium in the History of the American West (3). Study of issues and interpretations in the history of the American West from prehistory to the present, including attention to new approaches and techniques in research. LEC

HIST 986 Seminar in Historiography of Science (3). Examines the various patterns of interpretation influencing current historiography of science: the substance and impact of "internalist" history, which deals with the evolution of scientific ideas; the diversity of "externalist" history, which stresses interaction between the scientist's activity and social environment. Readings and discussions will assess intellectual, chronolog-ical, socioeconomic, theological, philosophical, national, institutional, and literary aesthetic influences on the history of science. LEC

HIST 999 Doctoral Dissertation (1-12). An inquiry into the source material upon a specific subject. Prerequisite: Consent of instructor. THE

Graduate students in art history have received such major fellowships as Fulbrights and Kress Foundation grants.

The Murphy Travel Fund provides support for national and international research trips for art history graduate students and faculty members.

KAU's Spencer Museum of Art is open from 10 a.m. to 5 p.m. Tuesday, Wednesday, Friday, and Saturday from 10 a.m. to 9 p.m. Thursday; and from noon to 5 p.m. Sunday. Closed Monday.

History of Art
Chair: Linda Stone-Ferrier, arthist@ku.edu
Spencer Museum of Art, 1301 Mississippi St., Room 209 Lawrence, KS 66045-7500, www.ku.edu/~kuarthis
(785) 864-4713, fax: (785) 864-5091

Graduate Advisers:
European and American Art History; John Pultz,
200A Spencer Museum of Art, (785) 864-4713
Asian Art History (Doctoral): Marsha Haufler,
200C Spencer Museum of Art, (785) 864-4713
Asian Art History (Master's): Amy McNair,
210 Spencer Museum of Art, (785) 864-4713

Professors: Eldredge, Goddard, Haufler, Stone-Ferrier

Courtesy Professor: Younger

Professors Emeriti: Larsen, Li, Stoksstad

Associate Professors: Cateforis, Fowler, McNair, Pultz

Associate Professors Emeriti: Eglinski, Stump

Assistant Professors: Cornelson, Kessler, Salami

Courtesy Assistant Professors: Earle, Huppert

KU offers graduate art history courses covering Africa, East Asia, Europe, and the United States. Master of Arts degrees are offered in European and American art, East Asian art, and African art; they offer the opportunity for advanced research and concentration. Holders of M.A. and Ph.D. degrees in art history typically seek careers in college and university teaching and in museum work.

Admission
Applicants for the M.A. degree are expected to hold the B.A. or equivalent degree with an overall grade-point average of 3.3 or better and to have taken at least six college courses in art history or the equivalent, distributed to provide the basic foundation for advanced study. M.A. applicants should specify their area of proposed study (African, East Asian, or European and American art).

Applicants for the Ph.D. degree are expected to hold an appropriate M.A. degree.

Completed applications must be submitted by January 1 for fall admission and October 15 for spring admission. The Graduate Record Examination is required. Submit your application to the Graduate School online at www.admissions.ku.edu. Send transcripts of all completed college and university course work to:

The University of Kansas Graduate Application Processing Center 1450 Jayhawk Blvd., Room 313 Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas Graduate Admissions, Department of Art History Spencer Museum of Art 1301 Mississippi St., Room 209 Lawrence, KS 66045-7500

Handbook for Graduate Students
A detailed presentation of departmental regulations is included in the department's Graduate Student Handbook, available in the departmental office and online.

M.A. Degree Requirements
A minimum of one year of resident study is required of M.A. candidates, although most students complete the degree in two or two-and-one-half years. The student must complete 30 hours of graduate credit, at least 21 of which must be in art history distributed according to department requirements. All course work must satisfy Graduate School grade standards. The candidate must demonstrate proficiency in the reading of a foreign language, normally a major European language, Chinese, or Japanese. A general written examination (in European and American art, East Asian art, or African art) must be passed for the M.A. degree. After passing the M.A. examination, students wishing admission to the doctoral art history program at KU must submit a petition for continuation of graduate studies and receive departmental approval for the petition.

Ph.D. Degree Requirements
Within three semesters of admission to the Ph.D. program, each student, in consultation with a major adviser, prepares for review by the full graduate faculty a petition that proposes a program of study, including a primary field of specialization and two minor fields, one of which may be outside the department. The petition, as approved by the faculty, becomes the student's program of study, which is then overseen by the major adviser and guided by a committee that includes the major- and minor-field advisers.
Ph.D. aspirants must satisfy the Graduate School's published requirements. Ph.D. aspirants must demonstrate proficiency in two research skills (normally foreign languages) relevant to their research; this requirement must be met before aspirants are admitted to the comprehensive examinations for the doctorate. (One of the two research skills is normally the foreign language that met the M.A. language requirement.)

Students must take both written and comprehensive oral examinations at the end of their course work. Both written and oral examinations cover the major area and two minor areas specified in the student's Ph.D. petition. The oral examination normally follows the written examination by two weeks.

Upon passing the comprehensive oral examination, the aspirant becomes a candidate for the Ph.D. and submits a dissertation proposal for faculty approval. Upon acceptance of the dissertation in final draft form, the candidate must successfully pass the final oral examination (the dissertation defense) to complete the degree.

History of Art Courses
HA 500 Prints and Printmakers (3).
HA 501 Modern Prints and Drawings (3).
HA 502 Medieval Art (3).
HA 503 Japanese Prints (3).
HA 504 Spanish Art (5).
HA 505 Special Study: _____ (3).
HA 511 The Celts (3).
HA 515 Latin American Art, 1492-1992 (3).
HA 516 Latin American Modern Art (3).
HA 517 Latin American Graphic Arts and Politics (3).
HA 525 Aegean Archaeology and Art (3).
HA 526 Greek Archaeology and Art (3).
HA 527 Late Medieval Art in Italy (3).
HA 528 Archaeology and Art of Greece and Rome (3).
HA 529 Archaeology and Art of the Ancient Near East (3).
HA 530 Renaissance Art in Italy (3).
HA 533 European Art 1789-1848: Gender and Revolution (3).
HA 534 Art in France 1848-1900: Modernisms (3).
HA 535 Impressionism (3).
HA 537 Roman Archaeology and Art (3).
HA 545 Early Chinese Art (3).
HA 546 Chinese Sculpture (3).
HA 548 Buddhist Scriptures in Chinese Painting (3).
HA 550 The Arts of the British Isles (3).
HA 555 Irish Culture (3).
HA 564 European Art, 1900-1945 (3).
HA 565 Art Since 1945 (3).
HA 570 American Art (3).
HA 571 Modern Sculpture (3).
HA 575 Northern Renaissance Art (3).
HA 576 Northern Baroque Art (3).
HA 577 Southern Baroque Art (3).
HA 578 Central African Art (3).
HA 580 History of Photography (3).
HA 581 American Art, Colonial to Civil War (3).
HA 582 American Art, 1860-1900 (3).
HA 583 American Art, 1900-1945 (3).
HA 585 The Art of Buddhism (3).
HA 587 Japanese Sculpture (3).
HA 589 Japanese Artistic Encounters with Europe and the United States (3).
HA 590 Photography Since 1945 (3).
HA 600 Biography of a City: _____ (3).
HA 604 Special Study in Asian Art: _____ (3).
HA 615 Special Studies in Modern Art: _____ (3).
HA 630 Italian Renaissance Sculpture and Architecture (3).
HA 632 Venetian Art (3).
HA 650 Classical Chinese Art Texts (3).
HA 675 Special Studies in American Art: _____ (3).
HA 676 West African Art (3).
HA 677 African Design (3).
HA 679 African Expressive Culture: _____ (3).
HA 687 Art of Modern China (3).
HA 704 Seminar on Christian Iconography (3). A study of subject matter in the visual arts and of modes of representing certain themes and categories of ideas and meanings in the history of art. Prerequisite: Nine hours of history of art and knowledge of a foreign language. LEC
HA 705 Major Artists: _____ (1-3). The study in detail of a single artist or of an artist and his school or shop. Prerequisite: An introductory course in Western art history at the college level and the 400-level course in the period in which the artist's work falls. LEC
HA 706 Seminar on Special Problems in Art History: _____ (1-6). Seminar dealing with particular art historical problems of a special and specific nature. Different topics are offered in different semesters. May be repeated for credit up to a maximum of 12 credit hours. LEC
HA 707 Directed Readings (1-6). Supervised study and research into special fields of particular interest to the student. Weekly consultations and reports. RSH
HA 710 Museum Techniques and Functions (3). Primarily for graduate students interested in pursuing a career in art museum work. The development of the museum idea, the activities of the art museum, as well as practical experience in the various fields of art museum curatorship and public activity are among the areas studied. LEC
HA 712 Directed Museum Study (1-6). Supervised study and research projects related to art works in the permanent collections or special exhibitions of local museums of art. Planned in consultation with a faculty member and the director of the museum. RSH
HA 715 Seminar in African Art (3). A concentrated study of a special topic relating to African art studies. Different topics are offered in different semesters. (Same as AAAS 715.) Prerequisite: Nine hours of Art History and/or consent of instructor. LEC
HA 716 Art of the Early Middle Ages in the West (3). A pro-seminar in the art of the West from the Migration Period through the art of the Carolingian Empire. LEC
HA 719 Art History Theory and Practice (3). An investigation of the methodology of art history research and writing. Includes discussion of the basic assumptions of art historians about the scholarly process: the questions scholars raise, the techniques of researching art historical problems, and the final writing of conclusions. Current essays on these issues will be analyzed and used as a background for practice in writing. Prerequisite: Nine hours of history of art, or consent of instructor. LEC
HA 723 Romanesque Art (3). A study of Western European sculpture, painting, and architecture from the period of the Migrations, through the so-called “Dark Ages” to the creation of the Gothic style. Prerequisite: A survey of medieval art. LEC
HA 725 The Gothic Cathedral (3). The development and spread of Gothic architecture and sculpture in France, England, Spain, and Germany. Prerequisite: A college level introduction to medieval art history. LEC
HA 727 Medieval Spanish Art (3). The religious and secular painting, sculpture, and architecture of the Iberian peninsula during the Visigothic, Asturian, Moorish, Moorish, Romanesque, Gothic, and Isabelline periods. The monuments are studied in their relation to general continental developments and as vehicles for the transmission of Islamic artistic ideas to the rest of Europe. Prerequisite: A survey of Medieval art. LEC
HA 745 Dutch and Flemish Painting of the 17th Century (3). A detailed study of the art of Hals, Rembrandt and Vermeer, on the one hand, and of Rubens and Van Dyck on the other. Prerequisite: A survey of Northern Baroque art or consent of instructor. LEC
HA 764 Calligraphy of China and Japan (3). The history of East Asian calligraphy will be examined, including seal script, clerical script, standard script, running script, grass script, and Japanese kana scripts. The styles of outstanding masters of the past will be studied, and students will also be expected to practice these scripts and styles as part of the understanding of technique and calligraphic expression. LEC
HA 782 Japanese Painting (3). A survey covering the development of Japanese painting from the Kofun period down to the early twentieth century. Topics will include Buddhist and other religious paintings, narrative handscrolls, shibukuga, decorative screens, genre paintings and ukiyo-e prints, and western-style paintings of the Meiji and Taisho periods. Work requirements will be greater for students enrolled at the 700 level. Prerequisite: HA 265, or HA 267, or consent of instructor. LEC
HA 783 Edo Period Painting (3). A survey of painting in Japan during the Edo Period (1615-1868), arranged by the many schools and styles of painting that were brought to a height during this era. Ink painting, Zen painting, decorative painting, naturalistic painting, literati painting, and court painting will be included. Prerequisite: A course in Japanese painting or consent of instructor. LEC
HA 785 Masters of Sung and Yuan Dynasty Painting (3). A thorough study of the works attributed to the great masters of the Five Dynas-
History of Art; Humanities & Western Civilization

Every year, 10 to 12 visiting scholars give public lectures and participate in classroom discussions in the art history department.

An interdisciplinary graduate certificate program in Peace and Conflict Studies was recently approved. Contact Humanities and Western Civilization for information, (785) 864-3011, www.hwc.ku.edu.

The Literature of Human Rights

No graduate program in humanities and western civilization is offered. The following courses may be taken for graduate credit.

Humanities and Western Civilization Courses

HWC 500 Studies in: (3).
HWC 510 Science, Technology, and Society (2-3).
HWC 514 Totalitarianism and Literature in Central Europe (3).
HWC 520 Literature in Translation (3).
HWC 524 Chinese Thought (3).
HWC 530 Study of a Culture: (3).
HWC 540 Translation (3).
HWC 550 Classics of Peace Literature (3).
HWC 555 Topics in Peace and Conflict Studies: (3).
HWC 560 Directed Study in Peace and Conflict Studies (1-3).
HWC 565 The Devil in Russian Literature (3).
HWC 566 The Literature of Human Rights (3).
HWC 568 The Devil in Russian Literature (3).
HWC 600 Biography of a City: (3).

Humanities and Western Civilization

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HWC 555 Topics in Peace and Conflict Studies: (3).
HWC 560 Directed Study in Peace and Conflict Studies (1-3).
HWC 565 The Devil in Russian Literature (3).
HWC 566 The Literature of Human Rights (3).
HWC 568 The Devil in Russian Literature (3).
HWC 600 Biography of a City: (3).

Humanities and Western Civilization

The Literature of Human Rights

No graduate program in humanities and western civilization is offered. The following courses may be taken for graduate credit.

Humanities and Western Civilization Courses

HWC 500 Studies in: (3).
HWC 510 Science, Technology, and Society (2-3).
HWC 514 Totalitarianism and Literature in Central Europe (3).
HWC 520 Literature in Translation (3).
HWC 524 Chinese Thought (3).
HWC 530 Study of a Culture: (3).
HWC 540 Translation (3).
HWC 550 Classics of Peace Literature (3).
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HWC 566 The Literature of Human Rights (3).
HWC 568 The Devil in Russian Literature (3).
HWC 600 Biography of a City: (3).
HWC 620 Study of a Culture: _____ (3).

HWC 650 Senior Seminar in Peace and Conflict Studies (3).

HWC 760 Investigation and Conference in Peace and Conflict Studies (3). Research under the supervision of a faculty member and approved for the Peace and Conflict Studies program. Individual conferences, reports, and papers; may be combined with coursework. Open only to graduate students. LEC

HWC 801 Peace and Conflict Studies: Texts and Methods (3). An interdisciplinary study of the historic literature on human conflict and peace-making and the methods used to analyze and interpret the literature. Peace literature encompasses a range of genres that include religious teachings, philosophical essays, political proposals, treaties and conventions, fiction, poetry, and drama. Approaches to solutions to human conflict cover a spectrum including rejection of all violence, active nonviolent strategies, balance of power requiring force, social and political revolution, diplomacy and treaties, international law and organizations, and world government. Required for the Graduate Certificate, and to be taken as early as possible in the student's program of study. Students must meet with HWC 801, Classics of Peace Literature, and produce a substantial graduate-level research paper. Open only to graduate students. LEC

HWC 850 Research Seminar (3). The capstone of the Graduate Certificate program, providing a sustained and in-depth study of a particular topic in Peace and Conflict Studies, to be chosen by the instructor. The members of the seminar will carry out a substantial research project to produce a research paper or comparable work. Required for the Graduate Certificate, and open only to graduate students. Students must meet with HWC 850, Senior Seminar, and produce a substantial graduate-level research project. Prerequisite: At least six hours of toward the Graduate Certificate including HWC 801. SEM

Indigenous Nations Studies

Chair: Michael Yellow Bird, mybird@ku.edu
Lippincott Hall, 1410 Jayhawk Blvd., Room 105
Lawrence, KS 66045-7515, www.ku.edu/~insp
(785) 864-2660, fax: (785) 864-0370

Professors: Crawford, Nagel, Pye, Rankin, Yamamoto
Associate Professors: Hirsch, Hofman, Hoopes, Napier, O'Brien, Pierotti
Assistant Professors: Dean, Herlhy, Pewewardy

The Indigenous Nations Studies program offers an interdisciplinary master's degree designed to prepare graduate students for academic careers; to conduct basic and applied scholarly research from a cross-cultural perspective; to develop innovative theories, methodologies, and research tools appropriate for indigenous cultures; and to train candidates to assume leadership roles in indigenous communities, in higher education, and in state, national, and international institutions and organizations. Indigenous Nations Studies collaborates with other units, including the Center of Latin American Studies, the Tribal Law and Government Center in the KU School of Law, and Haskell Indian Nations University. The master's degree program consists of three core courses and four tracks of study from which one is to be chosen: General Studies, Indigenous Museum Studies, Sovereignty Development Studies, or Linguistics and Language Teaching Studies.

Admission

Admission requires (1) a baccalaureate degree or the equivalent (for international students), (2) a grade-point average of at least 3.0 on a 4.0 scale, and (3) acceptance by the Graduate School. The application deadline is no later than three months before the desired date of enrollment.

Submit the following application materials:

1. Domestic or international graduate application.
2. Application fee (nonrefundable check payable to the University of Kansas, see Admissions in the General Information chapter of this catalog).
3. Two official transcripts for all previously completed college work.
4. Graduate Record Examination scores. International students should submit Test of English as a Foreign Language scores.
5. Three letters of recommendation.
6. A two- to three-page personal statement of background and academic and career goals.
7. Writing sample (research paper, etc.).
8. Résumé.

Send all other requested application materials to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

M.A. Degree Requirements

Students pursuing the M.A. in Indigenous Nations Studies must complete a minimum of 20 to 33 credit hours at the graduate level. Required core courses are INS 800, INS 801, INS 802, and INS 803.

Fifteen to 18 credit hours are to be completed in the student's designated study track. The program offers four study tracks (up to two courses can be taken from another track, with approval):

- General Studies (15 credit hours)
- Linguistics and Language Teaching Studies (18 credit hours)
- Indigenous Museum Studies (18 credit hours)
- Sovereignty Development Studies (15 credit hours)

Students who elect to write a master's thesis must complete 6 credit hours of thesis research and writing. The thesis must be successfully defended in an oral examination. A nonthesis option is available, requiring course work in lieu of thesis research. Nonthesis-option students must complete either 6 credit hours of classroom instruction of which 3 are normally in research methods appropriate to the study track, or a supervised apprenticeship in an approved organization or setting related to indigenous peoples of the Americas. Students who take the apprenticeship must submit a written report of their experiences.

Depending on the track, the degree program must include at least one research methods course. Course work must include a significant majority (60 percent or more of all course work completed) of courses at the 700 level or above.

Examinations. A final general examination is required of all candidates for the Master of Arts in Indigenous Nations Studies. At the option of the program, this examination may be oral or written or partly oral and partly written. Master's examinations are administered by a committee of at least three members of the Graduate School faculty. In this program, a thesis defense does not take the place of the required general examination.

Thesis. A master's thesis is optional but recommended for students planning to pursue a Ph.D. The thesis
Indigenous Nations Studies

counts up to 6 hours of credit as part of the total 30 to 33 credit hours for the master's degree. The thesis consists of original research conducted by the student with a thesis supervisor and two other INS program faculty members on the thesis committee. Upon completion, the student defends the thesis before the committee.

Core Curriculum. All INS students must take the following core courses:

INS 800 Research Methods and Indigenous Peoples ................ 3
INS 801 Indigeneous Peoples of the World .............................. 3
INS 802 Applied Indigenous Leadership .......................... 3
INS 803 Issues Facing Indigenous Peoples of the Americas ......... 3

The courses provide basic awareness of the indigenous peoples of the Americas, past and present, upon which students build specialized knowledge in one of the program's concentrations. The four focused study tracks each have additional track core requirements.

General Studies Track (15 credit hours). This track helps students develop critical thinking and understanding of the cultural, economic, environmental, political, and social needs of indigenous people. Course offerings reflect diverse perspectives, as well as methodological and theoretical foundations, relating to the indigenous peoples and cultures in the Western hemisphere.

This track offers flexibility in choosing course work. Students interested in examining how a specific social or community need or issue (e.g., education, poverty, social welfare) affects indigenous peoples should select this track. Students interested in pursuing a dual degree or combining this degree with Ph.D. work may find this the most appropriate track.

Students must choose five courses from at least four of the disciplines listed below:

Indigenous

Nations Studies
draws on the
resources of KU's
Tribal Law and
Government
Center and the
Center of Latin
American Studies.

Literature. One course (3 credit hours) from the following:

ENGL 570 Topics in American Literature: Traditional/Contemporary Indian Literature (3)
ENGL 571 American Indian Literature: (3)
ENGL 572 Women and Literature: (subtitle to be announced; only courses on indigenous peoples receive credit) (3)
ENGL 790 Studies in: (subtitle to be announced; only courses on indigenous peoples receive credit) (3)

History. One course (3 credit hours) from the following:

HIST 511 Early American Indian History (3)
HIST 618 History of the American Indian (3)
HIST 622 History of the Plains Indians (3)

Law and Policy. One course (3 credit hours) from the following:

LAW 304 Federal Indian Law (3)
LAW 990 Tribal Law and Process (3)
POLS 660 The Politics and Problems of Developing Countries (3)

Contemporary Issues. One course (3 hours) from the following:

ANTH 563 Cultural Diversity in the United States (3)
ANTH 785 Topics in Ethnology (3)
GEOG 570 Geography of American Indians (3)
SOC 522 American Racial and Ethnic Relations (3)

Linguistics and Language Teaching Studies Track (18 credit hours). The training in this study track provides theoretical as well as practical and hands-on experience in the development of curriculum and materials for indigenous language teaching. Native speakers learn how to develop professional teaching materials for their language programs at schools and within communities. The curriculum in this track provides the foundation necessary to evaluate a community’s language situation, form a team of language planners, formulate an action plan to meet challenges of language revitalization, and implement and evaluate the plan. The ultimate goal is to train language teachers who in turn will produce a new generation of speakers who bring life to the ancestral languages of indigenous peoples.

Each degree candidate must serve a supervised apprenticeship with an indigenous language program or a teacher training institute. The internship covers a four-week period either consecutively or in intervals. Students are involved in the actual teaching of a language if appropriate, developing curriculum units and/or lesson plans, developing language teaching materials, training language teachers, designing a language program, evaluating the effectiveness of a program, teaching methods and techniques, or language materials. Student must be enrolled in INS 708 Internship in Indigenous Nations Studies while serving their internships.

Required Courses (12 hours). All students must take these courses:

LING 700 Introduction to Linguistic Science ...................... 3
LING 709 Introduction to Language Acquisition .................. 3
T&L 816 Methods of Teaching English as a Second Language/Linguistic Education .................................................................. 3

Electives (9 hours). With advising, 9 credit hours of electives must be taken from each of the following three categories. Some other courses may be used to satisfy these electives, with permission of the graduate program director and/or advisers.

Elective Category 1: Second Language Acquisition

LING 715 Linguistics and Second Language Acquisition (3)
T&L 817 Second Language Acquisition (3)

Elective Category 2: Language Teaching and Curriculum

T&L 740 Foundations of Curriculum and Instruction (3)
T&L 818 Problems in Second Language Instruction (3)
T&L 819 Developing Intercultural Awareness in the Second Language Classroom (3)
T&L 820 Practicum in Teaching English as a Second Language/Linguistic Education (3)

Elective Category 3: Language Study and Language in Culture

LING 700 Phonetics I (3)
LING 730 Linguistics in Anthropology (3)
LING 747 North American Indian Languages (3)
LING 780 Field Methods in Linguistics (3)
LING 810/ANTH 810 Seminar in Ethnolinguistics: (3)
LING 822 Seminar in Acquisition of Language (3)
LING 970 The Structure of (specific Native American language) (3)

Indigenous Museum Studies Track (18 credit hours). This track trains professionals for positions in institutions responsible for collecting and caring for the material record of the natural and cultural world; for studying these collections to create new knowledge; and for sharing the results of these activities through exhibit and public educational procedures. As indigenous nations continue their efforts at self-determination, the need to provide for care of cultural patrimony arises.

For this track, each degree candidate must serve a supervised apprenticeship in an approved museum or historical agency, full time for one semester or half time for two semesters, for a total of 6 semester hours of credit. Approximately 500 hours of apprenticeship experience is expected. Students must be enrolled in one of the following while serving their apprenticeships: AMS 799, ANTH 799, BIOL 799, or HIST 799. Opportunities may be available to receive pay for this experience, and students may serve longer apprenticeships if they wish. Students must present a paper, with a related bibliogra-
phy, describing and critically analyzing their apprentice-ship experiences. Students in this track are not ex-pected to complete a thesis, given the length of the ap-prenticeship, but are encouraged to do so if interested.

INS 864 Exhibiting Cultures
INS 865 Grant Writing and Fundraising
INS 866 Indigenous Museum Management
INS 867 Indigenous Records Management I
INS 868 Indigenous Records Management II
INS 869 Traditional Care of Collections

Sovereignty Development Track (15 credit hours). This track prepares students for the practical challenges as-sociated with exercising indigenous rights of self-deter-mination and the preservation and strengthening of tribal sovereignty. To the indigenous nations, survival depends on the revitalization of all aspects of indigenous life, such as cultural, economic, governmental, and legal affairs. The curriculum provides the foundation neces-sary to implement sovereignty development initiatives by using a dual focus: (1) study of the law, politics, and economics affecting indigenous nations and surrounding states and (2) study of broader societal phenomena.

Students in this track must choose at least two courses that are law related and two courses that are society related as part of the total 15 credit hours. Recommended as particularly useful are the following: PUAD 850 Intergovernmental Relations; PUAD 845 Organizational Analysis; LAW 993 Tribal Law and Process; and LAW 987 Sovereignty, Self-determination, and the Indigenous Nations. With advising, electives are available from the following courses:

ABSC 730 Community Health and Development (3)
BUS 865 Comparative and Cross Cultural Management (3)
ECON 584 Economic Development of Latin America (3)
LAW 986 Federal Indian Law (3)
LAW 988 Regulation of Air and Water Pollution (3)
LAW 964 Public Lands and Natural Resources (3)
LAW 987 Sovereignty, Self-determination, and the Indigenous Nations (3)
LAW 995 Water Law (3)
POLIS 660 The Politics and Problems of Developing Countries (3)
POLIS 760 Revolutionary Politics of Latin America (3)
PUAD 854 Tribal Policy and Administration (3)
PUAD 826 Public Policy and Administration of State Government (3)
PUAD 834 Human Resource Management (3)
PUAD 835 Federal Indian Policy (3)
PUAD 837 Budget and Policy Analysis (3)
SOC 771 Intergroup Relations and Conflict in American Society (3)
SOCI 783 International Political Economy (3)

Consult with advisors for other electives.

World Indigenous Graduate Exchange. WIGE is a graduate student exchange program among KU, the University of Newcastle, Australia; and the University of Oulu, Finland. For more information, contact the Indigenous Nations Studies office.

Indigenous Nations Studies Courses

INS 800 Research Methods and Indigenous Peoples (1-3). This course is an introduction to the social science methods of investigation and analysis that are used in Indigenous Nations Studies as a disci-pline. The nature of Indigenous Nations Studies data sources and methods of data collection, the logic of social scientific inquiry, and key methods of data analysis are emphasized. In addition, the social and educational implications of the results are examined.LEC

INS 801 Indigenous Peoples of the World (3). A survey of the native peoples of the world at the time of contact with Europeans. An overview will be present of various indigenous cultures. A few detailed studies of selected groups will be used to explore environmental set-tings, settlements and subsistence patterns, and the world view of the Western Hemisphere’s indigenous societies. LEC

INS 802 Applied Indigenous Leadership (3). A preparation to train students in grant writing, leadership skills, conflict resolution, public presentation, and organization to assist indigenous people to set up programs. Prerequisite: Successful completions of INS 800 and INS 801 with a grade no lower than a B in each course. LEC

INS 803 Issues Facing Indigenous Peoples of the Americas (3). This seminar is normally team taught and explores in depth the theories and methods of selected socio-economic, political, legal, environmental, and cultural issues confronting indigenous societies throughout the World. Prerequisite: Successful completions of INS 800 and INS 801 with a grade no lower than a B in each course. LEC

INS 804 Special Topics (1-3). Designed to fulfill program needs of the Indigenous Nations Master’s program, this course may meet with appropriate professional or graduate courses. Can be repeated for credit when topic differs. LEC

INS 805 American Indian Leadership (3). Students will analyze the qualities of American Indian leadership and will examine circumstances and backgrounds of Indian leaders as heroes and role models paying particular attention to how they responded as individuals, lead-ers, and as community members of their tribes. Besides surveying noted Indian leaders in treaty negotiations, allotment, removal, war, etc., the course will examine leaders in medicine, education, and recent American Indian history including attention to women leaders. Students will learn about the leaders’ tribes and cultures in addition to understanding the ethnohistory of Indian-white relations. LEC

INS 806 Directed Readings (1-3). An individual readings course with a qualified instructor on a topic in Indigenous Nations Studies. LEC

INS 807 Internship in Indigenous Nations Studies (2-6). A hands-on experience resulting in a written paper or internship with an indigenous community, organization, tribal government, or government involving indigenous people. A minimum of 300 contact hours is ex-pected (for each 3 credit hours) with supervision from an INS program faculty member and approval from the INS graduate student adviser. LEC

INS 809 Indigenous Women: Gender and Sexuality (3). This course examines gender and sexuality among indigenous communities in the world. Ethnographies about indigenous women are used to explore a variety of gender and sexual identities. Gendered and sexualized identi-ties are analyzed within broader societal contexts such as the division of labor, kinship, marriage household, and the control of resources. Power relationships are examined between subsaharan women and the larger society, nation and globalizing world in which they play a part. LEC

INS 824 Federal Indian Law (2,5-3). Addresses the law and policy of the United States regarding Indian nations and their members. Issues include the origins and contours of federal plenary power over Indian affairs, the scope of inherent tribal sovereignty, the limits of state power in Indian country, civil and criminal jurisdiction, and gaming. (Same as LAW 914) Prerequisite: Permission from instructor. LEC

INS 862 Indigenous Archives (3). A discussion of what constitutes an archive, including the theory and methodology of archival collections, and an in-troduction to archiving as a profession. Includes a discussion of records man-agement, with an emphasis on tribal archives collections and tribal records. Includes instruction on arrangement and description of tribal archival collec-tions, funding, environmentally controlled storage, and disaster recovery plan-ning. The class will specifically address the needs of tribal archives: tribal records, oral history interviews, photographs, litigation records, grantwriting and culturally sensitive materials. Students will learn about primary and secondary sources, different formats of writing professional research papers, and will produce a research paper at the end of the semester. LEC

INS 863 Oral History (3). A discussion of the importance of the oral tradi-tion in Indigenous Nations and the difference between oral tradition and oral histories and myth. The class will concentrate on the methodologies of tribal oral history projects, from organizational aspects to personnel issues, equipment needed, sources of grant funding, interview methodology, as well as documentation and preservation of the interviews. The course will discuss how to share and make available these interviews and when access to them needs to be restricted.3 The students will conduct videotaped oral histories as part of the class exercises and get hands-on experience with the preservation, organization, and transcription of oral history projects. LEC

INS 864 Exhibiting Culture (3). A discussion of how museums and exhibi-tions can be a vehicle for indigenous community empowerment and the importance of indigenous cultures to perpetrate their stories them-selves. The class will also look at how different nations view the display and handling of their belongings and what kinds of belongings can or should be handled and displayed. LEC

INS 865 Grant Writing and Fundraising (3). A discussion of how to de-velop a grant writing and fundraising plan for a tribal project. Includes how to develop an idea or project and how to prepare a funding campaign. The students will produce a fundraising event and work on the various parts of an actual great as the final class activity that will be designed to bring in funding to support KU Indigenous Nations Studies Program. LEC

INS 866 Indigenous Museum Management (3). A discussion of the com-munity models of museum management, including museum administration, professional positions within a museum, education exhibits, public relations programs, security, and disaster planning. The course will compare and con-trast museum management in European/American museums and tribal museums and how these management styles affect collection policies, exhibit policies, traditional care of collections, sacred and ceremonial item han-dling and display, NAGPRA and repatriation, and oral histories. LEC

INS 867 Indigenous Records Management I (3). A discussion of what constitutes a record and how to manage records at the business or...
government level. Train students in hands-on records management techniques, policies, developing a records retention schedule, and how to plan and design a records management program for records pertaining to Indigenous nations. LEC

INS 868 Indigenous Records Management II (3). A discussion of what constitutes a record and how to manage records at the business or government level. This is a second level of records management leading to preparation for taking the certification examination. LEC

INS 869 Traditional Care of Collections (3). A discussion of on traditional care issues of handling and preserving of indigenous belongings. The class will compare the methods of traditional care at tribal museums vs., conservation of Native items in mainstream museums. LEC

INS 871 Community Health and Development (3). This course extends knowledge and skills for addressing issues in community health and development (e.g., substance abuse, adolescent pregnancy, child and youth development, prevention of violence). Students learn of core competencies such as analyzing community problems and goals, strategic planning, intervention, and evaluation, and then apply these skills to issues that matter to them in the communities they serve. (Same as ABHS 716) LEC

INS 876 Comparative Law (2.5-3). An introduction to and comparison of major legal systems of the world, with special emphasis given to how those systems reflect differing cultural values in addressing common legal questions. A major goal of the course is to deepen the students' understanding of law and practice in the United States and to broaden their perspective of law beyond the boundaries of the common law systems. (Same as LAW 879) Prerequisite: Permission from instructor. LEC

INS 877 Public Lands and Natural Resources (2.5-3). Devoted to the law and legal systems that govern the classification and use of one-third of America's land mass. Includes a survey of the acquisition and disposition of the public domain; general federal statutes and doctrines that affect public land law; and different forms of federal lands classifications, including national parks, scenic rivers, and grazing lands. (Same as LAW 953) Prerequisite: Permission from instructor. LEC

INS 878 Regulations of Air and Water Pollution (2.5-3). An introduction to national environmental policy and environmental litigation problems, focusing on current issues involving government regulation of activities that generate water and air pollution. Coverage of water pollution typically will include control of point sources and oil spills, while coverage of air pollution will include control of stationary and mobile sources, acid deposition, and introduction to transboundary problems such as the greenhouse effect and global warming. (Same as LAW 980) Prerequisite: Permission from instructor. LEC

INS 879 Water Law (2.5-3). A study of water rights including the riparian and prior appropriation doctrines for surface water, and the various doctrines for groundwater. Private and public water distribution organizations, and special water districts. Water pollution control. Interstate conflicts over water resources. Federal government involvement in water distribution including federal powers and programs. Indian and reserved rights. Kansas water law. (Same as LAW 995) Prerequisite: Permission from instructor. LEC

INS 882 Native American Natural Resources (2.5-3). This course provides a detailed examination of natural resource law as it applies to Indian Country. Among the topics to be discussed are water law, environmental protection, and subsurface property rights. While not a prerequisite, it is recommended that students take Federal Indian Law before enrolling in this course. (Same as LAW 987) Prerequisite: Permission from instructor. LEC

INS 883 Sovereignty, Self-determination, and Indigenous Nations (2.5-3). Examines legal, governmental, political, social, cultural, and economic issues associated with American Indian tribal sovereignty and self-determination. Includes the source and scope of tribal sovereignty, prevention of tribal sovereignty, and the methods by which tribal sovereignty can be strengthened and revitalized. (Same as LAW 987.) Prerequisite: Permission from instructor. LEC


For help finding course descriptions, see the Directory of Courses, pages 5-6.

Interdisciplinary Studies Program

Coordinator: John Gronbeck-Tedesco
Strong Hall, 1450 Jayhawk Blvd., Room 200
Lawrence, KS 66045-7535, (785) 864-3661

The College of Liberal Arts and Sciences offers degrees in several departments and programs that are interdisciplinary in nature. For information on these, see American Studies, East Asian Languages and Cultures, Museum Studies, Indigenous Nations Studies, International Studies (KU Edwards Campus only), Latin American Area Studies, and Russian, East European, and Eurasian Studies in this chapter of the catalog.

Courses are offered in several other areas, such as African and African-American studies, genetics, and women's studies, but there are no graduate programs in these areas. The courses, however, may be applied to degrees in other related fields. Special studies majors in these or other interdisciplinary areas may also be authorized upon petition. See sections on Special Studies in the General Information chapter of this catalog.

Courses
See course listings for the various departments.

International Studies Program

Director: Ted Wilson, taw@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 301
Lawrence, KS 66045-7535, www.intl.ku.edu
(785) 864-9460, fax: (785) 864-5046
Program Assistant: Sahar Habibi, 2069 Wescoe Hall, (785) 864-9118

Affiliated Faculty: Members of the Departments of African and African-American Studies, Anthropology, East Asian Languages and Cultures, Economics, European Studies, French and Italian, History, Humanities and Western Civilization, Latin American Area Studies, Political Science, Russian, East European, and Eurasian Studies, Sociology, and the Schools of Business and Journalism and Mass Communications.

The Master of Arts in International Studies is designed for business executives, educators, military personnel, journalists, bankers, attorneys, activists, and other professionals who need an analytically sophisticated understanding of the contemporary global arena. Through an individualized interdisciplinary program, students gain knowledge of one or more geographical areas as well as an awareness of international issues that transcend national boundaries.

Admission

Potential students must submit an application form with the appropriate fee and a brief (500- to 1,000-word) essay outlining relevant experiences and indicating how the program meets their academic and professional needs. A complete application also includes three letters of recommendation (sent directly from the references) and two copies of all official undergraduate and graduate transcripts (sent directly from the institutions). All application materials must be received before the application can be evaluated. In general, to enter this program, a student must have a bachelor's degree from an accredited institution with at least a 3.0 grade-point average on a 4.0 scale. Admission materials are reviewed by a subcommittee of the program advisory committee, which also considers the applicant's overall record and prospects for success in the program.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send all requested supporting application materials to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

M.A. Degree Requirements

Students must complete all requirements of the Graduate School and the College of Liberal Arts and Sciences as well as requirements of this program. The foundation of this degree is the six core courses (INTL 701,
INTL 702, INTL 703, INTL 704, INTL 705, INTL 706, of which a student must take at least four.

In addition to the four core courses, a student must take three courses in each of two specialization tracks, complete a significant piece of original research, pass a comprehensive written examination, and provide evidence of current competence (equivalent of two years of successful college-level study) in a modern spoken and written language other than English. Students may choose to take two area studies tracks or one area studies track and one topical track. In general, these courses are taken from the existing curriculum offered on the Lawrence campus.

**Area Studies Tracks.** These courses give students substantial knowledge of one or more geographical areas.

- African and African-American Studies
- East Asian Studies
- European Studies
- Latin American Area Studies
- Russian, East European, and Eurasian Studies

A student also may petition to enroll in courses under an adviser's guidance in a coherent area that does not correspond to the boundaries of the KU area studies programs.

**Topical Specialization Tracks.** These courses develop a proficiency in one of three cross-regional themes. The courses listed are illustrative; each student works with an adviser to identify the most appropriate courses, given her or his career goals.

**International Culture and Communications** focuses on issues of culture, ethnicity, diversity, and cross-cultural communications and examines how various cultures around the world deal with outside influences and define themselves as distinctive societies. Sample courses:
- AAAS 560 Race, Gender, and Post-colonial Discourses
- ANTH 674 Political Anthropology
- COMS 647 Issues in Intercultural Communication
- ENGL 774 Topics in Literatures of Africa and the African Diaspora
- HWC 500 Studies in Comparative Literature
- SOC 626 Religion and Society
- TH&F 883 Development of the International Sound Film

**International Politics and Policies** addresses foreign policy, comparative public policy, general theories of international relations and comparative politics, and current global issues. Sample courses:
- AAAS 554 Contemporary Health Issues in Africa
- ANTH 674 Political Anthropology
- POLS 670 United States Foreign Policy
- POLS 673 International Organization
- POLS 774 International Law
- PSYC 571 Violence, Aggression, and Terrorism in the Modern World (Same as ANTH 571)
- SOC 626 Sociology of War and Peace
- T&L 705 International Issues in the K-12 Curriculum

**International Business and Economics** offers a foundation in global business and economics, economic history, and political economy. Sample courses:
- BUS 771 Global Marketing
- ECON 582 Economic Growth and Development
- ECON 509 Comparative Economic Systems
- HIST 509 Multinational Corporations: The Role of Money and Power
- HIST 526 Economic History of Europe (Same as ECON 526)
- SOC 530 Industrial Revolution and Capitalist Development

**International Studies Courses**

INTL 701 Approaches to International Studies (3). General introduction to graduate-level research in international studies. Topics will include basic philosophy of social science research, the relative merits of qualitative “small N” studies and quantitative “large N” studies, the roles of theories, models and data, how to choose a research topic, how to design a research project, case study methods, and an introduction to formal quantitative and qualitative techniques. Course readings will illustrate how different methods have been used in practice, as well as articles on the theory and methods of research. LEC

INTL 702 International Institutions and Processes (3). Consideration of foreign policy decision-making, international institutions (governmental and nongovernmental), public and private international law, contemporary patterns of international conflict and cooperation, and the evolution of the international system in the twenty-first century. LEC

INTL 703 The World Economy (3). An introduction to international trade and finance, theories of economic development, and international economic structures. Not appropriate for economics majors. LEC

INTL 704 Global Cultures and Societies (3). Examination of the components of culture, economic and political anthropology, major global cultural areas, and the impact of cultural differences as expressed through language, literature, religion, thought, and motivation in cross-cultural communications. LEC

INTL 705 Globalization in History (3). A study of the increasing interaction among world societies since 1500 and an investigation of the long-term developments behind current world problems. Major topics include Western expansion since 1500, the spread of state sovereignty, the formation of a world economy, and the spread of international institutions. Current issues will vary, but may include environmental crises, human rights, migration, free trade and the spread of consumer culture, ethnicity and nationalism, and international intervention within states. (Same as HIST 705.) LEC

INTL 706 Comparative Governments (3). Survey of different governmental structures in the contemporary world and the ways these countries have confronted issues such as modernization and development, economic security, ethnic pluralism and conflict, and globalization. LEC

INTL 750 Topics in International Studies (1-6). Enrollment for writing thesis for master's degree. THE

INTL 793 Directed Readings (1-5). Individual and supervised readings in a selected area of international studies. Course is repeatable with permission of the program director. LEC

INTL 897 Examination Preparation (1). Independent study in preparation for the Comprehensive M.A. examination. Graded on satisfactory/unsatisfactory basis. May be repeated. LEC

INTL 898 Thesis (1-4). Enrollment for writing thesis for master’s degree. THE

**Italian**

See French and Italian.

**Japanese**

See East Asian Languages and Cultures.

**Korean**

See East Asian Languages and Cultures.

**Latin**

See Classics.

**Latin American Area Studies**

Chair: Elizabeth A. Kuznesof, latamst@ku.edu

Associate Director and Graduate Adviser: Brent Metz

Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574, www.ku.edu/~latamst

(785) 864-4213, fax: (785) 864-3800


Professors Emeriti: Adams, Brushwood, Casad, Doudoroff, Drayton, Garland, Lande, Lichtwardt, Nunley, Smith, Souza, Stansifer, Stokstad, Weiss, Woodyard

Associate Professors: Ajayi-Soyinka, C. Anderson, Barrière, Birch, Cohan, Corteguera, Davis, Dean, Earnhart, Gerner, Gibson, Graham, Harkess, Herlihy,
The Center of Latin American Studies administers an interdisciplinary program of substantive and language courses leading to the Master of Arts degree. Students may pursue the M.A. as a terminal degree for careers in the public or private sector or as preparation for additional graduate study. The center also offers two graduate certificates of four courses each in Brazilian Studies and Central American and Mexican Studies.

**Admission**

Admission requires a B.A., preferably in one of the social sciences or humanities; language proficiency in either Spanish or Portuguese as demonstrated by completion of a fourth-semester course or the equivalent; and acceptance by the Graduate School. The Graduate Record Examination is required for U.S. citizens.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to The University of Kansas Graduate Application Processing Center 1450 Jayhawk Blvd., Room 313 Lawrence, KS 66045-7535

Send all other required application materials to The University of Kansas Latin American Area Studies Program Bailey Hall, 1440 Jayhawk Blvd., Room 320 Lawrence, KS 66045-7574

**M.A. Degree Requirements**

**Course Work.** A minimum of 30 graduate credit hours is required in social sciences or humanities courses with Latin American content. At least 18 hours must be completed college and university course work with Latin American content. At least 18 hours must have 50 to 100 percent of their content dedicated to Latin America. Literature courses with Latin American content at the 500-level or above (except PORT 611 and HAIT 500) may be counted as part of the 30 required hours. Required courses are LAA 700 Introduction to Latin American Library Resources, LAA 701 Interdisciplinary Seminar in Latin American Culture and Problems, and two other seminars with at least 50 percent of their content dedicated to Latin America, each in a separate discipline, at the 700 level or above (excluding thesis and readings hours). Incoming students should enroll in LAA 700 during the first fall semester. All students must consult the graduate adviser before enrollment each semester. Up to 12 graduate hours from the University of Costa Rica may be applied to the M.A. To be eligible, students must have completed one semester of course work at KU and must obtain the graduate adviser’s approval of the UCR courses.

**Language Proficiency.** M.A. candidates must demonstrate comprehensive proficiency in Spanish or Portuguese. This includes aural, speaking, reading, and writing ability. Completion of SPAN 424 and SPAN 428 or a higher-level course constitutes comprehensive proficiency in Spanish. Comprehensive proficiency in Portuguese requires completion of a 500-level or higher literature course. The language requirements should be satisfied as early as possible. Students also must complete two semesters in a second language (SPAN 104 and SPAN 108; PORT 104 and PORT 108), or the equivalent (e.g., PORT 611). Quichua, Kaqchikel Maya, or Haitian Creole may be substituted as the language of reading proficiency with approval of the director.

**M.A. Degree Options.** Thesis and nonthesis degrees are offered. The thesis degree is most appropriate as preparation for a doctoral program and dissertation. Students must declare their intention to write a thesis before the end of the first year and form a committee of three faculty members, each from a different discipline. The student defends the completed thesis in an oral examination before this committee. A student must enroll in at least 3 credit hours of thesis. Students may count up to 6 credit hours of thesis toward the degree.

The nonthesis M.A. is a terminal degree suitable for a career in public service or business. The culmination of the nonthesis M.A. is an oral examination during the last semester of the student’s program. The Center of Latin American Studies produces a handout, Nonthesis M.A. Degree Option: Oral Exam Guidelines.

According to the continuous enrollment policy of the College, once the student’s course work is completed, the student must enroll in at least 1 credit hour of thesis/nonthesis (LAA 899) per semester (excluding summers) until the thesis and its defense or the oral examination is completed.

**Study in Latin America.** The center encourages students to study and do research in Latin America. Intensive language institutes in Portuguese and Spanish are held in Vitoria, Brazil; and Guadalajara, Mexico; respectively. The center has helped develop exchange relationships with universities in Costa Rica, Paraguay, and Brazil. One of the oldest and most successful academic study abroad programs in Latin America is the Kansas program at the Universidad de Costa Rica.

**Recommended Graduate Courses.** These courses have 50 to 100 percent Latin American content:

- AAAS 574 Slavery in the New World (same as HIST 574)
- ANTH 506 Ancient American Civilizations: Mesoamerica
- ANTH 507 The Ancient Maya
- ANTH 508 Ancient American Civilizations: The Central Andes
- ANTH 718 Seminar in Latin American Archaeology: Lower Central America
- ANTH 775 Seminar in Cultural Anthropology (taught by Dean or Gibson)
- ANTH 785 Topics in Ethnology (taught by Dean)
- ECON 534 Economic History of the Caribbean Region
- ECON 584 Economic Development of Latin America
- GEOG 571 Topics in Cultural Geography: (taught by Herlihy or Brown)
- GEOG 573 Geography of Population
- GEOG 591 Geography of Latin America
- GEOG 591 Geography of Latin America: (taught by Herlihy)
- GEOG 591 Regional Geography: Central American Indigenous Peoples (taught by Herlihy)
- HAIT 501 Directed Studies in Haitian Culture
- HAIT 505 Special Study: Latin America
- HAIT 700 Investigation and Conference
- HIST 510 Topics in: Latin America (taught by Stanisfer, Rosenthal, Kuznesof)
- HIST 571 The Spanish Borderlands in North America
- HIST 573 Latin America in the 19th Century
- HIST 574 Slavery in the New World (same as AAAS 574)
- HIST 575 History of Mexico
- HIST 576 History of Central America
- HIST 577 History of the Caribbean
- HIST 578 Social History of South America
- HIST 579 The History of Brazil
- HIST 580 Economic History of Latin America

Established in 1959, KU’s exchange with Universidad de Costa Rica is the oldest of its kind in the Western Hemisphere.

The University of Kansas has a mission to serve the international dimensions of higher education.
HIST 581 Topics in Third World History: ______ (taught by Stansifer, Rosenthal, Kuznesof)
HIST 607 The Family in History: Comparative Perspectives (taught by Kuznesof)
HIST 690 Seminar in: Latin America (taught by Stansifer, Rosenthal, Kuznesof)
HIST 801 Colloquium in: ______ (taught by Stansifer, Rosenthal, Kuznesof)
HIST 806 Colloquium in Comparative History: ______ (taught by Stansifer, Rosenthal, Kuznesof)
HIST 820 Colloquium in Popular Culture in Latin America
HIST 821 Colloquium on Iberian and Latin American Democracy
HIST 822 Colloquium in the Urban History of Latin America
HIST 825 Colloquium on Colonial Latin America
HIST 827 Seminar on Labor in Latin America
HIST 825 Seminar in Latin American Foreign Relations
HIST 826 Seminar in 20th-century South America
HIST 827 Colloquium in the Social History of Latin America
HIST 835 Research Seminar: The Atlantic World in the Early Modern Period (taught by Kuznesof)
HIST 950 Seminar in Latin American History
HIST 951 Seminar in Latin American Revolutions
HIST 952 Seminar in Ideology, Violence, and Social Change in Latin America
LING 565 Native Mesoamerican Writing
POLIS 651 Women and Politics in Latin America
POLIS 658 Theories of Politics in Latin America
POLIS 659 Political Dynamics of Latin America
POLIS 736 Revolutionary Politics of Latin America
POLIS 777 International Relations of Latin America
PORT 509 Phonetics
PORT 740 Survey of Brazilian Literature
PORT 742 The Brazilian Novel
PORT 746 The Brazilian Short Story
PORT 750 Brazilian Poetry
PORT 760 Contemporary Brazilian Literature
PORT 780 Special Readings in Portuguese and Brazilian Literature
PORT 970 Seminar in Brazilian literature: ______
SOC 531 Global Social Change
SOC 536 Latin American Society
SOC 780 Advanced Topics in Sociology: Third-world Social Change: ______
SOC 800 Latin American Society
SPAN 520 Structure of Spanish
SPAN 522 Advanced Studies in Spanish Language: ______
SPAN 540 Colloquium on Hispanic Studies: ______
SPAN 560 Colloquium on Latin American Film
SPAN 570 Studies in Hispanic Linguistics: ______
SPAN 717 History of the Spanish Language
SPAN 720 Syntax and Composition
SPAN 770 Spanish-American Drama
SPAN 771 Spanish-American Literature:
SPAN 772 The Modern Spanish-American Novel, 1900-1950
SPAN 775 The Modern Spanish-American Novel Since 1950
SPAN 774 Spanish-American Poetry
SPAN 776 Spanish-American Short Story
SPAN 781 Spanish-American Colonial Studies
SPAN 784 Spanish-American Modernism
SPAN 785 Special Topics in Spanish-American Literature:
SPAN 790 Spanish Linguistics: Theory and Application to Teaching
SPAN 792 Historical Linguistics: Theory and Application to Teaching
SPAN 817 Spanish Historical Grammar
SPAN 970 Seminar: Spanish-American Drama:
SPAN 972 Seminar: Spanish-American Novel: ______
SPAN 974 Seminar: Spanish-American Poetry: ______
SPAN 976 Seminar: Spanish-American Short Story:
SPAN 978 Seminar: Spanish-American Essay:
TH&F 792 Graduate Seminar in: Latin American Film
WS 651 Women and Politics in Latin America

**Recommended Graduate Courses.** These courses have 25 to 50 percent Latin American content:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>AAAS 520 African Studies In:</td>
<td>AAAS 555 African Film and Video</td>
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<td>ANTH 501 Topics in Sociocultural Anthropology:</td>
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<td>ANTH 512 Ethnolinguistics:</td>
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<td>ANTH 544 Physical Anthropology of American Indians</td>
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<td>ANTH 563 Cultural Diversity in the United States</td>
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<td>ANTH 586 Visual Anthropology</td>
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<td>ANTH 595 The Colonial Experience</td>
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<td>ANTH 632 Population Dynamics</td>
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<td>ANTH 674 Political Anthropology</td>
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<td>ANTH 695 Cultural Ecology (taught by Gibson or Herlihy)</td>
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<td>ANTH 734 Biological Bases of Human Behavior (taught by Crawford)</td>
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<td>ANTH 770 Research Methods in Physical Anthropology</td>
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<td>ANTH 794 Material Culture</td>
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<td>ARCH 703 Graduate Design Studio III</td>
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<td>ARCH 740 Architecture History/Theory IV</td>
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<tr>
<td>ARCH 764 Site Planning</td>
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</tbody>
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ARCH 800 Special Topics in Architecture: City Form: The Americas (taught by Swan)
BIOL 607 Field and Laboratory Exercises in Plant Ecology
BIOL 789 Field Course in Entomology
BUS 715 International Business Immersion Week
BUS 805 Comparative and Cross Cultural Management (taught by Kleinberg)
BUS 810 International Business (taught by Kleinberg)
BUS 895 Graduate Seminar in Business: Global Business Environment (taught by Birch)
ECON 582 Economic Growth and Development
ECON 604 International Trade
ECON 605 International Finance
ECON 715 Elementary Econometrics
ECON 740 Theory of Economic Growth and Development
ECON 750 The Theory of International Finance
ECON 850 The Advanced Theory of International Finance
ENGL 570 Topics in American Literature:
ENGS 570 Geography of American Indians (taught by Herlihy)
GEOG 670 Cultural Ecology
GEOG 775 Prospermorian in Population Geography
GEOG 975 Seminar in Population Geography (taught by Nunley)
HA 515 Latin American Art 1492-1992
HA 708 Seminar on Special Problems in Art History: North America (taught by Eldredge)
HART 500 Directed Studies in Haitian Language and Literature
HIST 551 Spain and its Empire, 1450-1700
HIST 572 The United States Borderlands: People, Place, Past HIST 509 Multinational Corporations: The Role of Money and Power
HIST 630 United States Diplomatic History II
HIST 636 Agriculture in World History (taught by Worster)
HWC 620 Study of a Culture: ______
LAW 930 International Law Seminar (taught by Head)
LING 575 The Structure of: LING 700 Introduction to Linguistic Science
LING 791 Topics in Linguistics:
MUSC 754 Music of the Baroque Era
MUSC 940 Seminar on Selected Topics in Musicology: 20th-century Hispanic Masters (taught by Clark)
POLS 662 Women and Politics
POLS 660 Contemporary Feminist Political Theory
POLS 660 The Politics and Problems of Developing Countries
POLS 663 Protest and Revolution
POLS 669 Topics in Comparative Politics: Women’s Social Movements (taught by Bayard de Volo)
POLS 670 United States Foreign Policy
POLS 672 International Political Economy
POLS 882 U.S. Foreign Policy Toward the Third World
POLS 726 Public Policy in Comparative Perspective
POLS 760 The Politics and Problems of Developing Countries
POLS 774 International Law
POLS 850 Introduction to Comparative Politics
POLS 870 International Relations
POLS 960 Politics of Developing Countries
POLS 962 The Breakdown, Restoration, and Consolidation of Democracies
POLS 973 International Political Economy
POLS 974 International Mediation and Conflict Resolution
POLS 978 Advanced Topics in International Relations Theory
SOC 533 Industrializing in Developing Nations
SOC 619 Political Sociology
SOC 627 School and Society
SOC 873 International Political Economy
SOC 892 Teaching Seminar
SOC 970 Seminar on Special Topics in Social Conflict and Change: ______
SPAN 801 Teaching Spanish in Institutions of Higher Learning
T&L 705 International Issues in the K-12 Curriculum
T&L 743 Multicultural Education
T&L 772 Philosophical Problems in Comparative Education
T&L 775 School and Society in Comparative Education
TH&F 902 Film Seminar in: ______ (taught by Falco or Ybarra)
UBPL 565 Planning and Environmental Values
VAE 730 Teaching Art: Introduction to Art Museum Education
WS 560 Race, Gender, and Post-colonial Discourses (taught by Ajayi-Soyinka)
WS 562 Women and Politics
WS 600 Contemporary Feminist Political Theory
WS 601 Seminar in Women’s Studies
WS 696 Studies in: ______

● **Latin American Area Studies Courses**

LAA 500 Directed Study in Latin American Area Studies (1-3).
LAA 501 Multilingualism and Multiculturalism in Latin America (3).
LAA 503 Race, Gender, Ethnicity, and Nationalism in Latin America (3).
LAA 504 Politics of Culture in Modern Latin America (3).
LAA 505 U.S. Latino and Latin-American Film and Literature (3).
LAA 506 Race, Gender, Ethnicity, and Nationalism in Latin America, Honors (3).
LAA 602 Topics in Latin American Studies: ______ (3).
LAA 634 Indigenous Traditions of Latin America (3).
LAA 665 Women, Health, and Healing in Latin America (3).
LAA 700 Introduction to Latin American Library Resources (3). A survey of bibliographic and reference sources for research on Latin America in the humanities and social sciences. Designed to prepare students for library research at the seminar, thesis, or dissertation level. Prerequisite: Junior standing, reading knowledge of Spanish or Portuguese. LEC
LAA 701 Interdisciplinary Seminar in Latin American Culture and Problems (3). An interdisciplinary seminar incorporating significant and pertinent materials from the fields of anthropology, economics, geography, history, political science, sociology, and Spanish and Portuguese literature. Required of all graduate students enrolled in the Master of Arts program in Latin American Area Studies. Prerequisite: LAA 700 (may be taken simultaneously with LAA 701 if both courses offered during same semester). LEC
LAA 703 Research Colloquium on Brazil (3). An interdisciplinary research seminar on historical and contemporary issues in Brazil, incorporating information and analysis from such fields as anthropology, economics, geography, history, political science, sociology, and Spanish and Portuguese literature and culture. Required for the Brazilian Graduate Certificate. Prerequisite: Recommended reading proficiency in Portuguese. LEC
LAA 704 Research Colloquium on Central America and Mexico (3). An interdisciplinary research seminar on historical and contemporary issues in Central America and Mexico, incorporating information and analysis from such fields as anthropology, economics, geography, history, political science, sociology, and Spanish and Portuguese literature and culture. Required for the Central America & Mexico Graduate Certificate. Prerequisite: Recommended reading proficiency in Spanish. LEC
LAA 800 Investigation and Conference (1-2). Investigation and research of interdisciplinary topics in Latin American Studies. RSH
LAA 899 Thesis/Nonthesis (1-6). Prerequisite: Consent of instructor. THE

Liberal Arts and Sciences

Since 1970, KU has maintained the only Latin American Studies resource center in the Great Plains.

Since 1976, federal fellowships have been awarded yearly for graduate study of Latin America.

Linguistics offers courses in first- and second-language acquisition, Native Mesoamerican writing, and the structure of North American Indian languages.

M.A. Degree Requirements

Prerequisites. Three credit hours of linguistics (LING 700 or equivalent) and reading ability in a foreign language (not English) with a significant linguistics literature. Students who do not meet these prerequisites but have undergraduate majors in related fields (such as a foreign language, English, speech, anthropology, or psychology) may be accepted with the provision that they make up deficiencies as soon as possible.

Degree Requirements. The following are minimum requirements.

Course Work: Thirty credit hours of graduate work including:

1. One course in each of the following areas:
   - LING 704 Prosinegram
   - LING 705 Phonetics I
   - LING 712 Phonology I
   - LING 726 Syntax I
2. Fifteen credit hours of electives to be determined by the student and the advisor.

M.A. students can complete the degree either by writing a thesis and passing a thesis oral defense or by passing a written comprehensive examination and satisfying a research component.

Thesis Option: A maximum of 3 hours of thesis credit may be applied toward the minimum of 30 hours for the degree. The thesis must be defended successfully in an oral examination.

Comprehensive Examination Option: A comprehensive written examination is taken no later than the semester in which the student completes 30 hours of course work applicable to the M.A.

Students taking the comprehensive examination also must satisfy a research component by:

- Taking a course with a significant research component (e.g., a seminar or LING 707, LING 709, or LING 780); or
- Writing a detailed research or grant proposal.

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Department of Linguistics
Blake Hall, 1542 Lilac Lane, Room 427
Lawrence, KS 66044-3177

M.A. Degree Requirements

Prerequisites. Three credit hours of linguistics (LING 700 or equivalent) and reading ability in a foreign language (not English) with a significant linguistics literature. Students who do not meet these prerequisites but have undergraduate majors in related fields (such as a foreign language, English, speech, anthropology, or psychology) may be accepted with the provision that they make up deficiencies as soon as possible.

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2. Fifteen credit hours of electives to be determined by the student and the advisor.

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M.A. Degree Requirements

Prerequisites. Three credit hours of linguistics (LING 700 or equivalent) and reading ability in a foreign language (not English) with a significant linguistics literature. Students who do not meet these prerequisites but have undergraduate majors in related fields (such as a foreign language, English, speech, anthropology, or psychology) may be accepted with the provision that they make up deficiencies as soon as possible.

Degree Requirements. The following are minimum requirements.

Course Work: Thirty credit hours of graduate work including:

1. One course in each of the following areas:
   - LING 704 Prosinegram
   - LING 705 Phonetics I
   - LING 712 Phonology I
   - LING 726 Syntax I
2. Fifteen credit hours of electives to be determined by the student and the adviser.

M.A. students can complete the degree either by writing a thesis and passing a thesis oral defense or by passing a written comprehensive examination and satisfying a research component.

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The University of Kansas
Department of Linguistics
Blake Hall, 1542 Lilac Lane, Room 427
Lawrence, KS 66044-3177

M.A. Degree Requirements

Prerequisites. Three credit hours of linguistics (LING 700 or equivalent) and reading ability in a foreign language (not English) with a significant linguistics literature. Students who do not meet these prerequisites but have undergraduate majors in related fields (such as a foreign language, English, speech, anthropology, or psychology) may be accepted with the provision that they make up deficiencies as soon as possible.

Degree Requirements. The following are minimum requirements.

Course Work: Thirty credit hours of graduate work including:

1. One course in each of the following areas:
   - LING 704 Prosinegram
   - LING 705 Phonetics I
   - LING 712 Phonology I
   - LING 726 Syntax I
2. Fifteen credit hours of electives to be determined by the student and the adviser.

M.A. students can complete the degree either by writing a thesis and passing a thesis oral defense or by passing a written comprehensive examination and satisfying a research component.

Thesis Option: A maximum of 3 hours of thesis credit may be applied toward the minimum of 30 hours for the degree. The thesis must be defended successfully in an oral examination.

Comprehensive Examination Option: A comprehensive written examination is taken no later than the semester in which the student completes 30 hours of course work applicable to the M.A.

Students taking the comprehensive examination also must satisfy a research component by:

- Taking a course with a significant research component (e.g., a seminar or LING 707, LING 709, or LING 780); or
- Writing a detailed research or grant proposal.
Ph.D. Degree Requirements

Prerequisites. Courses equivalent to those required for the M.A. (30 hours consisting of LING 794, LING 705, LING 712, LING 725, a course in first- or second-language acquisition, four electives, LING 899, and thesis and thesis defense or examination option).

A student entering the Ph.D. program without courses equivalent to these must take them as soon as they are offered, even if they would conflict with an advanced course for which the student is eligible.

Residence. Two semesters, which may include one summer session, must be spent in full-time resident study at KU. Normally 9 credit hours is considered full-time during the academic semester. See General Regulations in the General Information chapter of this catalog.

Research Skills. The student must demonstrate a reading or research ability in a second language (not English or the language chosen to fulfill the M.A. language requirement). The research skills requirement also can be met by a course in computer programming language, LING 783 Computational Linguistics, or a course in statistics. The student also must demonstrate a linguistic knowledge of the structure of a non-Indo-European language. The student also is expected to know such additional languages as may be necessary for research.

Minimum Course Requirements. Eighteen credit hours, consisting of

LING 750 Comparative and Historical Linguistics ............................................. 3
Two of the following second-level courses: .................................................. 6
LING 707 Phonetics II (3)
LING 714 Phonology II (3)
LING 726 Syntax II (3)
LING 737 Topics in Psycholinguistics (3)
LING 822 Seminar on Acquisition of Language (3)
LING 850 Advanced Comparative and Historical Linguistics (3)
LING 880 Seminar in Second Language Acquisition (3)

Three electives ........................................................................................... 9

The total number of post-M.A. credit hours required is 18. Courses that satisfy the prerequisites above cannot be used to fulfill this requirement, but other M.A.-level courses listed in this section can count toward the 18 post-M.A. hours.

Within one year of completing all course requirements and fulfilling the foreign language requirements, the student must write two papers and a dissertation proposal. One paper must be in the area of specialization, the other in a second area of linguistics.

Dissertation

Final Oral Examination

Facilities

The Department of Linguistics, with the Department of Speech-Language-Hearing: Sciences and Disorders, operates the Undergraduate Instructional Laboratory in Phonetics and Speech Science. The department has a fully equipped phonetics and psycholinguistics laboratory (KUPL), a small departmental library, a student computer laboratory, and tape recorders for field work.

Linguistics Courses

LING 525 Introduction to Syntax (3).
LING 539 The Acquisition of Morphosyntax (3).
LING 543 Language and Culture in Arabic-speaking Communities (3).
LING 560 Languages of the World (3).
LING 565 Native Mesoamerican Writing (3).
LING 570 The Structure of Japanese (3).
LING 572 Structure of Chinese (3).
LING 575 The Structure of: _______ (3).
LING 700 Introduction to Linguistic Science (3). An introduction to the theory and techniques of linguistic science for majors and others intending to do advanced work in linguistics. Emphasis on synchronic description of languages. Lectures and laboratory sessions. Will not count toward any graduate degree in linguistics. Not open to students who have taken LING 106 or LING 107. LEC
LING 705 Phonetics I (3). Introduction to the speech sounds used in languages of the world, the mechanisms used in their production, and their acoustic properties. The course includes practice in discrimination and transcription. Prerequisite: An introductory linguistics course. LEC
LING 707 Phonetics II (3). A study of speech sounds in languages of the world with special emphasis on experimental evidence related to their production and acoustic properties. Prerequisite: LING 705. LEC
LING 708 Problems in Linguistic Analysis (3). Practice in applying the techniques of phonological, grammatical, and syntactic analysis learned in introductory linguistics to data taken from a variety of languages of different structural types. Prerequisite: An introductory course in linguistics. Not open to students who have taken LING 308. LEC
LING 709 Introduction to Language Acquisition (3). Introduction to the study of language acquisition; the significant findings, the basic methodological procedures, and some of the more recent theoretical accounts. Not open to students who have taken LING 425. Prerequisite: An introductory course in linguistics. LEC
LING 712 Phonology I (3). A study of sound structure and function within languages; principles and techniques of phonological analysis. Introduction to morphophonemics, distinctive feature and rule notation. Prerequisite: An introductory course in phonetics. LEC
LING 714 Phonology II (3). Distinctive feature systems; interpretive input-output systems, markedness; phonological universals; the role of naturalness, generality, and economy in evaluation procedures. Prerequisite: LING 712. LEC
LING 715 Linguistics and Second Language Acquisition (3). Introduction to the study of second language acquisition: The application of theoretical linguistics to the description of the language a learner acquires, and to the process of acquisition. Prerequisite: An introductory course in linguistics. LEC
LING 722 Grammar: A Functional and Typological Approach (3). Differences in language use different linguistic mechanisms to encode meanings. This course surveys grammatical concepts and categories found in the world’s languages including tense, aspect, mood, voice, person, and number as well as case relations such as nominative, accusative, ergative, and absolutive. Basic word order typology and discourse functions such as topic, focus, and cohesion are introduced. Examples will be drawn from a wide variety of languages to illustrate how the same concept may be encoded differently, i.e., morphologically, syntactically, or lexically, in different languages. Prerequisite: An introductory course in linguistics. LEC
LING 725 Syntax I (3). The basic principles of universal grammar. Topics include phrase structure, relations among syntactic constituents, and the nature of syntactic rules and lexical categories. Prerequisite: An introductory course in linguistics. LEC
LING 726 Syntax II (3). An advanced course covering one or more current theories of syntax. The course will provide in-depth reading and discussion on the major areas of syntactic theory including universal grammar, phrase structure theory, lexical projections of argument structure, binding, control, locality condition, constraints on representation, and the relation between syntax and the semantic module. Prerequisite: LING 725. LEC
LING 730 Linguistics in Anthropology (3). The study of language as it concerns anthropology. Language systems in relation to culture, language taxonomy, semantics, linguistic analysis as an ethnographic tool. (Same as ANTH 730.) LEC
LING 731 Semantics I (3). A study of meaning in natural language usage. Emphasis on referential semantics. Set theory, propositional and first-order logic, and intentional and modal logic as they relate to nature. Questions that arise in representing the meanings of natural language sentences in a formalized language. Prerequisite: LING 725. LEC
LING 735 Psycholinguistics (3). A detailed examination of issues in the processing of language. The course will provide a survey of research and theory in psycholinguistics, reflecting the influence of linguistic theory and experimental psychology. Spoken and written language comprehension and language production processes will be examined. (Same as PSYC 735.) LEC
LING 737 Topics in Psycholinguistics (3). An in-depth examination of selected topics in psycholinguistics. Topics may include spoken language processing, written language processing, neurolinguistics, prosody, and syntactic processing. May be repeated for different topics. (Same as PSYC 737.) Prerequisite: PSYC 735/LING 735 or consent of instructor. LEC
LING 739 The Acquisition of Morphosyntax (3). A second semester course in child language which explores the acquisition of morphology, syntax, and the ways in which morphology and syntax interact in linguistic theory and language development. Topics covered in the
course include agreement, Case, null subjects, question formation, pro-noun binding, quantification, and control. LEC

LING 740 Linguistic Data Processing (3). The tools and techniques necessary for linguistic fieldwork data, including research on a sign, recording and elicitation techniques, computational data processing and analysis, and field ethics. Techniques of research, field recording, and data analysis technology. Methods of phonetic transcription, grammatical annotation, and analysis of language context. Practice of techniques via short studies of at least one language. (Same as ANTH 740.) Prerequisite: LING 705 or permission of instructor. LEC

LING 741 Field Methods in Linguistic Description (3). The elicitation and analysis of phonological, grammatical, and discourse data from a one of the fields of pure mathematics to one of the fields of applied mathematics and statistics.

Linguistics; Mathematics

An unusual pre-school at KU serves normally developing, language-impaired, and English-as-a-second-language children and provides training and research opportunities in child language.

Students in mathematics can design programs with emphases ranging from one of the fields of pure mathematics to one of the fields of applied mathematics and statistics.

LING 980 Linguistics Field Work (1-12). A course for students preparing to take the Oral Comprehensive Examination. Normally to be taken during the semester or the summer session immediately preceding the semester in which the comprehensive examination is taken. May be taken for a maximum of two semesters or twelve credits, whichever comes first. Does not count toward the minimum number of credits required for a graduate degree in linguistics. Graded satisfactory/unsatisfactory depending on the results of the comprehensive examination. RSH

LING 989 Investigation and Conference (1-12). Prerequisite: Written consent of instructor. RSH

LING 990 Seminar in Comparative and Historical Linguistics (3). Intensive study of varying topics in this area. May be repeated. Prerequisite: LING 750. RSH

LING 990 Seminar in Applied Linguistics: _____ (1-3). The content and prerequisites of this course will vary. May be repeated. LEC

LING 970 The Structure of: _____ (2-3). A detailed study of the phonological and grammatical structure of a language not regularly taught at the University. Primarily for students who want a linguistic knowledge of the language rather than a practical command of it. Prerequisite: Two courses in linguistics. LEC

LING 999 Doctoral Dissertation (1-12). THE

Mathematics

Chair: Jack Porter
Snow Hall, 1460 Jayhawk Blvd., Room 405
Lawrence, KS 66045-7523, www.math.ku.edu (785) 864-3651

Graduate Director: Judith Roitman, 525 Snow Hall, (785) 864-3651

Professors: Bayer, Brown, Byers, Duncan, Fleissner, Galvin, Himmelberg, Huang, Huneke, Katz, Lang, Lerner, Mandel, Paschke, Pasik-Duncan, Porter, Roitman, Sheu, Stahl, Torres, Van Vleck

Associate Professors: Church, Cobb, Creese, Gavosto, Gay, Hu, Liu, Purnaprajna, Xu

Assistant Professors: Stanislavova, Stefanov

The department offers a full graduate program, leading to both the M.A. and Ph.D. degrees. Programs can emphasize either pure mathematics or applied mathematics and statistics. A broad range of programs is possible in both pure and applied mathematics in the areas

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of algebra, analysis, combinatorics, control theory, dynamical systems, geometry, numerical analysis, probability, statistics, partial differential equations, set theory, and topology. Thus, a student can design a program with emphasis ranging from one of the traditional fields of pure mathematics to one of the fields of applied mathematics and statistics.

**Admission**

Regular admission ordinarily is granted to applicants who hold bachelor’s degrees, whose undergraduate grade-point averages are B or above (3.0 on a 4.0 scale), and whose undergraduate programs include mathematics comparable to that required for undergraduate majors in mathematics at KU (at least a B average in at least four upper-division courses). Applicants who do not meet these criteria but whose records and recommendations suggest likely success in the proposed programs may be admitted, possibly on probationary status.

Submit your application to the Graduate School online at [www.graduated.ku.edu](http://www.graduated.ku.edu). Send transcripts of all completed college and university course work to

**The University of Kansas**  
Graduate Application Processing Center  
1450 Jayhawk Blvd., Room 313  
Lawrence, KS 66045-7535

Send all other requested application materials to

**The University of Kansas**  
Department of Mathematics  
Snow Hall, 1460 Jayhawk Blvd., Room 405  
Lawrence, KS 66045-7523

**M.A. Degree Requirements**

A candidate must fulfill the general requirements of the Graduate School. In particular, this means that normally at least 30 hours of appropriate graduate credit must be earned (with at least a B average) and that a research component must be included in the candidate’s program. Usually this research component is fulfilled by writing a thesis or by completing appropriate seminars, independent research, or advanced graduate courses.

In addition, a candidate must complete one of the following options:

**Option A.** A satisfactory performance on the departmental Ph.D. written qualifying examination.

**Option B.** Complete the following courses and pass an oral examination: MATH 800, MATH 810, MATH 820, MATH 830, MATH 831, and at least 9 of the remaining 15 hours from courses numbered 700 or above. These additional 9 hours may include the enrollment credit (a minimum of 2 hours and a maximum of 6 hours) used to fulfill a research component (e.g., enrollment in MATH 896, MATH 899, MATH 990, MATH 993, or advanced courses). An M.A. candidate must demonstrate an ability to communicate mathematics both orally and in written form. In particular, an M.A. candidate not selecting the thesis option (MATH 899) is expected to write a technical report as part of his or her research component. Also, a candidate must give a short (30 to 60 minutes) presentation of her or his research component. If a candidate gives a short presentation, a candidate must have met the following requirements before being admitted to the comprehensive examination.

**Option C.** Complete 36 credit hours of courses numbered 600 or above. Complete MATH 727, MATH 765, MATH 781, MATH 791, and either MATH 790 or MATH 792. Complete a research component and pass an oral examination. At least 24 of the 36 hours must be in courses numbered 700 or above. Course equivalents to MATH 727, MATH 765, MATH 781, MATH 790, MATH 791, or MATH 792 may be substituted if approved by the graduate studies committee. An M.A. candidate may, with prior approval of the chair of the graduate studies committee, substitute up to 9 hours of courses taught in other departments. Also, the 36 hours may include the enrollment credit (a minimum of 2 hours and a maximum of 6 hours) used to fulfill a research component (e.g., enrollment in MATH 896, MATH 899, MATH 990, MATH 993, or advanced courses). An M.A. candidate must demonstrate an ability to communicate mathematics both orally and in written form. In particular, an M.A. candidate not selecting the thesis option (MATH 899) is expected to write a technical report as part of his or her research component.

**Ph.D. Degree Requirements**

In addition to the general requirements of the Graduate School, the department requires the student to have met the following requirements before being admitted to the comprehensive examination.

1. Satisfied the research skills requirement by demonstrating a reading ability in one of four languages—Chinese, French, German, or Russian—and a working knowledge of a programming language such as C++ or FORTRAN.
2. Passed written qualifying examinations, one in algebra, one in analysis, and one in either numerical analysis or probability and statistics.
3. Passed one preliminary examination in an area close to the focus of the eventual doctoral thesis.
4. Passed a set of required courses, differing in different tracks.

**Pure Mathematics.** This track requires MATH 800, MATH 810, MATH 820, MATH 830, and an approved course in geometry (e.g., MATH 840, MATH 910, or MATH 920).

**Applied Mathematics.** This track requires MATH 727 (or the corresponding qualifying examination); MATH 781 (or the corresponding qualifying examination); MATH 800, MATH 810, 6 hours in numerical analysis at the 800 level or above, or MATH 865 plus an additional three hours in stochastic processes at the 800 level or above, or MATH 850 plus an additional three hours in differential equations at the 800 level or above; and one of MATH 840, MATH 850, or MATH 950.
The student must complete four additional courses at the 800 level or above before the final examination. Mathematics courses at the 700 level, or courses outside the department at the 700 level or higher, may be substituted with the approval of the graduate studies committee.

Normally the work required to prepare a student for the oral comprehensive examination (and to do research) takes the form of one or more semesters of advanced courses, directed readings, and seminars. In the oral comprehensive examination, a student must show proficiency in the chosen area of mathematics. The precise areas of a student's responsibility on this examination should be discussed in detail with the advisory committee (consisting of the student's advisor and two other members of the department's graduate faculty). This should be done as soon as is feasible, and a letter sent to the student from the advisory committee well in advance of the examination, stating these responsibilities.

In addition to the time constraints of the Graduate School, the department requires the following:

1. The qualifying examinations are to be completed by the beginning of the student's fifth semester. Each qualifying examination is to be passed within three semesters of completion of the highest preparatory course.
2. The written preliminary examination must be completed by the beginning of the student's eighth semester.
3. The oral comprehensive examination is to be taken no later than the end of the second semester following the semester during which the student passes the written preliminary examination.

### Mathematics Courses

- **MATH 500 Intermediate Analysis** (3).
- **MATH 510 Introduction to the Theory of Computing II** (3).
- **MATH 520 Intermediate Logic** (3).
- **MATH 526 Applied Mathematical Statistics I** (3).
- **MATH 527 Applied Mathematical Statistics II** (3).
- **MATH 530 Mathematical Models I** (3).
- **MATH 531 Mathematical Models II** (3).
- **MATH 540 Elementary Number Theory** (3).
- **MATH 542 Vector Analysis** (3).
- **MATH 558 Introductory Modern Algebra** (3).
- **MATH 559 Modern Geometries** (3).
- **MATH 562 Evolution of Mathematical Thought** (3).
- **MATH 570 Undergraduate Honor Seminar** (3).
- **MATH 581 Numerical Analysis I** (3).
- **MATH 582 Numerical Analysis II** (3). Finite difference methods applied to particular initial-value problems, with a discussion of convergence (both parabolic and hyperbolic), to illustrate the concepts of convergence and stability. Knowledge of a programming language. LEC
- **MATH 590 Linear Algebra** (3).
- **MATH 591 Applied Numerical Linear Algebra** (3).
- **MATH 596 Special Topics: (1-3).**
- **MATH 601 Algebraic Coding Theory** (3).
- **MATH 605 Applied Regression Analysis** (3).
- **MATH 611 Fourier Analysis of Time Series** (3).
- **MATH 624 Discrete Probability** (3).
- **MATH 625 Operations Research** (3).
- **MATH 646 Complex Variable and Applications** (3).
- **MATH 647 Applied Partial Differential Equations** (3).
- **MATH 648 Calculus of Variations and Integral Equations** (3).
- **MATH 660 Geometry I** (3).
- **MATH 661 Geometry II** (3).
- **MATH 666 Computer Algebra I** (3).
- **MATH 667 Computer Algebra II** (3).
- **MATH 669 Directed Reading (1-3).**
- **MATH 701 Topics in Mathematics for Teachers: (1-6).** Material, including both mathematical content and teaching methodology, related to classroom use at various levels, elementary through secondary. Topics may vary. May not be counted for junior-senior credit towards a major in mathematics, nor for graduate credit towards a graduate degree in mathematics. Prerequisite: Permission of instructor. RSH
- **MATH 715 Sampling Techniques** (3). Statistical methodology of survey sampling. Data analysis and estimation methods for various experimental designs; fixed or random sample sizes, pre-and/or post-stratified samples, and multistage sampling. Estimates of totals, means, ratios and proportions with methods of estimation. Prerequisite: A post-calculus probability or statistics course. LEC
- **MATH 717 Nonparametric Statistics** (3). Methods requiring few assumptions about the populations sampled. Topics include quantile tests, tolerance limits, the sign test, contingency tables, random tests and rank correlation. Prerequisite: MATH 628 or permission of instructor. LEC
- **MATH 722 Mathematical Logic** (3). Propositional calculus. First order theories and model theory. Elementary arithmetic and Godel's incompleteness theorems. (Same as EECS 722) Prerequisite: MATH 695 or MATH 691, or equivalent evidence of mathematical maturity. LEC
- **MATH 724 Combinatorial Mathematics** (3). Counting problems, with an introduction to Polya's theory; Mobius functions; transversal theory; Ramsey's theorem; Sperner's theorem and related results. LEC
- **MATH 725 Graph Theory** (3). Graphs; trees; connectivity; Menger's theorem; eulerian and hamiltonian graphs; planarity; coloring of graphs; factorization of graphs; matching theory; alternating chain methods; introduction to matrix and graph theory with applications. LEC
- **MATH 727 Probability Theory** (3). A mathematical introduction to probability. Topics include probability spaces, conditional probabilities and independent events, random variables and probability distributions, special discrete and continuous distributions with emphasis on parametric families used in applications, the distribution problem for functions of random variables, sequences of independent random variables, laws of large numbers, and the central limit theorem. Prerequisite: MATH 125 or equivalent. LEC
- **MATH 728 Statistical Theory** (3). N Theory of point estimation and hypothesis testing with applications. Confidence region methodologies and relations to estimation and testing. Prerequisite: MATH 727 or equivalent. LEC
- **MATH 735 Introduction to Optimal Control Theory** (3). An introduction to the mathematical methods of deterministic control theory is given by considering some specific examples and the general theory. The methods include dynamic programming, the calculus of variations, and Pontryagin's maximum principle. Various problems of linear control systems, e.g., the linear regulator problem, are solved. Prerequisite: MATH 320 or equivalent. LEC
- **MATH 740 Number Theory** (3). Divisibility; the theory of congruences, primitive roots and indices, the quadratic reciprocity law, arithmetic functions, and miscellaneous additional topics. Prerequisite: MATH 123 or equivalent. LEC
- **MATH 750 Stochastic Adaptive Control** (3). Stochastic adaptive control methods. Stochastic processes such as Markov chains and Brownian motion, stochastic integral, differential, discrete, and continuous stochastic equations, martingales and estimation techniques. Identification and control of discrete and continuous time linear stochastic systems. Special applications and simulation results of stochastic adaptive control theory. Prerequisite: MATH 627 and some knowledge of control. LEC
- **MATH 765 Introduction to the Theory of Functions I** (3). MATH 765 and MATH 766 are theoretical courses on the fundamental concepts of analysis and the methods of proof. These two courses include the concept of a real number; limits, continuity, and uniform convergence; derivatives and integrals of functions of one and of several real variables. Prerequisite: MATH 123 or equivalent. LEC
- **MATH 766 Introduction to the Theory of Functions II** (3). A continuation of MATH 765. Prerequisite: MATH 765.
- **MATH 780 Numerical Analysis of Linear Systems** (3). Computational aspects of linear algebra, linear equations and matrices, direct and indirect methods, eigenvalues and eigenvectors of matrices, error analysis. Prerequisite: MATH 500 and MATH 781, LEC
- **MATH 781 Numerical Analysis I** (3). Finite and divided differences. Interpolation, numerical differentiation, and integration. Gaussian quadrature. Numerical integration of ordinary differential equations. Curve fitting. (Same as EECS 781.) Prerequisite: MATH 520 and knowledge of a programming language. LEC
- **MATH 782 Numerical Analysis II** (3). Direct and iterative methods for solving systems of linear equations. Numerical solution of partial differential equations. Numerical determination of eigenvalues and eigenvectors. Solution of nonlinear equations. (Same as EECS 782.) Prerequisite: MATH 781. LEC
- **MATH 783 Applied Numerical Methods for Partial Differential Equations** (3). Finite difference methods applied to particular initial-value problems (both parabolic and hyperbolic), to illustrate the concepts of convergence and stability and to provide a background for treating more complicated problems arising in engineering and physics. Finite difference methods for elliptic boundary-value problems, with a discussion of convergence and methods for solving the resulting algebraic equations. Various numerical methods for elliptic problems. Prerequisite: MATH 647 or equivalent. LEC

Thirty-eight KU students have won Goldwater Scholarships for excellence in science and mathematics since the award was established in 1989.

A KU mathematics professor won a national award from the Mathematical Association of America for his narrative account of how mathematicians solved a problem that confounded them for 79 years.
MATH 790 Linear Algebra II (3). A theoretical course on the fundamental concepts and theorems of linear algebra. Topics covered are: vector space, basis, dimension, subspace, norm, inner product, Banach spaces, Hilbert space, orthonormal basis, positive definite matrix, minimal polynomial, diagonalization and other canonical forms, Cayley-Hamilton spectral radius, dual space, quotient space. Prerequisite: MATH 590. LEC

MATH 791 Modern Algebra I (3). This course, together with MATH 792, includes the following topics: theory of groups; rings and fields; matrices and linear transformations; lattices; Galois theory; linear algebras. Prerequisite: MATH 123 or equivalent. LEC

MATH 792 Modern Algebra II (3). Continuation of MATH 791. Prerequisite: MATH 791. LEC

MATH 796 Special Topics: (1-3). Arranged as needed to present appropriate material for groups of students. May be repeated for credit. Prerequisite: Variable. LEC

MATH 799 Directed Readings (1-3). Directed readings on a topic chosen by the student in consultation with the advisor of the instructor. May be repeated for additional credit. Consent of the department required for enrollment. RSH

MATH 800 Theory of Functions of a Complex Variable (3). Cauchy’s theorem and contour integration; the argument principle; maximum modulus principle; Schwarz symmetry principle; analytic continuation; monodromy theorem; applications to the gamma function and Riemann’s zeta function; entire and meromorphic functions; conformal mapping; Riemann mapping theorem; univalent functions. Prerequisite: MATH 766 or concurrently with MATH 766. LEC

MATH 801 Theory of Functions of a Complex Variable (3). Continuation of MATH 800. LEC

MATH 802 Set Theory (3). Axiomatic set theory; transfinite induction; regularity; ordinal and cardinal numbers; well-ordered sets; ordinals; cardinals; cardinal addition; cardinal multiplication; cardinal exponentiation; cardinal arithmetic. Prerequisite: MATH 765 or MATH 791, or concurrent enrollment in MATH 765 and MATH 791, or equivalent evidence of mathematical maturity. LEC


MATH 811 Theory of Functions of a Real Variable (3). Continuation of MATH 810. LEC

MATH 820 Introduction to Topology (3). General topology; set theory; topological spaces; connectedness; countable and uncountable sets. Prerequisite: MATH 792. LEC

MATH 821 Introduction to Geometric and Algebraic Topology (3). The fundamental group and covering spaces (including classification); compact surfaces; homology theory; computations (including homotopy invariance) and applications (including Browder fixed point theorem); introduction to cohomology theory. Prerequisite: MATH 792 and MATH 820, or permission of instructor. LEC

MATH 822 Algebraic Topology (3). Review of simplicial homology; Lefschetz fixed point theorem and degree theory; singular, cellular, and axiomatic homology; Jordan Brouwer separation theorems; universal coefficients in cohomology, products in homotopy groups, and the Hurewicz Theorem. Prerequisite: MATH 821. LEC

MATH 830 Abstract Algebra (3). A study of some structures, theorems, and techniques in algebra whose use has become common in many branches of mathematics. Prerequisite: MATH 792. LEC

MATH 831 Abstract Algebra (3). Continuation of MATH 830. Prerequisite: MATH 830. LEC

MATH 840 Differentiable Manifolds (3). Multilinear algebra of finite dimensional vector spaces over fields; differentiable structures and tangent and tensor bundles; differentiable mappings and differentials; exterior differential forms; curves and surfaces as differentiable manifolds; affine connections and covariant differentiation; Riemannian manifolds. Prerequisite: MATH 765 and MATH 792. LEC

MATH 850 Differential Equations and Dynamical Systems (3). Discrete and differentiable dynamical systems with an emphasis on the qualitative theory. Topics to be covered include review of linear systems; existence and uniqueness theorems; flows and discrete dynamical systems; linearization (Hartman-Grobman theorem); stable and unstable manifolds; Poincare sections, normal forms, Hamiltonian systems, and an introduction to bifurcation theory and chaos. LEC

MATH 851 Topics in Dynamical Systems (3). Topics to be covered include one-dimensional maps; perturbation theory; nonlinear analysis of time series, chaotic dynamical systems, and numerical methods as dynamical systems. This course may be repeated for credit. LEC

MATH 865 Introduction to Stochastic Processes (3). Markov chains; Markov processes; diffusion processes; stationary processes. Emphasis is placed on applications: random walks; branching theory; Brownian motion; Poisson process; birth and death processes. Prerequisite: MATH 627 and MATH 765. LEC

MATH 870 The Analysis of Variance (3). The general linear hypothesis with fixed effects; the Gauss-Markov theorem, confidence ellipsoids, and tests under normal theory; multiple comparisons and the effect of departures from the underlying assumptions; analysis of variance for various experimental designs and analysis of covariance. Prerequisite: MATH 628 and either MATH 590 or MATH 792. LEC

MATH 872 Multivariate Statistical Analysis (3). The multivariate normal distribution; tests of hypotheses on means and covariance matrices; estimation; correlation; multivariate analysis of variance; principal components; canonical correlation. Prerequisite: MATH 628 and either MATH 590 or MATH 792. LEC

MATH 874 Statistical Decision Theory (3). Game theory, admissible decision functions and complete class theorems; Bayes and minimax solutions; sufficiency; invariance; multiple decision problems; sequential decision problems. Prerequisite: MATH 628 and MATH 765. LEC

MATH 896 Master’s Research Component (1-6). RSH

MATH 899 Master’s Thesis (1-10). THE

MATH 905 Several Complex Variables (3). Holomorphic functions in several complex variables, Cauchy’s integral for poly-discs, multivariable Taylor series, maximum modulus theorem. Further topics may include: removable singularities, extension theorems, Cauchy integral operator, domains of holomorphy, special domains and algebraic properties of rings of analytic functions. Prerequisite: MATH 800. LEC

MATH 910 Algebraic Curves (3). Algebraic sets, varieties, plane curves, morphisms and rational maps, resolution of singularities, Reimann-Roch theorem. Prerequisite: MATH 791 and MATH 792. LEC

MATH 915 Introduction to Homological Algebra (3). Injective and projective resolutions, homological dimension, chain complexes and derived functors (including homology, cyclic objects, Hochschild homology). Prerequisite: MATH 810 and MATH 831, or consent of instructor. LEC

MATH 920 Lie Groups and Lie Algebras (3). General properties of Lie groups; closed subgroups, one-parameter subgroups, homogeneous spaces, Lie bracket, Lie algebras, exponential map; structure of semi-simple Lie algebras, invariant forms, Maurer-Cartan equation, covering groups, spinor groups. Prerequisite: MATH 791 and MATH 820. LEC

MATH 930 Topics in General Topology (3). Paracompact spaces, uniform spaces, topology of continua, Peano spaces, Hausdorff spaces, dimension theory, and theory of retracts. Prerequisite: MATH 820. LEC

MATH 940 Advanced Probability (3). Probability measures, random variables, distribution functions, characteristic functions, types of convergence, central limit theorem, Laws of large numbers and other limit theorems. Conditional probability, Markov processes, and other topics in the theory of stochastic processes. Prerequisite: MATH 811. LEC

MATH 950 Partial Differential Equations (3). Introduction; equations of mathematical physics; classification of linear equations and systems. Existence and uniqueness problems for elliptic, parabolic, and hyperbolic equations. Eigenvalue problems for elliptic operators; numerical methods. Prerequisite: MATH 766. LEC


MATH 963 C*-Algebras (3). The basics of C*-algebras, approximately finite dimensional C*-algebras, irrational rotation algebras, C*-algebras of isometries, group C*-algebras, crossed products C*-algebras, extensions of C*-algebras and the BDF theory. Prerequisite: MATH 811 or MATH 960, or consent of instructor. LEC

MATH 970 Analytic K-Theory (3). K0 for rings, spectral theory in Banach algebras, K1 for Banach algebras, Bott periodicity and six-term cyclic exact sequence. Prerequisite: MATH 792 and MATH 960. LEC

MATH 990 Seminar: (1-10). LEC

MATH 993 Readings in Mathematics (1-10). RSH

MATH 996 Special Topics: (1-6). Arranged as needed to present appropriate material for groups of students. May be repeated for additional credit. Prerequisite: Variable. LEC

MATH 999 Doctoral Dissertation (1-10). THE

Meteorology

See Geography.

Microbiology

See Biological Sciences: Molecular Biosciences.

Molecular Biosciences

See Biological Sciences: Molecular Biosciences.

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
Museum Studies

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to
The University of Kansas
Museum Studies Program
Bailey Hall, 1440 Jayhawk Blvd., Room 208
Lawrence, KS 66045-7574

M.A. Degree Requirements

The course of study leading to the Master of Arts comprises a minimum of 42 semester credit hours at the graduate level. Required work falls into three categories: 18 credit hours of core courses, 18 hours of professional and subject-matter courses in the student’s designated disciplinary track (American studies, anthropology, geology, history, or natural history), and 6 hours of a supervised apprenticeship in an approved museum or historical agency. Upon satisfactory completion of the required credit hours, a student must pass a formal examination or evaluation of competence in museum studies to be nominated for the degree.

Graduate Certificate Program in Collections Conservation

The one-year graduate certificate program offers selected graduates of the Museum Studies Program the opportunity to take advanced conservation coursework under the direction of professional conservators in the KU Libraries’ Stannard Conservation Laboratory. Participants gain a solid background in preservation and conservation theory, principles, and philosophical issues. They apply this knowledge while working daily in a conservation facility, enabling them to cope effectively with many of the collections conservation issues that they will face in a museum archive or library environment. The program also gives participants basic conservation skills that enable them to function as trained conservation technicians.

MUSE 701 Museum Management (3). Lecture, discussion, and laboratory exercises on the nature of museums as organizations; accounting, budget cycles, personnel management, and related topics will be presented using, as appropriate, case studies and simulated museum organization models. Same as AMS 731, ANTH 796, BIOL 785, GEOL 781, and HIST 728. Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 702 The Nature of Museums (3). The purpose of this course is to provide an overview of the kinds of museums, their various missions, and the characteristics and potentials as research, education, and public service institutions responsible for collections of natural and cultural objects. Same as AMS 720, ANTH 795, BIOL 785, GEOL 782, and HIST 720. Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 703 Introduction to Museum Exhibits (3). Presentation of principles and practices of exhibit management, design, and production. Topics will include developing a master plan for museum exhibits; concept development; design, installation, and maintenance of exhibits; design theory; design process; label writing and editing; selection of materials and architectural requirements and building codes; cost estimating; publicity; security; and exhibit evaluation. Consideration will be given to exhibition problems in public and private museums in the areas of anthropology, art, history, natural history, and technology. Same as AMS 700, BIOL 785, GEOL 781, and HIST 725. Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 704 Principles and Practices of Museum Collection Management (3). Lecture, discussion, and laboratory exercises on the nature of museum collections, their associated data, and their use in scholarly research; cataloging, storage, fumigation, automated information management and related topics will be presented for museums of art, history, natural history and anthropology. Same as AMS 730, BIOL 781,
MUSE 705 Introduction to Museum Public Education (3). Consideration of the goals of an institution’s public education services, developing programs, identifying potential audiences, developing audiences, and funding. Workshops and demonstrations are designed for students to gain practical experience working with various programs and developing model programs. (Same as AMS 797, ANTH 797, BIOL 784, GEOl 784, and HIST 721.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 706 Conservation Principles and Practices (3). This course will acquaint the future museum professional with problems in conserving all types of collections. Philosophical and ethical approaches will be discussed, as well as the changing practices regarding conservation techniques. Emphasis will be placed on detection and identification of causes of deterioration in objects made of organic and inorganic materials, and how these problems can be remedied. Storage and care of objects will also be considered. (Same as AMS 714, BIOL 790, GEOl 780, and HIST 722.) Prerequisite: Museum Studies student, Indigenous Nations Studies student, or consent of instructor. LEC

MUSE 707 Special Topics: (1-3). Advanced courses on special topics in museum studies, guest speakers, discussions, and visits to scientific collections and data. The course format consists of readings, lectures, discussions, cataloging, preservation, preventive conservation, and access to collections and data. The course format consists of readings, lectures, discussions, cataloging, preservation, preventive conservation, and access to scientific collections on campus. (Same as BIOL 706.) LEC

MUSE 710 Current Trends in Curation and Collection Management (2). Seminar course to provide students with a working knowledge of the primary issues and current trends in building, administering, and caring of scientific collections. Topics include permits, collecting, accessioning, cataloging, preservation, preventive conservation, and access to collections and data. The course format consists of readings, lectures, guest speakers, discussions, and visits to scientific collections on campus. (Same as BIOL 706.) LEC

MUSE 780 Special Topics: (1-3). Advanced courses on special topics in museum studies, given as need arises. Lectures, discussions of readings, and guest speakers. Topic for semester to be announced. Prerequisite: Graduate standing in Museum Studies Program or permission of instructor. LEC

MUSE 782 Seminar in Current Museum Topics: (1-2). In-depth examination of specific topics currently of concern to museums and museum professionals. Topic for semester to be announced. Prerequisite: Graduate standing in Museum Studies Program or permission of instructor. LEC

MUSE 790 Advanced Study (1-3). Individual research in a specialized topic not ordinarily treated in a Museum Studies core course for which there is a member of the graduate faculty competent and willing to direct a research project. Prerequisite: Consent of instructor. RSH

MUSE 792 Directed Readings (1-3). Directed reading in an area of Museum Studies in which there is no particular course in the Museum Studies program or in cooperating departments but in which there is a member of the graduate faculty competent and willing to direct a program study. Prerequisite: Consent of instructor. IND

MUSE 799 Museum Apprenticeship (1-6). Provides directed, practical experience in research, collection, care, and management of archives and manuscripts. Practical experience will be an integral part of this course. (Same as HIST 727.) LEC

MUSE 870 Materials Conservation (3). Theory and principles of preventive conservation, with emphasis on its application to storage environment, archival supports and housings, basic bookbinding, composite objects, integrated pest management, light and lighting, paper evaluation and mending, temperature, and relative humidity. LEC

MUSE 900 Conservation Assessment (3). Understanding the conservator-curatorial relationship; principles of conservation assessment, documentation, conservation research, environmental monitoring, handling objects, photographic documentation, and development of a publishable preservation research project. LEC

MUSE 908 Advanced Conservation (3). Application of conservation theory and practice to exhibition development, planning, and preparation; conservation bookbinding; health and safety in conservation; integrated pest management; ethics of conservation; parameters of professional conservation practice. LEC

MUSE 910 Materials Conservation (3). Preservation and collection conservation theory and principles, including condition reporting, conservation of furniture and wooden objects, inorganic-based materials, metal objects, organic-based materials, paintings, photographic materials, textiles, three-dimensional objects, and works on paper. LEC

MUSE 930 Preventive Conservation (3). Theory and principles of preventive conservation, with emphasis on its application to storage environment, archival supports and housings, basic bookbinding, composite objects, integrated pest management, light and lighting, paper evaluation and mending, temperature, and relative humidity. LEC

MUSE 940 Conservation Assessment (3). Understanding the conservator-curatorial relationship; principles of conservation assessment, documentation, conservation research, environmental monitoring, handling objects, photographic documentation, and development of a publishable preservation research project. LEC

MUSE 980 Advanced Conservation (3). Application of conservation theory and practice to exhibition development, planning, and preparation; conservation bookbinding; health and safety in conservation; integrated pest management; ethics of conservation; parameters of professional conservation practice. LEC

Neurosciences
See the School of Pharmacy chapter of this catalog.

Philosophy
Chair: Thomas Tuozzo, ttuozzo@ku.edu
Wescoe Hall, 1445 Jayhawk Blvd., Room 3090
Lawrence, KS 66045-7590, www.ku.edu/~philos
(785) 864-2330
Graduate Adviser: Teresa Robertson, trobertson@ku.edu, 3054 Wescoe Hall, (785) 864-2325
Professors: Bricke, Cudd, DeGeorge, Genova, Marquis, Martin, Woellet
Professors Emeriti: Cole, Osborne, Verdu
Associate Professors: Robertson, Tuozzo
Associate Professor Emeritus: Skidmore
Assistant Professors: Davey, Eggleston, Lotz

The department offers graduate programs in philosophy leading to the M.A. and Ph.D. degrees. With the School of Law, the department also offers a joint program in law and philosophy leading to the J.D. in law and the M.A. in philosophy.

Admission
Applicants are expected to have taken the following seven courses or their equivalents as preparation for graduate work: symbolic logic, history of ancient philosophy, history of modern philosophy, history of 20th-century analytic philosophy (roughly from Frege to Quine), history of 19th/20th-century Continental philosophy, value theory, and metaphysics/epistemology (broadly construed to include philosophy of language and philosophy of mind). Students may be admitted without some of these courses, but they are expected to make up the deficiencies early in their graduate careers.

The department also requires Graduate Record Examination scores (verbal, quantitative, and analytical).

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to

The University of Kansas
Department of Philosophy
Wescoe Hall, 1445 Jayhawk Blvd., Room 3090
Lawrence, KS 66045-7590

M.A. Degree Requirements
The department offers both a thesis and a nonthesis option for the M.A. degree. Both require at least 30 credit hours of graduate work in philosophy with a grade of B or higher. At least 15 of these hours must be in courses numbered 800 or above and, for the thesis option, may include 6 hours of PHIL 899 Master’s Thesis. Students must complete two courses at the 500 level or above (or the equivalent) in each of the following areas: history of philosophy, metaphysics and epistemology (broadly construed), and value theory. Courses taken during the undergraduate career may be counted toward these area requirements, but such work does not count toward the overall 30-hour graduate credit requirement unless the student took this course work for graduate credit and it is acceptable to the department. A student also must take PHIL 800 Tutorial in the first year.
For the thesis option, the student must submit an acceptable thesis and pass a two-part oral or written examination including one part covering the material of the M.A. program generally and a second part devoted to a defense of the thesis. For the non-thesis option, the student substitutes 6 hours of acceptable graduate work in philosophy courses numbered 800 or above, excluding PHIL 899. The student must pass an oral examination covering the material of the M.A. program. The nonthesis option can be satisfied also by Ph.D. students who successfully complete PHIL 901 Ph.D. Tutorial. These students must be admitted to the Ph.D. program and satisfy M.A. distribution requirements.

**Joint J.D./M.A. Degree Program**

The joint degree program leading to the J.D. degree and the M.A. degree in philosophy develops a student’s understanding and appreciation of the converging disciplines of law and philosophy. The program combines into three years and one summer session the normal three-year J.D. program offered by the School of Law and the three-semester M.A. in philosophy program offered by the Department of Philosophy in the College of Liberal Arts and Sciences. Students in the program complete 81 credit hours in law and 21 credit hours in philosophy. The J.D. and M.A. diplomas are awarded concurrently after completion of joint degree program requirements.

**Admission.** The joint program is open to those who have earned baccalaureate degrees from accredited colleges or universities and whose undergraduate academic records indicate that the applicants have the capacity to complete the law and philosophy program. Applicants must meet the admission requirements of the School of Law, the Department of Philosophy, and the Graduate School. Applicants must apply and be admitted to each school separately before entering the first year of the program. The Law School Admission Test is the only required entrance examination for School of Law applicants. All admission requirements (including Graduate Record Examination scores) and prerequisites for the philosophy graduate program also apply. A student who decides to enter the program while enrolled in the first year of the J.D. or M.A. in philosophy curriculum must consult and obtain approval from the School of Law, the Department of Philosophy, and the College of Liberal Arts and Sciences. No student may enter the combined program after completing more than 30 credit hours in the law school or 12 credit hours in the Department of Philosophy.

**Typical Enrollment Pattern for J.D./M.A. Program**

<table>
<thead>
<tr>
<th>First Year (32 credit hours)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Law courses</td>
<td>32</td>
</tr>
<tr>
<td>Philosophy courses</td>
<td>0</td>
</tr>
<tr>
<td>Second Year (28 credit hours)</td>
<td></td>
</tr>
<tr>
<td>Law courses</td>
<td>22</td>
</tr>
<tr>
<td>Philosophy courses</td>
<td>6</td>
</tr>
<tr>
<td>Third Year (31 credit hours)</td>
<td></td>
</tr>
<tr>
<td>Law courses</td>
<td>22</td>
</tr>
<tr>
<td>Philosophy courses</td>
<td>9</td>
</tr>
<tr>
<td>Summer Session (11 credit hours)</td>
<td></td>
</tr>
<tr>
<td>Law courses</td>
<td>5</td>
</tr>
<tr>
<td>Philosophy courses</td>
<td>6</td>
</tr>
<tr>
<td>Joint J.D./M.A. Degree Requirements</td>
<td></td>
</tr>
<tr>
<td>Law courses required of all J.D. candidates</td>
<td>44</td>
</tr>
<tr>
<td>Law courses required for joint degree candidates</td>
<td>9</td>
</tr>
<tr>
<td>Philosophy courses required for joint degree candidates</td>
<td>9</td>
</tr>
<tr>
<td>Additional law courses</td>
<td>28</td>
</tr>
<tr>
<td>Additional philosophy courses</td>
<td>12</td>
</tr>
<tr>
<td>Total minimum credit hours required</td>
<td>102</td>
</tr>
</tbody>
</table>

It is essential for the student to consult with the director of graduate studies in philosophy and with a representative of the School of Law about specific courses required or recommended for this program.

For additional information, see the *School of Law Catalog* and the General Information chapter of this catalog, or write to the University of Kansas, Associate Dean, School of Law, Green Hall, 1535 West 15th St., Lawrence, KS 66045-7577; or the University of Kansas, Director of Graduate Programs, Department of Philosophy, Wescoe Hall, 1445 Jayhawk Blvd., Room 3090, Lawrence, KS 66045-7590. For a detailed description, see the *Guidelines and Information for Graduate Students* available in the Department of Philosophy.

**Ph.D. Degree Requirements**

A student preparing for a doctorate in philosophy must meet the general requirements of the Graduate School, and before officially enrolling in PHIL 999 Dissertation, must satisfy these special requirements:

1. **Overall Hours Requirement:** Complete at least 48 credit hours of graduate work in regular philosophy courses numbered 500 or above with grades in each course of at least B and an overall grade-point average higher than B in all graduate philosophy courses. At least 24 of these hours must be at the 800 level or above (including PHIL 800 Tutorial and PHIL 901 Ph.D. Tutorial). Beyond the 48 and PHIL 999 Dissertation, additional hours are required as appropriate, in accordance with Graduate School and department rules.

2. **Complete PHIL 800 Tutorial with a grade of B or higher, typically in the second semester of enrollment.**

3. **Formal Philosophy Requirement:** Complete PHIL 610 Symbolic Logic or PHIL 666 Rational Choice Theory with a grade of B or higher.

4. **Ph.D. Distribution Requirement:** Students must complete at least seven courses from the areas below, 500- and 600-level courses are listed as prerequisite options after 800-level seminars.

**Metaphysics and Epistemology** (two courses)

- PHIL 620 Philosophy of Natural Science
- PHIL 622 Philosophy of Social Science
- PHIL 628 Philosophy of Logic
- PHIL 630 Philosophy of Mathematics
- PHIL 638 Philosophy of Language
- PHIL 648 Theory of Knowledge
- PHIL 650 Metaphysics
- PHIL 654 Philosophy of Mind
- PHIL 860 Topics in Philosophy of Science: _____ (Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650)
- PHIL 862 Topics in Logic: _____ (Prerequisite: PHIL 610 or PHIL 628 or PHIL 630)

**Value Theory** (two courses)

- PHIL 504 Philosophy of Sex and Love
- PHIL 555 Justice and Economic Systems
- PHIL 662 Aesthetics
- PHIL 668 Political Philosophy
- PHIL 670 Contemporary Ethical Theory
- PHIL 671 Feminist Theories in Ethics
- PHIL 672 History of Ethics
- PHIL 674 Philosophy of Law
- PHIL 676 Medical Ethics: Life and Death Issues
- PHIL 677 Medical Ethics: Professional Responsibilities
**Prospectus for Thesis or Dissertation**

Any candidate who enrolls in either PHIL 899 Master’s Thesis or PHIL 999 Dissertation should have selected a member of the department as thesis or dissertation adviser and should submit a prospectus to the department, showing what problems the student plans to investigate and what methods are to be employed. The candidate should present a preliminary list of works to be consulted, and suggest, if possible, the conclusion he or she expects or hopes to establish.

**Time Limits and Other Restrictions**

Information on time limits may be found under General Regulations in the General Information chapter of this catalog. The rule for transferring credit toward the M.A. appears under General Regulations in the General Information chapter.

The department's requirement of 48 credit hours of acceptable graduate work for the Ph.D. degree can be reduced by petition depending on the amount and quality of equivalent graduate course work completed at another institution. A student may petition the graduate faculty for a reduction (after consultation with the director of graduate studies) during the first year in the graduate program. The student must satisfy the faculty as to the quality of the petitioned course work. However, at least 24 hours of acceptable graduate work must be taken in the Department of Philosophy at KU.

**Philosophy Courses**

PHIL 500 Studies in Philosophy: _____ (1-6).
PHIL 504 Philosophy of Sex and Love (3).
PHIL 506 Chinese Thought (3).
PHIL 508 Early Greek Philosophy (3).
PHIL 555 Justice and Economic Systems (3).
PHIL 560 Nineteenth-century Philosophy (3).
PHIL 562 Kierkegaard (3).
PHIL 570 Nietzsche (3).
PHIL 580 Marxism (3).
PHIL 582 Existentialism (3).
PHIL 590 Phenomenology (3).
PHIL 592 Contemporary Continental Philosophy (3).
PHIL 595 Readings in Philosophy: _____ (1-6).
PHIL 605 The Philosophy of Plato (3).
PHIL 607 The Philosophy of Aristotle (3).
PHIL 608 Hellenistic Philosophy (3).
PHIL 610 Symbolic Logic (3).
PHIL 611 Topics in Symbolic Logic: _____ (1-3).
PHIL 620 Philosophy of Natural Science (3).
PHIL 622 Philosophy of Social Science (3).
PHIL 628 Philosophy of Logic (3).
PHIL 630 Philosophy of Mathematics (3).
PHIL 638 Philosophy of Language (3).
PHIL 648 Theory of Knowledge (3).
PHIL 650 Metaphysics (3).
PHIL 654 Philosophy of Mind (3).
PHIL 662 Aesthetics (3).
PHIL 666 Rational Choice Theory (3).
PHIL 668 Political Philosophy (3).
PHIL 670 Contemporary Ethical Theory (3).
PHIL 671 Feminist Theories in Ethics (3).
PHIL 672 History of Ethics (3).
PHIL 674 Philosophy of Law (3).
PHIL 676 Medical Ethics: Life and Death Issues (3).
PHIL 677 Medical Ethics: Professional Responsibilities (3).
PHIL 684 Main Currents of Russian Thought I (3).
PHIL 686 Main Currents of Russian Thought II (3).
The space physics group has experiments on the Cassini mission to Saturn and Titan, models planetary magnetospheres and their interaction with space plasmas, and explores the physics of gamma ray bursts.

Particle physicists at KU are looking for new phenomena at the world's highest energy accelerators: Fermilab's currently operating proton-antiproton collider, CERN's soon-to-be-completed Large Hadron Collider, and the proposed next-generation electron-positron linear collider.

PHIL 800 Tutorial (3). Intensive supervised training in the techniques of research. Required of every graduate student seeking an advanced degree in the first or second semester of enrollment. Passing this tutorial constitutes partial fulfillment of the Ph.D. FLORS requirements. Consent of instructor required for repeating the course. Prerequisite: Graduate standing. RSH

PHIL 805 Advanced Studies in Plato (3). Prerequisite: PHIL 508 or PHIL 665 or PHIL 667 or PHIL 668 or PHIL 684 or PHIL 685. LEC

PHIL 807 Aristotle (3). Prerequisite: PHIL 508 or PHIL 665 or PHIL 667 or PHIL 668 or PHIL 684 or PHIL 685. LEC

PHIL 820 Topics in the History of Philosophy: ______ (3). This course may be offered by different instructors under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the timetable. Prerequisite: 500-600 level course specified as appropriate. LEC

PHIL 824 Hume (3). Prerequisite: PHIL 648 or PHIL 650 or PHIL 664. LEC

PHIL 828 Kant (3). Prerequisite: PHIL 648 or PHIL 650 or PHIL 664. LEC

PHIL 831 Hegel (3). Prerequisite: PHIL 560 or 568-600 level course specified as appropriate. LEC

PHIL 835 Frege (3). Gottlob Frege was the founder of the analytic movement in philosophy, having done seminal work in logic, the philosophy of language, and the philosophy of mathematics. This course will focus on his primary texts as well as his influence on present-day studies. Prerequisite: PHIL 628 or PHIL 630 or PHIL 638. LEC

PHIL 843 Heidegger (3). Prerequisite: PHIL 560 or PHIL 562 or PHIL 570 or PHIL 582 or PHIL 592. LEC

PHIL 848 Wittgenstein (3). Prerequisite: PHIL 628 or PHIL 630 or PHIL 638. LEC

PHIL 850 Topics in Recent Philosophy: ______ (3). This course may be offered by different instructors under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the timetable. Prerequisite: 500-600 level course specified as appropriate. LEC

PHIL 852 Quine (3). A systematic study of the major work of W. V. Quine and its influence on subsequent analytic philosophy. Topics will include Quine's theory of meaning, philosophical logic, and philosophy of science. Prerequisite: PHIL 628 or PHIL 630 or PHIL 638. LEC

PHIL 855 Davidson (3). An examination of Donald Davidson's seminal work in philosophy of language and philosophy of mind. Among the topics to be considered will be meaning, truth, interpretation, action, and propositional attitudes. Prerequisite: PHIL 638 or PHIL 644 or PHIL 664. LEC

PHIL 860 Topics in Philosophy of Science: ______ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Timetable of Classes. Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650. LEC

PHIL 862 Topics in Logic: ______ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Timetable of Classes. Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 650. LEC

PHIL 858 Topics in Philosophy of Language: ______ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Timetable of Classes. Prerequisite: PHIL 620 or PHIL 648 or PHIL 650. LEC

PHIL 868 Topics in Philosophy of Language: ______ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Timetable of Classes. Prerequisite: PHIL 620 or PHIL 648 or PHIL 650. LEC

PHIL 870 Topics in Metaphysics: ______ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Timetable of Classes. Prerequisite: PHIL 620 or PHIL 648 or PHIL 650. LEC

PHIL 872 Topics in Theory of Knowledge: ______ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Timetable of Classes. Prerequisite: PHIL 620 or PHIL 648 or PHIL 650. LEC

PHIL 877 Topics in Philosophy of Mind: ______ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Timetable of Classes. Prerequisite: PHIL 638 or PHIL 650 or PHIL 664. LEC

PHIL 880 Topics in Ethics: ______ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Timetable of Classes. Prerequisite: PHIL 638 or PHIL 650 or PHIL 664. LEC

PHIL 884 Topics in Social and Political Philosophy: ______ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Timetable of Classes. Prerequisite: PHIL 670 or PHIL 674. LEC

PHIL 885 Topics in Applied Ethics: ______ (3). This course may be offered under different subtitles, such as professional ethics or some issue in business ethics (e.g., corporate responsibility) or in medical ethics (e.g., the definition of death); it may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the Timetable of Classes. Prerequisite: PHIL 555 or PHIL 666 or PHIL 668 or PHIL 674. LEC

PHIL 888 Topics in the Philosophy of the Social Sciences: ______ (3). This course may be offered under different subtitles, such as philosophy of a particular social science (e.g., economics, psychology) or a particular issue in the social sciences (e.g., ideology, reductionism), and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the timetable. Prerequisite: PHIL 620 or PHIL 622 or PHIL 648 or PHIL 668 or PHIL 696. LEC

PHIL 890 Topics in Continental Philosophy: ______ (3). This course may be offered under different subtitles, and may be taken more than once if the subject matter varies sufficiently. Topic, instructor, and specific prerequisites to be announced in the timetable. LEC

PHIL 899 Master's Thesis (1-6). Six hours of credit will be awarded upon completion of the master's thesis, but no more than six hours of credit may be obtained in this course altogether. THE

PHIL 900 Research in Philosophy: ______ (1-3). Intensive research in philosophy. This course may be taken through individual arrangement, or in connection with small research seminars which are offered occasionally. Students may only enroll for three hours in any given semester. May be repeated if content varies significantly. Prerequisite: Twelve hours of graduate work. RSH

PHIL 901, Ph.D. Tutorial (3). Independent research on any topic that a graduate student and a faculty member shall agree on. It shall result in a tightly focused 20-30 page paper. The student's written work will be regularly evaluated over the semester by the director, and the final product must be defended in an oral examination conducted by a three-member faculty committee (including the director). Prerequisite: Students must be admitted to the Ph.D. program and have successfully completed the Ph.D. core courses requirement. RSH

PHIL 995 Dissertation (1-12). This course may be taken more than once, but not for more than twelve hours of credit in any one semester. THE
Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Graduate Secretary, Department of Physics
and Astronomy
Malott Hall, 1251 Wescowe Hall Dr., Room 1082
Lawrence, KS 66045-7582

M.S. Degree Requirements

M.S. Degree in Physics. Candidates must complete a minimum of 30 credit hours of advanced lecture courses (numbered 500 or above) in physics and related subjects within a period of seven years. These courses must include:

PHSX 711 Quantum Mechanics I
PHSX 717 Classical Mechanics
PHSX 831 Electrodynamics I
and at least two of the following:

PHSX 721 Chaotic Dynamics
PHSX 741 Nuclear Physics I
PHSX 761 Elementary Particles I
PHSX 763 Solid State Physics I
PHSX 795 Space Plasma Physics
PHSX 815 Computational Methods in Physical Sciences

Also, a minimum of 2 hours in PHSX 899 Master’s Research/Thesis is required, with a maximum of 6 hours that can be counted toward the master’s degree. A candidate who has not had an advanced undergraduate laboratory course (junior/senior level) must take one of the three advanced laboratory courses offered in the department.

Communication Skills: All graduate students must deliver at least one oral presentation per semester, with at least two faculty members or their professional equivalents present.

Candidates must pass a general oral examination in physics. The examination is given shortly before completion of other work for the degree. A master’s thesis is not required but may be submitted if the candidate and the director of the candidate’s research believe it to be appropriate.

M.S. Subspecialty in Computational Physics and Astronomy. A total of 30 hours of graduate credit is required. The 33 hours listed below under parts A and B may include certain undergraduate-level Electrical Engineering and Computer Science courses. Students entering the program may have satisfied several of these requirements. A total of 30 hours of graduate credit is still required. No more than the required 6 hours of PHSX 899 Master’s Research/Thesis may be counted toward the degree.

A. Required Courses (21 credit hours)

PHSX 815 Computational Methods in Physical Sciences/ATR 815 Computational Physics and Astronomy ........................................... 3
PHSX 718 Mathematical Methods in Physical Sciences ............................ 3
MATH 781/EECS 781 Numerical Analysis I .......................... 3
EECS (one course at the 300 level or above in addition to EECS 781) ................................................................. 3

Note: Courses below the 500 level do not count toward the required 30 hours of graduate credit.

PHSX 899 Master’s Research/Thesis ............................................ 6

B. Twelve or more credit hours from the following list: ________________ 12

Note: A course used to fulfill a requirement under A (e.g., EECS 448) may not also be counted under B.

*EECS 360 Signal and System Analysis (3)
*EECS 368 Functional Programming (3)
*EECS 388 Computer Systems and Assembly Language (4)
EECS 448 Software Engineering I (3)
EECS 560 Data Structures (3)
EECS 672 Introduction to Computer Graphics (3)
EECS 848 Software Engineering II (3)

PHSX 596, MATH 696, or MATH 796 Special Topics: ________________ 3

Each of the following courses, * may not be taken for graduate credit.

PHSX 623 Physics of Fluids ............................................................... 3
PHSX 711 Quantum Mechanics I .................................................. 3
PHSX 763 Solid State Physics I ...................................................... 3
PHSX 795 Space Plasma Physics ..................................................... 3
PHSX 815 Computational Methods in Physical Sciences

C. Thesis. An important component of this degree is the completion and documentation of a successful computer project. A thesis must be presented that describes the basic physics involved in the project, the method of implementing the project, and a discussion of the results. An oral defense of the thesis is required before a committee of at least three members of the graduate faculty.

M.S. Emphasis in Geophysics. This program is for students who wish to emphasize geophysics in terms of either solid earth or fluids. The student is assumed to have a degree in physics or another physical science or engineering, with a strong physics and mathematics background. Candidates must complete a minimum of 30 credit hours of advanced lecture courses, numbered 500 or above, in physics and related subjects. These courses must include the following:

Electives (minimum of 10 hours at the 700 level or above that must include at least one of the following): ........................................ 10

PHSX/ASTR/ATMO courses numbered 500 or above (3)

The student must write a research/thesis proposal and orally defend it before a committee of three faculty members, at least one of whom is from a department other than physics and astronomy. The student also must orally defend the completed master’s research/thesis project before this committee.

Ph.D. Degree Requirements

Residence. The student must spend the equivalent of three full academic years in graduate study at this or another approved institution or laboratory. Graduate students with half-time assistantships usually require at least four years to complete all requirements. Maximum enrollment for students with no other depart-
Physicists at KU are exploring quantum devices that could be used as qubits in quantum computers, machines that could be orders of magnitude faster than current computers. Condensed-matter physicists at KU are exploring quantum devices that could be used as qubits in quantum computers, machines that could be orders of magnitude faster than current computers.

mental obligations is 16 hours a semester. In addition to satisfying the Graduate School residence requirement, a student with a half-time assistantship must be enrolled for at least 6 hours each semester. A maximum of 12 hours is permitted if the student's duties consist of research that partially fulfills degree requirements. A fellowship holder or full-time student with private support must be enrolled for at least 12 hours.

To be eligible for teaching assistantships, all graduate students who are not native speakers of English must achieve a minimum score of 50 on the Test of Spoken English or 240 on the SPEAK. International students must pass an oral examination to demonstrate English fluency. Students who fail this examination should take courses from the Applied English Center.

Time Limits. Students entering with bachelor's degrees have a maximum time limit of seven years to complete the Ph.D. Students entering with master's degrees have a six-year limit. It is not necessary to obtain a master's degree to begin study for a Ph.D.

Preliminary Candidacy. To be admitted to preliminary candidacy, each graduate student must satisfy these departmental requirements:

1. All four sections of the preliminary examination must be passed. A student who sends in an original copy of a physics Graduate Record Examination score of 60 percent or higher before enrollment is excused from the examination. The preliminary examination is administered each January before the beginning of the spring semester. Students may repeat the examination once and must satisfy this requirement by the fifth semester of enrollment. The four sections cover mechanics, electricity and magnetism, quantum mechanics, thermal and statistical physics, and wave phenomena. The level is advanced undergraduate (600-level KU courses). Example questions are available.

2. A minimum grade-point average of 3.2 must be achieved in core courses. It is computed from the following five equally weighted elements:
   - Grade obtained in PHSX 711 Quantum Mechanics I
   - Grade obtained in PHSX 811 Quantum Mechanics II
   - Grade obtained in PHSX 821 Classical Mechanics
   - Grade obtained in PHSX 831 Electrodynamics I
   - Average grade of two other PHSX lecture courses numbered 700 or higher

Students entering with graduate credit from other institutions may petition the departmental committee on graduate studies to use the credits to meet KU requirements. For the core grade-point average, grades of B or higher from other institutions may be used for at most three of the four specified courses. For the remaining course, the student must obtain written certification of a B or higher from the KU instructor. Certification may be obtained by taking the course, taking the final examination (if any), or other means determined by the instructor. An appropriate higher-level course also may be used for certification in a core course. The two other PHSX lecture courses numbered 700 or higher must be taken at KU. Graduate students normally should complete all core courses by the end of the second year.

On admission to preliminary candidacy, the student selects a research adviser who appoints a tentative dissertation committee with the adviser as chair and at least two other members of the department's graduate faculty. This committee serves until the student passes the comprehensive oral examination and the dissertation committee is appointed. The computing skill requirement should be met within one year (by taking PHSX 815), and the comprehensive oral examination should be scheduled within two years after the student attains preliminary candidacy.

Course Requirements. A total of 11 advanced lecture courses (33 hours) is required. In addition, 1 hour of PHSX 700 Colloquium is required.

1. Core courses:
   - PHSX 711 Quantum Mechanics I
   - PHSX 811 Quantum Mechanics II
   - PHSX 821 Classical Mechanics
   - PHSX 831 Electrodynamics I

2. Other required courses:
   - PHSX 700 Colloquium
   - PHSX 718 Mathematical Methods in Physical Sciences
   - PHSX 815 Computational Methods in Physical Sciences (satisfies FLOBS requirement)
   - PHSX 871 Statistical Physics I
   - PHSX 931 Electrodynamics II

3. Two additional PHSX lecture courses numbered 700 or above. The courses must be in different subfields of physics. They may not be used simultaneously to satisfy other degree requirements.

4. One additional advanced PHSX lecture course numbered 800 or above.

5. A Ph.D. student who has not had the equivalent of 6 credit hours of advanced undergraduate laboratory course work (junior/senior level) must take one of the three advanced laboratory courses. Other experimental work (e.g., senior thesis or undergraduate research) may be considered for this requirement.

- PHSX 516 Physical Measurements
- PHSX 536 Electronic Circuit Measurement and Design
- PHSX 601 Design of Physical and Electronic Systems

The student and the adviser select subsequent work, consisting of advanced courses in appropriate fields and seminars, based on the student's need and intended specialization. There is no prescribed total number of credit hours. The student's dissertation committee determines the adequacy of courses and seminars and specifies total course requirements.

Colloquium and Graduate Seminar. All students must enroll in PHSX 700 Colloquium in the sixth semester. Students should have attended at least 75 percent of the regularly scheduled colloquia during the six semesters to achieve a passing grade. One semester of the first year, students are expected to attend the graduate seminar to become familiar with research programs and to gain experience in oral presentations.

Computing Skill. Students must complete PHSX 815 Computational Methods in Physical Sciences/ASTR 815 Computational Physics and Astronomy with a grade of A or B, preferably within one year after admission to preliminary candidacy. This course has significant prerequisites in advanced undergraduate computer science and requires completion of a substantial computer program to solve a physical problem.

Comprehensive Examination. After completing a major portion of the required course work and satisfying the computing skill requirement, the student must pass the comprehensive examination. The department recommends five members for the examining committee to the Graduate School. One member must be from outside the department. Requests to take the exam must be made at least three weeks before the examination. The student writes a 2,000- to 4,000-word paper relevant to thesis
work. The paper must be presented at least one week before the scheduled oral examination. The student is examined on the oral presentation, the contents of the paper, the bibliography, the general field of physics, and other related material. The student must receive passing grades on both the written and oral examinations.

Research and Post-comprehensive Enrollment. Upon passing the comprehensive oral examination, the aspirant becomes a candidate for the Ph.D. The Graduate School designates the candidate’s dissertation committee, based on department recommendations. The committee establishes course requirements and directs the research project. The candidate must remain continuously enrolled, full time including summer sessions, until all requirements are met. The number of hours is determined by the committee and should accurately reflect the candidate’s demands on faculty time and university resources.

Final Oral Examination. At least five months must elapse between the comprehensive oral examination and the final oral examination. When the dissertation has been tentatively accepted, the committee chair requests the Graduate School to schedule the final oral examination. This request must be made two weeks before the examination. The Graduate School appoints the committee, but the dissertation committee recommends at least five members, one of whom must be from outside the department. The candidate must defend his or her dissertation in an open meeting. The candidate must deposit two unbound copies of the dissertation with the Graduate School and one copy in the department office by the final date for meeting requirements.

Engineering Physics
Chair: Stephen Sanders, 1082 Malott Hall, (785) 864-4626

No graduate program in engineering physics is offered. Courses at the 500 and 600 levels carry graduate credit. Courses abbreviated EPHX are listed in the School of Engineering chapter of this catalog.

Astronomy Courses
ASTR 503 Undergraduate Research (1-4).
ASTR 591 Stellar Astronomy (3).
ASTR 592 Galactic and Extragalactic Astronomy (3).
ASTR 595 Astrophysics and Planetology (3).
ASTR 596 Observational Astrophysics (1-3).
ASTR 597 Analysis in Astrophysics (1-3).
ASTR 691 Astrophysics I (3).
ASTR 692 Astrophysics II (3).
ASTR 781 Seminar in Astrophysics (1-3). Seminar designed to cover current topics in the physics of the Universe beyond the solar system. Content will vary. Graduate students engaged in or preparing for research may repeat enrollments in this course. Open to undergraduates with the written consent of the instructor. LEC
ASTR 795 Space Plasma Physics (3). The physics of fully ionized gases in magnetic fields and their application to interplanetary processes, planetary radiation belts, and the surface of the sun. The motion of charged particles in magnetic fields, magnetohydrodynamic waves, the solar wind and the magnetosphere. (Same as PHSX 795.) Prerequisite: PHSX 621. Corequisite: PHSX 631. LEC
ASTR 815 Computational Physics and Astronomy. Advanced computer applications in physics and astronomy. General discussion and illustration of problem organization and solution by numerical and other methods with examples from plasma, space, solid state, elementary particle, and nuclear physics and astronomy. Students will design, write, validate, and document a computer program to solve a physical problem. (Same as PHSX 815 and CHEM 914.) Prerequisite: Six hours of computer science courses numbered 300 or above, and six hours of physics and/or astronomy courses numbered 300 or above. LEC

Physics & Astronomy
THE UNIVERSITY OF KANSAS • 2005/07 GRADUATE SCHOOL CATALOG

PHYSICS & ASTRONOMY

PHSX 724 Potential Fields in Geophysics (3). Reduction and interpretation of gravity and magnetic data with emphasis on exploration techniques. Spectral, analytical and modeling methods of analysis of gravity and magnetic anomalies are emphasized. Prerequisite: MATH 250/250/350/250/250/250/250/250/250/250/250/250/250/250/250 and either GEO 572 or GEO 573 or PHSX 528 or consent of instructor. LEC

PHSX 727 Advanced Geophysics: (1-3). Topics to vary with demand and include heat flow, wave propagation, synthetic seismograms, groundwater exploration, geothermal exploration, electrical methods in exploration, rock mechanics-geotechnophysics, rock magnetism, geo-magnetism, paleomagnetism, geophysical inverse theory, and others upon sufficient demand. May be repeated for different topics. (Same as GEO 771.) Prerequisite: GEO 572 or GEO 573/PHSX 528 or consent of instructor. LEC

PHSX 741 Nuclear Physics I (3). Experimental methods in nuclear physics, elementary concepts and simple considerations about nuclear forces, alpha and beta decay, gamma radiation, nuclear structure, and reaction systematics. Prerequisite: PHSX 611. LEC

PHSX 761 Elementary Particles I (3). Particle accelerators and detectors; quarks and leptons; invention principles and conservation laws; strong, electromagnetic, and weak interactions of elementary particles; unification of electroweak and other interactions. Prerequisite: PHSX 711. LEC

PHSX 781 Solid State Physics I (3). Classification of solids, structure and symmetry of crystals, lattice vibrations and thermal properties of solids; electric and magnetic properties; electron theory of metals and semiconductors; electronic and atomic transport processes. Prerequisite: PHSX 611 (or CHEM 648) and PHSX 671 (or CHEM 649). LEC

PHSX 791 Seminar in Astrophysics (1-3). Seminar designed to cover current topics in the physics of the Universe beyond the solar system. Content will vary. Graduate students engaged in or preparing for research may repeat enrollments in this course. Open to undergraduates with twelve hours of physics/astronomy courses numbered 500 or above, or consent of instructor. LEC

PHSX 793 Physical Cosmology (3). Discussion of how fundamental laws of physics govern the evolution of the universe as a whole along with its structure. Study of cosmogenic clues in the observable universe, including observed universes, cosmic background radiation and evidence for dark matter. Development of the universe, including theories of initial conditions; cosmological phase transitions; generation of possible relics and dark matter; symmetry breaking; baryon asymmetry; nucleosynthesis; recombination, gravitational instability and the formation of structure; current experimental techniques. Prerequisite: PHSX 718. Recommended: PHSX 593. LEC

PHSX 795 Space Plasma Physics (3). The physics of fully ionized gases in magnetic fields and their application to interplanetary processes, planetary radiation belts, and the sun. The motion of charged particles in magnetic fields, magnetohydrodynamic waves, the solar wind, the ionosphere, and the magnetosphere. (Same as ASTR 795.) Prerequisite: PHSX 611. Corequisite: PHSX 631. LEC

PHSX 800 Graduate Problems (1-5). Advanced laboratory problems, special research problems, or library reading problems. Repeated enrollments are permitted. RHS

PHSX 801 Advanced Topics (1-3). Lectures on advanced material not covered by regular courses. The general topics may address recent experimental or theoretical developments in subjects such as superconductivity, nuclear physics, elementary particle physics, quantum field theory, gauge and unified theories, nonlinear or chaotic systems, space plasma physics, and astrophysics and cosmology. Repeated enrollments are permitted. LEC

PHSX 811 Quantum Mechanics II (3). Time dependent perturbation theory. Quantum mechanics and relativistic interactions. The Dirac equation, its transformation properties and applications to relativistic problems. Scattering theory, elementary applications, and formal properties. Prerequisite: PHSX 711. LEC

PHSX 815 Computational Methods in Physical Sciences (3). Advanced computer applications in physical science. General discussion and illustrations of problem organization and solution by numerical and other methods with examples from physics, astronomy, and other physical sciences. Students will design, write, validate, and document a computer program to solve a physical problem. (Same as ASTR 815 and CHEM 914.) Prerequisite: Six hours of computer science courses numbered 300 or above, and six hours of physics and/or astronomy courses numbered 300 or above. LEC

PHSX 817 Graduate Seminar (1). First year graduate students meet to survey research opportunities both in the department and develop teaching skills in giving oral presentations in physics and related areas. Prerequisite: Only one year of 917 can count toward required hours for degree. LEC

PHSX 821 Classical Mechanics (3). Vector and tensor notation; review of Newton’s laws; Lagrangian mechanics; linear spaces and matrix theory with applications to the theory of small oscillations; rigid bodies; Hamiltonian formalism. Special relativity. Prerequisite: Twelve hours of junior-senior courses in physics. LEC

PHSX 831 Electrodynamics I (3). Electrostatics and magnetostatics; Maxwell’s equations; plane waves; waveguides. Prerequisite: PHSX 718 and PHSX 815. LEC

PHSX 841 Nuclear Physics II (3). Nuclear forces and the two-body problem; nuclear models; phenomenological treatment of nuclear reactions and decay processes. Prerequisite: PHSX 741 and PHSX 811. LEC

PHSX 861 Elementary Particles II (3). Theoretical analysis of the standard model of strong and electroweak interactions. Applications to decay and scattering processes with comparison to experiments. Selected topics in non-perturbative physics. Examples of tests to probe beyond the standard model. Prerequisite: PHSX 761. Corequisite: PHSX 911. LEC

PHSX 871 Statistical Physics I (3). Review of and advanced topics in thermodynamics; the Maxwell relations; the third law; phase transitions. Kinetic theory: the Boltzmann equation; transport phenomena. Statistical mechanics: ideal Maxwell-Boltzmann, Fermi-Dirac and Bose-Einstein gases, ensemble theory; derivation of the laws of thermodynamics. Prerequisite: PHSX 711 and PHSX 861. PHSX 871 is recommended. LEC

PHSX 881 Solid State Physics II (3). More advanced topics in solid state physics that may include: diamagnetism, paramagnetism, ferromagnetism, and antiferromagnetism; electron and nuclear spin magnetic resonance; dielectric properties and ferroelectricity; photoconductivity and luminescence. Prerequisite: PHSX 631 and PHSX 711 (or CHEM 910). LEC

PHSX 895 Plasma Physics (3). Magnetohydrodynamics, including discussion of shocks, waves, and stability theory; statistical mechanical foundations; kinetic theory; microstability; non-linear phenomena. Prerequisite: PHSX 795. LEC

PHSX 897 Seminar in Plasma and Space Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. The content will vary. (Same as ASTR 897.) LEC

PHSX 899 Master’s Research/Thesis (1-10). Research work (either experimental or theoretical) in physics for students working toward the master’s degree. Repeated enrollments are permitted. THE

PHSX 911 Quantum Mechanics III (3). Path integral formulation of quantum mechanics. Introduction to quantum field theory using the canonical approach and using the path integral approach. Application of perturbation theory to quantum electrodynamics. Selected applications in condensed matter, nuclear, and particle physics. Prerequisite: PHSX 811. LEC


PHSX 915 Relativity (3). Reviews of special relativity, manifolds, tensors, and geometry. General coordinate covariance and general relativity. Applications to classical theory of gravitation; weak field tests, isotropic, homogeneous cosmology, Schwarzschild solution. Selected advanced topics. Prerequisite: A total of 10 hours of junior/senior work in physics and mathematics, including at least concurrent enrollment in MATH 646. LEC

PHSX 917 Seminar in Theoretical Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. Content will vary. LEC

PHSX 931 Electrodynamics II (3). Inhomogeneous Maxwell’s equations and multipole radiation fields; special theory of relativity; radiation from accelerated charges; scattering and dispersion. Prerequisite: PHSX 831. LEC

PHSX 947 Seminar in Nuclear Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. The content will vary. LEC

PHSX 967 Seminar in Particle Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. The content will vary. LEC

PHSX 971 Advanced Statistical Mechanics (3). Advanced equilibrium statistical mechanics and introduction to nonequilibrium statistical mechanics. Topics include: the theory of liquids, critical phenomena, linear response theory and time correlation functions, Langevin dynamics, and molecular hydrodynamics. Prerequisite: PHSX 871 or CHEM 917. LEC

PHSX 976 Seminar in Solid State Physics (1-3). Graduate students engaged in or preparing for research may repeat enrollments in this course. The content will vary. LEC

PHSX 999 Ph.D. Dissertation Research (1-10). Research work (either experimental or theoretical) in physics for students working toward the Ph.D. degree. Repeated enrollments are permitted. THE

THE UNIVERSITY OF KANSAS • 2005/07 GRADUATE SCHOOL CATALOG

PHYSIOLOGY AND CELL BIOLOGY

See Biological Sciences: Molecular Biosciences.

POLISH

See Slavic Languages and Literatures.
Political Science

Chair: Burdett Loomis, bloomis@ku.edu
Blake Hall, 1541 Lilac Lane, Room 515
Lawrence, KS 66044-3177, www.ku.edu/~kups
(785) 864-9033

Graduate Studies Director: Juliet Kaarbo, kaarbo@ku.edu, 520 Blake Hall, (785) 864-9043

Professors: Cigler, Francisco, Gerner, Heilke, Johnson, Loomis, Schrödt, Schumaker, Sharp

Professors Emeriti: Drury, Fields, Getter, Heller, Lande, Nehring, Piekalkiewicz, Tomasek

Associate Professors: Bayard de Volo, D’Anieri, Haider-Markel, Herron, Joslyn, Kaarbo, Reich, Yap

Assistant Professors: Daley, Middlemass, Weaver

The Department of Political Science offers M.A. and Ph.D. degrees for students interested in academic work in political science leading to teaching and research careers. Political science graduates also have found careers in the public, private, and not-for-profit sectors. Ph.D. students can pursue concentrations in U.S. politics, comparative politics, international relations, political theory, and public policy.

Admission

Admission to M.A. or Ph.D. programs is based on the applicant’s undergraduate and/or graduate record, standardized test scores, and references from instructors. All applicants must complete a bachelor’s degree. A completed application must include (1) application, (2) Graduate Record Examination results—verbal, quantitative, and analytical, (3) a one- to two-page statement of goals and research interests, (4) three letters of recommendation, preferably from faculty members, (5) a nonrefundable application fee (see Admissions in the General Information chapter of this catalog), and (6) two official transcripts from each college or university attended. An official transcript is one that is sent directly from the registrar of the applicant’s school to the department. All these materials must be received before the application for admission can be considered.

If the applicant wishes to be considered for regular admission and for a graduate teaching assistantship, the application file must be complete by January 10 for the coming academic year. A student who wishes to be considered for fall admission but not for a teaching assistantship should submit the application by April 15 but may do so earlier.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to:

The University of Kansas
Graduate Coordinator, Department of Political Science
Blake Hall, 1541 Lilac Lane, Room 504
Lawrence, KS 66044-3177

Fields of Graduate Study

For graduate study, courses in the department are divided into the following fields:

1. Political philosophy and empirical theory.
2. U.S. political institutions and processes.
3. Comparative politics.
4. International relations.
5. Public policy.

M.A. Degree Requirements

All candidates for the M.A. degree must complete, at a satisfactory level, (1) 30 semester hours of graduate credit, 21 of which must be earned in courses at the 700 level or above; (2) research methods through POLS 706; and (3) a comprehensive master’s oral examination. The student selects a principal adviser from the political science graduate faculty by the end of the first year in order to choose courses and prepare for the comprehensive examination. The examination is administered by a three-person M.A. committee that includes the student’s principal adviser and two other members of the KU graduate faculty selected by the student in consultation with the principal adviser. One member of the committee may be selected from another department (including Ad hoc and Special members of the graduate faculty who have been approved by the Graduate School). Directed readings courses in excess of 5 hours cannot be counted toward the 30 hours required for the degree. With the prior written approval of the principal adviser and graduate director, candidates may count up to 6 graduate hours taken outside the department (either at KU or at another institution accredited by the North Central Association of Colleges and Schools) toward the 30 hours required for completion of the degree.

Candidates who have not completed at least 15 undergraduate credit hours in political science may be admitted with the provision that they complete additional hours of course work.

All candidates must fulfill the requirements of either the thesis or the nonthesis option for the Master of Arts degree.

Thesis Option. Upon completion and certification of an acceptable thesis, candidates may count 6 credit hours of thesis enrollment toward the 30 credit hours required for the M.A. degree.

Nonthesis Option. Candidates may substitute a minimum of two 800- or 900-level research courses plus satisfactory performance on a comprehensive written examination administered by the three-person M.A. committee before the oral examination.

Ph.D. Degree Requirements

Students who complete the Master of Arts degree may be eligible to pursue the Ph.D. degree.

The Ph.D. program requires work in two major subfields and one minor subfield.

The major fields must be drawn from those offered by the division (see above). Before their first attempt at the written preliminary examination in any subfield, all Ph.D. students must complete at least four courses in that field, three of which are at the 700 level or above. Enrollment in directed research covering a particular subfield may be substituted for one of the four courses/seminars.

The minor field may be another of the subfields in the division, a related field from an outside department, or an interdisciplinary program. If the choice is not one of the subfields, the student must obtain written approval of the adviser and the graduate studies director. A special field committee must consist of at
least three faculty members, one of whom must be from the department. This committee certifies the completion of one field and may administer a written preliminary examination. The courses for the minor field must follow the same structure as outlined above for the major fields. Courses for the minor field may not be applied to another examination field.

Students should consult their major advisers to plan a schedule of course work and seminar preparation in each of these subfields to provide adequate preparation for the written preliminary examination. The student must complete the Foreign Language or Other Research Skills (FLORS) requirement and Ph.D. residency requirement before registering for the preliminary examination. All incompletes in Ph.D. course work must be completed or a waiver must be granted by the graduate studies director.

In addition to the course work requirements and residency, the Ph.D. aspirant must fulfill the FLORS requirement. There are two options for Ph.D. aspirants:

Option 1: Research Methods. POLS 706 and POLS 707 plus one research methods course approved by the major adviser and the graduate director.

Option 2: Research Methods and Foreign Language. POLS 706 and POLS 707 plus one of the following choices in a language approved by the student’s adviser as well as the graduate director: (1) two semesters of a single foreign language, (2) demonstrated reading knowledge of a foreign language, or (3) native ability. All work must be no more than five years old at the time of certification.

To become a Ph.D. candidate, the student must satisfactorily complete a comprehensive oral examination. No student may attempt the comprehensive oral examination until the two written preliminary examinations have been passed and the requirements of the minor subfield have been completed.

After passing the comprehensive oral examination, the doctoral candidate must write a dissertation approved by a departmental dissertation committee and pass a final oral defense of the dissertation to qualify for the Ph.D. degree.

Political Science Courses

- POLS 501 Contemporary Political Thought (3).
- POLS 502 History of Political Thought (3).
- POLS 503 Politics in Literature (3).
- POLS 504 Millenarian Movements (3).
- POLS 505 Citizens, States, and Civility (3).
- POLS 506 Honors Seminar in Political Research (3).
- POLS 511 The Judicial Process (3).
- POLS 513 Power in American Communities (3).
- POLS 515 American Political Parties (3).
- POLS 516 Public Opinion and American Democracy (3).
- POLS 519 Community Development (3).
- POLS 520 Political Communication (3).
- POLS 521 Rhetoric, Politics, and the Mass Media (3).
- POLS 528 Environmental Justice and Public Policy (3).
- POLS 533 Comparative Environmental Politics (3).
- POLS 562 Women and Politics (3).
- POLS 563 Comparative Political Economy (3).
- POLS 564 Elections and Political Parties Around the World (3).
- POLS 572 National Security Policy (3).
- POLS 600 Contemporary Feminist Political Theory (3).
- POLS 601 Political Ideologies (3).
- POLS 602 American Political Ideas (3).
- POLS 603 Democratic Theory (3).
- POLS 604 Religion and Political Theory (3).
- POLS 605 A Study of Political Thought in Antiquity (3).
- POLS 607 Modern Political Theory (3).
- POLS 608 Social Choice and Game Theory (3).

- POLS 609 Topics in Political Theory: ______ (3).
- POLS 610 Constitutional Law: Governmental Powers (3).
- POLS 611 Constitutional Law: Civil Liberties (3).
- POLS 612 Psychology in Politics (3).
- POLS 613 Comparative U.S. State Politics (3).
- POLS 614 Urban Politics (3).
- POLS 615 Campaigns and Elections (3).
- POLS 616 Interest Group Politics (3).
- POLS 617 The Congress (3).
- POLS 618 The Presidency (3).
- POLS 619 Topics in American Politics: ______ (1-3).
- POLS 620 Formulation of Public Policy (3).
- POLS 621 Public Policy Analysis (3).
- POLS 622 Government and the Economy (3).
- POLS 623 The Politics of Social Policy (3).
- POLS 624 Environmental Politics and Policy (3).
- POLS 625 Extremist Groups and Government Response (3).
- POLS 629 Topics in Public Policy: ______ (1-3).
- POLS 631 Professionalism and Democracy (3).
- POLS 632 The Administrative State (3).
- POLS 634 Bureaucratic Politics (3).
- POLS 635 Public Organizations and Citizenship (3).
- POLS 642 The Administrative State – Honors (3).
- POLS 650 Palestinians and Israelis (3).
- POLS 651 Women and Politics in Latin America (3).
- POLS 652 Politics in Western Europe (3).
- POLS 653 Gender, War, and Peace (3).
- POLS 654 Politics and Government of Russia and the Central Eurasian States (3).
- POLS 655 Politics of East-Central Europe (3).
- POLS 656 Governments and Politics of East Asia (3).
- POLS 657 Government and Politics of Southeast Asia (3).
- POLS 658 Theories of Politics in Latin America (3).
- POLS 659 Political Dynamics of Latin America (3).
- POLS 660 The Politics and Problems of Developing Countries (3).
- POLS 661 Politics of the Middle East (3).
- POLS 662 Political Persuasion: Myth, Imagery, and Rhetoric (3).
- POLS 663 Protest and Revolution (3).
- POLS 665 Politics in Africa (3).
- POLS 666 Political Economy of East Asia (3).
- POLS 667 Islam and Politics (3).
- POLS 668 Reform in Contemporary China (3).
- POLS 669 Topics in Comparative Politics: ______ (2-3).
- POLS 670 United States Foreign Policy (3).
- POLS 671 International Cooperation (3).
- POLS 672 International Political Economy (3).
- POLS 673 International Organization (3).
- POLS 674 International Ethics (3).
- POLS 675 Russian Foreign Policy (3).
- POLS 676 International Relations of Asia (3).
- POLS 678 Chinese Foreign Policy (3).
- POLS 679 International Conflict (3).
- POLS 680 International Relations in Political Philosophy (3).
- POLS 681 Comparative Foreign Policy (3).
- POLS 682 U.S. Foreign Policy Toward the Third World (3).
- POLS 684 International Law: The State and the Individual (3).
- POLS 685 International Law: War, Territory, and Diplomacy (3).
- POLS 689 Topics in International Relations: ______ (2-3).
- POLS 701 Political Theory (3). This course is intended to introduce graduate and advanced undergraduate students to the kinds of activities engaged in by political theorists. Thus the course focuses on several approaches to doing political theory, such as interpreting the work of great political philosophers, clarifying political concepts, organizing and integrating political ideas, evaluating political practices, and creating new political perspectives. The course focuses on historical and contemporary treatments of both epistemological issues (the possibility and grounds for political knowledge) and selected substantive issues (e.g., the legitimacy of the state, the merits and limitations of democracy, the requirements of justice, and the nature and importance of ideologies).
- POLS 702 Empirical Political Theories (3). The purpose of this course is to introduce students to the critical evaluation and construction of empirical political theory. It will (a) introduce students to various types of political theory and the criteria for evaluating such theory, (b) consider some overarching “grand
POLS 703 Social Choice and Game Theory (3). A survey of the political economic approach to individual and collective choice behavior called "rational choice." The course focuses on models of voting systems and other political phenomena, including game theoretical approaches. Prerequisite: Nine hours of political science or admission into the M.A. or Ph.D. LEC

POLS 705 Research Design for Political Science (3). Introduction to the discipline of political science, the philosophy of science, research design, and data acquisition. Prerequisite: Graduate standing or consent of instructor. LEC

POLS 706 Research Methods I (3). An introduction to quantitative research methods in political science, including probability theory and statistical analysis, as well as background material required for these methods. Computer applications for research and statistical analysis accompany these topics. Prerequisite: Graduate standing, POLS 705, or consent of instructor. LEC

POLS 707 Research Methods II (3). This course covers basic techniques for multivariate analysis, focusing on multiple regression. Topics include interpretation of regression statistics, diagnostics for common problems, dummy variables, instrumental variables, basic time series methods including adjustment for autocorrelated error, logistic models, and nonlinear modeling; additional techniques may be covered at the discretion of the instructor. Prerequisite: POLS 706. LEC

POLS 708 Advanced Qualitative Research Methods (3). An examination of qualitative research, frequently employed within the context of other political science. Topics may include the use of case studies, archival and documentary research, content analysis, interviewing and focus group techniques, ethnographic fieldwork, analysis of primary sources. The course will examine the strengths and limitations of these methods in relation to major research traditions such as culturalist approaches, historical institutionalism, rational choice, and constructivism. Prerequisite: POLS 705 and other graduate standing or consent of instructor. LEC

POLS 709 Topics in Political Theory: _____ (3). At the discretion of the instructor, this course will cover one or more important areas of political theory for in-depth analysis. Prerequisite: Six hours in Political Theory. RSH

POLS 711 The Psychological Basis of Political Behavior (3). Examination of the relationships between psychological processes and social, political factors and individual political behavior. Particular attention is devoted to understanding the development of politically relevant psychological traits and dispositions, and to the methodology employed in studying the socio-psychological factors which underlie individual political behavior. Prerequisite: Twelve hours of political science and consent of instructor. LEC

POLS 712 The Electoral Process (3). A study of the characteristics of voting behavior and the influences upon such behavior in the United States. Emphasis is placed upon relevant research findings concerning partisanship and participation in politics, and on the methodology employed in the study of political behavior. Prerequisite: Twelve hours of political science and consent of instructor. LEC

POLS 713 Law and Society (3). A study of the province and function of law in the context of relevant social, economic, and political factors. The impact of these factors on the law will be illustrated through readings and case histories. Emphasis will be placed upon law as a social phenomenon rather than upon its technical aspects. Prerequisite: Twelve hours of political science and permission of instructor for undergraduates. LEC

POLS 715 Political Communication (3). A seminar for students interested in the role of communication in politics. In particular, this seminar will examine the functioning and role of media and the formation of public opinion. Prerequisite: Graduate standing or consent of instructor. LEC

POLS 716 Political Behavior (3). A seminar for students interested in understanding the public opinion, voting, and other forms of political participation. This course will include a discussion of the formation, measurement of political attitudes as well as an examination of protest and other forms of extra-legal participation. Prerequisite: Graduate standing or consent of instructor. LEC

POLS 719 Topics in the American Political Institutions: _____ (3). A seminar to be offered as occasion demands, dealing with, but not limited to special topics in the presidency, congress, and judicial processes. Prerequisites: Graduate standing or consent of instructor. LEC

POLS 720 The Scope of Public Policy (3). Introductory graduate course in the examination of public policy making. Considers institutions, basic theoretical frameworks, and standard methods, and places policy-making within a political context. Emphasizes American examples, but relevant comparative material is employed. Prerequisite: Twelve hours of political science. LEC

POLS 722 Intergovernmental Relations (3). A survey of characteristics of policies and legislative relationships among different units of American government, with particular emphasis upon the role of state agencies. Prerequisite: Nine hours of political science. LEC

POLS 726 Public Policy in Comparative Perspective (3). This seminar examines the application of policy theory in regional and comparative contexts. Much of the research and policy theory reviewed focuses on comparisons of public policy, but select weeks focus on specific regions of the world. A key goal is to help students understand which theories of policy may be best suited for universal application. LEC

POLS 753 Politics of Ideocracy (3). Study of ideologically-based authoritarian political systems and the methodologies employed in studying the socio-economic-political processes of Albania, Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia. Prerequisite: Six hours in the social sciences or East European history, including POLS 150, or consent of instructor. LEC

POLS 754 Politics and Government of Russia and the Central Eurasian States (3). The collapse of the Soviet system and the problems of transforming a central planned authoritarian state into a free-market democracy. The roles of ethnic and national tensions, economic decay, and cultural factors. Prerequisite: Eight hours in the social sciences and/or history, including POLS 150, or consent of instructor. LEC

POLS 755 Politics of East-Central Europe (3). This course analyzes Communist political theory in its application to the countries of East Central Europe with consideration of their traditional backgrounds and their patterns of political, social, and economic developments. It constructs a theoretical model of the communist state and discusses its variations by description and comparison of the governments and political processes of Albania, Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia. Prerequisite: Six hours in the social sciences or East European history, including POLS 150, or consent of instructor. LEC

POLS 758 Revolutionary Politics of Latin America (3). Primarily a comparative analysis of the Mexican, Bolivian, and Cuban revolutions within a framework of theories of revolutionary phenomena. Some attention to revolutionary political groupings and conditions in other Latin American countries. Prerequisite: POLS 150 or a course concerning Latin America in the social sciences or history. LEC

POLS 760 The Politics and Problems of Developing Countries (3). A focus on topics pertinent to all of the underdeveloped areas such as the role of the military, styles of political leadership, land tenure system, the role of the middle sector, the nature of bureaucracy, the activity of the students, and foreign policy attitudes. Prerequisite: One of the following: POLS 652, POLS 653, POLS 654, POLS 655, POLS 656, POLS 657, POLS 658, POLS 659, POLS 753, POLS 754, POLS 755, POLS 758. LEC

POLS 774 International Law (3). Study of topics in international law, relating these closely to the dynamics of international relations. Special emphasis will be given to regulating force, resolving disputes, the law of the sea, human rights, and emerging problem areas such as the environment, outer space, the oceanic seabed, and Antarctica. Prerequisite: Six hours of courses in international relations including POLS 170 and/or relevant courses in the social sciences and modern history. LEC

POLS 775 Russian Foreign Policy (3). Examination of the history of Soviet and Russian foreign policy and current issues of foreign policy in the Post-Soviet era. Analysis of foreign policy making in Russia and the former Post-Soviet states. Emphasis on the changed nature of international security problems after the cold war and on the role of foreign policy in economic development. Prerequisite: Eight hours in the social sciences and political science history, including either POLS 170 or a course in Russian history. LEC

POLS 776 International Relations of Asia (3). An intensive study of the problems of ideological conflict, diplomatic relations, strategic arrangements, economic cooperation, and cultural exchange in East and Southeast Asia with special emphasis upon the roles of major world powers. Prerequisite: POLS 170 or a course in East Asian studies. LEC

POLS 777 International Relations of Latin America (3). A descriptive and analytical course. Emphasis will be placed upon the role of the Organization of American States in relation to hemispheric disputes and defense, relations with the United States, Latin America in respect to international law and organizations, trade and economic problems, European colonial possessions, and communism. Prerequisite: POLS 170 or a relevant course on Latin America. LEC

POLS 789 Topics in International Relations: _____ (2-3). A study of selected problems in international relations. Prerequisite: Consent of instructor. RSH

POLS 810 American Politics (3). A survey and critical examination of recent theoretical developments and research focusing on national and international relations, electoral behavior, and policy-making processes. Emphasis is given to conceptualizing and analyzing the changing nature of the American political system. LEC

POLS 811 Role of Government in American Society (3). An examination and analysis of the normative bases of public institutions and how such institutions affect democratic and administrative processes. The purpose is to enable students to evaluate their political philosophy with respect to the role of these institutions in society. LEC

POLS 812 Political Psychology (3). A critical examination of the principal areas in current literature in political psychology, including psychological perspectives on mass political behavior, political decision making, and international relations. Attention will be given to articulating
and evaluating theories, constructing research questions and programs, and comparing methodologies. LEC

**POLS 820 Policy Formulation and Adoption (3)**. Survey of the literature on the international, economic, and political forces influencing the formulation and adoption of public policy, as well as policy change, at all levels of government. Topics include problem definition, agenda setting, and the methods of decision-making. This is a research seminar so students will be required to do original research influencing the policy implementation process and the analysis of public policy. The course covers a variety of theories and methods related to the study of the implementation process, policy evaluation, policy implementation, and policy change and learning. Substantive policy areas covered include environmental regulation, education, criminal justice, public safety, and health care. LEC

**POLS 824 Public Policy and Administration (3)**. An exploration of the ways in which public policy is made in the United States, focusing on the role of the administrator at each stage of the policy process: formulation, implementation, and evaluation. Various theories of policy-making and their applications to specific areas of public policy will be examined. LEC

**POLS 825 Public Policy and Urban Administration (3)**. An examination of policy development, implementation, and evaluation in the local government context. Various theories of the policy process and their application to municipal government are examined. (Same as PUAD 825.) LEC

**POLS 830 Advanced Research Methods for Public Policy (3)**. Research seminar organized around advanced quantitative and qualitative method skills for research on American and comparative politics and public policy. The course will combine advanced statistical estimation procedures (e.g., hazard analysis, event history analysis, hierarchical “contextual effects” models) with methods for the collection and integration of data. This course is intended as a research skills for students in the fields of American politics, comparative politics, and public policy. The course is open to Ph.D. students from other departments who have completed a course in intermediate regression analysis. Prerequisite: POLS 707. LEC

**POLS 840 Theory of Public Administration (3)**. Survey of the development of ideas about public administration among public officials and research investigators. Emphasis on basic concepts, research reports, and theoretical treatises on the nature of public administration. LEC

**POLS 849 Law, Courts, and Public Policy (3)**. This course provides an overview of the role of law, litigation, and courts in the public policy process, with an emphasis on bureaucratic institutions. The course covers the main theories and empirical research on the policy effects of litigation and intervention, with a particular focus on civil rights in the areas of employment, policing, welfare, prisons, and environmental policy. (Same as PUAD 849.) Prerequisite: Graduate standing or consent of instructor. LEC

**POLS 850 Introduction to Comparative Politics (3)**. This course provides a graduate level introduction to the field of Comparative Politics. Among topics it will survey are: the history and development of the field; classic works and major founding concerns of the field; methodological and philosophical controversies; and characterized Comparative Politics (structural-functionalism, culturalists, state-centricists, institutionalists, rational choice, and others); theory building; the role of area specialists. LEC

**POLS 851 Comparative Institutions and Government (3)**. This course provides a survey of the subfield of political institutions within Comparative Politics. Among the topics it will cover are: identifying regime types (democracy vs. non-democracy); comparative electoral systems; party systems; presidential vs. parliamentary systems; comparative legislatures; constitutional engineering and democratic transitions, and others. Prerequisite: POLS 850. LEC

**POLS 852 Comparative Political Economy (3)**. This course provides a survey of some of the major works, research traditions, and current debates in the subfield of comparative political economy. This includes such topics as: the political economy of development and underdevelopment; dependency and world systems theory; the relationship between economic development and democracy; the political economy of dual transitions; the political economy of privatization and structural adjustment; comparative welfare states; and comparative labor-business-government relations. Prerequisite: POLS 850. LEC

**POLS 853 Comparative Social Politics (3)**. This course provides a survey of some major research traditions and current debates in the subfield of political sociology. This includes such topics as: cultural politics; elites, social structures, and politics; the politics of cultural pluralism and ethnonationalism; social movements and protest; gender and politics; state-society relation; and religion and politics. Prerequisite: POLS 850. LEC

**POLS 870 International Relations (3)**. Critical evaluation of the major approaches to international relations and their application to conflict and conflict resolution, foreign policy, and international political economy. LEC

**POLS 898 Nonthesis Research (1)**. Research course used to fulfill continuous enrollment requirement for master’s degree students. Hours cannot count toward degree. Must be graded Satisfactory/Unsatisfactory. RSH

**POLS 899 Thesis (1-6)**. Enrollment for writing thesis for master’s degree. THE

**POLS 905 Complex Adaptive Systems, Agent-based Modeling, and Computer Simulation (3)**. This seminar addresses the rapidly growing science of complex systems. Topics addressed include political, economic, ecological, and social systems and their interactions. Includes a survey of the theory of complexity and computer models that are used to study complex adaptive systems. The main focus is on agent-based models, but attention is also given to traditional cellular automata. Methods of design, implementation, and interpreting results of agent-based models are addressed. Students who have formal training in computer programming are welcome in the course, but they should expect to do some extra work on fundamentals of programming. Students will work in a course in Java, C++, Objective-C, or another object-oriented language would significantly facilitate the student’s research effort. SEM

**POLS 906 Advanced Regression (3)**. Covers topics appropriate for a second course in regression analysis. The content will vary according to the interest of the instructor and students, but will generally include such topics as multiple imputation of missing data, the generalized linear model (GLM), and specialized models for longitudinal data. The course will include a review of the principles of maximum likelihood estimation and applications of matrix algebra and differential calculus in statistical applications. LEC

**POLS 907 Research Methods in International Studies (3)**. This course focuses on quantitative methods of research relevant to international relations and comparative politics. Topics will vary with the instructor and student interests, but may include time series analysis, classification algorithms, computer programming and computational modeling, simulation, data mining, data content analysis, and dynamic models. Prerequisite: POLS 707. LEC

**POLS 908 Individual and Collective Choice (3)**. This course surveys rational choice theories of politics as they are applied to decisions by individuals and groups. The individual behavior are drawn primarily from economics and decision theory. The primary approaches to collective choice are social choice theory and game theory. Prerequisite: POLS 707. LEC

**POLS 909 Topics in Methodology (3)**. An intensive seminar in a method (or a variety of relevant methods) of theoretical or empirical research designed for Ph.D. students only. Emphasis is on deepening the understanding and ability to use advanced methods of analysis. Prerequisite: Admission to the Ph.D. program, RSH

**POLS 910 Research Seminar in American Government (2-3)**. A faculty and advanced graduate student collegial research experience focusing on American politics, policy-making and administration, with faculty and students engaged in the production of scholarly research articles, books and conference papers. Topics will be chosen by individual students with consent of the seminar professor. LEC

**POLS 911 The U.S. Congress (3)**. This seminar employs various theoretical and methodological perspectives to explore the burgeoning post-1960 literature on Congress. Traditional subjects such as committees, parties, and elections are examined through applications of formal models, behavioral analyses, and participant observation. LEC

**POLS 912 Elections and Voting Behavior (3)**. A research seminar for students interested in theoretical and empirical approaches to the behavior of candidates, voters and contributors in campaigns and elections. The impact of campaign laws and other institutional influences will also be examined. LEC

**POLS 913 State and Local Politics (3)**. Research seminar on various aspects of state and local government, such as reformed institutions, fiscal stress, citizen participation, and various policy problems. LEC

**POLS 914 Political Behavior (3)**. Survey of various approaches to the analysis of political behavior, including an evaluation of each approach in terms of its utility in building empirically-based political theory. Examples of the application of the various approaches will focus on the American political process. LEC

**POLS 915 American Political Parties (3)**. A survey of the theories and research findings dealing with political parties in American politics, including third and minor parties. Topics to be covered include the development and evolution of the party system; the nature of party organization and the recruitment of party activists, the role of parties in the electoral process, the impact of parties upon public policy, and party reform. LEC

**POLS 916 Group Politics (3)**. The focus of this course is upon the theories and research findings dealing with political groups in American politics, including protest groups, movements, as well as conventional interest groups. Topics to be covered include group mobilization and maintenance, group involvement in the political process, group behavior and political processes, methods and strengths of group influence, and the impact of political groups on the policy process. LEC

**POLS 917 The Presidency (3)**. An advanced research seminar for students interested in theoretical and empirical approaches to the American political process, with focus on the understanding and ability to use advanced methods of analysis. Faculty and students engaged in the production of scholarly research articles, books and conference papers. Topics will be chosen by individual students with consent of the seminar professor. LEC

**POLS 918 International Relations (3)**. Critical evaluation of the major approaches to international relations and their application to conflict and conflict resolution, foreign policy, and international political economy. LEC
can presidency. This seminar will examine the powers and organization of the White House through a study of the literature. LEC POLS 919 Topics in U.S. Government and Politics: _____ (2-3). A seminar to explore current domestic policy debates, dealing with, but not limited to, bureaucracy, legislative policy, federalism, and special problems in U.S. politics. LEC POLS 920 Policy Analysis Research Seminar (3). Research seminar designed to apply public policy theory and policy analysis methods to evaluate the impact of public policies. Students will be required to design and conduct an original research project with the intention of presenting the work at a professional conference or publishing the work in a professional journal. LEC POLS 921 Public Law (3). This seminar is designed to initiate the advanced graduate student to research in judicial and jury behavior. Requirements include mastery of literature on the psychological foundations of both judgment and research designed to test propositions derived from this literature. LEC POLS 929 Topics in Public Policy: _____ (1-3). Study of selected topics in public policy. LEC POLS 940 Teaching Political Science (1). A discussion of teaching methods and approaches. Students are expected to develop a personal teaching portfolio that describes their outlook on teaching political science and to prepare sample teaching materials. This course must be taken by all graduate teaching assistants and assistant instructors during the first year of their appointment. Grades are issued on a pass/fail basis, LEC POLS 950 Research Seminar in International Studies (2-3). A faculty- and advanced graduate students engaged in the production of scholarly research articles, books, and conference papers. Topics will be chosen by individual students and the seminar professor. RSH POLS 951 Mobilization (3). A study of how politicians, interest group leaders, and dissident leaders exhort citizens to act in or preclude them from acting in politics. LEC POLS 953 Ideocratic Politics (3). Ideocratic politics includes political behavior animated by a monistic ideology. Topics include: radical political ideologies and movements, the functional and structural aspects of ideocratic systems, their causes, and their life cycles. The seminar will deal with fascism, communism, Islamic fundamentalism, and other movements and systems. The seminar is conceived as a research seminar in which the participants are expected to pursue their own research interests within the broad framework of the seminar. LEC POLS 954 Politics in Post-Soviet States (3). In-depth study of the politics of Russia, Ukraine, and the other Post-Soviet states. Focus on the problems of transforming a centrally planned authoritarian system to a free market democracy. LEC POLS 955 Politics of Advanced Industrial Societies (3). Theory and research on the patterns of behavior that characterize the politics of North America, Europe, and developed regions of Asia. Topics include: corporatism and alternative forms of interest intermediation, economic theories of socialization and electoral choice, and the role of political parties in its finances, adaptation, and the problem of power and legitimacy. Prerequisite: POLS 850 or permission of instructor. LEC POLS 956 The Governments and Politics of Asia (2-3). A research seminar on selected subjects and issues in the governments and politics of selected Asian countries. The particular focus each year will depend upon the instructor. LEC POLS 957 Political Processes in Southeast Asia (3). A seminar on political leadership, parties, military regimes, and other selected topics of Southeast Asian politics. LEC POLS 959 Topics in Comparative Politics: _____ (1-3). Study of selected topics in comparative government and politics. LEC POLS 960 Politics of Developing Countries (2-3). LEC POLS 961 The Politics of Culturally Plural Societies (3). This is an advanced seminar on the politics of countries characterized by sub-cultural cleavages, including ethnicity, language, religion, and race. The course will first survey and critique competing theoretical explanations for different patterns of conflict or peaceful cohabitation among such groupings and then a variety of world regions. Students will then examine the utility of these theories in individual in-depth research papers which will be presented in class and critiqued by seminar participants. LEC POLS 962 The Breakdown, Restoration, and Consolidation of Democracies (3). A graduate seminar focusing on the new and revived democracies of the Third World, Eastern and Southern Europe. Readings in theory will be combined with individually assigned case studies. Prerequisite: Two upper level or graduate courses in comparative politics. LEC POLS 965 Soviet and East European Policies and Problems (3). A seminar for advanced graduate students interested in Soviet and East European affairs that combines discussion and research. The early sessions will be devoted to discussions (often led by outside speakers) of various aspects of domestic and international affairs as related to the nations of the region. The final sessions will be devoted to the presentation of papers by the students, papers prepared with the intention of submitting them for publication. LEC POLS 970 Foreign Policy Analysis (3). Designed to acquaint students with the principal theories, approaches and types of empirical analysis generally employed to explain and interpret the creation and implementation of foreign policy. Topics include: rational actor models, collective and bureaucratic processes, societal influences, cognitive and psychological factors, and comparative foreign policy. Prerequisite: POLS 870. An undergraduate United States foreign policy class is recommended. LEC POLS 972 Theories of International Conflict (3). An in-depth survey of theories and research on international conflict. Topics will range from anthropological studies of conflict in primitive societies to contemporary theories of nuclear conflict. The course will also cover current empirical research methodology and results of research on international conflict, as well as models of conflict processes. Prerequisite: POLS 870. LEC POLS 973 International Political Economy (3). Provides an eclectic survey of major developments in the field. Topics include: the intellectual origins of IPE; the historical evolution of the international system; North-South and Western trade, investment, and monetary relations; foreign aid, debt, technology transfer, development, international economic institutions (e.g., IMF, IBRD, MNCs, etc.). (Same as SOC 873.) Prerequisite: POLS 870 or consent of instructor. LEC POLS 974 International Mediation and Conflict Resolution (3). The course examines the theory and practice of international mediation and other forms of third party intervention used to resolve interstate and nonstate disputes. Topics include explanations of mediation success and failure, conditions of conflict escalation where mediation is likely to be counterproductive or resisted by recalcitrant disputants, the ethics of intervention, citizen diplomacy, and the role of international organizations such as the United Nations. Prerequisite: POLS 870. LEC POLS 975 Foreign Policies of Post-Soviet States (2-3). Examination of the history of Soviet and Russian foreign policy and analysis of foreign policy making in Russia, Ukraine, and the other Post-Soviet States. Emphasis on Russian relations with Ukraine, the European community, and the United States. LEC POLS 976 International Relations of Asia (2-3). In-depth analysis of major international problems of Asian countries and critical examination of the theories and methods which have been developed and applied to the systematic study of Asian international politics. LEC POLS 978 Advanced Topics in International Relations Theory (3). Intensive examination of key theoretical debates in international relations. Topics covered will include Classical Realism and Liberalism, Neorealism/Neoliberal debate, and post-structural critiques of mainstream international relations theory. Prerequisite: POLS 870. LEC POLS 979 Topics in International Relations: _____ (3). To be offered periodically when topics of special interest arise. LEC POLS 980 International Organizations (3). Considers theoretical and empirical work on international governmental and non-governmental organizations (IOs). Specifically highly theoretical issues such as the role of IOs regarding the function, design, and delegation of authority to IOs as well as their behavior and change. Explores these questions in depth through a wide range of cases, including comprehensive coverage of the United Nations, Bretton Woods Institutions, and the European Union, and their activities in issue areas concerning international security, trade, finance, development, humanitarian aid, and the environment. LEC POLS 981 Global Development (3). Considers the nature and problems of development and underdevelopment from a cross-regional and interdisciplinary perspective. Deals with the historical origins of the enormous disparities in wealth that exist today, both between and within countries. Considers the explanations for these differences, prescriptions for how to narrow them, and specific cases (both successes and failures) from various regions of the globe. LEC POLS 993 Directed Readings (1-5). Designed to meet the needs of graduate students whose scholarly work in political science cannot be met with present course. Prerequisite: Consent of instructor. RSH POLS 995 Directed Research (2). Designed for advanced graduate students who are concurrently enrolled or who will be enrolled in a subsequent semester in one of the Research Seminars in American, Government or International Studies. Students enrolling in this course should have the prior approval of the faculty member with whom they wish to conduct the research. RSH POLS 997 Preparation for the Comprehensive Examination (1-6). An independent reading course for students preparing to take the Ph.D. comprehensive examination. May be taken for two semesters or six credits, whichever comes first. Graded S or F depending of the results of the comprehensive examination. POLS 999 Doctoral Dissertation (1-15). Enrollment for writing doctoral dissertations. THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG 291 Political Science Liberal Arts & Sciences
Psychology

Chair: Gregory Simpson, gsimpson@ku.edu
Fraser Hall, 1415 Jayhawk Blvd., Room 426
Lawrence, KS 66045-7556, www.psych.ku.edu
(785) 864-4131

Professors: Batson, Bernstein, Biernat, Branscombe, Colombo, Crandall, Denney, Higgins, Holmes, Ingram, Juola, Kemper, McCluskey-Fawcett, Muehlenhard, Roberts, Simpson, Snyder, Vernberg, Wrightsmann

Professors Emeriti: Baumgartel, Brehm, Crockett, Cromwell, Hallenbeck, Kellas, Neuringer, Rosenfeld, Shontz

Associate Professors: P. Atchley, R. Atchley, Gallant, Ilardi, Jackson, Karpowitz, Little, Schreiber, Steele

Assistant Professors: Adams, Dien, Greenhoot, Grobe, Hawley, Hamilton, Vitevitch

Assistant Professor Emeritus: Townsend

The department offers a single doctoral degree in psychology, which may be earned in social, cognitive, quantitative, or clinical psychology. Students enter with the expectation of earning the Ph.D. The department does not admit students seeking the terminal master's degree.

The department cooperates with related departments in joint Ph.D. programs in clinical child psychology, developmental and child psychology, and child language.

Admission

Students may write to the department for application materials or download program information and application materials from our Web site. Applicants must have earned either the bachelor’s degree or the master’s degree. Although most applicants have majored in psychology as undergraduates, this is not required. It is necessary, however, to have earned 15 credit hours in psychology, including a first course in statistics and a course in experimental psychology or psychological research methods. Admission is competitive. The Graduate Record Examination is required. The GRE subject test is preferred but not required. Prior research and relevant work experience, honors, awards, and other achievements are taken into account. The deadline for completed applications is January 15 for the following fall semester. January 4 is the deadline for students seeking university-wide fellowships or other financial assistance.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas
Graduate Officer, Department of Psychology
Fraser Hall, 1415 Jayhawk Blvd., Room 426
Lawrence, KS 66045-7556

M.A. Degree Requirements

Within two years of first enrollment in the Ph.D. program, the student must earn at least 30 graduate credit hours, no more than 6 of which may be in courses offered by other departments. The student must complete an acceptable thesis based on an empirical study and pass an oral examination. The oral examination may cover the thesis as well as more general material. Courses required for the M.A. degree are determined in consultation with faculty of the program in which the student is enrolled as part of the process of development of an individualized program. No more than 6 thesis hours may be applied to the 30 hours required for the M.A.

Ph.D. Degree Requirements

Although graduate education is offered through separate programs; each student prepares an individualized plan of study in consultation with faculty members in the program. These plans indicate how the student proposes to fulfill the requirements for the M.A. and Ph.D. degrees, including all requirements and conditions established by the Graduate School and the College of Liberal Arts and Sciences.

Social Psychology. The program is an intensive research training experience seeking students who are committed to empirical, scholarly work. The major research interests of faculty members are stereotyping and prejudice, person perception, social stigma, intergroup relations, social competence and aggression, emotion and motivation, empathy and altruism, and psychology and the law.

In addition to course work, the central requirement of the program is continuous involvement in research. Research opportunities range from laboratory experimentation to field research. Depending on backgrounds and goals, students may move from one research setting to another or concentrate on a particular type of research throughout their training.

Requirements. Students are guided by individually tailored plans called contracts. These describe sequences of learning experiences developed by the student and a three-member faculty committee. Beginning students are urged to enroll in basic courses in theory and research in social psychology and statistics. The contract specifies students’ long-range goals, specialities, other fields of psychology or related disciplines in which they will become proficient, plans for meeting the research skills requirement, proposed sequence of course work, research and teaching experiences they hope to obtain, plans for meeting M.A. comprehensive requirements and dissertation landmarks, and an approximate timetable. Contract details can be changed by agreement of the student and faculty committee. The contract is a general framework that permits students’ graduate work to be adapted to their interests and abilities and provides a standard against which progress can be assessed. Students’ contracts must specify how the Graduate School Foreign Language or Other Research Skills requirement is to be met (typically by taking six graduate statistics and research design classes) and must comply with other departmental and Graduate School rules including residence and time limits.

Cognitive Psychology. The program seeks students with the intellectual potential, motivation, and quantitative aptitude to engage in productive scholarship in a basic or applied area of interest.

Interdisciplinary training is also available in:

• Cognitive neuroscience.
• Developmental science.
• Aging and cognition.
• Child language.
• Quantitative methods.
The training program emphasizes the development of a broad-based foundation in theory, research methods, technical skills, and quantitative analysis for application in a variety of basic and applied research settings. Areas of focus of current faculty members include memory, cognitive development, language, perception, attention, aging, and cognition.

Recent graduates have found employment in academic programs, research organizations, and applied research units in industry and government. The rate of employment for graduates is very high. General program requirements are listed below. Applicants are encouraged to contact the department’s Web site for details.

The admission process includes evaluation of submitted materials and may include additional interviews by individual faculty members, as appropriate. The program follows a mentorship model; students are admitted to work with specific faculty members rather than to the program at large. During the application process, applicants are encouraged to contact faculty members with whom they are interested in working.

### General Program Requirements

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<th>Requirement</th>
<th>Hours</th>
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<td>Research activity (continuous)</td>
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<td>Course requirements (before oral comprehensives)</td>
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<td>Master's thesis and oral defense (year two or three)</td>
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<td>Written preliminary examination (year three or four)</td>
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<td>Foreign Language or Other Research Skills (FLORS) requirement</td>
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<td>(year three or four)</td>
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<td>Comprehensive oral examination (year four or five)</td>
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<td>Dissertation and oral defense (year five or six)</td>
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### Course Requirements:

**Statistics/Methods Core** (12 hours by the end of the third year).
- PSYC 790 Statistical Methods in Psychology I
- PSYC 791 Statistical Methods in Psychology II
- PSYC 982 Professional Issues in Scientific Conduct
- PSYC 983 Methodology

**Content Core** (9 hours by the end of the second year).

**PSYC 723 Advanced Cognitive Psychology**

Plus two subsequent classes during spring semester; these have previously included
- PSYC 725 Cognitive Neuroscience
- PSYC 737 Topics in Psycholinguistics
- PSYC 757 Theories of Perception
- PSYC 831 Advanced Human Learning and Memory

**Breadth/Depth** (12 hours before oral comprehensives).
- Breadth I and II
- Depth I and II

Breadth/depth courses may come from a number of sources, depending on student interests and adviser suggestions. Students are expected to use this requirement to gain additional specialization in two areas in addition to cognitive psychology. Examples include
- Quantitative courses in psychology and PRE
- Language courses in linguistics or speech-language-hearing
- Neuroscience courses in psychology, biology, or pharmacology
- Philosophy, or Computer Science

These courses also can be used to help meet FLOWS requirements with breadth goals set out by the adviser.

**Seminar** (continuous enrollment).

PSYC 902 Proseminar

### Quantitative Psychology

The program trains psychologists who can interface quantitative methods with psychology. Graduates are trained as quantitative specialists with substantial background in psychology. Current interests include psychometric methods, item response theory, structural equation modeling, multivariate statistics and mathematical modeling, as well as other topics in psychological methods and statistics.

Graduates find employment in academic programs, basic research units in academic or organizational settings, or applied research and consulting. Nearly all graduates proceed directly to full-time employment. About half the positions are academic. Quantitative psychologists with technical expertise have a special edge in the job market.

### Requirements

**Quantitative Psychology** (88 hours).

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Hours</th>
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<tbody>
<tr>
<td>Quantitative foundations</td>
<td>6</td>
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<tr>
<td>Methodology</td>
<td>3</td>
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<tr>
<td>Quantitative core</td>
<td>12</td>
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<tr>
<td>Quantitative breadth (minimum requirement)</td>
<td>9</td>
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<tr>
<td>Related field</td>
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<tr>
<td>Substantive breadth (minimum requirement)</td>
<td>6</td>
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<tr>
<td>Substantive psychology depth (two different areas)</td>
<td>6</td>
</tr>
<tr>
<td>Proseminar</td>
<td>10</td>
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<tr>
<td>M.A. thesis</td>
<td>9</td>
</tr>
<tr>
<td>Dissertation</td>
<td>12</td>
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<tr>
<td>Independent study</td>
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</table>

The substantive breadth requirement is met by courses in two substantive areas of psychology (e.g., cognitive psychology, social psychology, psychopathology, health psychology, or developmental psychology). The substantive depth requirement is met by two more courses in one of the breadth areas.

All Graduate School requirements must be met, including an M.A., foreign language or research skills, oral comprehensive examination, dissertation, and final defense. The FLORS requirement typically is met by demonstrating competence in a computational language that enables specialized studies in quantitative methods. The dissertation and thesis may be an empirical study of a quantitative issue, an original quantitative development, such as a model or estimation methods, or a cutting-edge application that interfaces psychological issues with quantitative methods. A written comprehensive examination or a comprehensive review paper is required.

### Clinical Psychology

The program educates students about the content issues that define a minimum knowledge base and the processes of learning and problem-solving. All students take basic course work and practice in both academic/research and clinical application. Students may take elective course work or practice to augment either aspect of training. About half of the graduates pursue academic/research-oriented careers, and the rest undertake careers emphasizing applied activities (e.g., psychotherapy in community mental health centers or hospitals). A detailed overview is available from the graduate admission secretary or online at www.ku.edu/~clinprog.

**Health and Rehabilitation Specialty.** Work centers on the psychosocial and biomedical aspects of physical health, illness, and disability. Students apply the knowledge and techniques to problems of prevention, assessment, treatment, and rehabilitation. A detailed overview is available from the graduate admission secretary or online at www.ku.edu/~clinprog.

### Requirements

Individual plans of study are designed to meet the standards established by state licensing boards and professional organizations. Individualization is achieved by selecting among alternate ways of meeting specific requirements and by selected electives or choosing the health and rehabilitation emphasis. The plan of study constitutes an agreement between the student and the entire clinical faculty. Program requirements are

**General Core Requirements for Clinical Psychology** (12-15 hours).

**Quantitative Analysis of Behavior**

- PSYC 790 Statistical Methods in Psychology I or PRE 811 Analysis of Variance
- PSYC 791 Statistical Methods in Psychology II or PRE 904 Regression Analysis

Completion of option a or option b:
- a. Computer knowledge, demonstrated by one of the following:
  - Completion of PSYC 795 Computing and Psychology or PRE 903 Computer Applications for Statistical Analyses
  - A minimum of 18 clock hours of workshops including use of one of the major electronic mail systems, use of the World
Clinical Child Psychology

For information on this degree, see Clinical Child Psychology in this chapter of the catalog.

Counseling Psychology

For information on this degree, see Psychology and Research in Education in the School of Education chapter of this catalog.

Developmental Psychology Concentration

For information on this concentration, consult the Department of Psychology, (785) 864-4131, www.psych.ku.edu.

Psychology Courses

PSYC 500 Intermediate Statistics in Psychological Research (3).
PSYC 502 Human Sexuality (3).
PSYC 506 Psychology and the Actor (3).
PSYC 510 Infant Behavior and Development (3).
PSYC 511 Laboratory Research in Infant Behavior (3).
PSYC 518 Human Memory (3).
PSYC 520 Memory and Eyewitness Testimony in Children (3).
PSYC 531 Language Development (3).
PSYC 535 Developmental Psychopathology (3).
PSYC 536 The Psychology of Language (3).
PSYC 545 Culture and Psychology (3).
PSYC 550 Psychology of Reading (3).
PSYC 555 Evolutionary Psychology (3).
PSYC 565 Applied Developmental Psychology (3).
PSYC 566 Psychology and the Law (3).
PSYC 570 Group Dynamics (3).
PSYC 571 Violence, Aggression, and Terrorism in the Modern World (3).
PSYC 572 Psychology and International Conflict (3).
PSYC 575 Psychopathology of HIV/AIDS (3).
PSYC 578 Social Attitudes (3).
PSYC 581 Psychology of Religion (3).
PSYC 590 Nonverbal Communication (3).
PSYC 592 Psychological Significance of Physical Illness and Disability (3).
PSYC 602 Basis and Nature of Individuality (3).
PSYC 604 Psychological Tests (3).
PSYC 605 Health Psychology (3).
PSYC 608 Sex Role Development (3).
PSYC 610 Advanced Personality (3).
PSYC 613 History and Systems in Psychology (3).
PSYC 614 Basic Processes of Visual Perception (3).
PSYC 616 Foundations of Learning (3).
PSYC 618 Experimental Psychology: Human Learning (6).
PSYC 620 Experimental Psychology: Sensation, Perception, and Cognition (6).
PSYC 622 Experimental Psychology: Social Behavior (6).
PSYC 624 Experimental Psychology: Clinical Psychology (6).
PSYC 626 Psychology of Adolescence (3).
PSYC 630 Clinical Psychology (3).
PSYC 632 Advanced Child Behavior and Development (3).
PSYC 642 The Psychology of Families (3).
PSYC 652 Behavior Therapy (3).
PSYC 660 Values and Caring (3).
PSYC 662 Industrial and Organizational Psychology (3).
PSYC 668 Fundamentals of Psychoanalytic Psychology (3).
PSYC 670 Theories of Personality (3).
PSYC 678 Drugs and Behavior (3).
PSYC 685 Human Factors Psychology (3).
PSYC 690 Seminar: _____ (1-5).
PSYC 691 The Psychology of Aging (3).
PSYC 704 Research Practicum in Clinical Child Psychology (3).

An interdepartmental program in clinical child psychology is available. See Clinical Child Psychology in this chapter of the catalog for information.

The University of Kansas enrolls more than 29,000 students.

KU’s program in clinical child psychology was tied for 19th in the nation in the 2006 edition of U.S. News’ “America’s Best Graduate Schools.”

Clinical students may complete their internships at any setting approved by the American Psychology Association.

Clinical Child Psychology

For information on this degree, see Clinical Child Psychology in this chapter of the catalog.

Counseling Psychology

For information on this degree, see Psychology and Research in Education in the School of Education chapter of this catalog.

Developmental Psychology Concentration

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PSYC 555 Evolutionary Psychology (3).
PSYC 565 Applied Developmental Psychology (3).
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PSYC 678 Drugs and Behavior (3).
PSYC 685 Human Factors Psychology (3).
PSYC 690 Seminar: _____ (1-5).
PSYC 691 The Psychology of Aging (3).
PSYC 704 Research Practicum in Clinical Child Psychology (3).

This course provides students in the Clinical Child Psychology Program with the opportunity to enhance and consolidate their research activities by fulfilling one of the elective cluster course requirements. This practicum involves a contract with a research adviser and the program.
the courtroom and judicial process. Research findings to the courtroom and judicial process.

- PSYC 706 Special Topics in Clinical Child Psychology: (3). A course offering detailed discussion of the literature and research methods of a special topic within clinical child and pediatric psychology. Topic and instructor may change by semester and will be announced in the Timetable. May be repeated. (Same as ABSC 706, formerly HDFL 706.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC

- PSYC 723 Advanced Cognitive Psychology: (3). Advanced cognitive psychology reviewing theories of pattern recognition, attention, working memory, language comprehension and problem solving. Emphasis will be placed upon the application of these theories to real-life situations. Prerequisite: PSYC 432 and six additional credit hours in psychology, permission of the instructor. LEC

- PSYC 725 Cognitive Neuroscience: (3). A survey of the critical issues within cognitive and behavioral neuroscience. The course will provide information about neuronal physiology, functional neuroanatomy, and psychobiological, cognitive and sensory research methods. Human neurobiology that subserves the primary cognitive functions will be discussed. LEC

- PSYC 735 Psycholinguistics: (3). A detailed examination of issues in the processing of language. The course will provide a survey of research in language in psycholinguistics, reflecting the influence of linguistic theory and experimental psychology. Spoken and written language comprehension and language production processing will be examined. LEC

- PSYC 737 Topics in Psycholinguistics: (3). An in-depth examination of selected topics in psycholinguistics. Topics may include spoken language processing, written language processing, neurolinguistics, prosody, and syntactic processing. May be repeated for different topics. (Same as LING 735.) Prerequisite: PSYC 435 and PSYC 436 or consent of instructor. LEC

- PSYC 750 Advanced Seminar in Gender Identity and Sexual Orientation: (3). Design and execution of research on the causes and consequences of variations in gender identity, sexual orientation or affectional preference, sex roles, and sex-linked behaviors. Prerequisite: Consent of instructor. LEC

- PSYC 757 Theories of Perception: (3). A consideration of the facts and theories of human perception. The emphasis will be on vision, although hearing, smell, pain, and other senses will also be discussed. Of particular concern is the question of perceptual modifiability and the response of the human observer to unusual sensory environments. Prerequisite: PSYC 104. LEC

- PSYC 768 Forensic Psychology: (3). Applications of psychological concepts and research to the courts. Topics covered include dispute resolution, jury selection, expert witnesses, determination of competency, and criminal profiling. LEC

- PSYC 774 Advanced Social Psychology I: (3). First semester of a two-semester course. Designed to provide a thorough background in social psychology and to motivate a continuing exploration of theoretical problems and issues in the field. Combines examination of historical development of theories and methods in social psychology with analysis of theoretical and methodological approaches to a variety of contemporary topics. LEC

- PSYC 775 Advanced Social Psychology II: (3). A continuation of PSYC 774. LEC

- PSYC 777 Social Psychology: Theory, Research, and Clinical Applications: (3). Basic theories in social psychology, as well as their applications to contemporary issues. Topics include theory and research in social psychology. LEC

- PSYC 779 Physiological Aspects of Health and Disease: (3). Provides an overview of the physiological manifestations of health and disease for the graduate student in health and psychology. Content areas include overview of general anatomy and physiology of each body system, description of how deviations from normal occur, and the clinical development of complex disorders. Key physiological questions lead to common disease states, conditions of ongoing research in health and disease. May be repeated for credit. (Same as COMS 784.) (Same as SPLH 784.) Prerequisite: Consent of instructor. LEC

- PSYC 800 Experimental Psychology: (3). An advanced survey of theory and research in a selected area of experimental psychology. Continual enrollment for four semesters is required of entering graduate students in experimental psychology. Open to other students with graduate standing in psychology or a closely related field. May be repeated with permission. LEC

- PSYC 802 Social-Psychological Aspects of Health, Disability, and Associated Life Stress: (3). Disabling myths; perception of causes and effects of disease and disability; attitudes and interpersonal relations; hoping, coping, and reality issues; purposes; professional-client relations: public media and social rehabilitation. A departmental core course for graduate students. LEC

- PSYC 805 History of Psychology: (3). Historical survey of basic concepts and theories in psychology with emphasis on their relationship to contemporary problems in theory. LEC

- PSYC 809 Professional Issues: Clinical Child Psychology: (3). Consideration of special problems confronting the child psychologist and the psychological and professional development of the child psychologist; and, in the development of a professional identity. Topics include critical issues including ethical, legal, cultural, empirical, and clinical aspects of research and practice. May be repeated. (Same as ABSC 809, formerly HDFL 809.) Prerequisite: Graduate standing in child clinical psychology. LEC

- PSYC 812 Behavioral and Personality Assessment of Children: (3). Lecture, laboratory, field work, and supervision appointment. Theory
PSYC 814 Advanced Child and Family Assessment (3). Lecture, laboratory, field work, and supervision appointment. Supervised experimental experience in counseling and psychological assessment approaches for children and families. Emphasis on interviewing, observation, psychometric scales, and consultation. Rationale, administration, analysis, and reporting of mental health functioning of children and families. Experience with clinical populations, and communication with referral sources. (Same as ABS 814, formerly HDFL 814.) Prerequisite: Graduate student in clinical psychology. LEC

PSYC 815 Developmental Research (5). Coverage of the philosophy and basic principles of group-design research, with a special emphasis on designs that are appropriate for developmental studies. Designs for both experimental and quasi-experimental research are covered, and appropriate statistical procedures are presented concomitantly with the designs. Individual-difference analyses and statistical control issues are also addressed. LEC

PSYC 818 Experimental Research Methods in Social Psychology (3). Systematic discussion of the techniques of research in social psychology, with practice in the utilization of selected methods. Prerequisite: One course in social psychology in addition to introductory social psychology. LEC

PSYC 819 Field and Evaluation Research Methods in Social Psychology (3). Field study and procedures of field methods in applied research in social psychology and related fields; relationships between field and laboratory studies; special emphasis on survey and evaluation research methods and study designs; client and respondent relationships; research pedagogy. LEC

PSYC 820 Advanced Child Development (3). A survey of the basic empirical research in the field of child development, covering intelligence, cognition, perception, attention, personality, social behavior, and socialization processes. Theories are integrated and their implications for social application are addressed. (Same as ABS 820, formerly HDFL 820.) Prerequisite: A course in child development or equivalent. LEC

PSYC 825 Social Development (3). A lecture and discussion course in social development. It includes such topics as theoretical approaches to the study of social development, as well as the literature on family processes, peer relations, aggression and prosocial behavior, child abuse and neglect, early childhood care, and the media. (Formerly PSYC 880.) (Same as ABS 825.) Prerequisite: A course in child psychology or development. LEC

PSYC 831 Advanced Human Learning and Memory (3). An in-depth analysis of current research and theory. Focus will be on experimental methodology in these areas. LEC

PSYC 832 Clinical Health Psychology I: Health Promotion and Disease Prevention (3). An overview of the field of health psychology as applied to health promotion and disease prevention. Content areas include history and current research regarding behavioral and psychosocial factors for health, as well as empirically supported assessment and therapeutic techniques for risk factor reduction and health promotion. Prerequisite: Graduate student in psychology or related field. Consent of instructor. LEC

PSYC 833 Clinical Health Psychology II: Acute and Chronic Illness (3). An overview of the field of health psychology as applied to acute and chronic illness in adult, adolescent, and child populations. Content areas include psychological aspects of acute and chronic illness, including relevant empirically supported assessment and intervention strategies, adherence to medical regimens, pain, and enhancement of the psychologist's role in medical settings. Prerequisite: Graduate student in psychology or health-related fields, or by permission of instructor. LEC

PSYC 834 Clinical Health Psychology III: Physical Aspects of Health and Disease (3). An overview of physical manifestations of health and disease. Content areas include overview of anatomy and physiology of each body system, description of how deviations form normal anatomical development and physiological function result in common disorders, methods for distinguishing psychological from organic etiologies, indications of side effects of medications for common disorders, and description of roles of key members of health care team members. Prerequisite: Graduate student in psychology or health-related fields, or by permission of instructor. LEC

PSYC 835 Psychological Clinic VI: Health Psychology Practicum (3). Supervised assessment and treatment of individuals and families within a medical setting, as well as multidisciplinary consultation. Inpatient and outpatient clinical health psychology rotations may include pediatrics, oncology, pain, and rehabilitation. Prerequisite: Graduate student in clinical health psychology specialty. LEC

PSYC 836 Psychological Clinic VII: Health Psychology Practicum (3). Continuation of PSYC 835. Prerequisite: Graduate student in clinical health psychology specialty. LEC

PSYC 837 Proseminar in Health Psychology (1). Discussion of current theoretical, empirical, and applied issues in health psychology involving students, faculty, and guest speakers. Prerequisite: Graduate student in clinical health psychology specialty. LEC

PSYC 838 Pain and Its Management (3). Focuses on biological, cognitive/affective, and social causes and effects of pain. Emphasis on basic research and treatment of pain, and personality functioning in children. (Same as ABS 812, formerly HDFL 812.) Prerequisite: Graduate standing in clinical child psychology. LEC

PSYC 841 Stress and Coping (3). Theories and research on conceptualization, assessment, and effects of stress. Focus on coping processes and other determinants of adjustment to stress. Discussion of professional and public policy implications. Prerequisite: Graduate student in psychology or health-related fields, or permission of instructor. LEC

PSYC 842 Specialized Health Psychology Practicum (1-3). Specialized advanced practicum in clinical health psychology, with an area of emphasis mutually defined by student and instructor. Prerequisite: Consent of instructor. FLD

PSYC 843 Behavioral Pharmacology (3). Addresses psychological and behavioral effects of drugs, including psychotropic medications. A central theme is that effects of drugs frequently cannot be characterized solely from a pharmacological perspective. Thus, emphasis will be placed on examining the interaction of pharmacological and behavioral variables. For example, how does drug re- sponse to drugs? The nature of this area assumes some knowledge of general psychology, research methods, biology, chemistry, neurophysiology, and the nervous system. Specific course structure will be modified to suit student interests. Prerequisite: Graduate student in psychology or health-related fields, or by permission of instructor. LEC

PSYC 845 Impression Formation and Interpersonal Behavior (3). Intensive investigations of the processes involved in impression formation and the effects of characteristics of others on interpersonal communica- tion. (Same as COMS 853.) Prerequisite: PSYC 670 or COMS 655. LEC

PSYC 846 Practicum in Clinical Child Psychology I (1-3). Lecture, laboratory, field work, and supervision appointment. Psychological evaluation and treatment of children and their families. Prerequisite: Graduate student in advanced practicum in clinical health psychology, with an area of expertise defined by student and instructor. LEC

PSYC 847 Practicum in Clinical Child Psychology II (1-3). Lecture, laboratory, field work, and supervision appointment. Psychological evaluation and treatment of children and their families. Prerequisite: Graduate student in advanced practicum in clinical child psychology. LEC

PSYC 848 Field Experience in Psychological Interventions in Clinical Child Psychology (Same as ABS 846, formerly HDFL 846.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC

PSYC 849 Field Experience in Psychological Interventions in Clinical Child Psychology (Same as ABS 846, formerly HDFL 846.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. LEC

PSYC 850 Psychological Clinic I (3). Assessment of intelligence. Students learn to administer, score, interpret, and report the results of intelligence tests for adults, adolescents, and children. The course also addresses how intelligence is conceptualized and the scientific, social, and political implications of various conceptualizations. Prerequisite: Graduate student in clinical psychology or consent of instructor. LEC

PSYC 853 Advanced Acoustical and Psychological Aspects of Musical Behavior (3). Study and experimental investigation of acoustic, psychoacoustic, and psychological aspects of music. Attention will be given to physical parameters; perception of pitch, loudness, and timbre; magnitude estimation; theories of consonance; experimental aesthetics; and measurement and prediction of musical ability. Each student will be expected to complete an experiment or quasi-experiment related to human musical behavior. (Same as MGMT 953.) Prerequisite: PSYC 453 or equivalent; or consent of instructor. LEC

PSYC 855 Psychological Intervention in Clinical Child Psychology I (3). Lecture, laboratory, and field work, and supervision appointment. The diagnosis of competencies and validation of personality evaluation tests and techniques. The administration, scoring, interpretation, and reporting of individual and group tests of personality functioning. Prerequisite: Graduate student in clinical psychology or consent of instructor. LEC

PSYC 862 Behavioral Approaches to Individual Treatment (3). Review of the research and techniques of individual behavior therapies
such as systematic desensitization, covert sensitization, implosive therapy and modeling therapy. Prerequisite: Consent of instructor. LEC

PSYC 864 Clinical Neuropsychology (3). Brain-behavior relationships in humans. Examination of the behavioral implications of the interpretation of neuropsychological data. Lecture and laboratory. LEC

PSYC 865 Psychological Clinic III (3). Lecture, laboratory and field work, and supervision appointment. Introduction to clinical interviewing; working with clients and case materials. Emphasis on interview and gathering data critical to initial assessment of clients. This includes observation of clients in their natural surroundings rather than only face-to-face interview settings. Prerequisite: Graduate student in clinical psychology or consent of instructor. LEC

PSYC 866 Seminar in Interviewing (3). An advanced supervised laboratory experience of the interviewing process. Emphasis is heavily upon the “helping” interview in which the relationship function is stressed. LEC

PSYC 870 Cognitive Development (3). A lecture/discussion course in cognitive development. The course will contrast the theory and research of Jean Piaget and his followers, with an information processing or cognitive psychology approach to issues. Topics include development of perception, attention and information getting; memory and metamemory; problem solving; discrimination learning and concept formation; and individual differences in cognitive styles and strategies. Prerequisite: A course in child psychology or development, a course in cognitive psychology, or consent of instructor. LEC

PSYC 872 Attention, Perception, and Learning in Infancy (3). Coverage of the basic literatures on perceptual-cognitive behavior during the first three years of life, as assessed by measures of attention, perception, learning, and memory. Course material is approached from an information-processing framework. LEC

PSYC 875 Psychological Clinic IV (3). Lecture, practicum, and tutorial on the selection, administration, scoring, and interpretation of data from intellectual and personality tests. An emphasis is placed on the integration of test findings with interview and other clinical information. Prerequisite: Graduate student in clinical psychology or consent of instructor. LEC

PSYC 882 Theory and Method for Research of Human Environments (3). Conceptual and methodological problems for environmental psychologist; theory and research utilization of behavior settings and other ecobehavioral units. Prerequisite: Nine hours of social science including at least one course dealing with research methods and consent of instructor. LEC

PSYC 885 Altruism and Helping Behavior (3). Review of contemporary research on prosocial behavior. Topics to be covered include theories of the existence of altruism, why people do and do not help others, and the effect of institutional roles on the behavior of service professionals such as therapists, counselors, and social workers. LEC

PSYC 888 Diversity Issues in Clinical Psychology (3). Review of individual differences pertaining to culture, ethnicity, race, gender, sexual orientation, age, etc., as these have an impact upon theory, research, assessment, and treatment issues in clinical psychology. (Same as ABSC 888.) Prerequisite: Graduate status in clinical psychology, or instructor permission. LEC

PSYC 891 Intelligence and Cognition (3). This course concerns the nature of intelligence. Theory and research on cognitive abilities, reasoning, and complex problem solving are surveyed. Special emphasis is given to contemporary cognitive ability research that applies both experimental and correlation methods to understand the nature of intelligence. LEC

PSYC 892 Measurement Methods in Psychological Research (3). This course concerns the design and scaling of measures to reflect psychological constructs. Model-based measurement methods (e.g., item response theory) that are appropriate to designing both rating scales and cognitive outcome data are surveyed. Students apply the methods to actual data with contemporary computer programs. LEC

PSYC 897 Master's Thesis in Clinical Child Psychology (1-10). Supervised research experience completing thesis leading to master’s degree. (Same as ABSC 897.) I SH

PSYC 898 Thesis Seminar in Clinical Psychology (1). A weekly meeting of students and faculty members in the graduate program in clinical psychology. The course will discuss their thesis and dissertation proposals and results; and faculty, students and guest speakers will lead discussions of significant current issues in clinical psychology. Prerequisite: Graduate standing in clinical psychology. LEC

PSYC 899 Clinical Psychopharmacology (3). Review of current nosology of adult psychopathological syndromes emphasizing development of diagnostic skills. Critical survey of recent research and theory related to the etiology, course, prognosis, and treatment of adult psychopathological conditions. Prerequisite: Graduate student in clinical psychology, clinical child psychology, or counseling psychology. LEC

PSYC 900 Biological Foundations of Psychopathology (3). A review of fundamental topics in the neurosciences and their relevance to selected psychopathological disorders. The fundamental topics are taken from genetics, neuroanatomy, neuropsychology, and neurochemistry. The disorders include schizophrenia, depression, anxiety disorders, Alzheimer’s disease, Parkinson’s disease, and Huntington’s disease. Prerequisite: Graduate student in clinical psychology, clinical child psychology, or counseling psychology. LEC

PSYC 905 Proseminar in Psychological Assessment (1). Seminar in assessment of psychological problems in childhood and adolescence. (Same as ABSC 905.) Prerequisite: Graduate student in clinical psychology, school psychology, and counseling psychology. Prerequisite: Fifteen hours of graduate credit in psychology or consent of instructor. LEC

PSYC 907 Seminar in Early Development (3). A seminar devoted to factors affecting early human development with the emphasis on the theoretical formulations and the relevant animal literature. LEC

PSYC 923 History and Systems of Developmental Psychology: Developmental Theory (3). An intensive study of traditional and recent developmental theories with an emphasis upon the role of heredity, early stimulation, reinforcement, and modification as each affects the course of the development of children. LEC

PSYC 925 Demonstrative Seminar in Rehabilitation Psychology (1). A seminar involving graduate students and faculty members in discussion of research reports and significant issues in the field of rehabilitation psychology. LEC

PSYC 926 Rehabilitation Problems in Field Settings: Practicum (3). Provides students with opportunities to aid in solving real-life problems confronted by clients concerning rehabilitation of persons with physical and mental disabilities. Theory, substantive knowledge, value, and reality considerations are brought to bear upon the solutions considered. FLD

PSYC 927 Seminar in Psychobiology (3). A detailed study of a specific research area dealing with the biological foundations of behavior. Each week articles will be assigned from the journal literature. LEC

PSYC 930 Research Seminar on Intimate Relationships (3). Consideration of current psychological theory and research on adult intimate relationships: friendship, dating, cohabitation, marriage, and divorce. Prerequisite: Graduate level courses in research design and statistics. LEC

PSYC 931 Advanced Topics in Behaviorism (1-4). An advanced seminar on the philosophy, concepts, and principles of behaviorism. The seminar will provide in-depth reading and discussion on both theoretical and empirical issues. Emphasis will be placed on reading primary sources. May be repeated for up to ten hours. Prerequisite: Consent of instructor. RSH

PSYC 933 Seminar: The Measurement of Attitudes (3). An examination of the concept of attitude and methods and scales used to assess the various aspects of attitudes. Prerequisite: PSYC 578 or consent of instructor. LEC

PSYC 935 Seminar in Group Dynamics (3). Intensive examination of selected problems in the functioning of small groups. May be taken for two semesters. LEC

PSYC 936 Group Therapeutic Techniques (3). LEC

PSYC 943 Advanced Practicum in Clinical Child Psychology III (1-3). Lecture, laboratory, field work, and supervision appointment. Advanced psychological intervention techniques for children, youth, and families; supervised progressive experience in application of behavioral and psycho-therapeutic methods to behavioral and emotional problems. (Same as ABSC 943, formerly HDFL 943.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

PSYC 944 Advanced Practicum in Clinical Child Psychology IV (1-3). A continuation of ABSC/HDFL 943 and PSYC 945. (Same as ABSC 944, formerly HDFL 944.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

PSYC 945 Advanced Practicum in Clinical Psychological (1). A weekly meeting of students and faculty members in the graduate program in clinical psychology in which students will discuss their thesis and dissertation proposals and results; and faculty, students and guest speakers will lead discussions of significant current issues in clinical psychology. Prerequisite: Graduate standing in clinical psychology. LEC

PSYC 946 Clinical Psychotherapy (3). Basic considerations in the therapeutic relationship. Technical aspects of various psychotherapeutic approaches, comparative psychotherapy, laboratory experiences in interviewing. Prerequisite: Nine hours in graduate psychology. LEC

PSYC 947 Advanced Practicum in Clinical Child Psychology V (1-5). A continuation of ABSC/HDFL 944 and PSYC 944. May be taken in more than one semester. (Same as ABSC 947.) Prerequisite: Graduate standing in clinical child psychology and instructor permission. FLD

PSYC 949 Empirically Supported Treatment (3). This course provides an overview of theoretical and applied issues germane to the contemporary empirically supported treatments movement in clinical psychology. The course will include an in-depth examination of several psychotherapy protocols (e.g., cognitive therapy for depression) which have been identified as “empirically supported,” with considerable attention accorded to implementation of the characteristic techniques of such interventions. LEC

PSYC 950 Advanced Psychopathology (3). Review of current nosology of adult psychopathological syndromes emphasizing development of diagnostic skills. Critical survey of recent research and theory related to the etiology, course, prognosis, and treatment of adult psychopathological conditions. Prerequisite: Graduate student in clinical psychology, clinical child psychology, or counseling psychology. LEC

PSYC 951 Seminar on Schizophrenia (3). A survey of selected topics in the area of personality. Includes review of theoretical and research issues in the area of personality. Prerequisite: Consent of instructor. LEC

PSYC 953 Clinical Child Psychology Internship (1). Three consecutive enrollments, covering a minimum of eleven months of experience in an
PSYC 971 Psychological Clinic VII (3). Lecture, laboratory and field work, and supervision appointment. Psychological evaluation and treatment of individuals, couples, families, and groups; supervised, progressive experience in psychological treatment and in the clinical evaluation of intellectual, personality, and social functioning. Grading on Satisfactory/Fail basis. Prerequisite: PSYC 850 and PSYC 855. FLD

PSYC 975 Psychological Clinic VII (3). A continuation of PSYC 971. Grading on Satisfactory/Fail basis. FLD

PSYC 976 Psychotherapy with Families (3). Clinical approaches to marriage and family therapy. Intensive consideration of the theoretical positions, research findings, clinical methods, and technical problems of practice. Clinical approaches to child and group treatment. Prerequisite: PSYC 971. FLD

PSYC 980 Research Methods in Clinical Psychology (3). Systematic consideration of research methods in clinical psychology including identification of a research problem, selection of the research design and assessment strategies, and methods of evaluating the results. The principles, pitfalls, artifacts, biases, and sources of controversy in research in this area are also covered. Prerequisite: Graduate standing in clinical or counseling psychology. LEC

PSYC 991 Structural Equation Analysis (3). A survey of methods for testing hypotheses on multivariate correlational data in the behavioral and social sciences. Topics include exploratory and confirmatory factor analysis, path analysis, and linear structural equations as alternative covariance models. Applications to data are stressed, rather than mathematical derivations; exercises on relevant computer programs are included. Prerequisite: PSYC 790 and PSYC 791 or consent of instructor. LEC

PSYC 992 Analysis of Categorical Data (3). Multivariate analyses of count data. Error models, statistical inference, loglinear models, logit models, logistic regression. Homogeneity, symmetry, and selected other topics. Prerequisite: PSYC 790 and PSYC 791 or consent of instructor. LEC

PSYC 993 Seminar: _____ (1-5). Investigation of a special research problem or directed reading in an area not covered in regular courses. Prerequisite: Consent of instructor. LEC

PSYC 994 Special Problems in Psychology (1-5). Special problems in the area of psychology. Topics will include topics of special importance in behavioral science. Discussions on issues in the conduct of a scientific career, with emphasis on practical approaches to research and clinical practice. Prerequisite: Permission of the department. Only three hours may count toward the Ph.D. degree. LEC

PSYC 995 Professional and Ethical Problems in Clinical Psychology (3). Interprofessional relationships, case security, legal aspects, ethical codes of practice, clinic administration, and problems in the clinical practice of psychology. Issues involving ethics in research will also be explored. Prerequisite: Consent of instructor. LEC

PSYC 996 Professional and Ethical Problems in Clinical Psychology (3). Interprofessional relationships, case security, legal aspects, ethical codes of practice, clinic administration, and problems in the clinical practice of psychology. Issues involving ethics in research will also be explored. Prerequisite: Consent of instructor. LEC

PSYC 997 Professional and Ethical Problems in Clinical Psychology (3). Interprofessional relationships, case security, legal aspects, ethical codes of practice, clinic administration, and problems in the clinical practice of psychology. Issues involving ethics in research will also be explored. Prerequisite: Consent of instructor. LEC

PSYC 998 Doctoral Dissertation in Clinical Child Psychology (1-10). Research experience making original contribution to literature in clinical child psychology. (Same as ABSC 988, formerly HDFS 980). THE

PSYC 999 Dissertation (1-12). THE

Public Administration

Chair: John Nalbandian, padet@ku.edu
Blake Hall, 1541 Lilac Lane, Room 318
Lawrence, KS 66044-3177, www.kupublicadministration.org (785) 864-3527, fax: (785) 864-5208
M.P.A. Adviser: Ray Hummert, rhummert@ku.edu, 326 Blake Hall, (785) 864-9097
Ph.D. Adviser: Steven Maynard-Moody, smm@ku.edu, 604 Blake Hall, (785) 864-9099
Professors: Frederickson, Maynard-Moody, Nalbandian, Romzek
Associate Professors: Davis, Epp, Goodyear, Longoria
Assistant Professors: Dehart Davis, Marlowe
The department offers an M.P.A. degree and a Ph.D. degree. The M.P.A. degree is designed for students preparing for public service careers or for mid-career students wishing to pursue graduate studies for career advancement. The Ph.D. degree is designed primarily for students anticipating careers in research and teaching.

Master of Public Administration Degree

The Department of Public Administration houses the Edwin O. Stene Graduate Program in Public Administration and offers a Master of Public Administration degree. The degree may be obtained through course work in Lawrence, the KU Public Management Center in Topeka, and the KU Edwards Campus in Overland Park for the Kansas City area.
Students with public administrative experience may pursue the degree under the career option through part-time studies at the three campuses or through full-time studies on the Lawrence campus. Students without public administrative experience must complete the degree under the internship option through full-time studies on the Lawrence campus. Internship-option students most commonly specialize in local or state government.

After consultation with a faculty member, a student may develop an individualized specialization, supplementing course work in the Department of Public Administration with one or two courses offered by other departments in the university.

**Admission.** The academic prerequisites for regular admission to the M.P.A. program are:

1. Completion of a bachelor’s degree preferably with a background in the social sciences, including basic college algebra and statistics courses.
2. A grade-point average of B (3.0 on a 4.0 scale) for all previous university or college work (in certain circumstances, when the grade-point average is slightly below 3.0, other factors, such as strong Graduate Record Examination scores or exceptional letters of recommendation, may be considered). Admission is competitive and limited.

A completed application includes a Graduate School application form; two official transcripts of all undergraduate and graduate work; GRE scores on verbal, quantitative, and analytic sections (may be waived under some conditions); a three- to five-page essay stating the applicant’s goals and objectives; and a non-refundable application fee (see Admissions in the General Information chapter of this catalog). Applicants to the internship program must have all application materials in to the department by January 15 to be considered for Graduate School fellowships; otherwise, the deadline is February 1. Career-option applicants are considered for admission each semester. Application deadlines are June 15 for fall semester, November 15 for spring semester, and April 15 for summer session. Submit your application to the Graduate School online at www.winter.graduate.ku.edu. Send transcripts of all completed college and university course work to

**The University of Kansas**

Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

**The University of Kansas**

Department of Public Administration
Attn: M.P.A. Admissions
Blake Hall, 1541 Lilac Lane, Room 318
Lawrence, KS 66044-3177

**Degree Requirements.** The master’s degree is awarded after successful completion of 37 credit hours of course work. This includes 30 hours of formal course work consisting of eight required courses and two elective courses. Students attend a series of workshops to earn one additional unit of credit.

With departmental assistance, internship-option students locate a nine-month, paid internship in a governmental agency. During the internship to earn the remaining 6 hours of credit, students attend three intensive professional development seminars on campus in the fall, winter, and spring. Career-option students and international students receive 6 hours of credit either for writing a field project report or by taking two elective courses.

All students must pass a written final examination to complete the requirements for the M.P.A. degree. The time limit for earning the degree is seven years. No extensions are allowed.

**M.P.A./J.D. Combined Program.** The joint degree program is designed for the student who intends to combine career preparations in law and public administration. Examples of career objectives for this degree are the practice of law in communities (for example, a city attorney, who may be called upon to perform legal services for a municipality) and for city managers (who may need to deal with legal questions and interact with legal professionals). The program combines into four years the normal three-year J.D. program offered by the School of Law and the two-year M.P.A. program offered by the Department of Public Administration. Students must complete 115 total credit hours: 78 credit hours in the School of Law (42 required and 36 elective), 25 hours in the Department of Public Administration, and 12 hours of electives of which only 6 hours may be law courses.

Of the 25 required hours in the Department of Public Administration, 6 hours of credit are earned during the internship in the fourth year of the program. The internship may not be taken concurrently with course work. At the conclusion of the internship year, each candidate must successfully pass a final written examination administered by the Department of Public Administration. The J.D. degree is awarded at the completion of the total required credit hours other than those associated with the internship. The M.P.A. degree is awarded upon the successful completion of the internship and final examination. All course work counted toward any master’s degree requires a B average for the award of the degree. Specifically, students should understand that if they elect 6 or fewer hours of law requirements, the grades received in those law courses are incorporated into the M.P.A. grade-point average, which as the Graduate School states, must be 3.0 for the award of the M.P.A.

For admission a student must meet requirements of both programs. Dual admission involves submitting separate sets of application materials as required by the respective programs. The M.P.A./J.D. program is open to those who have earned baccalaureate degrees and whose undergraduate academic records indicate that they have the capacity to complete these programs.

Since the total course work, excluding the internship, comes to 109 hours, students pursuing the joint degree program should plan to enroll in course work for two, and in some instances three, summers.

**M.P.A./M.U.P. Combined Program.** This program is designed for the student with career goals that center on assuming administrative and management responsibilities in urban planning and urban affairs. It combines into three years (excluding the one-year internship required for the M.P.A. program) the normal course work required for the two-year M.U.P. degree and the two-year M.P.A. degree. The program offers students experience not only in public policy management, but also in management with particular expertise in urban problem resolution.

For admission, a student must meet requirements of both programs. Dual admission involves submitting separate sets of application materials as required by
Public Administration

The Edwin O. Stene Graduate Program in Public Administration offers two nationally ranked programs, according to the 2006 edition of U.S. News’ “America’s Best Graduate Schools.” The city management and urban policy program was No. 1 in the United States. The specialty in public management ranked fourth in the nation.

the respective programs. The M.P.A./M.U.P. program is open to those who have earned baccalaureate degrees and whose undergraduate academic records indicate that they have the capacity to complete these graduate programs.

Contact the Department of Public Administration or the Graduate Program in Urban Planning for information about degree requirements.

See also Joint Degree Programs in the School of Architecture and Urban Design chapter of this catalog.

Doctor of Philosophy Degree

Admission. Admission is based on the applicant’s undergraduate and/or graduate academic record, standardized test scores, and references from instructors. All applicants must have completed a bachelor’s degree and an M.P.A. or equivalent degree. Students without an M.P.A. or equivalent degree must complete KU core M.P.A. requirements as part of their doctoral studies.

A completed application must include (1) application, (2) Graduate Record Examination results—verbal, quantitative, and analytical, (3) two-page statement of goals and research interests including evidence of research aptitude/interest, (4) three letters of recommendation preferably from faculty members who can comment on the applicant’s potential for doctoral study, (5) nonrefundable application fee (see Admissions in the General Information chapter of this catalog), and (6) two official transcripts from each college or university attended. In addition, international students must submit Test of English as a Foreign Language scores from an examination administered no more than two years before the date of application. Immigration requirements and a financial statement are available from the Office of International Student and Scholar Services, www.ku.edu/~issfacts. All materials must be received before the application for admission can be considered.

To be considered for full admission and financial aid, the application file must be completed by February 1. Applicants who do not meet this deadline are unlikely to be considered for financial aid, even though applications may be considered throughout the year.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Public Administration
Attn: Doctoral Admissions
Blake Hall, 1541 Lilac Lane, Room 318
Lawrence, KS 66044-3177

Degree Requirements and Fields of Study. The Ph.D. program requires a minimum of 66 credit hours of course work, including up to 30 hours earned in the process of completing the M.P.A. degree or its equivalent, plus a minimum of 9 hours for the dissertation, for a total of 75 credit hours. (An applicant with a KU M.P.A. may apply 30 hours toward the 75-hour course work requirement.)

All students who enter the Ph.D. program must already have completed the core curriculum (eight courses) for the KU M.P.A. degree or the equivalent at another university, or they must take the appropriate courses after entering the program.

The requirements for the Ph.D. are based on formal course work and independent study in several fields:

- Foundations of Public Administration
- Specialization Field within Public Administration
- Cognate Field
- Methods Sequence

Foundations of Public Administration. Four of the five courses listed below are required of all doctoral students.

- PUAD 930, PUAD 931, and PUAD 932
- And either
- PUAD 943 or PUAD 949

Substitutions require the approval of the departmental coordinator of doctoral studies.

Public Administration Specialization. In consultation with the coordinator of doctoral studies, each doctoral student must develop a public administration specialization of at least three courses. Within the discipline, commonly considered subjects for specialization include budgeting, public finance, human resources management, public policy analysis and evaluation, public values and ethics, organizations and organization theory, public law and administration, and urban policy/politics and community building. Each has a basic course that is regularly taught in the present graduate curriculum at the 800 level, and it is presumed that at least an additional course would come from an independent study. A third course could come from within the department or could be taken outside. Potential cooperating units include the Departments of Political Science, Communication Studies, and Economics, and the Schools of Education and Business. Additional subfield specializations are available in consultation with faculty.

Cognate Fields. The degree requires a cognate field in addition to the public administration specialization. The cognate field is a subfield in economics, political science, education administration, etc., or a policy specialization (environmental policy, transportation policy, etc.) The cognate field’s sequence of three courses requires the approval of the departmental coordinator of doctoral studies and does not require a comprehensive examination.

Methods. The doctorate emphasizes the development of research skills. It requires PUAD 934 Research Methods in Public Administration, with the prerequisite PUAD 836 or its equivalent, and PUAD 935 Advanced Quantitative Methods for Public Administration. In addition, doctoral students are encouraged to take PUAD 937 Qualitative Methods in Public Administration. Substitutions require the approval of the departmental coordinator of doctoral studies. The methods requirement satisfies Option 1 of the Graduate School Foreign Language or Other Research Skills Requirement.

To become a Ph.D. candidate, the student must satisfactorily complete a comprehensive oral examination. No student may attempt the comprehensive oral until he or she has satisfied requirements for the cognate field and passed the preliminary written examination in both the foundations and specialization fields. The doctoral coordinator certifies that the student has met these requirements.

After passing the comprehensive oral examination, the doctoral candidate must write a dissertation approved by a departmental dissertation committee and pass a final oral defense of the dissertation to qualify for the
degree. If the aspirant receives a grade of unsatisfactory, the examination may be repeated, but under no circumstances may the student take it more than twice.

Public Administration Courses

Courses at the 800 level are primarily designed for M.P.A. students, but Ph.D. students may enroll with consent of the doctoral coordinator. Core M.P.A. courses are marked with an asterisk (*).

PUAD 606 Criminal Justice (3).
PUAD 609 Punishment (3).
PUAD 610 Diversity in Public Administration (3).
PUAD 613 The Nonprofit Sector: Formation, Leadership, and Governance (3).
PUAD 623 Concepts of Civil Society (3).
PUAD 640 Public Service Leadership Practicum (3).
PUAD 641 Public Service Leadership (3).
PUAD 693 Directed Readings (1-3).
PUAD 694 Topics in Public Administration: (3).
PUAD 695 Public Service Leadership Final Research Report (3).
*PUAD 824 Public Policy and Administration (3). An exploration of the ways in which public policy is made in the United States, focusing on the role of the administrator at each stage of the policy process: formulation, implementation, and evaluation. Various theories of policy-making with applied to specific areas of public policy will be examined. LEC
PUAD 825 Public Policy and Urban Administration (3). An exploration of policy development, implementation, and evaluation in the local government context. Various theories of the policy process and their application to municipal government are examined. (Same as POLS 825) LEC
PUAD 826 Public Policy and Administration of State Government (3). An examination of political and administrative aspects of state government focusing on legislative and executive branches of government. LEC
PUAD 827 Health Care Policy and Administration (3). A seminar designed to explore the development of public health policy in the United States. Particular attention will be given to (1) the development of public institutions and policy goals; (2) current policy problems such as expenditure-control, prospective reimbursement, utilization review, access, and public and private investment planning; and (3) administrative problems in the current health care system. (Same as HP&M 837) LEC
PUAD 830 Administrative Ethics (3). A survey of ethical issues faced by public administrators. Special attention will be given to ethical problems arising within hierarchical organizations and to the ethical implications of particular public policies. LEC
PUAD 831 Public Administration Practicum (1). Exposes students to day-to-day operational facets of public management through workshops, seminars, exercises. LEC
PUAD 832 Organizational Theory (3). An introductory theory course designed to develop an understanding about organizations, their environments, and the political subsystems in which they exist. LEC
PUAD 833 Administrative Behavior (3). An examination of individual and group behaviors, focusing on motivation, leadership, conflict and conflict resolution, group dynamics and communication. LEC
*PUAD 834 Human Resource Management (3). Explores the ways in which public sector organizations procure, allocate, and develop labor and how the employee-employer relationship is established and maintained. Also emphasizes the relationship between civil service personnel systems and larger political systems. LEC
*PUAD 835 Public Finance (3). This course examines the management of public investments and theories of taxation and non-tax revenues. Basic microeconomic theory is introduced. LEC
*PUAD 836 Introduction to Quantitative Methods (3). Introduces quantitative approaches to examine public management and public policy decisions. Concepts of research design, probability, and inferential statistics are covered. LEC
*PUAD 837 Budget and Policy Analysis (3). Discusses the methods and political context of policy analysis and the role of budgets in policy making and implementation. Examines public budgeting processes and budgetary decision making. LEC
PUAD 838 Urban Service Delivery (3). Focuses on organizational arrangements for the provision of basic urban services and the character of service delivery politics. Methods for evaluating the efficiency and re- sponsiveness of alternative organizational arrangements are treated. LEC
PUAD 839 Topics in Public Administration: (3). Study of selected topics in public administration. LEC
PUAD 840 Theory of Public Administration (3). Survey of the development of ideas about public administration among public officials and research investigators. Emphasis on basic concepts, research reports, and theoretical treatises on the nature of public administration. LEC

*PUAD 841 The Role, Context, and Ethics of Public Administration in American Society (3). Provides students with an overview of the social context of public administration with an emphasis on political issues, political history, and ethics. LEC
*PUAD 842 Law and Public Management (3). Course investigates major concepts that make up the legal environment of public administration. The accepted uses and procedures of the field, relationships among courts, agencies, the legislature, and basic legal research are examined. LEC
PUAD 843 Constitutional Foundations of Public Administration (3). This course provides a grounding in the constitutional premises of public administration including the role of the executive, legislative, and judicial powers, and federalism, and those issues associated with the development of economic institutions and processes such as taxation, employment regulation, and commerce controls. LEC
PUAD 844 Advanced Seminar in State and Local Budgeting (3). This course studies the theories behind selected topics in public budgeting and compares the theories with the actual practice of budgeting in the State of Kansas and its communities. LEC
*PUAD 845 Public Management and Organizational Analysis (3). Explores knowledge of organization theory and behavior to understand and explore organizational dynamics in the public sector. Topics include change, innovation, and organizational culture. LEC
PUAD 846 Kansas and Its Government (3). This course is designed to offer students the opportunity to obtain a comprehensive overview of the culture, history, economy, and geography of Kansas along with the review of state and local government infrastructure. The review of governments will include the financing of governments in Kansas. LEC
PUAD 847 Legislative Process (3). This course is designed to acquaint students with the workings of the policy process at the level of state government. Its focus will give students an understanding of the political process to enable them to function more effectively in state policy development and implementation. Prerequisite: PUAD 824, PUAD 825, PUAD 826 or PUAD 827. LEC
PUAD 848 Advanced Management Practices in State Government (3). This course offers the student an opportunity to enhance skills developed in PUAD 826 in an experiential learning environment that simulates actual management practice. Complex cases will be ranked and resolved on a work schedule developed by each work group. Groups will work simultaneously on two or more cases at all times. Prerequisite: PUAD 826, LEC
PUAD 849 Law, Courts, and Public Policy (3). This course provides an overview of the role of law, litigation, and courts in the public policy process, with an emphasis on bureaucratic institutions. The course covers the main theories and empirical research on the policy effects of litigation and intervention, with a particular focus on civil rights in the areas of employment, policing, welfare, prisons, and environmental policy. (Same as POLS 849) Prerequisite: Graduate standing or consent of instructor. LEC
PUAD 850 Intergovernmental Relations (3). This course focuses on the fiscal and administrative relationships among the three levels of government - federal, state, and local - in the United States. A number of topics will be examined, including a history of intergovernmental relations, the political, constitutional, and legal foundations of the intergovernmental system, and intergovernmental fiscal policy. The impact of the intergovernmental system will be assessed from the perspective of specific areas and intergovernmental programs. LEC
PUAD 851 Infrastructure Management (3). A survey of land-use, infrastructure, and technology issues in municipalities. LEC
PUAD 852 Comparative Public Administration (3). This course explores current issues affecting the administration of governments around the world. Particular attention is paid to the intergovernmental arrangements in selected countries, including administrative and fiscal structures. LEC
PUAD 893 Directed Readings (1-3). Designed to meet the needs of advanced students whose study in public administration cannot be met with current. LEC
PUAD 894 Professional Development Seminar I (3). Open only to pre-career students with internships, this intensive seminar is designed around issues intern confront in their working relationships. Emphasis is placed on the transition of the student from an academic environment to a professional work relationship. Class sessions deal with issues like employee socialization, power and trust, and administrative change. FLD
PUAD 895 Professional Development Seminar II (3). Continuation of PUAD 894. LEC
PUAD 896 Field Project Report (1-6). A major independent research project in lieu of a thesis for the MPA degree. Prerequisite: Completion of all other course requirements for the degree. THE
PUAD 930 Research Seminar in Public Administration and Democratic Theory (3). This course focuses on the democratic context of public management. Topics could include: theories of state; the place of the constitutions, law and regulation; politics and administration; citizenship and representative bureaucracy; administrative discretion and public responsibility; theories of equity, justice and efficiency; theories of institutions; democracy as applied to bureaucracy; and ethics for administrators. SEM
PUAD 931 Research Seminar in Public Administration and Management (3). The course focuses on public management within a democratic context. Topics could include: theories of bureaucracy; distinctions between public and private organizations and administration; administrative or organizational behavior including middle range theories like role theory, group theory, communication theory; leadership, management and supervision; organizational change and innovation; and theories of decision-making including rationality, public choice and “garbage cars” (models of decision-making). SEM

PUAD 932 Seminar in the Intellectual History of Public Administration (3). This course will analyze the intellectual currents that undergird the theories and concepts in public administration. There are three primary perspectives cutting the topics. They are historical, cultural and analytical. SEM

PUAD 934 Research Methods in Public Administration (3). The course examines issues of research and epistemology with an emphasis on connecting theory and research and doing research in field settings. RSH

PUAD 935 Advanced Quantitative Methods for Public Administration (3). This seminar will assist students to develop a thorough competence in both theory and application of multivariate statistical models of the typologies that are commonly used to study questions of organization and policy in the public sector. These will include inference for the general linear regression model under a wide variety of specifications, as well as a consideration of path models and systems of simultaneous equations. The principal goal of this course is to strengthen the ability of doctoral students in public administration to work methodologically as independent scholars using relatively advanced designs and techniques in their work. SEM

PUAD 937 Qualitative Methods in Public Administration (3). This course examines the concepts and practices of qualitative research. The focus will be on field research and the collection of “textual data” through observation, interviewing, and documents. The course will also examine the interpretation and analysis of qualitative data and how to present qualitative findings. RSH

PUAD 939 Topics in Public Administration: (1-3). A study of selective topics in public administration. Course may be taken more than once. LEC

PUAD 943 Constitutional Foundations of Public Administration (3). This course provides grounding in the constitutional premises of public administration including executive, legislative, and judicial powers, and federalism, and those issues associated with the development of economic institutions and processes such as taxation, employment regulation, and commerce controls. LEC

PUAD 949 Law, Courts, and Public Policy (3). This course provides an in-depth analysis of the role of law, litigation, and courts in the public policy process, with an emphasis on bureaucratic institutions. The course covers the main theories and empirical research on the policy effects of litigation and intervention, with a particular focus on civil rights in the areas of employment, policing, welfare, prisons, and environmental policy. As part of the course requirements, students will conduct original empirical research. LEC

PUAD 998 Directed Reading on Public Administration (1-6). Designed to meet the needs of graduate students whose study in public administration cannot be met with present course. Prerequisite: consent of instructor. RSH

PUAD 999 Dissertation (1-15). Enrollment for writing doctoral dissertations. THE

Radio-Television-Film

For information on programs in film/video studies, see Theatre and Film in this chapter of the catalog.

For information on programs in broadcast journalism, see the School of Journalism and Mass Communications chapter of this catalog.

Religious Studies

Chair: Paul Mirecki
Graduate Adviser: Daniel B. Stevenson
Smith Hall, 1300 Oread Ave., Room 109A
Lawrence, KS 66045-7615, www.ku.edu/~rstudies
(785) 864-4663

Professors: Boyarin, Miller, Minor, S. Zimdars-Swartz
Professors Emeriti: Breslauer, Macaulay
Associate Professors: Mirecki, Shelton, Stevenson
Assistant Professors: Lindsey, Rausch, Zogry
Lecturer: P. Zimdars-Swartz

The academic study of religion acquaints the student with religion as a central phenomenon of human experience; examines the forms in which religious experience has been described, organized, and practiced in history and in varying cultures; analyzes the interaction of religion with cultural institutions and personal and group experience; focuses on religion as an expression of meanings and values in the context of what is perceived as ultimate; and introduces the student to the methods appropriate to the objective study of religion.

The department offers a graduate program leading to the M.A. with a major in religious studies. The program enables students to pursue specialized advanced work that builds on previous general background in religious studies. At all levels, interdisciplinary and interdepartmental cooperation is encouraged as important to a comprehensive program. Continuing research in religious studies is an indispensable and foundational element, intimately related both to teaching and to the wider exchange and advancement of knowledge.

A library of some 14,000 volumes, owned by the the Friends of the Department of Religious Studies at the University of Kansas, is housed with and used by the department in Irma I. Smith Hall.

Admission

An applicant is expected to have taken at least four undergraduate courses in religious studies, of which one must be in biblical studies and critical methods, one in the history of religious institutions and movements, and one in religious thought. At least one of the four courses must be in a religion not associated with the Hebrew Bible. Students with undergraduate deficiencies in religious studies must take course work to make them up. Such course work does not count as part of the total hours required for the M.A.

The department does not require Graduate Record Examination scores for admission or for department awards if the applicant’s undergraduate grade-point average is 3.0 or higher on a 4.0 scale. It does urge all applicants to take the appropriate sections of the GRE.

Applicants whose undergraduate grade-point averages are below 3.0 must submit official results of the GRE aptitude test to complete their applications. Those applying for university awards and funding must submit official results of the GRE aptitude test.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to

The University of Kansas
Department of Religious Studies
Smith Hall, 1300 Oread Ave., Room 109A
Lawrence, KS 66045-7615

Competence

Competence represents an ability to command a broad general knowledge of a field in religious studies. Students are expected to have a wide understanding of the basic facts, methodological issues, and history of research in the competence area. Students may wish to focus more narrowly on some aspect of that area for the thesis project or for later research. The department
permits students to be examined for competence in one of the following areas:

- Religion in the Ancient Near East and Mediterranean.
- Religion in Asia.
- Religion in Western Europe.
- Religion in the U.S.A.
- Religious Ethics.
- Theories and Methods of Studying Religion and Religious Experience.
- Religion in the Middle East and North Africa.

**M.A. Degree Requirements**

**M.A. Thesis Degree Requirements.** The thesis program in religious studies leads toward the M.A. and consists of three interrelated but distinct elements.

1. Candidates for this degree must complete 30 graduate credit hours with the following stipulations:
   (a) At least 18 credit hours must be in courses in religious studies and the rest in fields related to a declared competence.
   (b) Course work must include at least 12 hours (four courses) in the declared competence.
   (c) Immediately upon completion of 12 hours of course work, a student must, in consultation with an adviser, declare a competence in which an examination eventually will be taken. The student and the adviser must determine whether the student is pursuing a thesis or a nonthesis option. The student and the adviser plan the remaining course work with the declared competence in mind and propose a program and supervisory committee to the committee on graduate studies for approval. At this point, the supervisory committee determines the need for special competence in languages or research skills appropriate for the declared competence. If students wish to declare a new competence, the change may be permitted but is likely to require additional courses relevant to the new area and additional linguistic or research skills.
   (d) Students must complete REL 691 Approaches to the Study of Religion the first year in the program.
   (e) Students must complete REL 780 Seminar in Theories of Religious Experience or REL 781 Seminar in Theories of Religion. Students should complete the prerequisite 12 hours of undergraduate courses in religious studies before taking REL 601, REL 780, or REL 781.
   (f) Students must complete one course from each of these groups:

   **A. Western Religious Tradition**
   - REL 512 Prophecy, Poetry, and Story in the Hebrew Bible (Old Testament)
   - REL 515 Studies in Early Christian Literature and History
   - REL 525 Jews and Christians in Greco-Roman Antiquity
   - REL 526 Jewish History and Literature in the Greek and Roman Periods
   - REL 530 Christian Origins: from the Beginnings to Augustine
   - REL 531 Studies in Christianity
   - REL 532 Studies in Islam
   - REL 535/AAAS 542 The History of Islam in Africa
   - REL 539 Greek and Roman Religion
   - REL 570 Studies in Judaism
   - REL 732 Seminar in Western Religious Texts:
   - REL 775 Seminar in Religion and Society in the West:

   **B. Non-Western Religious Tradition**
   - REL 507 Religion in India
   - REL 508 Religion in China
   - REL 509 Religion in Japan
   - REL 733 Seminar in Eastern Religious Texts:
   - REL 762 Seminar in Eastern Religious Thought:
   - REL 770 Seminar in Religion and Society in Asia:
   - REL 781 Seminar in Theories of Religion and Religious Experience:
   - REL 782 Seminar in Theories of Religious Experience:

   (g) Students must complete 9 hours in courses numbered 700 or above, excluding REL 800 Readings and REL 899 Thesis. Courses at the 700 level in religious studies are seminars that include the following elements: at least one session devoted to a discussion of methods of study, completion of a major research paper of at least 25 pages, an oral defense and presentation of student research during the semester for which the student was first enrolled in the class, a limit of 15 students in the class, and permission of the instructor for undergraduates.

2. Students must pass a comprehensive examination, oral and written, over the declared competence, based on a bibliography generated by the student, adviser, and supervisory committee. The bibliography must list about 20 to 25 books in addition to appropriate articles. Two-thirds of the bibliography should be relevant to the area generally, and one-third should reflect the student’s special interests within that area. At least two weeks before the scheduled oral defense, the student and adviser must submit a Do-all form to the Graduate School.

3. Students must write and successfully defend a thesis that meets the minimum requirements of the department and the Graduate School. As many as 3 hours in REL 899 Thesis may be included in the 30-hour program. The thesis project includes a prospectus for a thesis to the supervisory committee, approval of which can be granted only after the examination is passed.

**Nonthesis Program Degree Requirements.** The nonthesis graduate program in religious studies leads toward the M.A. and consists of two interrelated but distinct elements.

1. Candidates for this degree must complete 33 graduate credit hours with the following stipulations:
   (a) At least 21 of the 33 graduate hours must be in courses in religious studies and the rest in fields related to a declared competence.
   (b) (Same as thesis option, above).
   (c) (Same as thesis option, above).
   (d) (Same as thesis option, above).
   (e) (Same as thesis option, above).
   (f) (Same as thesis option, above).
   (g) (Same as thesis option, above).

2. Students must pass a comprehensive oral and written examination over the declared competence, based on a bibliography generated by the student, adviser, and supervisory committee. The bibliography must list about 20 to 25 books in addition to appropriate articles. Two-thirds of the bibliography should be relevant to the area generally, and one-third should reflect the student’s special interests within that area. At least two weeks before the scheduled oral defense, the student and adviser must submit a Do-all form to the Graduate School.

**Transfer of Credit**

The Graduate School permits the transfer of graduate credit from other accredited institutions, up to a total of 6 semester hours. (See Credit by Transfer under General Regulations in the General Information chapter of this catalog.) Bachelor’s degree graduates from KU are permitted to transfer 8 hours. The hours may be used only when the M.A. is completed within six years of the time the credit was given. Application for transfer must be made by the student and the adviser to the committee on graduate studies. Normally, such applications are not made until after 12 hours of KU course work have been completed. If the committee approves, applications are forwarded to the Graduate School for approval.

**Hebrew Courses**

- HEBR 500 Biblical Hebrew (3).
- HEBR 501 Biblical Hebrew II (3).

**Religious Studies Courses**

- REL 500 Readings in Non-English Religious Texts (1-4).
- REL 504 Millenarian Movements (3).
- REL 507 Religion in India (3).
- REL 508 Religion in China (3).
- REL 509 Religion in Japan (3).
- REL 512 Prophecy, Poetry, and Story in the Hebrew Bible (Old Testament) (3).
- REL 513 Studies in Early Christian Literature and History (3).
- REL 523 The Dead Sea Scrolls (3).
- REL 524 Studies in Ancient Egyptian Culture and Religion (3).
- REL 525 Jews and Christians in Greco-Roman Antiquity (3).
- REL 526 Jewish History and Literature in the Greek and Roman Periods (3).
- REL 530 Christian Origins: from the Beginnings to Augustine (3).
The Center for Eurasian Studies is one of the nation’s 13 comprehensive Title VI National Resource Centers for the study of Russia, Ukraine, East/Central Europe, and the Balkans.

REES courses are taught by faculty members in many areas of the university.

REL 531 Studies in Christianity (3).
REL 532 Studies in Islam (3).
REL 534 Studies in Ritual: (3).
REL 535 The History of Islam in Africa (3).
REL 539 Greek and Roman Religion (3).
REL 552 Classical Islamic Literature (3).
REL 556 Religion in Britain Since the Reformation: A Survey (3).
REL 559 Religion in Britain Since the Reformation: A Survey, Honors (3).
REL 570 Studies in Judaism (3).
REL 580 Religious Perspectives on Illness, Health, and Healing (3).
REL 581 Psychology of Religion (3).
REL 585 New Religious Movements (Western) (3).
REL 586 New Religious Movements (Nonwestern) (3).
REL 601 Approaches to the Study of Religion (3).
REL 602 Special Topics in Religion: (1-4).
REL 604 Religion and Political Theory (3).
REL 650 Sufism (3).
REL 657 Gender in Islam and Society (3).
REL 665 Religious Ethics (3).
REL 667 Religious Perspectives on War and Peace (3).
REL 669 Human Conflict and Peace (3).
REL 671 American Communism (3).
REL 672 Mother as Religious Metaphor (3).
REL 677 Women in Christianity (3).
REL 732 Seminar in Western Religious Texts: (3). An analysis of selected religious texts or texts from Judaism, Islam, or Christianity in translation. May be taken more than once if subject matter varies sufficiently. Prerequisite: REL 512, REL 515, REL 526, REL 530, REL 532, REL 539, or REL 570 or permission of the instructor. LEC
REL 733 Seminar in Eastern Religious Texts: (3). Analysis of a selected religious text or texts from India, China, or Japan, in translation. May be taken more than once if subject matter varies sufficiently. (Same as EALC 733.) Prerequisite: REL 507, REL 508, REL 509, or permission of instructor. LEC
REL 761 Seminar in Western Religious Thought: (3). An analysis of the thought of selected thinkers of the Christian, Jewish, and/or Islamic traditions. May be taken more than once if subject matter varies sufficiently. (Same as EALC 792.) Prerequisite: REL 507, REL 508, REL 509, or permission of instructor. LEC
REL 762 Seminar in Eastern Religious Thought: (3). Analysis of the religious thought of selected thinkers of India, China, and/or Japan, traditional and modern. May be taken more than once if subject matter varies sufficiently. Prerequisite: REL 507, REL 508, REL 509, or permission of instructor. LEC
REL 771 Seminar in Religious Movements and Social Change: (3). Relationship of religious groups to movements for social change: influence of religious groups on the social change, and the impact of efforts toward social change in religious groups. Prerequisite: REL 171, REL 371, REL 377, or equivalent. LEC
REL 772 Seminar in Religion and Modern Social Criticism: (3). Seminar focusing on religious issues in some important texts of modern social criticism from the French Revolution to the present day. Prerequisite: An introductory course in religion. LEC
REL 775 Seminar in Religion and Society in the West: (3). Analysis of selected Western religions and their relationships to selected Western societies. May be taken more than once if subject matter varies sufficiently. Prerequisite: REL 512, REL 515, REL 526, REL 530, REL 532, REL 539, or REL 570 or permission of instructor. LEC
REL 776 Seminar in Religion and Society in Asia: (3). Analysis of selected Asian religions and their relationship to selected Asian societies. May be taken more than once if subject matter varies sufficiently. (Same as EALC 776.) Prerequisite: REL 507, REL 508, REL 509, or permission of instructor. LEC
REL 777 Seminar in Religion and Gender (3). Examination of symbols, images, scriptures, rites, teachings and scholarship regarding gender definitions and performance in various religious traditions. LEC
REL 780 Seminar in Theories of Religious Experience (3). Seminar exploring sociological, psychological, anthropological, and other theories regarding religious experience. Prerequisite: Permission of instructor. LEC
REL 781 Seminar in Theories of Religion (3). A study of selected theorists concerned with the nature of religion conducted by methodological analysis of the theories, data, and conclusions. LEC
REL 787 Seminar in Ethical Issues in Health Care: (3). Interdisciplinary seminar, drawing on the literature of social, medical, and professional ethics, with special attention to religious perspectives on meanings of health and the delivery of prerequisite. Permission of instructor. LEC
REL 800 Readings (1-4). RSH
REL 839 Topics in the History and Literature of Religion: (3). Selected studies, as announced in Timetable of Classes, in the history and religious literature of Judaism, Christianity, religion in America, Islam, and Asian religions. Course may be taken more than once if the subject matter varies sufficiently. Prerequisite: Permission of instructor. LEC
REL 864 Topics in Religious Thought and Symbol: (3). Selected studies, as announced in Timetable of Classes, in the history and analysis of symbols, images, scriptures, rites, and teachings defining women’s roles in various religious traditions. Course may be taken more than once if the subject matter varies sufficiently. Prerequisite: Permission of instructor. LEC
REL 875 Topics in Religion and Society: (3). Special topics to be announced in Timetable of Classes, according to research interests of faculty and students. A particular aspect of the study of religion and culture will be emphasized. Course may be taken more than once if the subject matter varies. Prerequisite: Permission of instructor. LEC
REL 877 Topics in Women and Religion: (3). Selected studies, as announced in Timetable of Classes, in the history and analysis of symbols, images, scriptures, rites, and teachings defining women’s roles in various religious traditions. Course may be taken more than once if the subject matter varies sufficiently. Prerequisite: Permission of instructor. LEC
REL 899 Thesis (1-3). THE

Russian, East European, and Eurasian Studies

Chair: Erik Herron, crees@ku.edu
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574, www.ku.edu/~crees
(785) 864-4236
Graduate Adviser: Ray Finch,
310 Bailey Hall, (785) 864-4248
Professors Emeriti: Cinciala, Darek, Garland, Greaves, Maurer, Piekalkiewicz, Shaffer, Stammier, Stokstad
Associate Professors: Christilles, Comer, D’Anieri, Earnhart, O’Lear, Phipps, Stone, Volek
Assistant Professors: Dickey, Hanley, Herron, Ivanov, Karcz, Radovanovic, Skiba, A. Tsiovkh, Y. Tsiovkh, Weaver
Librarians: Haines, Husic

Admission

Most applicants hold the B.A. degree in the social sciences or humanities with grade-point averages of 3.0 or higher. Students with B.S. or professional degrees are also eligible to apply. Some students may consider completing the M.A. degree in Russian and East European studies in conjunction with academic or professional study in another department or school.

Students should submit the following application materials:

1. An application form for admission to the Graduate School.
2. A nonrefundable application fee (check payable to the University of Kansas; see Admissions in the General Information chapter of this catalog).
3. Two original transcripts of all college-level work.
4. Graduate Record Examination scores. International students should submit Test of English as a Foreign Language scores.
5. Three letters of recommendation commenting on the student’s ability to succeed at graduate work.
6. A one- to two-page statement of the student’s educational and professional objectives.
Students may begin the program in any semester. Admissions continue throughout the year. Submit your application to the Graduate School online at www.graduate.ku.edu. Send the application (paper or online), application fee, GRE scores and two sets of official transcripts to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Russian, East European, and Eurasian Studies
Bailey Hall, 1440 Jayhawk Blvd., Room 320
Lawrence, KS 66045-7574

M.A. Degree Requirements
A Master of Arts degree is awarded in Russian and East European studies in three tracks: Russian, East European, and Ukrainian.

Requirements for the degree are
1. One course of advanced language (in addition to the 22 hours or equivalent required below).
2. Three courses for a total of 9 credit hours in the department or subject area of the student's special interest.
3. One area course in each of the other four groupings below, for a total of 12 hours.
4. REES 898 and REES 899, an interdisciplinary M.A. seminar (6 credit hours). In this two-semester course, students learn about issues in the field and research methodologies and write a paper using Russian, Croatian, Polish, Ukrainian, or other approved language materials. Before enrolling for REES 899, a student must have completed a total of 22 hours (three years), or the equivalent, of the target language.

Course Groupings
I. Literature and the Arts.
II. History.
III. Political Science and Sociology.
IV. Philosophy and Religion.
V. Economics, Business, and Geography.

Every graduate degree candidate at KU must pass a comprehensive examination, in addition to the regular course examinations, by the final date for meeting degree requirements set by the Graduate School.

Information about opportunities and requirements for graduate work with a Russian or Eastern European concentration in any department of the university may be obtained from the department.

Requirements may be modified in special cases with the chair's approval, particularly for students with special needs such as Experienced Teacher Fellows, Foreign Area Officers, or candidates for degrees in professional schools. All students are encouraged to study abroad.

- Russian and East European Studies Courses

REES 510 Understanding Central Asia (3)

REES 704 Church History of Russia I (3). A study of Russia's religious development since the introduction of Christianity through the religious schism. Prerequisite: Five hours of principal courses in history. LEC

REES 709 Church History of Russia II (3). A study of Russia's religious development from the schism through the Soviet period. LEC

REES 714 Church-state Relations in the U.S.S.R. (3). Survey of church-state relations 1917 to the present; anti-religious programs and policies; law; nonorthodox religions; religious dissent; religion and Soviet foreign policy. LEC

REES 715 Seminar in the History of Russian Thought (3). Topics in the development of social radicalism and of philosophical positivism and materialism from Radischev through the Russian Marxists. A reading knowledge of Russian is desirable but not required. Prerequisite: REES 723 or PHIL 580. LEC

REES 799 Directed Readings in Russian and East European Studies (1-5). RSH

REES 895 Special Problems in Area Studies: _____ (3). Interdisciplinary examination of topics involving two or more of the cooperating disciplines in Russian and East European studies. LEC

REES 897 Research (1). Enrollment to fulfill Masters continuous enrollment rule. Graded on satisfactory/unsatisfactory basis. Prerequisite: Completion of all degree requirements except submission of seminar paper or comprehensive examination. RSH

REES 898 Seminar in Russian and East European Studies (3). An interdisciplinary seminar. Each student will be expected to write an interdisciplinary seminar paper, involving the use of materials in an East European language and concentrated in the discipline of the student's special interest. A grade will be assigned only on satisfactory completion of REES 899. LEC

REES 899 Seminar in Russian and East European Studies (3). Continuation of REES 898. LEC

Slavic Languages and Literatures
Chair: Marc L. Greenberg
Wescoe Hall, 1445 Jayhawk Blvd., Room 2134
Lawrence, KS 66045-7590, www.ku.edu/~slavic
(785) 864-3313

Director of Graduate Studies: Stephen J. Parker,
2138 Wescoe Hall, (785) 864-2346

Professors: Carlson, Clowes, Greenberg, Parker
Professors Emeriti: Maurer, Stammler
Associate Professor: Comer
Assistant Professors: Dickey, Karcz

Courtesy Faculty: Levin, Mikkelsen

The department offers full programs leading to the degrees of Master of Arts and Doctor of Philosophy with a major in Slavic languages and literatures. Two concentrations are offered in the M.A. program: a concentration in Slavic languages and literatures and a concentration in Russian language and civilization. Four concentrations are offered in the Ph.D. program: concentrations in Russian, Polish, and South Slavic literatures, and a concentration in Slavic linguistics.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Slavic Languages and Literatures
Wescoe Hall, 1445 Jayhawk Blvd., Room 2134
Lawrence, KS 66045-7590

M.A. Degree Requirements
Concentration in Slavic Languages and Literatures. Prerequisites for Admission: 30 semester hours of credit in Russian language and literature (of which 10 to 12 must have been taken on the junior/senior level), or the equivalent of such study.

Nonthesis Degree:
1. At least 30 hours of graduate work in Slavic languages and literatures, including SLAV 710 and SLAV 740, three courses in Slavic literature, three courses in Slavic linguistics, and two courses in either Slavic litter-
The holdings of Slavica in the University of Kansas library total more than 400,000 volumes in both Slavic and non-Slavic languages.

Language and area studies in Russian and Polish are available.

All international students who are not native speakers of English must be screened by the Applied English Center in Lippincott Hall on arrival at KU.

At least one of the literature or linguistics courses must be a graduate seminar.

1. A written and oral examination.

**Thesis Degree:**

1. At least 24 hours of graduate work in Slavic languages and literatures, including SLAV 710 and SLAV 740, three courses in Slavic literature, and three courses in Slavic linguistics.
2. A thesis for which 6 credit hours may be allowed (not to be included in the 24-hour minimum).
3. A written and oral examination.

For the student who plans to continue toward the doctorate, the M.A. examination also functions as a qualifying examination. In this case, the written and oral examinations are both of greater length. The function of the qualifying examination is to ascertain the student's general competence and to identify areas in which further work is needed.

Students planning to continue toward the doctorate should begin study of a second Slavic language during the first year of graduate work. Such study does not count toward M.A. degree requirements.

**Concentration in Russian Language and Civilization.**

This is a master's degree program, focusing on Russian language, literature, and culture, for people who plan to teach Russian language and culture at the high school level, as well as to enter careers in other fields. Although the program is not intended for those planning to continue to the Ph.D. degree, it can lead to qualifying for admission to the Ph.D. concentrations in Slavic literatures or linguistics, with appropriate additional courses.

**Prerequisites:** Twenty-two semester credit hours of Russian language courses and 3 hours of Russian studies other than language.

**Degree Requirements:**

1. At least 30 hours of graduate work including:
   - Nine hours of Russian language at the advanced level (6 hours of practical Russian chosen from SLAV 506, SLAV 508, SLAV 520, SLAV 521, SLAV 512, SLAV 611, or RUS 604/RUS 608; 3 hours of Russian linguistics chosen from phonetics, morphology, syntax, introduction to history of Russian, OCS, etc.)
   - Nine hours of Russian literature (including work in prose and poetry, surveys and more specialized courses)
   - Three hours in an interdisciplinary course from the following list: SLAV 502 Introduction to Russian Culture and Society, SLAV 512 Siberia Yesterday and Today, SLAV 600 Biography of a City, ________
   - Nine hours of Russian culture other than language and literature per se, selected from courses in Russian history, Russian thought (Main Currents, Marxism, or Post-Marxism), Russian folklore, Russian theatre and drama, Russian religion, Russian music, art, and film, Russian geography, economics, government and politics.
2. A written and oral examination.

Students seeking certification to teach in Kansas high schools or junior colleges must complete the appropriate professional education courses.

**Ph.D. Degree Requirements**

The Ph.D. program with concentration in Slavic literature or Slavic linguistics includes, in addition to M.A. requirements, completion of the Ph.D. qualifying examination, fulfillment of all specific requirements in the concentration, the Foreign Language or Other Research Skills (FLORS) requirement in a Western European language, completion of comprehensive examinations, and a dissertation. All doctoral students are expected to enroll in courses in their concentrations numbered 500 and above offered in a given semester (1) if they have not previously had the courses or their equivalent, (2) if it is judged that the course material aids in preparation for comprehensive examinations, and (3) if it is feasible to incorporate such courses into a given semester's program.

**Requirements for Concentration in Literature**

1. Detailed knowledge of the history and development of one Slavic literature.
2. Oral and written competence in the student’s major Slavic language plus an orientation in its structure and history.
3. Reading competence in at least one additional Slavic language and a general knowledge of the history of its literature.
4. About 9 to 12 graduate semester credit hours in a minor subject, taken either from outside or inside the Department of Slavic Languages and Literatures.
5. An acceptable dissertation.

**Requirements for Concentration in Linguistics**

1. Detailed knowledge of the structure and history of two Slavic languages, one of which is considered the student's major language, plus reading competence in a third Slavic language.
2. Oral and written competence in the student’s major Slavic language.
3. About 1 to 2 graduate semester credit hours in a minor subject, taken either from outside or inside the Department of Slavic Languages and Literatures.
4. Basic knowledge of general linguistics and comparative Slavic linguistics.
5. An acceptable dissertation.

**Examinations.** All prospective Ph.D. aspirants must take a qualifying examination. For KU students, the master’s examination is adjusted to serve as the qualifying examination. For students beginning their work here but with the M.A. from another institution, a qualifying examination is required. This examination consists of two three-hour sessions (written) and a two-hour oral examination. Successful completion of this requirement admits the student to aspirancy for the Ph.D. with a major in Slavic languages and literatures.

Before taking the Ph.D. comprehensive examination, the student must demonstrate reading competence in a Western European language, preferably French or German, to satisfy the FLORS requirement.

Students must take written and oral comprehensive examinations after all other requirements for the Ph.D. are fulfilled, except the dissertation.

There is a final oral examination (defense) on the candidate's dissertation and its field.

**Slavic Language Programs in Russia and Eastern Europe**

KU conducts a six-week summer language program in Russia. Students may take intermediate or advanced Croatian and Serbian at a six-week summer institute in Croatia or attend a summer language program in Poland. An academic year in Poland is available for the advanced student of Polish language and area studies. Graduate students at KU are encouraged to participate.

**Croatian and Serbian Courses**

CRSB 504 Advanced Croatian and Serbian I (3).
CRSB 508 Advanced Croatian and Serbian II (3).
CRSB 675 Readings in Croatian and Serbian (1-6).


**Slavic Languages & Literatures**

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**Czech Course**  
**CZCH 675 Readings in Czech** (1-6).

**Polish Courses**  
**PLSH 504 Advanced Polish I** (3).  
**PLSH 508 Advanced Polish II** (3).  
**PLSH 675 Readings in Polish Language and Literature** (1-6).

**Russian Courses**  
**RUSS 504 Advanced Russian I** (3).  
**RUSS 508 Advanced Russian II** (3).  
**RUSS 512 Russian for the Professions I** (3).  
**RUSS 516 Russian for the Professions II** (3).  
**RUSS 522 Problems in Translating Russian into English I** (3).  
**RUSS 526 Problems in Translating Russian into English II** (3).  
**RUSS 550 Advanced Conversation, Composition, and Grammar in Russian: Summer Program** (6).  
**RUSS 552 Advanced Russian Language at Saint Petersburg University: Semester Program** (14).

**SLAV 650 The Russian Short Story** (3).

**SLAV 514 Totalitarianism and Literature in Central Europe** (3).

**SLAV 679 Topics in:** (1-6).

**SLAV 684 Main Currents of Russian Thought I** (3).  
**SLAV 686 Main Currents of Russian Thought II** (3).

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**Slavic Languages and Literatures Courses**  
**SLAV 500 Russia Today** (3).  
**SLAV 502 Introduction to Russian Culture and Society:** (3).  
**SLAV 504 Introduction to East-Central European Culture and Society:** (3).  
**SLAV 505 Introduction to Czech Culture** (3).  
**SLAV 506 Polish Literature and Civilization** (3).  
**SLAV 508 South Slavic Literature and Civilization (3).**  
**SLAV 510 The Russian Literary Genius** (3).  
**SLAV 512 Siberia Yesterday and Today** (3).  
**SLAV 514 Totalitarianism and Literature in Central Europe** (3).  
**SLAV 520 Russian Phonetics, Phonology, and Inflectional Morphology** (3).  
**SLAV 522 Russian Derivational Morphology, Syntax, and Lexicology** (3).  
**SLAV 524 Russian Since the Revolution** (3).  
**SLAV 528 Comparative Study of Slavic Literatures** (3).  
**SLAV 530 Introduction to Russian Poetry** (3).  
**SLAV 532 Dostoievsky** (3).  
**SLAV 534 Tolstoy** (3).  
**SLAV 536 Turgenev** (3).  
**SLAV 538 The Modern Polish Short Story** (3).  
**SLAV 540 Language and Identity in East-Central Europe and the Former Soviet Union** (3).  
**SLAV 560 Introduction to Slavic Language:** (3).  
**SLAV 561 Readings in Slavic Language:** (1-6).  
**SLAV 562 Russian Theatre and Drama from Stanislavski and Chekhov to the Present** (3).  
**SLAV 566 The Devil in Russian Literature** (3).  
**SLAV 568 Biblical Themes in Modern Russian Literature** (3).  
**SLAV 600 Biography of a City:** (2-4).  
**SLAV 612 Introduction to Russian Literature of the Nineteenth Century** (5).  
**SLAV 614 Russian Literature in Translation:** (3).  
**SLAV 616 Introduction to Russian Literature of the Twentieth Century** (3).  
**SLAV 630 Slavic Folklore** (3).  
**SLAV 642 Pushkin and Evgenij Onegin** (3).  
**SLAV 650 The Russian Short Story** (3).  
**SLAV 656 Russian Literature of the Eighteenth Century** (3).  
**SLAV 660 Nineteenth-century Russian Prose and Fiction** (3).  
**SLAV 662 Russian Literary Modernism: 1880-1930** (3).  
**SLAV 664 Soviet Russian Literature: 1930-1990** (3).  
**SLAV 667 Post-Soviet Literature** (3).  
**SLAV 668 Nabokov** (3).  
**SLAV 676 Readings in Slavic Linguistics:** (1-6).  
**SLAV 679 Topics in:** (1-6).  
**SLAV 684 Main Currents of Russian Thought I** (3).  
**SLAV 686 Main Currents of Russian Thought II** (3).

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**SLAV 710 Introduction to Slavic Literatures and Linguistics:** (3).  
The Slavic languages and peoples, including briefly: their origin, prehistory, and early culture. Basic linguistic methodology as applied to Slavic material from the beginnings of Slavic linguistics to the present. LEC

**SLAV 711 Russian Poetry: Nineteenth Century** (3).  
Readings from the works of the major poets, in Russian. Prerequisite: Three years of Russian language study or the equivalent. LEC

**SLAV 712 Russian Poetry: Twentieth Century** (3).  
Readings from the works of the major poets, in Russian. Prerequisite: Language proficiency. LEC

**SLAV 714 Russian Theatre and Drama to 1900** (3).  
A study of the development of Russian theatre and dramatic literature from their beginnings to 1900. Readings in English. Students with knowledge of Russian will read some works in Russian. LEC

**SLAV 715 Russian Drama and Theatre, 1953 to the Present** (3).  
A study of the development of Russian theatre and dramatic literature from 1953 to the present. Readings in English. Students with knowledge of Russian will read some works in Russian. LEC

**SLAV 716 History of Russian Literary Criticism: Late Eighteenth and Nineteenth Century** (3).  
A study of the various literary periods, such as sentimentalism, romanticism, naturalism, realism, with particular reference to individual literary critics and critical journals. LEC

**SLAV 719 Philosophical and Aesthetic Thought of the Russian Silver Age** (3).  
A survey of the works of Solovov, Florensky, Berdyaev, Merezhkovskii, Ivanov, and others, and their relation to the literature and culture of the Silver Age. LEC

**SLAV 721 Pushkin** (3).  
A study of the life and works of Alexander Pushkin. Readings in Russian, open to senior Russian majors and graduate students. Prerequisite: Three years of Russian or the equivalent. LEC

**SLAV 726 Chekhov** (3).  
A study of the life and works of Anton Chekhov. Open to senior Russian majors and graduate students. Readings in Russian. Prerequisite: Three years of Russian or the equivalent. LEC

**SLAV 727 Bely and Blok** (3).  
A study of the life and works of the Symbolist writers, Andrei Bely and Aleksandr Blok. Readings in Russian. LEC

**SLAV 728 19th-century Russian Prose** (3).  
Readings from the works of Turgenev, Chekhov, Leskov, Salykov, and others. Readings and discussion in English. Russian majors will be expected to read some works in Russian. No prerequisite. LEC

**SLAV 730 Russian Emigré Literature** (3).  
A study of representative works in all genres, by Russian émigré writers. Readings in English. LEC

**SLAV 740 Bibliography and Methods** (3).  
An introduction to the technical problems of literary and philosophical research in the field of Russian studies. LEC

**SLAV 748 Old Church Slavie** (3).  
A course in the first written language of the Slavs (9-12th centuries AD), with discussion of Indo-European, Baltic and Common Slavic background. Prerequisite: Two years of Russian or the study of another ancient Indo-European language. LEC

**SLAV 750 Introduction to Russian Historical Grammar** (3).  
The linguistic history of Russian from the emergence of East Slavic dialects of Common Slavic to the modern period, with emphasis on fundamental structural changes and the introduction of skills necessary for the reading and analysis of Old and Middle Russian texts. Prerequisite: Three years of Russian or the equivalent. LEC

**SLAV 752 Old Russian Grammar and Texts** (3).  
An examination of the Russian language from its beginnings to the 17th century through close reading of Old and Middle Russian texts and reading and discussion of the literature on issues in Russian historical linguistics. Prerequisite: SLAV 748; SLAV 750, or equivalent. LEC

**SLAV 756 Structure of Russian:** (3).  
Synchronic study of the contemporary Russian language with special emphasis on problems of functional morphology and syntax. Prerequisite: Three years of Russian language study or its equivalent. LEC

**SLAV 802 Thesis** (1-6).  
THE

**SLAV 804 Comparative Slavic Linguistics** (3).  
An examination of the development of the Slavic languages from the Common Slavic period to the present, proceeding from Indo-European. Prerequisite: Graduate standing in Russian. LEC

**SLAV 806 East Slavic Linguistics** (3).  
An examination of the linguistic phenomena and historical development of the East Slavic languages (Russian, Belorussian, and Ukrainian). Prerequisite: Graduate standing in Russian. LEC

**SLAV 808 West Slavic Linguistics** (3).  
An examination of linguistic phenomena and historical development of the West Slavic languages (Polish, Czech, Slovak, and Upper and Lower Sorbian). LEC

**SLAV 810 South Slavic Linguistics** (3).  
An examination of linguistic phenomena and historical development of Bulgarian, Macedonian, Croatian-Serbian, Slovone. LEC

**SLAV 820 Old Russian Literature: Beginnings to 1700** (3).  
Readings of selected texts in Russian. Prerequisite: SLAV 752. LEC

**SLAV 822 Eighteenth-century Russian Literature** (3).  
A survey of Russian literature and thought of the eighteenth century. All readings in Russian. Prerequisite: Graduate standing in Russian. LEC

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**Liberal Arts**
SLAV 824 Proseminar in Methods of Teaching Slavic Languages I (1-3). Required for all teaching assistants, assistant instructors engaged in the teaching of Slavic languages and persons planning for careers in teaching Slavic languages. Combines discussion of theoretical teaching concepts with practical solution of problems arising concurrently in Slavic language courses. Students enrolled for two or three hours will study advanced Slavic grammar topics and stylistics as they apply to the teaching of Slavic languages. LEC

SLAV 825 Investigation and Conference (1-3). Individual work in language or literature of the teaching of Slavic languages by qualified students under direction of members of the department. RSH

SLAV 826 Proseminar in Methods of Teaching Slavic Languages II (1-3). Required for all teaching assistants, assistant instructors engaged in the teaching of Slavic languages and persons planning for careers in teaching Slavic languages. Combines discussion of theoretical teaching concepts with practical solution of problems arising concurrently in Slavic language courses. Students enrolled for two or three hours will study advanced Slavic grammar topics and stylistics as they apply to the teaching of Slavic languages. LEC

SLAV 850 Seminar in Russian Literature: Nineteenth Century: (3). A regular seminar for graduate students, devoted to special problems in Russian literature. (Ancient Russian literature, Classicism, Romanticism, Realism, Symbolism, etc.) Designed to introduce the student to the more advanced methods in criticism, literary analysis, and research. Prerequisite: Graduate standing in Slavic Languages and Literatures, or permission of instructor. LEC

SLAV 852 Seminar in Russian Literature: Twentieth Century (3). Various topics including pre- and post-Revolutionary poetry, the prose of the 1920s, the development of Socialist Realism, individual authors, etc. LEC

SLAV 912 Seminar: Topics in Contemporary Slavic Linguistics (3). Synchronic examination of specific topics, i.e., phonology, morphology, syntax, and lexicology of several Slavic languages. LEC

SLAV 914 Seminar: Topics in Historical Slavic Linguistics (3). Diachronic examination of selected topics, i.e., phonology, morphology, syntax, or lexicology of one or more Slavic languages. LEC

SLAV 917 Seminar in Russian Culture and Society (3). Examination of selected topics in Russian cultural history, especially as treated in the works of Russian literature and intellectual history. Prerequisite: At least one course in Russian history, or one of the following courses—SLAV 529, SLAV 530, SLAV 684, SLAV 685, plus graduate standing. LEC

SLAV 932 Seminar: Topics in Slavic Folklore (3). Investigation and concentrated study of one or more popular genres, e.g., byliny, skazki, zakazki, etc. Prerequisite: SLAV 630. LEC

SLAV 940 Seminar: Topics in Comparative Slavic Literature (3). Prerequisite: Graduate standing in Slavic Languages and Literatures. LEC

SLAV 999 Dissertation (1-6). THE

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to
The University of Kansas
Department of Sociology
Fraser Hall, 1415 Jayhawk Blvd., Room 716
Lawrence, KS 66045-7556

M.A. Degree Requirements

The University of Kansas Graduate Application Processing Center 1450 Jayhawk Blvd., Room 313 Lawrence, KS 66045-7535

Thesis Option. Students must complete 30 hours of graduate credit (including SOC 790 M.A. Proseminar, SOC 811 Sociological Research, one course in sociological theory, one additional course in either sociological theory or research methods, and at least 6 hours of thesis) and must prepare and defend an M.A. thesis. The defense includes a general examination of sociological theory and research. Completion of these requirements leads to the M.A. degree, which normally allows the student to proceed to doctoral study.

Nonthesis—Research Paper Option. Students must complete 33 hours of graduate credit (excluding any credit for thesis and including the courses above under thesis option) and must prepare and receive approval of a research paper, not to exceed 40 pages, to be submitted for presentation at a scholarly meeting or for publication in a scholarly journal. Completion of these requirements leads to the M.A. degree, which normally allows the student to proceed to doctoral study.

Nonthesis—Course Work Option. Students must complete 36 hours of graduate credit (excluding any credit given for thesis and including the courses specified above under the thesis option) and a final oral examination over course work in sociology. Completion of these requirements leads to the M.A. degree but does not allow the student to proceed to doctoral study.

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
Ph.D. Degree Requirements

Regular admission to the doctoral program requires the M.A. degree with a major in sociology or a closely related field and evidence of scholarly accomplishment and capability equivalent to that demonstrated in an M.A. thesis or research paper (described above) in sociology. To receive the Ph.D. with a major in sociology, the student must

1. Obtain admission to the Ph.D. program.
2. Complete SOC 990 Ph.D. Proseminar unless SOC 790 M.A. Proseminar has been completed.
3. Carry out a program of study developed, initially, with a member of the graduate studies committee and, as soon as possible, with a doctoral advisory committee.
4. Attain the requisite levels of competence in the history and theory of sociology and in methods of sociological research by taking 9 hours of approved graduate courses in theory and completion of SOC 811 Sociological Research, SOC 812 Analytic Methods in Sociology, and one other graduate-level sociology methods course with an average grade of 3.0.
5. Complete the Foreign Language or Other Research Skills (FLORS) requirement, which may be satisfied by completion of three sociological methods courses as specified in 4 above. Additional information about the FLORS requirement can be found under Research Skills, Doctoral Degree Requirements in the General Information chapter of this catalog.
6. Pass two written examinations in special fields in sociology or related disciplines.
7. Complete three full academic years, or the bona fide equivalent, in study at this or another approved university, including time spent attaining the master's.
8. Complete two semesters, normally consecutive, in study at KU. During this period, the student must be involved in full-time academic pursuits that may involve teaching or research activities. In this case, the minimum enrollment is 6 credit hours.
9. Pass an oral comprehensive examination. The candidate then enrolls for a minimum of 6 hours a semester and 3 hours a summer session until 18 hours or all requirements for the degree (whichever comes first) have been completed. If the degree is not complete after 18 hours of post-comprehensive enrollment, the candidate continues to enroll each semester and each summer session until all requirements for the degree have been met.

Manual of Graduate Study in Sociology

A more detailed account of advising procedures, degree requirements, and program options is set forth in the department's Manual of Graduate Study in Sociology, which is sent with the application for admission to the program or given to anyone on request.

Sociology Courses

SOC 500 Sociological Theory (3).
SOC 510 Elementary Statistics and Data Analysis (3).
SOC 520 Groups and Associations (3).
SOC 521 Wealth, Power, and Inequality (3).
SOC 522 American Racial and Ethnic Relations (3).
SOC 523 Sociology of Aging and the Life Course (3).
SOC 524 Sociology of the Economy (3).
SOC 525 Sociology of Work (3).
SOC 526 Industrial Sociology (3).
SOC 530 Industrial Revolution and Capitalist Development (3).
SOC 531 Global Social Change (3).
SOC 533 Industrialization in Developing Nations (3).
SOC 534 Comparative Racial and Ethnic Relations (3).
SOC 535 Gender in the Global Context (3).
SOC 536 Ethnicity in the United States: ____ (3).
SOC 560 Law and Criminal Justice (3).
SOC 561 Sociology of Deviance (3).
SOC 562 Sociology of Law (3).
SOC 570 Social Conflict (3).
SOC 571 Collective Behavior (3).
SOC 572 Dispute Settlement (3).
SOC 573 Sociology of Violence (3).
SOC 598 Practicum in Crime and Delinquency Studies (3-6).
SOC 600 Sociological Perspectives: ____ (3).
SOC 601 Introduction to Feminist Social Theory (3).
SOC 610 Survey Research (3).
SOC 617 Women and Health Care (3).
SOC 618 The Sociology of Pharmacy (3).
SOC 619 Political Sociology (3).
SOC 620 Social Organization (3).
SOC 621 Cross-cultural Sociology (3).
SOC 622 Sociology of Science (3).
SOC 623 Women and Work (3).
SOC 624 Sociology of Health and Medicine (3).
SOC 625 Work Roles in Health and Medicine (3).
SOC 626 Religion and Society (3).
SOC 627 School and Society (3).
SOC 628 Sociology of the Family (3).
SOC 629 Sociology of Sport (3).
SOC 630 Latin American Society (3).
SOC 633 Traditional Rural China and the Communist Revolution (3).
SOC 634 The Sociology of Culture (3).
SOC 660 Sociology of Mental Illness (3).
SOC 661 Causation of Crime and Delinquency (3).
SOC 662 Corrections (3).
SOC 671 Social Movements (3).
SOC 672 Sociology of War and Peace (3).
SOC 698 Individual Undergraduate Research (1-12).
SOC 707 Seminar in Historical Sociology (1-4). Each seminar will explore problems at the intersection of sociology and history. Topic, instructors, and hours of credit will be announced in the Timetable. Seminars will be offered by different instructors on different topics and students may take more than one topic. No prerequisite. LEC.
SOC 722 Sociology of Gender (3). This course will offer a range of sociological perspectives on the role of gender in society. The particular substantive focus will vary each semester to allow flexibility for in-depth analysis of gender relationships in such areas as politics, health and aging, and work. LEC.
SOC 760 Social Inequality (3). A comprehensive review of the major theoretical and empirical approaches used in the study of institutionalized social inequality. Reference to the origins, forms, cultural and structural variations and their changes over time, consequences and ideologies of social inequality. Prerequisite: A distribution course in sociology. LEC.
SOC 762 Seminar in Social Deviation and Control: ____ (3). Advanced study of theory and practice relating to deviation. May be repeated as topics vary. Prerequisite: SOC 662 or SOC 661. LEC.
SOC 767 Gerontology Proseminar (3). A proseminar coordinated by the Gerontology Center. The proseminar explores essential areas of gerontology for researchers and practitioners, providing a multidisciplinary (psychology, biology, sociology, and communication) perspective on aging. The proseminar surveys contemporary basic and applied research, service programs, and policy and management issues in gerontology. (Same as ABSC 737, AMS 767, COMS 787, and PSYC 787.) Formerly HDFL 787. LEC.
SOC 770 Social Systems and Social Change in the United States (3). Analysis of approaches to the study of sociocultural change in America, with special emphasis on a systems perspective. Seniors by consent of instructor. LEC.
SOC 771 Intergroup Relations and Conflict in American Society (3). Analysis of the dynamics of intergroup relations (e.g., class, religious, ethnic, racial, political) in America with special emphasis on the examination of major theoretical and empirical approaches employed in the study of societal conflict and consensus. LEC.
Sociology

SOC 780 Advanced Topics in Sociology: ____ (3). Topics will vary from semester to semester and instructor to instructor to allow flexibility and in-depth analysis of particular topics. LEC

SOC 790 M.A. Proseminar (3). Introduction to major disciplinary issues, departmental research specialties, faculty research interests, interdisciplinary connections, funding sources, and professional writing. Required of M.A. students entering the graduate program in sociology. May not be taken by those who have credit for SOC 590. Graded on satisfactory/unsatisfactory basis. LEC

SOC 801 The Rise of Social Theory (3). This is less a survey of intellectual history than an effort to trace the “preclassical” roots of sociological theory. We will explore the rise of paradigmatic concerns in the writings of such key figures as Aristotle, Marsilius of Padua, Martin Luther, Etienne de la Boëte, Michel de Montaigne, Charles de Montesquieu, Jean-Jacques Rousseau, Immanuel Kant, G.W.F. Hegel, Flora Tristan, and Ludwig Feuerbach, among others. LEC

SOC 802 Modern Social Theory (3). This seminar will focus on the later 19th and early 20th century “theories of society,” addressing the origins and developmental tendencies of Western modernity and their relationship to modern social orders. Primary texts of the major theorists (e.g., Marx, Durkheim, Nietzsche, Weber, Simmel, and Mead) will be studied in historical context. The tradition’s analytical and critical resources and problematic features will also be explored. Finally, the connections between this tradition and contemporary sociological approaches will be explored. LEC

SOC 803 Issues in Contemporary Theory: ____ (3). A critical examination of recent trends and issues in sociological theory. There is a theoretically oriented course in which classical as well as contemporary views will be explored. Attention will be directed to theoretical issues under discussion in fields such as symbolic interactionism, ethnography, methodological critical theory, and poststructuralist theory. LEC

SOC 804 Sociology of Knowledge (3). This course reviews the major sociological approaches to the study of the relationship between thought and the social context within which it arises. A central concern is an examination of the relationship between ideology and social structures, particularly as expressed in the construction of official knowledge. LEC

SOC 808 Feminist Theories (3). This course will explore and evaluate accounts of social structure, social processes, and consciousness developed in the feminist literature. We will review a range of theoretical arguments, including liberal, historical, materialist, psychoanalytic, cultural, and Black feminist theories. Some of the readings will focus on limitations and distortions within mainstream social theory; others will center on the development of alternative social theory using the standpoint of women as a point of departure. LEC

SOC 811 Sociological Research (3). The use of the scientific method to study social phenomena including the formulation and testing of hypotheses; techniques for collecting data; measuring social variables; interpreting research findings; the relationship of theory and facts. Prerequisite: A distribution course in sociology. LEC

SOC 812 Analytic Methods in Sociology (3). Consideration of quantitative methods of analysis including both parametric and non-parametric techniques. Prerequisite: A course in statistics. LEC

SOC 813 Field Methods and Participant Observation (3-5). Will acquaint the student both theoretically and empirically with the procedures and logics of the research techniques employed by individuals or small research teams conducting qualitative fieldwork. Prerequisite: A distribution course in sociology. LEC

SOC 834 Health Services Research: Epidemiology, Evaluation, and Survey Methods (3). Students learn the logic, assumptions, designs, and procedures involved in conducting the major types of research found in the health services field. Students develop an informed basis for critically evaluating the methodological adequacy of research studies in the areas of descriptive and analytic epidemiology, program evaluation, and health-related survey research as well as working knowledge of the research process itself. Emphasis is placed on examining basic health services issues such as measuring quality of care, understanding the role of social factors in the etiology of disease, determining the health status and health needs of populations, and incorporating health services research into policy and decision-making. (Same as HP&M 821.) Prerequisite: PRE 710 or equivalent. HP&M 810 and HP&M 812 or consent of instructor. LEC

SOC 824 Health and Social Behavior (3). This course provides students with an analytic understanding of the organization, processes, and interpersonal behavior that characterizes contemporary health and health care. Emphasis is placed on examination and integration of conceptual frameworks and theories, and research findings bearing on behavioral/managerial health care contexts, authority relations in health care settings, models of illness behavior and health services utilization, the impact of organizational structure on employee and client attitudes and behavior, and the culture of professional medicine in relation to patient care. (Same as HP&M 835.) Prerequisite: HP&M 810 and HP&M 830 or consent of instructor. LEC

SOC 830 Latin American Society (3). Aspects of the social organization of main Latin American nations, including, e.g., race/ethnicity, social class, gender, urbanization,iction, and relations with the U.S. Emphasis on sociological theories of Latin American development. Prerequisite: A principal course in sociology or ANTH 108 or ANTH 308, plus junior-senior or graduate student standing. LEC

SOC 873 International Political Economy (3). Provides a broad survey of major developments in the field. Topics include the intellectual origins of international political economy; the historical evolution of the international system; North-South and Western trade, investment, and monetary relations; foreign aid, debt technology transfer, development, international economic institutions (e.g., International Monetary Funds, World Bank, Multinational Corporations, etc.). (Same as POLS 573.) LEC

SOC 875 The Politics of Globalization (3). The course will acquaint students with recent developments in the global economy, including its impact on politics and society. Topics include theories of globalization, the role of the nation-state and international agencies in the global economy, globalization and citizenship, globalization and democracy, and the rise of transnational social movements. LEC

SOC 891 Individual Master's Readings (1-6). Individual study of special topics in sociology. Topic, instructor, and hours of credit will be announced in the Timetable. May not be taken by those who have credit for SOC 892. LEC

SOC 892 Teaching Seminar (1-3). Seminar on sociology course design and development. Topics covered include syllabus design, exam strategies and design, course design, content of and approaches to teaching introductory and upper-level courses, program evaluation, assignment evaluation. Required of all teaching assistants assigned to courses in sociology. May not be repeated for credit toward graduate degree. LEC

SOC 899 Thesis (1-8). THE

SOC 900 Seminar on Special Topics in Theory: ____ (1-4). Each seminar will explore a problem or theme in sociological theory. Topic, instructor, and hours of credit will be announced in the Timetable. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 910 Seminar on Special Topics in Methods: ____ (1-4). Each seminar will explore problems of methods in sociology. Topic, instructor, and hours of credit will be announced in the Timetable. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 920 Seminar on Social Disorganization: ____ (1-4). Each seminar will explore problems of social disorganization. Topic, instructor, and hours of credit will be announced in the Timetable. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 970 Seminar on Special Topics in Social Conflict and Change: ____ (3). This course will explore the impact of social mobilization, social movements, and social protest on the United States. Prerequisite: Consent of instructor. LEC

SOC 975 Seminar on Social Problems: ____ (1-4). Each seminar will explore problems of social problems in sociology. Topic, instructor, and hours of credit will be announced in the Timetable. Seminars will be offered by different instructors on different topics, and a student may take more than one topic. LEC

SOC 999 Dissertation (1-12). THE
Spanish and Portuguese

Chair: Danny J. Anderson
Graduate Student Admissions: Lee Skinner
Director of Graduate Studies: Vicky Unruh
Wescoe Hall, 1445 Jayhawk Blvd., Room 3062
Lawrence, KS 66045-7590, www.ku.edu/~spanport

(785) 864-3851

Professors: Anderson, Unruh
Professors Emeriti: Brushwood, Chamberlin, Doudoroff, Johnson, Kuhnheim, Spires, Woodyard
Associate Professors: Mayhew, Rivera, Simões, Skinner
Associate Professor Emeritus: Weiss
Assistant Professors: Bayliss, Manning, Pérez, Rego, Rossomondo, Versteeg
Specialist: Postma-Carttar

The department offers a full graduate program leading to the M.A. and the Ph.D. degrees. Students who complete their graduate studies with the M.A. degree are well prepared to enter a variety of fields, including international business, teaching, and government. The Ph.D. program takes advantage of the literature specialties of the faculty, and Ph.D. recipients generally go on to university or college teaching.

A detailed description is available from the departmental office. This includes specific distribution requirements, fields of specialization, and information on the comprehensive examinations. Students should request information and application forms as early as possible, especially if they plan to apply for financial aid.

Submit your application to the Graduate School online at www.gradient.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Spanish and Portuguese
Wescoe Hall, 1445 Jayhawk Blvd., Room 3062
Lawrence, KS 66045-7590

M.A. Degree Requirements

The department offers the M.A. degree with a concentration in literature or language/literature/culture.

Admission

1. The applicant must hold (or anticipate completing by the time of admission) a B.A. or B.S. degree from an accredited U.S. college or university or the equivalent degree from a foreign university, must have 15 semester hours of literature courses at the survey level or above in Spanish or the equivalent of the undergraduate major in Spanish at KU (see below), and must have a minimum grade-point average of 3.0 on a 4.0 scale, both in Spanish and overall.

2. A reading knowledge of another foreign language, as approved by the department.

3. A general examination in the field of Hispanic literature, partly written and partly oral.

Language/Literature/Culture Concentration Requirements

1. A minimum of 36 hours of graduate credit, as listed below.

2. A general examination, partly written and partly oral, based on the appropriate department reading lists for this degree.

   (a) Language and Culture (12 hours), including courses in phonetics and the structure of Spanish if they have not been taken at the undergraduate level.

   (b) Literature (12 hours), including at least 3 credit hours of course work in each of the three major genres (fiction, theatre, poetry). One course in this category must be a seminar.

   (c) One additional course in the department (3 hours) in any field.

   (d) One graduate-level course (3 hours) in a second language (excluding PORT 611).

M.A. Degree Requirements

The department offers the M.A. degree with a concentration in literature or language/literature/culture.

Admission

1. The applicant must hold (or anticipate completing by the time of admission) an M.A. or M.S. degree from an accredited U.S. college or university or the equivalent degree from a foreign university; must have a minimum grade-point average of 3.0 on a 4.0 scale, both in Spanish and overall; and must meet the general requirements of the Graduate School.

2. Strong consideration is given to letters of recommendation, breadth and depth of preparation, and Graduate Record Examination scores, if available.

Requirements. Once admitted, the aspirant must (1) present a reading knowledge of two foreign languages, other than Spanish, appropriate to the specialization; (2) complete all course work prescribed by the advisory committee (this course work is to include a minimum of five seminars, at least four at KU, and a guideline of a minimum of 24 hours in Hispanic literatures at KU beyond the 30 hours required for the M.A. degree); (3) present a minor in a field other than Spanish or Spanish-American literature; (4) complete a minimum of two semesters of quarter-time teaching or one semester of half-time teaching in the Department of Spanish and Portuguese; (5) pass a comprehensive examination, partly written and partly oral; and (6) write and defend a dissertation. See also the Graduate School’s general requirements for the Doctor of Philosophy degree in the General Information chapter of this catalog.

Graduate Experience Abroad

Graduate students have the opportunity to teach and conduct research during the summer session in Guadalajara, Mexico; or Barcelona, Spain. The department also has a graduate student exchange agreement with the University of Santiago de Compostela, Spain.

Portuguese Courses

PORT 509 Phonetics (2).
PORT 540 Textual Analysis and Critical Reading (3).
PORT 547 Brazilian Studies: (3).
Crafton-Preyer Theatre has complete facilities for concerts, plays, operas, and musicals.

The M.F.A. in scenography is a comprehensive program encompassing scene, lighting, and costume design.

The Lied Center Series includes the Concert Series, Swarthout Chamber Music Series, New Directions Series, Broadway and Beyond Series, World Series, and the Lied Family Series, bringing outstanding performers to KU each year.

- **Spanish Courses**
  - SPAN 500 Hispanic Literature in Translation: (3).
  - SPAN 520 Structure of Spanish (3).
  - SPAN 522 Advanced Studies in Spanish Language: (3).
  - SPAN 540 Colloquium on Hispanic Studies: (3).
  - SPAN 550 Colloquium on Spanish Film (3).
  - SPAN 560 Colloquium on Latin American Folklore (3).
  - SPAN 568 Latin American Folklore (3).
  - SPAN 570 Studies in Hispanic Linguistics: (3).
  - SPAN 681 Language Teaching for Oral Proficiency (1).
  - SPAN 717 History of the Spanish Language (3). The phonological and lexical development of the Spanish language from spoken Latin to the present; major dialectal features. Prerequisite: A course in Spanish phonetics. LEC
  - SPAN 720 Syntax and Composition (3). Syntactical analysis of modern Spanish usage; principles of expository writing. Prerequisite: A course in advanced composition or structure, or graduate standing. LEC
  - SPAN 722 Special Topics in Spanish Literature: (3). Topics vary by semester. The course may be taken more than once, with full credit, provided there is no duplication in the material covered. Conducted in Portuguese. LEC
  - SPAN 730 Seminar in Portuguese Literature: (3). LEC
  - SPAN 770 Seminar in Brazilian Literature: (3). LEC

- **Portuguese Courses**
  - PORT 548 Portuguese Language and Brazilian Culture for Business (3).
  - PORT 560 Survey of Portuguese Literature (3).
  - PORT 565 Studies in Brazilian Film: (3).
  - PORT 611 Accelerated Basic Portuguese for Spanish Speakers (3).
  - PORT 612 Accelerated Basic Portuguese for Spanish Speakers II (3).
  - PORT 740 Brazilian Culture (3). A survey of Brazilian literature from 1500 to present. Prerequisite: A fourth semester course in Portuguese or consent of instructor. LEC
  - PORT 742 The Brazilian Novel (3). The development of the novel in Brazil and analysis of representative works of the nineteenth and twentieth centuries. Prerequisite: A fourth semester course in Portuguese or consent of instructor. LEC
  - PORT 746 The Brazilian Short Story (3). The development of the short story in Brazil and analysis of representative works of the nineteenth and twentieth centuries. Prerequisite: A fourth semester course in Portuguese or consent of instructor. LEC
  - PORT 750 Brazilian Poetry (3). A study of the principal movements and an analysis of representative works from the colonial period to the present. Emphasis on modernists and post-modernists. Prerequisite: A fourth semester course in Portuguese or consent of instructor. LEC
  - PORT 760 Contemporary Brazilian Literature (3). A survey of Brazilian cultural expressions and literature in the Twentieth Century. Conducted in Portuguese. Prerequisite: PORT 216 or consent of instructor. LEC
  - PORT 780 Special Readings: Brazilian Literature (1-3). May be taken more than once; total credit not to exceed five hours. Directed private readings with conferences with instructor. Prerequisite: Consent of department. RSH
  - PORT 785 Special Topics in Brazilian Cultural and Literary Studies: (3). Topics vary by semester. The course may be taken more than once, with full credit, provided there is no duplication in the material covered. Conducted in Portuguese. LEC

- **Additional Courses**
  - SPAN 747 The Spanish Theatre before Lope de Vega (3). Prerequisite: A course in Spanish drama of the Golden Age. LEC
  - SPAN 744 Spanish Lyric Poetry of the Golden Age (3). A survey of Spanish poetry from Garcilaso de la Vega through Quevedo including both major and minor poets. Prerequisite: A survey level course on Spanish literature through 1700. LEC
  - SPAN 745 Don Quixote (3). Linguistic and literary study. Examination of traditional interpretations. The life and thought of Cervantes. Collateral readings. Prerequisite: A survey of Spanish literature through the Golden Age. LEC
  - SPAN 747 The Spanish Theatre before Lope de Vega (3). Prerequisite: A course in Spanish drama of the Golden Age. LEC
  - SPAN 752 Spanish Literature of the 18th Century (3). The neo-classic movement; the traditionalist reaction; the beginnings of Romanticism. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC
  - SPAN 754 Romanticism (3). The development of the Romantic movement in Spain. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC
  - SPAN 755 19th-century Spanish Novel (3). The rise and development of realism. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC
  - SPAN 760 19th-century Spanish Drama (3). A survey of the major playwrights of the 19th century in Spain: Neo-Classicism, Romanticism, Costumbrismo, Realismo (Alta Comedia), Neo-Romanticism, and the innovations of Galdos and Benavente. Prerequisite: A survey course in Spanish literature from the 18th century to the present. LEC
  - SPAN 761 20th-century Spanish Drama (3). A survey of major plays and playwrights of 20th century Spain with reference to critical theory of text as literature and performance. LEC
  - SPAN 762 The Spanish Novel Since the Civil War (3). A study of the major works and movements occurring since the Spanish Civil War. LEC
  - SPAN 764 Modern Spanish Poetry (3). Modern poetry of Spain, beginning with Becquer and ending with the “Generation of the 1929’s.” Close study of the works of the major poets; readings in poetic theory. Prerequisite: A general survey course of the literature of Spain of the 18th, 19th, and 20th centuries. LEC
  - SPAN 765 Contemporary Spanish Poetry (3). Contemporary poetry of Spain, beginning with the “Generation of the 1929’s” and including the post-Civil War period. Close study of the work of several poets; readings in poetic theory. Prerequisite: A general survey course in the literature of Spain since the Golden Age. LEC
  - SPAN 766 The Spanish Modernist Novel (3). A diachronic study of the syntax and morphology of Spanish from the thirteenth century to the present; sound change and orthography; evolution of literary styles. Prerequisite: A course in Spanish phonetics. LEC
  - SPAN 770 Spanish-American Drama (3). Study of several exceptional plays of 20th century Spain. Spanish American theatre, and political aspects. LEC
  - SPAN 771 Spanish-American Literature (3). A course by region or country (Mexican literature, Cuban literature, Argentine literature, Caribbean literature, etc.) of Spanish American literature from the beginning to the present, with emphasis on the 19th and 20th centuries. Course title will vary by country or region. Prerequisite: A survey course in Spanish American literature. LEC
  - SPAN 774 Spanish-American Poetry (3). Major poets, since 1914, with emphasis on Vallejo, Borges, Neruda, and Paz. LEC
  - SPAN 776 Spanish-American Short Story (3). A study of aspects of the short story tradition in Spanish America from its origins to the present. Topics may vary. Prerequisite: A survey course in Spanish American literature. LEC
  - SPAN 781 Spanish-American Colonial Studies (3). A course of the intellectual life and literary culture of Spanish America, from the Iberian-colonial encounter until Independence. Prerequisite: A survey course in Spanish American Literature. LEC
  - SPAN 782 Spanish-American Prose Fiction: (3). A survey by region or country (Mexican Prose Fiction, Cuban Prose Fiction, Argentine Prose Fiction, Caribbean Prose Fiction, etc.) of Spanish American Prose Fiction from the beginning to the present, with emphasis on the 19th and 20th centuries. Course title will vary by country or region. Prerequisite: A survey course in Spanish American literature. LEC
  - SPAN 784 Spanish-American Modernism (3). A study of the poetry and prose of the modernist movement in Spanish America. Prerequisite: A survey of Spanish American literature from Marit to the present. LEC
Speech
See Communication Studies.

Speech-Language-Hearing: Sciences & Disorders
For a description of master’s and doctoral degree programs, see Communicative Disorders: Intercampus Program in this chapter of this catalog.

For Audiology courses, see Communicative Disorders: Intercampus Program in the School of Allied Health chapter. For Speech-Language Pathology courses, see Communicative Disorders: Intercampus Program in this chapter.

Systematics and Ecology
See Biological Sciences: Ecology and Evolutionary Biology.

Theatre and Film
Chair: Chuck Berg, cberg@ku.edu
Murphy Hall, 1530 Naismith Drive, Room 356
Lawrence, KS 66045-3102, www.ku.edu/~kuthf
(785) 864-3511

Director of Graduate Studies: Tamara Falicov
Oldfather Studios, 1621 West Ninth St.
Lawrence, KS 66040, (785) 864-1353, tfalicov@ku.edu

Professors: Berg, Gronbeck-Tedesco, Meier, Reaney, Small, Unruh, Wright

Professors Emeriti: Davis, Findlay, Kuhlke, Linton, Willis

Associate Professors: Ajayi-Soyinka, Christilles, Falicov, Klein, Preston, Ringer, Staniunas, Tibbetts

Assistant Professors: Baskett, Bennett, Jacobson, Leon, Willmott

Affiliated Lecturer: Ukpokodu

Admission
Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to:

The University of Kansas
Department of Theatre and Film
Murphy Hall, 1530 Naismith Drive, Room 356
Lawrence, KS 66045-3102

M.A. Degree Requirements

Normally candidates for the master’s degree in theatre studies elect one of these emphases: general theatre studies, children’s theatre, international theatre, or film and video. Whatever the emphasis, the candidate’s program begins with the core requirements listed below and culminates in a thesis. To be admitted, a student must have a cumulative undergraduate grade-point average of at least 3.2 and at least 3.5 in previous graduate work and a Graduate Record Examination score of at least 600 (verbal), 500 (quantitative), and 600 (analytical). To complete the M.A., the student must sustain a grade-point average of 3.0 or higher through 33 graduate credit hours.

M.A. in Theatre Studies (33 hours)

Department Core. To be taken the first semester in residence:

TH&F 800 Introduction to Graduate Study in Theatre and Film . 3

Theatre Studies Core. Methodology:

TH&F 702 Graduate Seminar in: (Theatre Historiography) . 3
TH&F 702 Graduate Seminar in: (Theory and Criticism) . 3

Production. Choose two courses in either directing or scenography:

A. Directing

TH&F 609 Play Directing . 3
TH&F 715 Problems and Techniques of Direction . 3
TH&F 815 Advanced Play Production . 3

B. Scenography

TH&F 516 Scenic Painting Techniques . 3
TH&F 517 Computer-aided Design for Theatre, Film, and Video . 3

TH&F 518 Scenography I . 3
TH&F 519 Scenography II . 3
TH&F 618 Scenography III . 3
TH&F 619 Scenography IV . 3

TH&F 972 Seminar: Spanish-American Drama: 3
TH&F 976 Seminar: Spanish-American Short Story: 3
TH&F 978 Seminar: Spanish-American Essay: 3

TH&F 970 Seminar: Spanish-American Drama: 3
TH&F 974 Seminar: Spanish-American Poetry: 3
TH&F 976 Seminar: Spanish-American Short Story: 3
TH&F 978 Seminar: Spanish-American Essay: 3

TH&F 999 Dissertation (1-12). SEM

Speech

See Communication Studies.
Ph.D. Degree Requirements

The Ph.D. in theatre and film is an academic degree, but students must demonstrate competence in at least one production area. To be admitted, a student must have a Graduate Record Examination score of at least 600 (verbal), 500 (quantitative), and 600 (analytical); a grade-point average of at least 3.2 for undergraduate and at least 3.5 for graduate work; and a master’s degree acceptable to the graduate faculty. Deficiencies in a student’s background may require make-up work.

Core Requirement

ADVS 730 Directed Reading in Design

Concentration Requirements

TH&F 599 Script Analysis
TH&F 518 Scenography I
TH&F 519 Scenography II
TH&F 618 Scenography III
TH&F 619 Scenography IV
TH&F 719 M.F.A. Production Seminar
TH&F 819 Advanced M.F.A. Production Seminar
TH&F 801 Professional Development Seminar
TH&F 892 Master’s Projects
TH&F 899 Master’s Thesis

Electives: no limit, but a minimum of 21 hours for a total of 60 hours

Ph.D. Degree in Theatre (60 hours not including language proficiency). Applicants must hold the M.A. in theatre studies or a related field acceptable to the department. Depending on background, students may have to make up some work from the M.A. including courses in the methodology sequence below. Normally, such make-up work does not count toward the Ph.D.

Core Requirements

(12 hours). In consultation with an adviser, students choose from among departmental courses in theatre history, dramatic literature, theory, and criticism.

Elective Requirements

(9 hours). Elective courses focus on the academic study of history, international cinema, popular culture, and film theory.
student’s special interest. The adviser may increase the number of hours depending on the student’s academic needs.

**Production Requirements** (6 hours). Production courses give students an understanding of the production process in making film, video, or animation pieces. Upon graduation, doctoral students will be able to perform as competent artists as well as research scholars. Production courses are selected with a graduate adviser to reflect the student’s special interest. The adviser may increase the number of hours depending on the student’s academic needs.

**Secondary Field Requirements** (9 hours). Students choose 9 hours at the graduate level from outside the department to assist them in writing the dissertation. Courses are related to the student’s proposed specialization. Examples include English, history, women’s studies, American studies, education, social welfare, etc.

**Foreign Language or Other Research Skills Requirement.** The student must demonstrate proficiency in one foreign language or competence for use as research skills in two foreign languages. For one of the languages under the second option, the student may substitute a research skill pertinent to the specialty (e.g., computer language, research methods, American Sign Language). Courses may be taken within or outside the department.

**Comprehensive Examination.** Two publishable papers are due at the time of the examination. The examination includes on-site written responses to questions in history, theory, production, literature/criticism, and the student’s specialization, followed by an oral examination.

**Dissertation** (18 hours). The finished dissertation must constitute a palatable contribution to knowledge in the candidate’s chosen field. Following its completion, an oral defense must be held no less than four weeks before the deadline for graduation. The committee consists of one chair, three departmental members, and an outside member.

**Ph.D. in Film/Media Program of Study. Core** (24 hours)

- TH&F 700 Introduction to Graduate Study in Theatre and Film ... 3
- TH&F 801 Professional Development Seminar (1 hour/three semesters) ... 3
- TH&F 833 Survey of Documentary and Experimental Film and Media ... 3
- TH&F 844 Documentary Film and Media Theory ... 3
- TH&F 865 Contemporary Film and Media Theory ... 3
- TH&F 902 Film Seminar in: (Special Topics) ... 3
- One graduate-level non-Western/indigenous film course ... 3
- Eighty hours chosen in consultation with the adviser) .......... 9
- TH&F 885 Latin American Film (3)
- TH&F 886 Asian Film (3)
- TH&F 902 Film Seminar in: (Special Topics) (3)
- TH&F 908 Investigation and Conference (3)
- Others to be selected from semester offerings at the graduate level

**Production** (6 hours) ................................. 6

- TH&F 702 Graduate Seminar in: (Post-Colonial Theatre, Visual Theatre, Theatre Historiography, Semiotics of Performance, etc.)

**Theatre and Film Courses**

- TH&F 501 Colloquium on American Theatre/ Film (1)
- TH&F 506 Psychology and the Actor (3)
- TH&F 509 Script Analysis (3)
- TH&F 512 A Vocal Approach to the Classics (3)
- TH&F 516 Scenic Painting Techniques (3)
- TH&F 517 Computer-aided Design for Theatre, Film, and Video (3)
- TH&F 518 Scenography I (3)
- TH&F 519 Scenography II (3)
- TH&F 520 History of Period Style I (3)
- TH&F 521 History of Period Style II (3)
- TH&F 525 Theatre in Western Civilization to 1642 (3)
- TH&F 526 Theatre in Western Civilization from 1642 (3)
- TH&F 527 Asian Theatre and Film (3)
- TH&F 528 History of American Theatre and Drama (3)
- TH&F 529 Race and the American Theatre (3)
- TH&F 530 African Film and Video (3)
- TH&F 576 Animation (3)
- TH&F 583 Film Theory (3)
- TH&F 584 Film Theory and Criticism, 1960-Present (3)
- TH&F 585 Latin American Film (3)
- TH&F 586 Asian Film (3)
- TH&F 587 Studies in Approaches to Classical Film (3)
- TH&F 593 Experimental Film and Video (3)
- TH&F 599 Special Topics in Scenography (1-6)
- TH&F 603 Theatre for Young Audiences (3)
- TH&F 604 Drama With Young People (1-3)
- TH&F 609 Play Directing (3)
- TH&F 617 Computer-aided Design for Theatre, Film, and Video II (3)
- TH&F 618 Scenography III (3)
- TH&F 619 Scenography IV (3)
- TH&F 626 Myth and the Dramatist (3)
- TH&F 675 Advanced Video Production (3)
- TH&F 676 Advanced Film Production (3)
- TH&F 677 Advanced Audio Production (3)
- TH&F 680 Film and Video Performance Techniques (3)
- TH&F 684 Documentary Film and Video (3)
- TH&F 686 American Film Criticism (3)
- TH&F 702 Graduate Seminar in: ... (3)
- TH&F 703 Readings in Dramatic Literature (1-3)
- TH&F 704 Study Abroad Topics in: (1-4)
- TH&F 707 Theatre or Film Internship (3-12)
- TH&F 710 Styles of Acting: Classical Japanese (3)
- TH&F 711 Styles of Acting: Shakespearean (3)
- TH&F 712 Styles of Acting: Restoration and 18th-century English (3)
- TH&F 713 Styles of Acting: Oriental (3)
- TH&F 714 Study in Masks and Martial Arts (3)
- TH&F 715 Problems and Techniques of Direction (3)
- TH&F 719 M.F.A. Production Seminar (3)
or more elements in a production to be mounted on one of our stages. Weekly critique and discussion of solutions to practical design problems from conception through execution may be repeated for a total of more than six hours credit. Prerequisite: Consent of instructor. LEC

TH&F 725 Russian Theatre and Drama from Stanislavski and Chekov to the Present (3). A study of the development of Russian theatre and dramatic literature from 1880 to the present. Lectures and reading in English. Same as SLAV 5522. LEC

TH&F 773 Problems in Basic Screenwriting (3). The principles of screenwriting are developed through scene writing and analysis culminating in the writing and structure of a full-length, three act screenplay. In addition to the class sessions taught with TH&F 774 Basic Screenwriting, separate consultations and specific research assignments for graduate students in TH&F 773 are also required. LEC

TH&F 775 Problems in Basic Video Production (3). Theory and practice of single-camera video production with emphasis on preproduction planning, shooting, directing, lighting, camera operation and audio. In addition to the class sessions taught with TH&F 775 Basic Video Production, separate consultations and specific research assignments for graduate students in TH&F 775 are also required. Lecture-laboratory. LEC

TH&F 776 Problems in Basic Film Production (3). An introduction to film technique and structures, requiring construction of brief, individually produced fictive-narrative films employing classical continuity. In addition to the class sessions taught with TH&F 775 Basic Film Production, separate consultations and specific research assignments for graduate students in TH&F 776 are also required. Lecture-laboratory. LEC

TH&F 800 Introduction to Graduate Study in Theatre and Film (3). Major emphasis on the principles of research, bibliographical data, and research methods useful in theatre, film, and television. The course should be taken at the beginning of the graduate student's program. LEC

TH&F 801 Professional Development Seminar (1). A series of weekly lectures/discussions led by invited guests both from the University and outside on various topics central to the graduate study of theatre and film. RSH

TH&F 802 Master's Projects (3-6). Advanced creative projects which may be elected by master's degree candidates in lieu of thesis. RSH

TH&F 803 Summer Theatre: Graduate (1-3). Provides graduate level experience in a wide range of theatre activity related to the summer theatre production or productions. Work may include activity in the following areas: acting, directing, design, technical theatre, voice and/or movement. Specialized skills are developed through individual classes, production preparation, and performance. Prerequisite: TH&F 715. FLD

TH&F 810 Advanced Studies in Japanese Acting (3). A continuation of TH&F 710. In addition to continued study and practice of classical Japanese acting styles, the application of Japanese classical theatrical practice to the production of Western plays will be explored. Prerequisite: TH&F 710. LEC

TH&F 815 Advanced Play Production (1-3). Individually supervised directing of theatre pieces for public presentation. In special cases credit may be given for musical direction, choreography, or stage management. Prerequisite: TH&F 715. FLD

TH&F 817 Theory of Acting and Directing (3). Readings, lectures, discussions and papers on acting and directing theory; is concerned with the divergence between representational and representational acting methods and the emergence of presentational acting. Prerequisite: TH&F 699 or TH&F 715. LEC

TH&F 818 Scenography V (3). Individual problems in scenography. Advanced projects tailored to the needs of the individual student. Prerequisite: TH&F 619. LEC

TH&F 819 Advanced M.F.A. Production Seminar (5). Continuation of TH&F 719. May be repeated for a maximum of six hours credit. Prerequisite: Six hours of TH&F 719 and consent of instructor. LEC

TH&F 826 Seminar in African Theatre (3). A study of developments in African theatre in the 20th Century focusing on themes, concepts, styles, and critical perspectives. The course will investigate the idea of "African theatre" and identify different periods and movements within national and international contexts. The analysis of representational works and authors will be grounded within appropriate theoretical frameworks. LEC

TH&F 827 Japanese Theatre and Film (3). Study of traditional and modern Japanese theatre and film focusing on genres, history and production conventions. LEC

TH&F 828 Seminar in American Theatre and Drama to 1895 (3). Intensive investigation of selected topics. Individual study emphasized. LEC

TH&F 829 Seminar in American Theatre and Drama from 1895 (3). Intensive investigation of selected topics. Individual study emphasized. LEC

TH&F 862 Survey of Film and Media History (3). This seminar will be primarily international in scope and will concentrate on the following: technological and production issues relating to the transition from 1927-1931 of silent to sound film; the constructions of national identity, including those of recently emerging cultures; a comparison and contrast of the censorial agencies in America and abroad; and current revisionist control over film and media history. LEC

TH&F 863 Survey of Document and Experimental Film and Media (3). Surveys the important historical and theoretical issues pertinent to both the documentary and experimental approaches as expressed in film, video and new technologies. Includes major documentary and experimental genres, directors, national schools, artistic movements, and landmark works. May be repeated for a total of more than six hours credit. Prerequisite: Consent of instructor. LEC

TH&F 864 Classical Film and Media Theory (3). This seminar is a comprehensive survey of the major classical film and media theories and theorists, such as Munsterberg, Eisenstein, Arnheim, Bazin, and Adorno. Organized around specific questions, e.g.: What qualifies differentiable film and media from other art and communication media? What roles does film and media share with other art and communication forms? What qualities differentiate film from other forms of media such as television? Readings from primary sources stressed. Class discussion, individual research papers. LEC

TH&F 865 Contemporary Film and Media Theory (3). This seminar is a study of the theories applied to the study of film and media since the 1970s moving through structuralism, and into the post-classical, postmodern or poststructural, and beyond. Within these broad paradigms some of the theories examined in depth are semiotics, Marxism, cinematic apparatus, feminist film theory, reception theory, new media and virtual reality. LEC

TH&F 873 Problems in Intermediate Screenwriting (3). The principles of screenwriting are developed through scene writing and analysis culminating in the writing and structure of a full-length, three act screenplay. In addition to the class sessions taught with TH&F 473 Intermediate Screenwriting, separate consultations and specific research assignments for graduate students in TH&F 873 are also required. LEC

TH&F 875 Problems in Intermediate Video Production (3). Theory and practice of multiple-camera video production with emphasis on preproduction planning, scripting, directing, lighting, camera operation and audio. In addition to the class sessions taught with TH&F 775 Intermediate Video Production, separate consultations and specific research assignments for graduate students in TH&F 875 are also required. Lecture-laboratory. LEC

TH&F 876 Problems in Intermediate Film Production (3). Further exploration of single-camera video production course with emphasis on the writing and structure of a full-length, three act screenplay. In addition to the class sessions taught with TH&F 476 Intermediate Film Production, separate consultations and specific research assignments for graduate students in TH&F 876 are also required. LEC

TH&F 880 Development of American Popular Culture of the 19th Century (3). Intensive interdisciplinary examination of popular culture forms and their relationships with the social, political, and economic dynamics of America in a specific decade with emphasis on film, broadcasting, music, and literature (including magazines and newspapers), and the graphic arts. Decade to be studied changes as resources and needs develop. LEC

TH&F 881 Development of the Silent Film (3). Intensive study of the artistic, economic, and sociological development of the silent narrative film with an emphasis on the development of the American studio system, German Expressionism, and Soviet Expressive Realism. LEC

TH&F 882 Development of the American Sound Film (3). Intensive study of the artistic, economic, and sociological development of the American sound film with an emphasis on 1930s film, the studio system, major directors, genres, and the impact of television. LEC

TH&F 883 Development of the International Sound Film (3). Intensive study of the artistic, economic, and sociological development of the international sound film with emphasis on the cinema of England, France, Italy, Germany, Sweden, and Eastern Europe. LEC

TH&F 884 Development of African-American Images in Film (3). A history and critical assessment of the development of diverse images of African-Americans in American cinema and the impact of those images of American society. Screenings of feature and independent films, including those by African-Americans. In addition to the lecture/screening sessions taught in tandem with TH&F 384, a separate discussion section and specific research assignments for graduate students enrolled in TH&F 884 are also required. LEC

TH&F 885 Latin American Film (3). The course explores the national cinemas and film industries of various nations in Latin America, as well as films made by indigenous and Chicanos/a filmmakers. Films are analyzed both as artistic works (formal qualities, cinematic styles, and influences) and as documents that provide windows to the socio-historical context of the nation. The course focuses on the political-economic factors surrounding the production of Latin American national cinema (the role of the state, co-productions, film markets). LEC

TH&F 886 Asian Film (3). Seminar on various national film cultures of China, Japan, Korea, India, Thailand, Indonesia, Malaysia, Vietnam, and the Philippines focusing on the role of cultural, economic and political issues on each film industry. Class discussion, reports, and individual research papers. LEC

TH&F 887 Film and the Public (3). A study of the actual and implied responsibilities of film producers and the impact of the cinema on conformations, self-regulatory codes, and the critical literature of the field. Prerequisite: Consent of instructor. LEC

TH&F 888 Special Problems in Film History and Criticism (1-3). Each. May be taken concurrently with graduate internship or employment with an approved firm or video production company. Discussion and critical evaluation of work.
experience with faculty adviser and job supervisor. Prerequisite: Consent of Theatre and Film graduate faculty.

**TH&F 895 Intensive Film Project Seminar** (1-4). The student plans and executes an intensive special project which requires the professional skills of investigation and performance appropriate to radio, television and/or film. May be repeated for credit up to a maximum of six credit hours. (This seminar is to the special project program what "thesis" is to the traditional program.) RSH

**TH&F 897 Practicum in Film** (1-3). Various approaches to the illustration of principles of production in film and/or video through the supervision of laboratory exercises and subsequent evaluation by the Theatre and Film graduate faculty. FLD

**TH&F 898 Investigation and Conference (for Master's Students)** (1-8). Directed research and experimentation in theatre and/or film/video. Limited to eight hours credit toward the Master's degree. RSH

**TH&F 899 Master's Thesis** (1-6). Thesis approved by the instructor. LEC

**TH&F 901 Theatre Seminar in: ____** (3). A graduate seminar devoted to selected historical, theoretical, or critical issues in theatre. Prerequisite: Consent of instructor. LEC

**TH&F 902 Film Seminar in: ____** (3). A graduate seminar devoted to selected historical, theoretical, or critical issues. Prerequisite: Consent of instructor. LEC

**TH&F 915 Modern Theatre and Drama** (3). A study of the movements in playwriting and theatrical production in Europe and America from the mid-19th century to World War II. Prerequisite: TH&F 525 and TH&F 526 or comparable courses. LEC

**TH&F 916 Postmodern Theatre and Drama** (3). A study of the movements in playwriting and theatrical production in Europe and America from the mid-19th century to World War II. Prerequisite: TH&F 525 and TH&F 526 or comparable courses. LEC

**TH&F 917 Dramatic Theory I** (3). A survey of dramatic theory from Plato to Lessing. LEC

**TH&F 918 Dramatic Theory II** (3). A survey of dramatic theory from Leavis to Lessing. LEC

**TH&F 919 Dramatic Theory Seminar** (3). Study in depth of selected theorists. Offered as determined by faculty availability and student interest. LEC

**TH&F 920 Practicum in Criticism** (3). Contemporary approaches to theatre and drama criticism, including applications to film. Emphasis on actual practice, using a variety of critical methods. FLD

**TH&F 922 History of the Theatrical Event** (3). Detailed examination of selected theatrical pieces with emphasis placed upon the relationship of nontextual elements to the event. Prerequisite: TH&F 525 and TH&F 526 or equivalent. LEC

**TH&F 998 Investigation and Conference (for Doctoral Students)** (1-8). Directed research and experimentation in theatre and/or film. Limited to eight hours credit toward the doctoral degree. RSH

**TH&F 999 Doctoral Dissertation** (1-12). THE

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**Turkish**

See Slavic Languages and Literatures.

**Ukrainian**

See Slavic Languages and Literatures.

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**Women's Studies**

Chair: Ann E. Cudd

Bailey Hall, 1440 Jayhawk Blvd., Room 213

Lawrence, KS 66045-7574, www.ku.edu/~wsku

(785) 864-2311

Professors: Cudd, Muehlenhard, Schofield

Associate Professors: Ajayi-Soyinka, Bayard de Volo

Assistant Professors: Jenkins, Vicente

Additional Graduate Faculty: Albrecht, Anatol, Branscombe, Caminero-Santangelo, Carlin, Childs, Conrad, Davidson, Elliott, Fischer, Fourny, Fowler, Gerner, Ginther, Harkess, Harris, Hartnett, Jewers, Kessler, Kuznesof, Lieberman, MacGonagle, Mack, Nagel, Nell, Peterson, Postmus, Preston, Rausch, Sivian, Sitar, Stanishian, Sprague, Tucker, Tuttle, Unruh, Zimdars-Swartz, Zimmerman

The Women's Studies Program supports interdisciplinary research on women and gender and administers an interdisciplinary program leading to a Graduate Certificate in Women's Studies. Additional cross-referenced courses are available. Students may pursue the graduate certificate in addition to a graduate degree or as a stand-alone program.

**Admission**

Admission requires a bachelor's degree and acceptance by the Graduate School.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send the application (paper or online), application fee, GRE scores and two sets of official transcripts to:

**The University of Kansas**

Graduate Application Processing Center

1450 Jayhawk Blvd., Room 313

Lawrence, KS 66045-7535

Send all other requested application materials to:

**The University of Kansas**

Women's Studies Program

Bailey Hall, 1440 Jayhawk Blvd., Room 213

Lawrence, KS 66045-7574

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**Graduate Certificate Requirements**

The graduate certificate requires completion of 12 credit hours of graduate work, including WS 801

Women and Gender Studies: Theory and Methods; WS 898 Research Colloquium; and two 3-hour electives from two different disciplines, chosen from a list of recommended graduate courses or approved by the graduate director.

**Required Graduate Courses** (6 credit hours).

- WS 801 Women and Gender Studies: Theory and Methods ----------- 3
- WS 898 Research Colloquium: --------------------------------------------- 3

**Recommended Graduate Electives** (6 credit hours).

- WS 510/AMS 510/HIST 530 History of American Women: Colonial Times to 1870
- WS 511/AMS 511/HIST 531 History of American Women: 1870 to Present
- BS 512/AMS 512/HIST 532 History of Women and Work in Comparative Perspective
- WS 520 Women and Violence
- WS 549/HIST 649 History of Feminist Theory
- WS 560/AAAS 560 Race, Gender and Post-colonial Discourses
- WS 562/POLS 562 Women and Politics
- WS 580 Feminism and Anthropology
- WS 600/POLS 600 Contemporary Feminist Political Theory
- WS 601 Seminar in Women's Studies
- WS 646/HIST 646 Witches in European History and Historiography
- WS 651/POLS 651 Women and Politics in Latin America
- WS 660 Human Reproduction: Culture, Power, and Politics
- WS 665 Women, Health, and Healing in Latin America
- WS 696 Studies: ---
- WS 701 Seminar in: ____
- WS 789/ANTH 789 Anthropology of Gender: Advanced Seminar in the Four Fields
- WS 797 Directed Readings
- WS 873/AMS 873/HIST 873 Seminar in United States Women's History
- COMS 552 The Rhetoric of Women's Rights
- COMS 559/COMS 595 Seminar in: Women as Political Communicators
- EALC 573 Love, Sexuality, and Gender in Japanese Literature
- ENGL 572 Women and Literature: Women in Victorian England
- ENGL 572 Women and Literature: Women's Autobiography and Bildungsroman
- ENGL 709 Critical Theory: Problems and Principles: Feminist Theory/ Women's Texts
- ENGL 970 Seminar in American Literature: Edith Wharton and Willa Cather
- HIST 233 European Art 1789-1848: Gender and Revolution
- HIST 986 Colloquium in United States Women's History

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**THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG**
Women’s Studies

HIST 973 Seminar in United States Women’s History
HP&M 620 Women and Health Care
PSY 660 Human Reproduction: Culture, Power, and Politics
REL 672 Mother as Religious Metaphor
REL 677 Women in Christianity
REL 875 Topics in Religion and Society: Women and Religion
SOC 601 Introduction to Feminist Social Theory
SOC 617 Women and Health Care
SOC 623 Women and Work
SOC 722 Sociology of Gender
SOC 780 Advanced Topics in Sociology: Women of the Third World
SOC 808 Feminist Theories
SW 874 Social Work Practice with Women
TH&F 702 Graduate Seminar in: Representation of Race, Class, and Gender in Visual Culture

KW set a record of $274 million for total research expenditures in fiscal year 2004, an increase of 6.2 percent from $258 million in total expenditures in fiscal year 2003.

Women’s Studies Courses

WS 510 History of American Women: Colonial Times to 1870 (3).
WS 511 History of American Women: 1870 to Present (3).
WS 512 History of Women and Work in Comparative Perspective (3).
WS 513 Modern American Women in Film and Literature (3).
WS 520 Women and Violence (3).
WS 549 History of Feminist Theory (3).
WS 560 Race, Gender, and Post-colonial Discourses (3).
WS 562 Women and Politics (3).
WS 563 Seminar in Feminism and Anthropology (3).
WS 600 Contemporary Feminist Political Theory (3).
WS 601 Seminar in Women’s Studies (3).
WS 646 Witches in European History and Historiography (3).
WS 650 Service Learning in Women’s Studies (3).
WS 651 Women and Politics in Latin America (3).
WS 653 Gender, War, and Peace (3).
WS 665 Women, Health, and Healing in Latin America (3).
WS 696 Studies in: _____ (3).
WS 701 Seminar in: _____ (3). A research seminar in women’s studies. Instructor and topic will vary. LEC
WS 789 Anthropology of Gender: Advanced Seminar in the Four Fields (3). This seminar is intended primarily for graduate students in anthropology or other disciplines who share an interest in any of the subdisciplines of anthropology (archaeology, linguistics, biological anthropology, and sociocultural anthropology) and/or anthropological theories and methods. Undergraduates pursuing Honors or other major research projects are also encouraged to participate. Students will receive training in the contemporary theories, research, and pedagogies informing the anthropology of gender. Class participants will explore how these materials intersect with their current thesis or research projects and develop syllabi specific to their subdiscipline. (Same as ANTH 789). Prerequisite: Permission of instructor. LEC
WS 797 Directed Readings (1-3). Directed reading in an area of women’s studies in which there is no appropriate course in the offerings of the Women’s Studies Program, but in which there is a member of the cooperating graduate faculty competent and willing to direct the program of study. RSH
WS 801 Women and Gender Studies: Theory and Methods (3). This course will be intensive interdisciplinary overview of the major theories and research approaches in literature on women and gender. The topics covered will include the following: 1) an overview of feminist theories; 2) an overview of how feminist theories can be integrated with research methods in various disciplines; and 3) examples of applications of feminist theories and methods to specific content areas. Open only to graduate students. LEC
WS 835 Colloquium in the History of Gender (3). This colloquium will cover theoretical and topical readings on the history of manhood, womanhood, and gender systems. (Same as AMS 835 and HIST 895) LEC
WS 836 Colloquium in United States Women’s History (3). This colloquium will cover theoretical and topical readings on the history of women in the United States from the pre-contact period to the present. It is designed to familiarize students with the most important and current historiography in the field. (Same as AMS 836 and HIST 896) LEC
WS 837 Comparative Colloquium in Women’s History (3). This colloquium will approach the history of women from a comparative perspective through theoretical and topical readings on women in at least two different cultures. (Same as AMS 837 and HIST 897) LEC
WS 873 Seminar in United States Women’s History (3). This research seminar will focus on the history of women in the United States from the pre-contact period to the present. Students will research and write a paper using primary sources, and present those papers to the seminar for evaluation. (Same as HIST 973 and AMS 973) LEC
WS 880 Advanced Feminist Anthropology: _____ (3-6). Intensive consideration of special problems in feminist anthropology. Topics for the semester to be announced. May be repeated for a total of six hours credit. (Same as ANTH 880). Prerequisite: Permission of instructor. LEC
WS 898 Research Colloquium (3). This course is the “capstone” to the Women’s Studies Graduate Certificate program. Members of the seminar will produce a major paper and will share their research. During the first part of the term a small number of visitors (professors at KU and/or visiting speakers from other universities) will be invited to assign readings and subsequently present their work on women and gender. Students will be expected to attend the Gender Seminar of the Hall Center for the Humanities. Prerequisite: WS 801 and at least 3 hours of other graduate work in the Women’s Studies graduate certificate program, or by special permission. LEC

Zoology

See Biological Sciences: Ecology and Evolutionary Biology.
School of Medicine

Barbara Atkinson, Executive Dean
Mail Stop 1049, KU Medical Center
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/som/som.html

Combined Medical & Graduate School Degrees ........................................... 321
Interdisciplinary Graduate Program in Biomedical Sciences ...................... 321
Anatomy & Cell Biology ................................................................. 321
Admission ................................................................. 322
M.A. Degree Requirements .................................................. 322
Ph.D. Degree Requirements .................................................. 322
Requirements ................................................................. 322
Foreign Language or Research Skills ........................................ 322
Teaching Expertise ............................................................... 322
Dissertation ................................................................. 322
Anatomy Courses ................................................................. 322
Biochemistry & Molecular Biology .............................................. 323
M.S. Degree Requirements .................................................. 323
Prerequisites ................................................................. 323
Ph.D. Degree Requirements .................................................. 323
Prerequisites ................................................................. 323
Course Requirements .......................................................... 324
Foreign Language or Research Skills ........................................ 324
Examinations ................................................................. 324
Dissertation ................................................................. 324
Teaching Experience ............................................................... 324
M.D./Ph.D. Combined Degree Requirements ..................................... 324
Biochemistry Courses ............................................................. 324
Clinical Research ............................................................. 325
Clinical Research Admission .................................................... 325
Clinical Research M.S. Degree Requirements .................................... 325
Courses ................................................................. 325
Health Policy & Management .................................................. 325
Admission ................................................................. 325
Concentration in Outcomes Management and Research ....................... 325
M.H.S.A. Degree Requirements .................................................. 325
Ph.D. Degree ................................................................. 326
Joint Degree Programs ........................................................ 326
Health Policy & Management Courses ........................................... 326
History & Philosophy of Medicine ............................................... 328
History & Philosophy of Medicine Courses ...................................... 328
Microbiology, Molecular Genetics, & Immunology ............................ 328
Admission ................................................................. 328
M.A. Degree Requirements .................................................. 328
Course & Thesis Requirements .................................................. 328
Ph.D. & M.D./Ph.D. Degrees .................................................. 328
Course Requirements .......................................................... 328
Foreign Language or Research Skills ........................................ 328
Comprehensive Examination .............................................. 328
Dissertation ................................................................. 328
Microbiology Courses ............................................................. 328
Molecular & Integrative Physiology ........................................... 329
Admission ................................................................. 329
M.S. Degree Requirements .................................................. 329
Ph.D. Degree Requirements .................................................. 329
Research Skill ................................................................. 330
Examinations & Dissertation .................................................. 330
Physiology Courses ............................................................. 330
Neurosciences ................................................................. 331
Pathology & Laboratory Medicine ............................................ 331
Degree Requirements ...................................................... 331
General Requirements .......................................................... 331
M.A. Degree Requirements .................................................. 331
Ph.D. Degree Requirements .................................................. 331
Pathology & Laboratory Medicine Courses ..................................... 331
Pharmacology, Toxicology, & Therapeutics ................................... 331
Admission Requirements ...................................................... 332
Ph.D. Degree Requirements .................................................. 332
Course Requirements, Ph.D. in Pharmacology ................................ 332
Course Requirements, Ph.D. in Toxicology ................................ 332
Foreign Language ............................................................... 332
Examinations ................................................................. 332
Dissertation ................................................................. 332
Pharmacology Courses .......................................................... 333
Toxicology Courses .............................................................. 333
Preventive Medicine & Public Health ............................................. 334
Public Health Admission ...................................................... 334
M.P.H. Degree Requirements .................................................. 334
Dual/Joint Degree Programs ................................................... 334
M.D./M.P.H. ................................................................. 334
M.S.N./M.P.H. ................................................................. 334
Ph.D./M.P.H. ................................................................. 334
Distance Education .............................................................. 335
Preventive Medicine & Public Health Courses .................................... 335
A cademic programs at the University of Kansas Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. Graduate programs are components of KU’s Graduate School. The Office of the Dean of Graduate Studies at KUMC handles matters related to the graduate programs in Allied Health, Medicine, and Nursing.

The graduate programs below are available to all qualified students with appropriate baccalaureate degrees. The master’s and Ph.D. degrees also may be obtained in special studies in such interdisciplinary areas as immunology, immunohematology, toxicology, medical physics, endocrinology, molecular genetics, and clinical biochemistry.

Combined Medical and Graduate School Degrees

See the General Information chapter of this catalog.

Interdisciplinary Graduate Program in Biomedical Sciences

Director: Michael J. Werle
2035 Lied BRF Building, Mail Stop 3025, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/igpbs, (913) 588-2719, fax: (913) 588-2711
Biomedicine and biotechnologies have been identified by Presidential and Congressional commissions as among the leading growth sectors of the American and world economies. Research at KUMC encompasses a broad spectrum, including neuroscience; protein structure and function; pharmacology and toxicology; viral, microbial, molecular, cellular, developmental, reproductive, immunological, renal, and general physiological biology; and clinically related studies focusing on a broad range of human diseases.

At KUMC, students enter an Interdisciplinary Graduate Program in Biomedical Sciences, which allows them time to receive an education in the most current areas of the biomedical sciences before they select laboratories for their graduate research programs. During the first year of the IGPBS, students take a state-of-the-art, highly integrated core curriculum that involves faculty members from all the basic science departments.

In addition to fundamental principles essential for understanding the biomedical sciences, students in the first year receive an introduction to the practical aspects of research such as the use of biographics (organization and presentation of research data) and bioethics (issues such as authorship, appropriate use of animals in research, and procedures for human studies research). They also acquire first-hand experience in research methods through research laboratory rotations.

During the first semester, students see presentations from faculty members about research programs, then begin laboratory rotations with KUMC research faculty members. Research rotations also occur in the second semester. This gives students time to evaluate KUMC’s research programs before selecting the best program for them. Once students make this choice, they enter one of the six degree-granting departments at KUMC (anatomy, biochemistry, microbiology, pathology, pharmacology and toxicology, and physiology) or the neuroscience graduate program. The KUMC graduate program is a partnership with the Stowers Institute for Medical Research, and students may conduct research at either institution.

The IGPBS is flexible and totally student oriented. It provides the most advanced laboratory-based biomedical education available in the United States today. Students emerge from this program as highly competitive biomedical scientists.

Anatomy and Cell Biology

Chair: Dale R. Abrahamson
2008 Wahl Hall East, Mail Stop 3038, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/anatomy, (913) 588-7000
Graduate Adviser: Douglas Wright, (913) 588-7013
Professors: Abrahamson, Bast, Berman, Durham, Hung, Hunt, Kinsey, Klein, Little, MacGregor, Stephens
Professors Emeriti: Chapman, Mohn, Nelson
Associate Professors: De Lisle, Enders, Stehno-Bittel, Werle, Wright
Assistant Professors: Petroff, Rongish, Vanden Heuvel
The graduate programs are cell biology, developmental biology, and neurosciences—primarily for the Ph.D. and combined M.D./Ph.D. degrees. The M.A. degree may be granted in appropriate circumstances.
Admission
Submit these materials to the director of the Interdisciplinary Graduate Program in Biomedical Sciences:
1. Application for admission, domestic or foreign.
2. A letter discussing the applicant’s academic objectives, general or specific research interests, and professional plans.
3. Two official transcripts of the applicant’s academic record from each undergraduate or graduate institution attended.
4. Three letters of recommendation.
5. The applicant’s scores for the aptitude and advanced parts of the Graduate Record Examination. (An applicant from a foreign country where this examination is not administered must submit a letter of verification about this situation to the department.) Medical College Admission Test scores may be considered for M.D./Ph.D. applicants and in unusual circumstances for applicants to the Ph.D. program.
6. Foreign applicants must submit their scores on the Test of English as a Foreign Language as well as Test of Spoken English scores.

Courses with laboratories in general biology, inorganic chemistry, organic chemistry, calculus, and physics should be completed before starting graduate work. Requests for additional information about the graduate program, financial assistance, research interests of the departmental faculty, and requests for application forms should be directed to the Graduate Adviser, Department of Anatomy and Cell Biology.

Further information and applications are available online at www.kumc.edu/igpbs.

M.A. Degree Requirements
A minimum of 30 credit hours is required. These hours are divided between formal course work and research/thesis. The student must satisfactorily defend the thesis in an open seminar as part of the final examination.

Ph.D. Degree Requirements
Principal courses are listed below. The majority are required as determined by the subspecialization of the student. Unspecified, but required, credits taken outside the department are selected with the counsel of the adviser, whom the student usually selects before starting the second year of study. By or at the end of the second year, the student must satisfactorily pass written and oral comprehensive examinations. The student writes and defends a grant proposal in an area of research chosen in consultation with the graduate adviser. After successful completion of the oral comprehensive examination, the student, with the advice and consent of the adviser, must name three faculty members to be recommended for the doctoral research committee.

Requirements. All students must take Modules 1 through 5 of the Interdisciplinary Graduate Program in Biomedical Sciences. After the first year, students must take three semesters of ANAT 900 Analysis of Scientific Papers. Advanced departmental and interdepartmental courses are required based on the student’s specialized interests and needs. Students select these after consultation with their advisers. The Graduate School requires that the student maintain a B average overall, and the department requires a B average in all didactic courses.

Foreign Language or Research Skills. Before taking the comprehensive Ph.D. oral examination, the student must demonstrate additional expertise outside his or her immediate research area by meeting the following requirements.
1. Demonstrate proficiency in a relevant research skill that will not be used routinely as a primary skill in the student’s doctoral research, or
2. Demonstrate a reading knowledge of one foreign language. (See Doctor of Philosophy, Research Skills in the General Information chapter of this catalog.)

Teaching Expertise. Each student must gain teaching experience by assisting in the laboratory segments of courses taught to medical students.

Dissertation. The student must complete original research, write a dissertation, and satisfactorily defend it in a final public seminar and oral examination. One or more parts of the dissertation must be suitable for publication in appropriate peer-reviewed scientific journals.

Anatomy Courses

ANAT 821 Human Anatomy and Embryology (4). Study of the macroscopic structures of the human body. (Same as ATMY 821.) Prerequisite: Consent of instructor (course intended for M.D./Ph.D. students). LEC

ANAT 822 Human Anatomy and Embryology II (5). Study of the macroscopic structures of the human body. (Same as ATMY 822.) Prerequisite: Consent of instructor (course intended for M.D./Ph.D. students). LEC

ANAT 831 Cell and Tissue Biology (3). Lectures and laboratories devoted to the study of microscopic anatomy at the organ, tissue, cell and subcellular levels. Lectures emphasize modern cell biological concepts and the correlation of structure with cell, tissue, and organ function. Laboratories teach the identification of cells, tissues and organs and relate this information to functional concepts presented in lecture. (Same as ATMY 831.) Prerequisite: Consent of course coordinator (course intended for M.D./Ph.D. students). LEC

ANAT 832 Electron Microscopy Techniques (3). Basic methods in preparation of tissues and cells for ultrastructural studies; use of electron microscopy in specific research problems; interpretation of biological ultrastructure; reading assignments and discussion sessions. Prerequisite: ANAT 830, or consent of course instructor. LEC

ANAT 833 Cell and Tissue Biology II (5). Lectures and laboratories devoted to the study of microscopic anatomy at the organ, tissue, cell and subcellular levels. Lectures emphasize modern cell biological concepts and the correlation of structure with cell, tissue, and organ function. Laboratories teach the identification of cells, tissues and organs and relate this information to functional concepts presented in lecture. Prerequisite: Consent of course coordinator (course intended for M.D./Ph.D. students). LEC

ANAT 840 Neuroscience (5). This course integrates human neuroanatomy, neurophysiology, neurochemistry, neuropathology, and basic neurobiology. Instruction formats include lectures, conferences, laboratories, and demonstrations. (Same as NEUS 840 and PHSL 840.) Prerequisite: A graduate level physiology course or concurrent enrollment in PHSL 801, PHSL 802 and consent of instructor. LEC

ANAT 845 Graduate Histology (2). This course will bridge student knowledge of systems/organisms with cellular histology and is designed as an accelerated introduction to histological techniques, microscopy/optics, and histology. The course will be held within a one month period in the summer. Individual tissues will be covered by a brief 30 minute lecture followed by a 90 minute session of observing the tissues under the microscope. Prerequisite: Advanced course in cell biology (IGPBS module 4 or equivalent) or consent of instructor. LEC

ANAT 846 Advanced Neuroscience (5). Team taught, in-depth neuroscience course focusing on normal and diseased brain function at the molecular, cellular and systems levels. Lectures and discussions will emphasize current issues in neuroscience research. (Same as PHCL 846 and PHSL 846.) Prerequisite: Permission of course director. LEC

ANAT 847 Developmental Neurobiology (2). Development of the nervous system from early induction to the development of learning and memory. Topics include: Induction; Cell Differentiation; Axon Growth and Guidance; Target Selection; Cell Survival and Growth; Synapse Formation; Synapse Elimination; and Development of Behavior. (Same as NUBM 847 and PHSL 847.) Prerequisite: Advanced Neuroscience (ANAT 846; NURO 846; PHSL 846) or consent of instructor. LEC

ANAT 848 Molecular Mechanisms of Neurological Disorders (2). An in-depth coverage of pathogenic mechanisms in neurological diseases; cellular and molecular responses to brain injury and disease, neuroinflammatory diseases (e.g., multiple sclerosis), neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s, Huntington’s, amyotrophic lateral sclero-
sis, and prion diseases), neurogenetic diseases (e.g., lysosomal and peroxisomal disorders, Down’s syndrome and fragile X, trauma, stroke, and viral diseases), and infectious diseases (e.g., HIV encephalitis). Prerequisites: Consent of instructor. LEC

ANAT 890 Doctoral Research (1-12). Original and independent laboratory investigation, approved by and conducted under the supervision of the student’s research adviser and advisory committee; in partial fulfillment of the requirements for the Ph.D. degree. Prerequisite: Consent of adviser. LEC

ANAT 999 Doctoral Dissertation (1-12). Preparation of the dissertation based on original research and in partial fulfillment of the requirements for the Ph.D. degree. Prerequisites: Consent of adviser. LEC

Biology and Chemical Medicine

Chair: Gerald Carlson
4011 Wall Hall East, Mail Stop 3030, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/biologychemistry, (913) 588-7005
Graduate Adviser: Glen Andrews,
2034 BRF, (913) 588-6935


Associate Professor: M. Fisher

Assistant Professors: Fenton, Ladochkin, Swint-Kruse

Both the M.S. and the Ph.D. degrees may be earned with a major in biochemistry. The M.S. in biochemistry normally leads to positions at the advanced technical level in academic research, industry, or government. It may lead to teaching positions at the secondary or junior college level. The Ph.D. most often is followed by one or more years of postdoctoral training in a specific area of research. Ph.D. degree holders in biochemistry may find positions in industry or government and, with some postdoctoral experience, may obtain faculty positions at the college or university level.

The Ph.D. is required for careers in independent research in biochemistry and molecular biology.

Applications are available online.

M.S. Degree Requirements

Prerequisites. To pursue a master’s program, the student must meet requirements for admission to the Graduate School. The student also should have completed mathematics through calculus, general and analytical chemistry, and organic chemistry (8-10 credit hours, lecture and laboratory).

Requirements. The curriculum normally requires a minimum of 30 semester credit hours. Half of these hours are usually formal course work and the remainder research and thesis. Required courses are BCHM 862, BCHM 890, BCHM 891, BCHM 892, BCHM 893, BCHM 899, and ANAT 894. There is no research skills requirement or examination for the M.S. degree. The student is expected to participate in the teaching program during the second year of study. The student must maintain a B average in nonresearch and nonseminar credits as well as an overall grade-point average of B. Upon completion of research work, the student writes a thesis, presents it as a formal seminar, and defends it to a thesis committee. A final typed draft of the thesis, approved by the research adviser, is given to the thesis committee at least one week before the final oral defense.

Ph.D. Degree Requirements

Prerequisites. To pursue graduate study, students must meet requirements for admission to the Graduate School. In addition, students should have completed mathematics through calculus (two semesters), general and analytical chemistry, organic chemistry (8 to 10 semester credit hours, lecture and laboratory) and two semesters of physics. Applicants should take the

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
Biochemistry & Molecular Biology

general aptitude and advanced sections of the Graduate Record Examination. It is possible to make up some course deficiencies in the first year of graduate study.

**Course Requirements.** BCHM 808, BCHM 850, BCHM 862, BCHM 891, BCHM 892, BCHM 922, BCHM 923, ANAT 894, ANAT 895, ANAT 897, ANAT 898, and PHSL 896. Available electives include: immunology, physiology, cell biology, and microbial genetics. The student must maintain at least a B average in all nonresearch and nonseminar courses. Credit in research cannot be used to meet this grade-point average. The student completes her or his curriculum by enrolling in BCHM 990 Doctoral Research and BCHM 999 Doctoral Dissertation. All graduate students on half-time assistantships are expected to enroll in at least 6 credit hours each regular semester and 3 credit hours for the summer session.

**Foreign Language or Research Skills.** Before taking the comprehensive oral examination, the student must demonstrate additional expertise outside his or her primary research area by completing a course or equivalent in one of the following areas: (1) basic statistics, (2) computer programming, (3) electronics, and (4) a one-year course or its equivalent in French, German, Japanese, or Russian. If a student has had previous training in one of these areas, he or she may petition the graduate committee for credit for this requirement.

**Examinations.** Comprehensive written and oral examinations are administered during the second year of full-time graduate study and cover the broad aspects of biochemistry.

**Dissertation.** The student must complete original research, write a dissertation that is acceptable to a dissertation committee, present the results in a formal seminar, and defend the dissertation to a doctoral committee.

**Teaching Experience.** Graduate students may gain teaching experience as tutors in the medical biochemistry course and participants in departmental seminar programs.

**M.D./Ph.D. Combined Degree Requirements**

This program is open to students enrolled in the M.D. degree program. Prerequisites are the same as for the Ph.D. program. Students normally enter the M.D./Ph.D. program after completion of the basic medical science curriculum. Depending on their backgrounds in biochemistry and related sciences, students may begin early, such as the summer session before or during medical school. The course requirements are the same as for the Ph.D., except that the student’s committee may exempt him or her from BCHM 805. All other requirements for the Ph.D. program apply.

**Biochemistry Courses**


**BCHM 801 Research in Biochemistry** (1-10). LEC

**BCHM 802 Biochemistry Seminar** (1). Weekly meetings. LEC

**BCHM 803 Medical Biochemistry I** (4). Review the structure, chemistry, and metabolism of amino acids, proteins. (Same as BIOG 803.) Prerequisite: Consent of course coordinator. Restricted to M.D./Ph.D. students. LEC

**BCHM 804 Medical Biochemistry II** (4). Review of the structure, chemistry and metabolism of amino acids, proteins, carbohydrates, lipids and nucleic acids, as well as sections on enzyme kinetics, bioenergetics, integrated metabolism, the biochemical basis of nutrition and molecular genetics. The molecular basis of disease is emphasized throughout the course. In addition to lectures, a series of small group discussions and clinical correlations relating to chemical principles and concepts to medical problems are led by biochemistry faculty and selected clinical faculty. (Same as BIOG 802.) Prerequisite: Consent of course coordinator. Restricted to M.D./Ph.D. students. LEC

**BCHM 805 Advanced Biochemistry** (3). Lectures on important current topics such as gene expression, regulation, structural proteins, hormone biochemistry, protein processing, and membrane phenomena. Prerequisites: BCHM 891, BCHM 892, BCHM 893, BCHM 894, or consent of chair. LEC

**BCHM 806 Endocrinology** (3). A lecture course dealing with the morphology, biochemistry and physiology of the endocrine system. The areas considered include the bio-synthesis, storage, secretion, transport, degradation, and the mechanisms of action of the hormones. Physical, chemical, and biological techniques used to quantitate hormones and their effects at the organ, cell and subcellular level will be discussed. Prerequisite: Consent of instructor. LEC

**BCHM 815 Theories and Applications of Biochemical Techniques** (3). Theoretical basis and application of methods in biochemistry presented in lecture-demonstration format. Emphasis on general methodologies, and current techniques in molecular biology, protein chemistry, and related areas. Prerequisite: Graduate level course in biochemistry or concurrent enrollment, or consent of instructor. LAB

**BCHM 850 Topics in Biochemistry** (1-3). Selected topics in biochemistry with varying subject matter. Students should inquire before enrolling. Topics are in-depth studies of current research areas. The course may consist of formal lectures and/or directed readings and studies. IND

**BCHM 862 Biochemical Research-literature Seminar** (1). Students and faculty meet once weekly to discuss the research of students or the current biochemical literature. The student is required to make one presentation. Prerequisite: Consent of instructor. LEC

**BCHM 890 Master’s Research** (1-15). Research for the M.A. degree. RSH

**BCHM 891 Module 1 of the IGPBS: Thermodynamics, Protein Structure, and Analysis of Reaction Kinetics** (3). This is module 1 of the first year curriculum of the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover basic principles and advanced topics of thermodynamics, protein structure, and analysis of the reaction kinetics involved in substrate/enzyme interactions and ligand/receptor interactions. LEC

**BCHM 892 Module 2 of the IGPBS: Cell Metabolism** (1). This is module 2 of the first year curriculum of the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover basic principles and advanced aspects of biochemical processes underlying cellular metabolism. LEC

**BCHM 893 Module 3 of the IGPBS: Molecular Biology** (4). This is module 3 of the first year curriculum of the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover basic principles and advanced aspects of prokaryotic and eukaryotic molecular biology with topics such as DNA structure, transcriptional and translational mechanisms, and mechanisms of gene expression. This course is co-listed as MICR 893. (Same as MICR 893.) LEC

**BCHM 899 Master’s Thesis** (1-15). Restricted to the writing of the master’s thesis. THE

**BCHM 922 Advanced Molecular Genetics** (3). An in-depth analysis of the structure and function of gene regulatory proteins and the mechanisms of gene transcription, and DNA replication and repair. Lectures and discussion of current literature. Prerequisite: BCHM 891, BCHM 892, BCHM 893, BCHM 894 or equivalent, or consent of instructor. Course will be presented in the fall semester and will include several Biochemistry Faculty leading discussions in their area of research interests. LEC

**BCHM 923 Protein Structure and Function** (3). The relationship between protein structure, binding, and physiological function. Emphasis is on proteins as enzymes, structural components, and regulators. Prerequisite: BCHM 808 or consent of instructor. LEC

**BCHM 990 Doctoral Research** (1-15). Research for the doctoral degree. RSH

**BCHM 999 Doctoral Dissertation** (1-15). Restricted to the writing of the doctoral dissertation. THE
Clinical Research

Offered through the Departments of Preventive Medicine and Public Health

Director and Chair: Jasjit S. Ahluwalia
Associate Directors: Won S. Choi, Matthew S. Mayo
Assistant Director: Jonathan D. Mahnken
4004 Robinson Hall, Mail Stop 1088, KUMC 3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/prevmed/MS_Clinical_Research
(913) 588-2770
Professors: Ahluwalia, Neuberger
Professors Emeriti: Chin, Jerome
Associate Professors: Ellerbeck, Lai, Mayo
Assistant Professors: Choi, Engelman, Hall, Li, Mahnken, Rhode, Richter, Thomas

Clinical Research Admission

Admission to the M.S. in clinical research degree program is competitive. Candidates should meet all general requirements for admission to the Graduate School including a baccalaureate degree from a regionally accredited institution and an undergraduate grade-point average of 3.0 on a 4.0 scale. Applicants also should have passed at least one semester of college calculus.

Applicants who have not previously earned a doctoral degree must submit official scores on the Graduate Record Examination or other professional test scores (such as the Graduate Management Admissions Test, Medical College Admissions Test, Law School Aptitude Test) that are not more than seven years old. Applicants whose native language is not English also must submit scores on the Test of English as a Foreign Language. No applicant with a score below 230 on the computer-based TOEFL examination or 570 on the paper-based TOEFL examination will be considered.

All M.S. applications must be supported by three letters of recommendation or evaluation forms from persons qualified to assess the candidate’s aptitude for the M.S. degree program. Applicants must include a current résumé or curriculum vitae and a signed personal statement indicating their intended emphasis upon acceptance. Emphasis choices include biostatistics, epidemiology, and/or medical.

Clinical Research M.S. Degree Requirements

The 33-credit-hour M.S. degree program includes six core courses (18 hours) in epidemiology, an epidemiology laboratory, biostatistics I and II, statistical computing in research, and advanced epidemiologic methods I and II. The program also includes elective credits and a thesis. Students must complete 12 credit hours in elective courses, with 6 of those hours in the chosen emphasis. The capstone requirement, a thesis, accounts for the final 3 credit hours. Students are allowed up to seven years to complete the M.S. in clinical research degree. However, most students can complete the program in two to three years of full-time study.

Courses

See Preventive Medicine and Public Health for course offerings for the Clinical Research M.S. program.

Health Policy and Management

Interim Chair: Michael H. Fox, mfox2@kumc.edu
5008 Student Center, Mail Stop 3044, KUMC 3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/som/hpm, (913) 588-2887
Graduate Adviser: Jane Faubion, jfaubion@kumc.edu,
4040 Varnes, (913) 588-3763
Professor: Zimmerman
Associate Professors: Fox, Lee
Assistant Professors: Grasso, Nielsen, Paul

The Department of Health Policy and Management offers the Master of Health Services Administration degree. A Ph.D. degree in Health Policy and Management has been approved.

Admission

Admission is based on the applicant’s undergraduate and/or graduate record, Graduate Record Examination or Graduate Management Admission Test scores, and references. Completion of a bachelor’s degree is required. Admission is competitive and limited. Each applicant must pay a processing fee of $35.

Academic prerequisites for admission are (1) a completed application form from the Graduate School, (2) a brief statement of goals, (3) three letters of recommendation, (4) completion of the GRE or GMAT, (5) two copies of official transcripts, and (6) references. An interview with a member of the department faculty may be required. If travel to the area is impossible, a telephone interview may be substituted. Students typically begin in fall semester.

Early application is encouraged. Deadlines for admission are July 15 for fall, December 1 for spring, and May 1 for summer.

Certificate in Outcomes Management and Research

The department offers a certificate in Outcomes Management and Research. The program prepares professionals to analyze the effects of health care interventions. They learn to develop programs that improve outcomes in clinical practice and to assess the impact of health care interventions on organizations, health and public policy, and the overall economy. Contact the department to determine eligibility for the certificate.

M.H.S.A. Degree Requirements

All candidates must complete, at a satisfactory level, 58 credit hours of courses in five general areas: health services, health management, business management sciences, professional development, and ethics. For full-time students, the course work includes an internship in the summer between the first and second year of study. Students with substantial experience in health services administration may elect either to serve an internship or complete a research project. Full-time students are encouraged to seek a residency/fellowship after graduation.

Courses are taught late afternoons and evenings. Part-time students should not expect to register for more than 6 hours in any one semester. Students begin work with introductory courses (e.g., Health Systems), with more advanced course work to be completed later (e.g., Health Policy and Administration). The curriculum requires that many courses be taken in sequence.
The M.H.S.A. program prepares administrators for management positions in hospitals, clinics, public health, and long-term health care facilities.

KU’s health services administration program was tied for 18th in the nation among public universities in the 2006 edition of U.S. News’ “America’s Best Graduate Schools.”

Health Policy & Management

Ph.D. Degree
The Ph.D. in Health Policy and Management has been developed. Consult the department’s Web site, www.kumc.edu/som/hpm/phd.html, for current status and degree requirements.

Joint Degree Programs
The Juris Doctor/Master of Health Services Administration program combines four years of study the three-year J.D. program and the two-year M.H.S.A. program. This program offers a thorough academic grounding in both disciplines to students who plan to practice law or to enter health care management. Interested students should contact both programs for admission information.

The Master of Science in Nursing/Master of Health Services Administration program combines some course work, allowing the two degrees to be completed in 68 credit hours, compared to 99 credit hours if the degrees were pursued independently. Application to both programs is required.

The Master of Business Administration/Master of Health Services Administration program is currently under review. No new applications are being accepted.

The Doctor of Medicine/Master of Health Services Administration joint degree program prepares students for careers as physician-executives. Total completion time for the M.D./M.H.S.A. program is five years.

Health Policy and Management Courses
HP&M 600 Directed Readings (1-3).
HP&M 610 Survey of Health Systems (3).
HP&M 610 The Health Care System (4).
HP&M 620 Women and Health Care (3).
HP&M 650 Health Care Economics (3).
HP&M 800 Health Services Colloquium (1-3). This course will be an introduction to the health services administration profession through regular seminars held over the course of the student’s two-year tenure at the University of Kansas and involve meetings with established professionals, members of the department faculty, as well as faculty from programs across the country. The seminar will be on a dialogue basis—emphasizing the information and values that make successful health services administrators. The course is also designed as a practicum in health services management with on-site visits and seminars in a variety of health care settings, including medical schools, acute care facilities, long-term facilities, pre-paid group practices, fee-for-service group practice and a number of other settings. Prerequisite: Approval of chief of department. FLD
HP&M 815 Health Services Financial Accounting (4). This course introduces students to the health care system of the United States. The course stresses the system’s historical development, distinguishing features, financing, management, resources, and politics. Requirements include position papers, class discussions, examinations, and site visits to health care facilities. LEC
HP&M 814 Health Care Economics (3). This course introduces students to health care economics. By the end of the course a student should understand the core concepts of managerial economics; the relevance of demand for health care organizations; the structure of insurance and its impact; the determinants of costs in health care organizations; the factors underlying resource allocation in health care organizations; the implications of differences in market structure; the basic decisions making in the face of uncertainty; and the basics of the evaluation of outcomes. Problems, presentations, lectures, discussion, and examinations. LEC
HP&M 815 Health Services Financial Accounting (3). This course is an introduction to financial accounting with emphasis on generally accepted accounting principles applied to organizations providing health services. Emphasis is on understanding the accumulation and interpretation of information for decision making by internal and external users in a variety of health service settings. Consideration is given to financial information systems of voluntary community settings as well as multiple facility organizations. LEC
HP&M 817 Health Care Statistics (3). Elementary statistical techniques to include descriptive statistics, probability, sampling, and statistical inference of means and proportions; advanced statistical techniques include multivariate analysis of qualitative and quantitative variables using multiple linear and logistic regression. LEC
HP&M 821 Health Services Research: Epidemiology, Evaluation, and Survey Methods (3). Students learn the logic, assumptions, designs, and procedures involved in conducting the major types of research found in the health services field. Students develop an informed basis for critically evaluating the methodological adequacy of research studies in the areas of descriptive and analytic epidemiology, program evaluation, and health-related survey research as well as a working knowledge of the research process itself. Emphasis is placed on examining basic health services issues such as measuring quality of care, understanding the role of social factors in the etiology of disease, determining the health status and health needs of populations, and incorporating health services research into organizational policy and decision-making. (Same as SOC 817.) Prerequisite: HP&M 810 and HP&M 812, or consent of instructor. LEC
HP&M 824 Applied Concepts in Health Care Financial Management (3). Strategic financial planning employing the concepts and techniques found in health services managerial accounting. These concepts include financial statement analysis, working capital analysis, the time value of money, capital investment analysis, capital financing, break-even analysis, operational budgeting, responsibility accounting and cost accounting. Case analysis is used to demonstrate these concepts. Prerequisite: HP&M 825. LEC
HP&M 825 Financial Concepts in Health Services Accounting (3). The basis of this course is on the concepts and techniques in health services managerial accounting. These concepts include financial statement analysis, working capital, capital management, the time value of money, capital investment analysis, capital financing, break-even analysis, operational budgeting, responsibility accounting and cost accounting. Numerous examples and exercises are used to demonstrate how these concepts apply to health care situations. Prerequisite: HP&M 825. LEC
HP&M 826 Management Information Systems (3). A broad introduction to information systems for decision making in health services organizations. Specific topics include basic concepts of MIS, need for MIS in organizations, role of computers in MIS, applications of MIS, systems analysis and design, decision support systems, and data communication. LEC
HP&M 828 Human Resources Management (3). This course will cover managerial responsibilities relating to human resources. Constraints on managerial discretion (including legal, economic, and institutional environment) are reviewed. The major focus of the course is on such concerns of management as compensation, staffing, and labor relations. Students will be introduced to current human resource issues. LEC
HP&M 830 Health Services Management (3). This course introduces the prospective health services administrator to the concepts of organizational theory and the management of health service organizations. Specific topics include the role of management, planning and control, organizational design, and managing organizational change. Managerial problems and issues specific to health services organizations will be presented and discussed, such as governance, medical staff organization, managing health care professionals, and measuring effectiveness in health services organization. Prerequisite: HP&M 810. LEC
HP&M 833 Health Law (3). Topics might include terminology; anti-trusts; licensure; medical malpractice; insurance, delegation and liability; negligence; patient rights (especially privacy); legal standards for care; legal process and trial procedures; governmental regulation; contracts; informed consent; and malpractice. Prerequisite: Consent of instructor. LEC
HP&M 835 Health and Social Behavior (3). This course provides students with an analytic understanding of the organizational, professional, and interpersonal behavior that characterizes contemporary health and health care. Emphasis is placed on understanding conceptual frameworks theories, and research findings bearing on basic behavioral/managerial issues such as authority relations in health care settings, models of illness behavior and health services utilization, the impact of organizational structure on employee and client attitudes and behavior, and the culture of professional medicine in relation to patient care. (Same as SOC 824.) Prerequisite: HP&M 810 and HP&M 810. LEC
HP&M 836 Topics in Health Services Administration (3). Study of selected topics in health services administration. LEC
HP&M 837 Health Care Policy and Administration (3). A seminar designed to explore the development of public health policy in the United States. Particular attention will be given to (1) the development of public institutions and policy goals; (2) current expenditure, cost controls, prospective reimbursement, utilization review, assessment, and public and private investment planning; and (3) administrative problems in the current health care systems. (Same as PUAD 827.) Prerequisite: HP&M 810, HP&M 821, HP&M 825, or consent of instructor. LEC
HP&M 838 Rural Health Care (3). Examination of the demographic and economic conditions/trends affecting rural areas and delivery of health care services in rural areas. Includes analysis of social cultural differences and similarities between rural populations, challenges to sustaining access to basic health care services, policy initiatives affecting access to and availability of care in rural America and identification of innovative approaches to delivering services to rural populations. LEC
HP&M 839 Medicare and Medicaid (3). Provides students with an in-depth understanding of the three publicly financed health programs that impact virtually all aspects of the American health care system - Medicare, Medicaid, and Children’s Health Insurance Programs (CHIP). Ex-
HP&M 840 Strategic Management of Health Services (3). This course will be presented. Prerequisite: Permission of instructor. LEC

HP&M 845 Ethics (3). This course presents advanced techniques in statistical analysis and information management to help understand, process, and use health services data. The three broad areas of health services data will be used: clinical, program, and population-based. Ways in which these data can be used as both management and research tools will be discussed. Implications for improving patient care and delivery of health services will be emphasized. Labs will stress the use of both manipulative techniques such as merging, matching, sorting, and file construction, as well as focus on analysis, using univariate, bivariate, and multivariate techniques. Recent methodology related to outcomes, case-mix, and performance assessment will be presented, and their application to health services administration demonstrated.

HP&M 871 Pharmacoeconomics (3). This course presents advanced techniques in statistical analysis and information management to help understand, process, and use health services data. The three broad areas of health services data will be used: clinical, program, and population-based. Ways in which these data can be used as both management and research tools will be discussed. Implications for improving patient care and delivery of health services will be emphasized. Labs will stress the use of both manipulative techniques such as merging, matching, sorting, and file construction, as well as focus on analysis, using univariate, bivariate, and multivariate techniques. Recent methodology related to outcomes, case-mix, and performance assessment will be presented, and their application to health services administration demonstrated.

HP&M 872 Cost-effectiveness and Decision Analysis (3). This course uses the technique of measuring health outcomes decisions when outcomes are uncertain. The course begins with a review of probabilistic decision making, then explores methods of analyzing choices with uncertain outcomes, stressing the use of decision trees and sensitivity analysis. The course features a computerized econometric analysis, cost-effectiveness analysis, and cost benefit analysis. LEC

HP&M 874 Clinical and Administrative Data Analysis (3). This course presents advanced techniques in statistical analysis and information management to help understand, process, and use health services data. The three broad areas of health services data will be used: clinical, program, and population-based. Ways in which these data can be used as both management and research tools will be discussed. Implications for improving patient care and delivery of health services will be emphasized. Labs will stress the use of both manipulative techniques such as merging, matching, sorting, and file construction, as well as focus on analysis, using univariate, bivariate, and multivariate techniques. Recent methodology related to outcomes, case-mix, and performance assessment will be presented, and their application to health services administration demonstrated.

HP&M 876 Seminar In Outcomes Management and Research (3). Students admitted to the Certificate in Outcomes Management and Research program interact to build on the integreate content from the other outcomes certificate courses. During seminars the students discuss and analyze presentaitons and publications, reporting studies and projects undertaken to described, evaluate, and improve clinical, financial, and quality-of-life outcomes of medical and health care interventions. Prerequisite: Admission to the Certificate in Outcomes Management and Research Program. Placement is the responsibility of the student, with assistance from the department. The internship will be monitored by a member of the faculty. Prerequisite: Approval of chair of department. FLD

HP&M 881 Research Practicum in Health Services Administration (3). A twelve-week practicum in an approved long-term care facility under the guidance of a registered preceptor and instructor. Completion of the practicum meets the 40-hour requirement by the Kansas Board of Long Term Care Administrators. Placement is the responsibility of the student. Prerequisite: Permission of instructor. FLD

HP&M 890 Directed Readings (1-3). This course is designed to meet the needs of students who have a special interest that cannot be met by existing courses. IND
History and Philosophy of Medicine

No graduate program is offered in this area, but the following courses may be taken for graduate credit.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tr>
<td>H &amp; PM 802 Introduction to Clinical Medicine I</td>
<td>(3). Includes Social Basis of Medical Practice (SBMP) and Clinical Skills. SBMP acquaints students with the historical development of American medicine, allowing them to recognize and examine in detail the social forces affecting medical practice today. Through lectures and small group discussion, students explore the impact of social influences in three areas: the production and modification of disease, the organization of medical care, the interpretation of illness. Course activities also promote the development of oral and written communication skills. Clinical Skills helps students acquire and use the knowledge, skills, and attitudes of a competent, caring clinician. Through lectures, demonstrations, tutorials, standardized patient encounters, and preceptor experiences, students learn and practice patient interviewing and physical examination. This module emphasizes the evaluation of the normal patient and the application of principles introduced in basic science courses (e.g., anatomy and physiology) to the physical exam. Students are evaluated through written examinations and other written assignments, small group presentations, preceptor activities, and standardized patient encounters. (Same as ICM 802). Prerequisite: Consent of instructor (course intended for M.D./Ph.D. students). LEC</td>
</tr>
<tr>
<td>H &amp; PM 850 Introduction to Clinical Medicine II</td>
<td>(3). Includes Clinical Epidemiology and Prevention (CEP) and Physical Diagnosis. CEP provides an introduction to basic statistics and epidemiology, and illustrates their relevance to clinical practice, research, and public health policy. Students also examine the role of clinical preventive services, including counseling, immunization, and screening. Physical Diagnosis builds on material covered in the Clinical Skills component of PRVM 801 and H &amp; PM 802. The focus of this module is the evaluation of patients with common complaints and illnesses. Through lectures, demonstrations, tutorials, standardized patient encounters, and preceptor experiences, students develop skills in interviewing, physical examination, and the use and interpretation of laboratory tests. Case-based tutorials introduce students to the principles of differential diagnosis and evidence-based medicine. Students are evaluated through written examinations and other written assignments, small group presentations, preceptor activities, and standardized patient encounters. (Same as ICM 850). Prerequisite: Consent of instructor (course intended for M.D./Ph.D. students). LEC</td>
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Microbiology, Molecular Genetics, and Immunology

Chair: Opendra Narayan
3025 Wahl Hall West, Mall Stop 3029, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/instruction/medicine/microbio
(913) 588-7010

Graduate Adviser: Joe Lutkenhaus, 3016 Wahl Hall West, (913) 588-7054
Professors: Chandran, Fiskin, Lutkenhaus, Narayan, Parmely
Professor Emeritus: Furtado, Suzuki
Assistant Professors: Cue, Nicot, Zückert

Graduate programs in microbiology and related areas are primarily for students who wish to obtain either the Ph.D. or combined M.D./Ph.D. degree. The M.A. degree may be granted in appropriate circumstances.

Admission

Admission is through the Interdisciplinary Program in Biomedical Sciences. In addition to Graduate School admission requirements, the program requires completion of calculus, inorganic chemistry including qualitative and quantitative analysis, two semesters of organic chemistry, two semesters of biology, and two semesters of physics. Applicants must take the general aptitude portion of the Graduate Record Examination and forward the results to the program. Three letters of recommendation also are required.

M.A. Degree Requirements

Course and Thesis Requirements. Students must accumulate 40 hours of graduate credit, including the following courses: MICR 808, MICR 820, MICR 830, MICR 855 and three elective graduate-level courses of at least 3 credit hours each. Each degree candidate must submit a written thesis detailing original laboratory research and defend it orally before a thesis committee.

Ph.D. and M.D./Ph.D. Degrees

Candidates for the combined M.D./Ph.D. degree must meet all requirements for the Ph.D. degree.

Course Requirements. Students pursuing the Ph.D. degree must complete the first year of the IGBS. Students must take MICR 851, MICR 852, and MICR 853, which provide an introduction to medical microbiology. Also required are an advanced course and a core course in the student’s subject area (Immunology, MICR 850; Bacterial Genetics and Pathogenesis, MICR 820; or Virology, MICR 825). Students also must present literature seminars.

Foreign Language or Research Skills. Before taking the comprehensive examination for the doctorate, the student must satisfy the FLORS requirement of the Graduate School. This requirement can be satisfied by demonstrating foreign language competence or by completing a course dealing with research skills outside the primary area of research. Examples of this type of training include courses in statistics, computer programming, radioisotopes, electron microscopy, or instrumentation. In special cases, the research skills requirement may be satisfied by providing evidence of previous training in an appropriate area.

Comprehensive Examination. During the second year of study, the student takes an oral comprehensive examination based in part on defense of an original written research proposal. This examination evaluates the student’s ability to write an original research proposal, design experiments, and interpret results in a sound and critical manner.

Dissertation. Doctoral candidates are expected to conduct original research, prepare a written dissertation detailing the results, and defend the dissertation in a...
final oral examination. It generally is expected that the research will be of sufficient quality to permit publication in reputable scientific journals.

**Microbiology Courses**

MICR 808 Immunology (3). Molecular and cellular aspects of immunity. Specific topics will include immunoglobulin and receptor structure/function, attributes of antigenicity, antigen-antibody reactions, immunocompetent cells, cellular interactions, soluble mediators of immune responses and normal and abnormal immune regulation. Prerequisite: Permission of course director. LEC

MICR 820 Bacterial Genetics and Pathogenesis (3). Genetics of bacteria with emphasis on bacterial pathogens. Topics include: gene regulation, recombination, bacteriophages, transposons, genetic exchange, plasmid genetics of virulence, bacterial adherence and colonization, immune evasion mechanisms, bacterial toxins, vaccines and antimicrobials, re-emerging bacterial diseases. Prerequisite: Permission of instructor. LEC

MICR 825 Virology (3). Molecular biology of animal viruses. Aspects of various virus groups to be covered include structure, replication, and host cell responses. Lectures and student seminars. Prerequisite: Permission of the course director. LEC

MICR 835 Research in Microbiology (2-3). This course is specifically designed to provide supervised research experience in various laboratories in the department. LEC

MICR 852 Medical Microbiology (3). This course presents in depth coverage of the bacteriological, virological, mycological and parasitic etiologic agents of infection; immunology is covered with emphasis on defense mechanisms, immune regulation and immunogenetics and microbial physiology and genetics are discussed with emphasis on the molecular aspects of antimicrobial resistance and microbial virulence. Lectures, clinical vignettes, clinically-related discussions, care-based small group conferences and tutorials. Restricted to M.D./Ph.D. students. (Same as MBIO 850) LEC

MICR 853 Medical Virology (2). This course will serve as an introduction to medical virology. It will include an examination of the various virus groups that infect humans and the mechanisms by which these viruses produce disease. The course will emphasize the molecular properties of viruses including topics from genome replication to host cell interaction to pathogenesis. LEC

MICR 890 Research for M.A. in Microbiology (1-10). This course is designated for thesis research leading to the M.A. degree. LEC

MICR 893 Module 3 of the IGPBS: Molecular Biology (4). This is module 3 of the first year curriculum for the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover basic principles and advanced aspects of prokaryotic and eukaryotic molecular biology with topics such as DNA structure, transcriptional and translational mechanisms, and mechanisms of gene expression. This course is co-listed as BCHM 893. (Same as BCHM 893) LEC

MICR 899 Thesis for M.A. in Microbiology (1-10). Restricted to writing of the dissertation. THESIS

MICR 900 Advanced Microbial Physiology (3). Physiology and growth of bacterial cells. Analysis of the current literature relating to microbial physiology presented in a seminar/discussion format. Topics to be covered include protein secretion, microbial development, cellular responses to environmental stresses, DNA replication and segregation, peptidoglycan biosynthesis and cell division. Prerequisite: MICR 820 or permission of instructor. LEC

MICR 920 Advanced Microbial Molecular Genetics: Prokaryotes (3). Topics in genetics with lectures and discussions about recent advances in microbial molecular genetics. The topics include those following with emphasis on genetic aspects such as: sporulation and differentiation, bacterial pathogenicity, recombination, cell growth and division, DNA replication and site-specific mutagenesis. Prerequisite: MICR 820 or permission of instructor. LEC

MICR 921 Advanced Microbial Molecular Genetics: Eukaryotes (3). Topics in genetics with lectures and discussions covering advances in molecular genetics of microbial eukaryotes. The topics include those following with emphasis on genetic aspects such as: transposable elements, developmental regulation, recombination and genetic control of gene expression. Prerequisite: MICR 820 or permission of instructor. LEC

MICR 925 Advanced Virology (3). An advanced course dealing with a number of topics of special and current interest in modern virology. Lectures and/or conferences. Prerequisite: MICR 825 or permission of instructor. LEC

MICR 930 Advanced Topics in Microbiology (1-8). An advanced approach to selected topics in any of the major disciplines in microbiology. Readings and conferences, or advanced laboratory techniques. LEC

**Molecular and Integrative Physiology**

Chair: Paul D. Cheney, pcheney@kumc.edu

Graduate Adviser: Thomas Imig, timig@kumc.edu

3011 Wahl Hall East, Mall Stop 3043, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160

Graduate Program: www.kumc.edu/physiology, (913) 588-7400

Adviser: Thomas Imig, timig@kumc.edu, 3003 Wahl Hall East, (913) 588-7025

Professors: Albertini, Cheney, Gonzalez, Imig, Levine, Nudo, Smith, Tarr, Terranova, Voogt

Professors Emeriti: Johnson, Sullivan

Associate Professors: Bilgen, Heckert, Tash, Wolfe, Wood

Assistant Professors: Blanco, Christenson, Godwin, Kumar, Nothnick, Stanford

Programs range from factors controlling gene expression to whole animal adaptations; the common thread is that all programs endeavor to understand biological function in health and disease. The program provides outstanding didactic instruction and laboratory experiences that enable students to become effective teachers and independent investigators. The department participates in the IGPBS at KUMC and provides research emphases in cardiovascular biology, cell and developmental biology, molecular and cellular biophysics, cellular and molecular immunology, molecular biology and genetics, neuroscience, reproductive biology, and signal transduction and cancer biology. The program is for the student pursuing the Ph.D. or M.D./Ph.D. degree. Degrees are granted to persons who fulfill both departmental and Graduate School requirements.

**Admission**

The applicant must have a bachelor's degree from an accredited college or university. Minimum course requirements are two semesters of general chemistry, two semesters of organic chemistry or one semester each of organic and biochemistry, two semesters of biological sciences, one semester of calculus, and one semester of physics. Graduate Record Examination Aptitude Test scores are required, although the results may be pending at the time of application. The applicant is encouraged to take the GRE Advanced Test corresponding to her or his major undergraduate course of study.

To ensure consideration for financial support, applications should be received by January 31.

**M.S. Degree Requirements**

Students are admitted to the M.S. program only if they have compelling reasons for pursuing advanced study, but the Ph.D. degree is not practical for them. Course requirements generally are the same as for the Ph.D., but the research component is of more limited scope.

**Ph.D. Degree Requirements**

Students take the core curriculum of the Interdisciplinary Graduate Program in Biomedical Sciences. This consists of nine modules:

1. Thermodynamics, protein structure, analysis of reactions, and binding kinetics.
2. Cell metabolism.
Molecular & Integrative Physiology

5. Molecular and physiological basis of disease.
7. Laboratory rotations.
8. Introduction to faculty research.
9. Introduction to ethics.

In most cases, students take additional course work in the fall of the second year before entering full time into a research program.

Research Skill. Completion of a research skill is required. This can be fulfilled through didactic work, mastering a laboratory technique, or activities relevant to the student's dissertation research.

Examinations and Dissertation. Following completion of the courses, the student must successfully complete a comprehensive qualifying examination consisting of a research proposal written in the form of a National Institutes of Health grant application, which the student defends orally. The student, with the guidance of his or her dissertation adviser, conducts an original research project. The outcomes of that research are assembled as a written dissertation generally consisting of a compilation of scientific papers submitted by the student for publication. A more traditional thesis format also can be used. The student defends this research in a seminar open to all interested parties.

Physiology Courses

PHSL 784 Faculty Research Programs (1). The new student will be introduced to the faculty research programs. Each faculty member will present his/her research interests using one or more of the following formats: laboratory demonstrations, computer simulations and lectures. The objectives are to assist the new student in selecting his/her area of dissertation research and acquainting the new student with the department research resources. LEC

PHSL 801 Medical Physiology (4). PHSL 801 is the first half of a two-semester course providing a systematic coverage of the mechanisms involved in the functions of the organ system of the body exclusive of the nervous system. The material will be presented in lecture and laboratory formats. PHSL 801 is taught in accordance with the School of Medicine calendar. (Same as PHYS 801.) Prerequisite: Consent of instructor. LEC

PHSL 802 Medical Physiology (4). PHSL 802 is the second half of a two-semester course providing a systematic coverage of the mechanisms involved in the functions of the organ system of the body exclusive of the nervous system. The material will be presented in lecture and laboratory formats. PHSL 802 is taught in accordance with the School of Medicine calendar. Prerequisite: Consent of instructor. LEC

PHSL 803 General and Electrophysiology (1). The following topics are presented: cell volume regulation; body fluid balance; membrane transport of water, non-electrolyte, and electrolytes; electrochemical energy; Nernst potential; membrane excitability properties in nerve. Prerequisite: Consent of instructor. LEC

PHSL 804 Cardiovascular Physiology (2). Mammalian cardiovascular physiology principles are presented using lecture, laboratory, and computer simulation formats. Topics presented include: muscle contraction, cardiac electrophysiology, electrocardiography, myocardial performance, hemodynamics, mechanisms of blood pressure control, vascular smooth muscle, exercise, hypertension, hyper tension and heart failure. Prerequisite: PHSL 803 or an equivalent course and consent of instructor. LEC

PHSL 805 Respiratory Physiology (1). Mammalian respiratory physiology principles are presented using lecture, demonstration and problem session formats. Topics presented include: mechanics and control of breathing; pulmonary and blood gas exchange and transport; and acid base regulation. Prerequisite: PHSL 803 and consent of instructor. LEC

PHSL 806 Renal Physiology (1). The general principles of mammalian renal physiology are presented using lecture and problem session formats. Topics presented include: measurement of renal function, principles of filtration, renal blood flow, tubular secretion, acid base and potassium balance. Prerequisite: PHSL 803, PHSL 804, PHSL 805 and consent of instructor or Physiology in its entirety. LEC

PHSL 807 Endocrinology (1). This course presents all aspects of the system, especially as related to humans. Hormone synthesis, secretion patterns, cellular mechanisms of action and feedback regulation are emphasized. Hormonal regulation of metabolic and reproductive processes are presented at molecular, cellular and integrative levels. Prerequisite: Consent of instructor. LEC

PHSL 808 Gastrointestinal Physiology (1). A survey of the physiology and pathophysiology of the gastrointestinal tract emphasizing the Neural, Hormonal, and Paracrine Control of Motility, Secretion, Absorption and Digestion. Prerequisite: Consent of instructor. LEC

PHSL 834 Reproductive Physiology (3). This course presents all aspects of reproductive physiology, ovarian and testicular function and neuroendocrine control of gonadotropins, puberty and hormone action in the adult. Prerequisite: PHSL 807 or an equivalent course and consent of instructor. LEC

PHSL 838 Advanced Topics (1-3). Special studies designed and arranged on an individual basis to allow a student to pursue a particular subject through reading, special laboratory work, and conferences with a senior staff member. LEC

PHSL 840 Neuroscience (5). This course integrates human neuroanatomy, neurophysiology, neurochemistry, and neuropharmacology, and basic neurology. Instruction formats include lectures, conference, laboratories and demonstrations. (Same as ANAT 840 and NEUS 840.) Prerequisite: PHSL 802 or an equivalent course and consent of instructor. LEC

PHSL 844 Neurophysiology (3). Somatosensory, motor and cognitive function of the brain will be discussed using a combination of lecture and student presentation formats. Current issues and evidence underlying accepted concepts and mechanisms will be emphasized. (Same as NURO 844.) Prerequisite: PHSL 846 or an equivalent course and consent of instructor. LEC

PHSL 845 Advanced Neuroscience (5). Team taught, in-depth neuroscience course focusing on normal and diseased brain function at the molecular, cellular and systems levels. Lectures and discussions will emphasize current issues in neuroscience research. (Same as ANAT 846 and PHCL 846.) Prerequisite: Permission of course director. LEC

PHSL 847 Developmental Neurobiology (3). Developmental mechanisms of the nervous system from early induction to the development of learning and memory. Topics include: induction; Cellular Differentiation; Axon Growth and Guidance; Target Selection; Cell Survival and Growth; Synapse Formation and Elimination; Neurotransmission and Behavior. (Same as ANAT 847 and NURO 847.) Prerequisite: Advanced Neuroscience (ANAT 846, NURO 846, PHSL 846) or consent of instructor. LEC

PHSL 848 Molecular Mechanisms of Neurological Disorders (2). An in-depth coverage of pathogenic mechanisms in neurological diseases: cellular and molecular responses to brain injury and disease, neuroinflammatory diseases (e.g., multiple sclerosis), neurodegenerative diseases (e.g., Alzheimer’s, Parkinson’s, Huntington’s, amyotrophic lateral sclerosis, and prion diseases), neurogenic diseases (e.g., lysosomal and peroxisomal disorders, Down’s syndrome and fragile X), trauma, stroke, and viral diseases (e.g., HIV encephalitis). (Same as ANAT 848, NURO 848, and PHCL 848.) Prerequisite: Advanced Neuroscience (ANAT 846, PHSL 846 or PHSL 846) or an equivalent course and consent of instructor. LEC

PHSL 850 Research (1-10). Original laboratory investigation conducted under the supervision of a senior staff member. RSH

PHSL 851 Seminar (1). Student participation conferences in which students are then given a constructive critique of their presentation by the faculty. The subjects examined in these seminars are dictated by the interests of students and staff. LEC

PHSL 894 Module 4 of the IGPBS: Cell and Developmental Biology (5). This is module 4 of the first year curriculum for the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover the basic principles and advanced aspects of prokaryotic and eukaryotic cell biology. It will cover such topics as: structure/function relationships of membranes and organelle systems; ECM structure and integrated aspects of protein processing and sorting, endocytosis. Early aspects of development such as the relationship of gene expression to embryonic pattern formation will also be covered. This course is co-listed as ANAT 894, LEC

PHSL 895 Module 5 of the IGPBS: Molecular and Physiological Basis of Disease (3). This is module 5 of the Interdisciplinary Graduate Program in Biomedical Sciences (IGPBS). It will cover the impact of disease on the major organ systems of the body using an integration of biochemical, molecular, structural, and physiological approaches. This course is co-listed as ANAT 895, LEC

PHSL 896 Module 6 of the IGPBS: BioGraphics (1). The objective of this course is to teach students how to organize data and how to present data in a clear and concise manner. Students are taught basic principles of organizing data for presentation and then learn through the actual presentation of data in simulated platform sessions. All sessions are held in the course. Videotapes of the presentations and students are then given a constructive critique of their presentation by the instructor and fellow students. LEC

PHSL 899 Master’s Thesis (1-5). Preparation of the formal thesis based on library research or independent research and in partial fulfillment of the requirements for the master's degree. Students are taught basic principles of organizing data for presentation and then learn through the actual presentation of data in simulated platform sessions. The final format of the presentation and students are then given a constructive critique of their presentation by the instructor and fellow students. LEC

PHSL 999 Doctoral Dissertation (1-10). Preparation of the Dissertation based on original research and in partial fulfillment of the requirements for the Ph.D. degree. Credits will be given only after the dissertation has been accepted by the student’s dissertation committee. THE
Neurosciences
See the School of Pharmacy chapter of this catalog.

Pathology and Laboratory Medicine
Chair: Patricia Thomas
2017 Wahl Hall West, Mail Stop 3045, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www2.kumc.edu/pathology, (913) 588-7070
Graduate Adviser: Rebecca T. Horvat,
2017 Wahl Hall West, (913) 588-1753
Professors: Atkinson, Damjanov, Soares, Tawfik, Thomas, Tilzer
Associate Professors: Fishback, Horvat, Hsu, Persons
Assistant Professors: Buch, Vivian

The department offers a graduate program and re-
search opportunities with emphasis in molecular and
experimental pathology, leading to the M.A. or the
Ph.D. degree.

Degree Requirements
This curriculum is designed for advanced study in
molecular and experimental pathology.

General Requirements. These requirements must be
met for admission: baccalaureate degree, inorganic
chemistry, organic chemistry, calculus, physics, bio-
logical sciences.

M.A. Degree Requirements. Graduate School require-
ments for the M.A. must be met. In addition, students
must take P&O 800 or its equivalent and must have a
minimum of 10 credit hours of work outside the De-
partment of Pathology and Laboratory Medicine in fields
related to molecular and experimental pathology. Addi-
tional course work is assigned according to each stu-
dent’s individual needs.

Ph.D. Degree Requirements. Graduate School require-
ments for the Ph.D. must be met. In addition, students
must take P&O 800 or its equivalent and must have a
minimum of 10 credit hours of work outside the De-
partment of Pathology and Laboratory Medicine in fields
related to molecular and experimental pathology. Addi-
tional course work is assigned according to each student’s
needs.

Pathology and Laboratory Medicine Courses

P&O 800 General Pathology (7). The basic mechanisms of human
disease, including cellular pathology, inflammation, diseases of immunity,
neoplasia, infectious and circulatory diseases and aging are considered
through the mechanisms of lectures, small-group problem based care
study and autopsy demonstration. (Same as PAON 850) Prerequisite:
Courses in cell biology, biochemistry, and physiology, or equivalents. LEC
P&O 801 Systemic Pathology (9). Human disease is studied by organ
systems to include cardiovascular, hematologic, renal, respiratory, gas-
trointestinal, genitourinary, musculoskeletal, endocrine, and nervous sys-
tem diseases. The pathobiology of all major diseases occurring within
each organ system are considered by lectures, problem based case study
and autopsy participation. Since final comprehensive examination at the
end of Pathology II will include material from both Pathology I and
Pathology II. Prerequisite: Successful completion of Pathology LEC
P&O 802 Special Pathology (6). A detailed study of diseases involving
the endocrine, genitourinary, neuromuscular, and skeletal systems.
Prerequisite: P&O 800 and courses in histology, biochemistry, and
physiology, or equivalent. LEC
P&O 803 Stem Cell Biology (2). Current concepts in the study of stem
cells, and the clinical potential in modern disease treatment. Students
will learn concepts of stem cells: origin, regulation of pluripotency,
and differentiative potential; experimental isolation and manipulation;
and clinical application of isolated stem cells. Current scientific literature will
be used to highlight recent advances in stem cell biology. Special empha-
sis will be placed on the ethical and legal issues surrounding the use of
stem cells of both adult and embryonic origin. Prerequisite: Course in
stem cell biology (IGPBS module 4, or equivalent); consent of instructor. LEC
P&O 899 Master’s Thesis (1-7). THE
P&O 903 Pathology Techniques Laboratory (3-5). A laboratory
course in which students may select no more than three of the follow-
ing: electron microscopy, fluorescence microscopy, cell typing, mor-
phometry, immunohistochemistry, flow cytometry, DNA probe, au-
topsy technique. LAB
P&O 905 Cellular Biology and Pathophysiology of Bone (3-5). Normal
bone development, ultrastructure of bone, and the calcification mecha-
nism. Developmental and genetic abnormalities of bone including
dwarfism and osteogenesis imperfecta. Metabolic bone diseases includ-
ing osteoporosis, Paget’s disease and osteomalacia. Methods of diagno-
sis by morphometry of undecalcified bone biopsy. Common primary
bone tumors, and the mechanism of bone loss or bone over growth
caused by metastatic malignant tumors. There will be practical labora-
tory portion. Prerequisite: P&O 800 or permission of instructor. LAB
P&O 907 Infection and Immunity (1). Microbial factors, host reaction,
and disease. Emphasis on recovery from infection, response to reinfec-
tion, the resultant clearance of microbes, or the development of chronic
infection. Hypersensitivity phenomena will also be considered in the
light of data from transplantation immunity. Prerequisite: P&O 800. LAB
P&O 911 Research in Pathology (1-10). RSH
P&O 912 Advanced Topics (1-5). Offered by arrangement. Prerequi-
tive: P&O 800, P&O 801, and P&O 802. IND
P&O 915 Advanced Pathology (3). A lecture and literature review course
in which molecular, subcellular, and supracellular organization and function
are considered in normal and disease states. Prerequisite: P&O 800. LEC
P&O 939 Carcinogenesis and Cancer Biology (3). Multidisciplinary
approach. Cancer pathology, Mutagenesis, Genetics, Carcinogen
metabolism. Radiation biology, Initiation and promotion. Tumor Im-
munology. Cell proliferation, Protooncogenes and suppressor genes.
Hormonal carcinogenesis. Cancer epidemiology. Dietary and environ-
mental causation and prevention. Cancer in various organ systems.
(Same as PHCL 939 and PTOX 939.) Prerequisite: One of the follow-
ing: Biochemistry (BCHM 710), Cell Biology (ANAT 880), Pharmacol-
ogy (PTCL-841), Toxicology (PTOX 841 or PTOX 918). LEC
P&O 999 Doctoral Dissertation (1-7). THE

Pharmacology, Toxicology,
and Therapeutics
Chair: Curtis Klaassen
Graduate Adviser: Kenneth McCarson
G034 Breidenthal, Mail Stop 1018, KUMC
3901 Rainbow Blvd., Kansas City, KS 66160
www.kumc.edu/pharmacology, (913) 588-7500
Professors: Bunag, Enna, Hagenbuch, Klaassen, J. Li,
Pazdernik, Rozman, Wan
Professors Emeriti: Cheng, Doull, Maguire, Poisner
Associate Professors: Levant, McCarson, Reed
Assistant Professors: Coppie, Guo, Robertson, Zhong

The Department of Pharmacology, Toxicology, and Therapeutics offers programs leading to Ph.D. and
M.D./Ph.D. degrees in either of two areas. A Ph.D. de-
gree may be earned in pharmacology with specializa-
tion in a number of subfields. The department is one of a very few nationally also to grant the Ph.D. degree in
toxicology, again with opportunities for specialization in
several subfields.

For a few students, a post-graduate training pro-
gram is available in pharmacology and toxicology. Be-
cause the emphasis in training students is to provide
the broad background needed in pharmacological sci-
ces, our program encompasses a wide spectrum of the
biomedical sciences. This includes participation in the
IGPBS core curriculum as well as appropriate elec-
tives in other basic sciences.

Research areas emphasized in both pharmacology and
toxicology programs are biochemical, neurologic,
autonomic, cardiovascular, drug metabolism, molecu-
lar, and endocrine.
Graduate work in the department is primarily for students planning to earn the Ph.D. degree. Although a master’s degree is offered, the broad background required for work in pharmacology makes only the doctoral program appropriate for most students.

**Admission Requirements**

Most often, students entering the program hold undergraduate degrees in chemistry, biology, pharmacy, or veterinary medicine. Applicants must take the Graduate Record Examination.

**Ph.D. Degree Requirements**

In addition to the general requirements of the Graduate School, students must meet the following departmental requirements:

**Course Requirements for the Ph.D. in Pharmacology.**

1. Credit hours equivalent to at least three full academic years.
2. All modules of the Interdisciplinary Graduate Program in Biomedical Sciences core curriculum, which cover biochemistry, molecular biology, cell biology, and physiology.
3. PHCL 880 Essentials of Pharmacology, PTOX 917 Disposition of Xenobiotics, PTOX 918 Toxicology.
4. Other courses considered necessary by sponsor and dissertation committee.

**Course Requirements for the Ph.D. in Toxicology.**

1. Credit hours equivalent to at least three full academic years.
2. All modules of the Interdisciplinary Graduate Program in Biomedical Sciences core curriculum, which cover biochemistry, molecular biology, cell biology, and physiology.
3. PHCL 880 Essentials of Pharmacology, PTOX 917 Disposition of Xenobiotics, PTOX 918 Toxicology, PTOX 940 Techniques in Industrial Toxicology.
4. Other courses considered necessary by sponsor and dissertation committee.

**Foreign Language.** Skill in one foreign language (computer language included) or a research skill is required.

**Examinations**

1. Oral comprehensive examination. To be taken after completion of most course requirements and the language requirement (normally during the third year of full-time graduate study).
2. Final examination. To be taken after all other requirements, including the dissertation, are completed.

**Dissertation**

**Pharmacology Courses**

- **PHCL 761 General Principles of Pharmacology** (1). General principles of pharmacology, including pharmacokinetics, pharmacodynamics, adverse effects, graphically therapeutic plus miscellaneous agents (antacids, cathartics, biologicals). Open to advanced B.S. students and graduate students in Nursing, Allied Health, and other health related programs. Independent study program with use of computer assisted instruction, textbooks, syllabi, consultation with staff and exams as primary teaching instruments. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an Incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. In addition, the enrollment card must be stamped by the instructor. LEC.

- **PHCL 763 Cardiovascular-renal Pharmacology** (1). Antihypertensives, antiarrhythmics, vasodilators, cardioactive, polypeptides, diuretics, antianginals. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. In addition, the enrollment card must be stamped by the instructor. LEC.

- **PHCL 764 Pharmacology of the Central Nervous System** (1). General principles of the central nervous system, stimulants, hallucinogens, depressants (hypnotics and sedatives), general and local anesthetics, anti-parkinson agents, tranquilizers, analesgesics and anticonvulsants. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. In addition, the enrollment card must be stamped by the instructor. LEC.

- **PHCL 765 Chemotherapy** (1). Principles of chemotherapy, sulfonamides, penicillins, aminoglycosides, anticancer and antiinflugal agents, antimalarials, broad spectrum antibiotics, anti-parasitic agents, and anti-septics. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an Incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. In addition, the enrollment card must be stamped by the instructor. LEC.

- **PHCL 766 Bloodendoctrine Pharmacology** (1). General principles of endocrine function and use, thyroid drugs, insulin, sex hormones, oxotocics, adrenal steroids, anti-inflammatary agents, blood drugs, antibiotic drugs and vitamins. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an Incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. In addition, the enrollment card must be stamped by the instructor. LEC.

- **PHCL 767 Toxicology** (1). General principles of toxicity, clinical toxicology, solvents, metals, gases and dusts, corrosives, plant and animal toxins, pesticides, radiation, miscellaneous. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an Incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. In addition, the enrollment card must be stamped by the instructor. LEC.

- **PHCL 809 Seminar in Pharmacology** (1). Weekly meetings. LEC.

- **PHCL 826 History of Pharmacology** (2). A discussion dealing with the literature and history of pharmacology. The development of the British school, German school and the origin of American pharmacology are emphasized. LEC.

- **PHCL 841 Molecular and Cellular Pharmacology** (4). Molecular foundations of drug action, including chemical structure of drugs, kinetics and consequences of drug-receptor interactions, and methods for characterizing receptors, and receptor-mediated events. Prerequisite: Permission of course director. LEC.

- **PHCL 846 Advanced Neuroscience** (5). Team taught, in-depth neuroscience course focusing on normal and diseased brain function at the molecular, cellular and systems levels. Lectures and discussions will emphasize current research in neuroscience (same as ANAT 846 and PHSL 846). Prerequisite: Permission of course director. LEC.

- **PHCL 880 Essentials of Pharmacology** (1). Principles of chemotherapy, sulfonamides, penicillins, aminoglycosides, anticancer and antiinflugal agents, antimalarials, broad spectrum antibiotics, anti-parasitic agents, and anti-septics. Students are encouraged to complete this course the semester they enroll. If this course is not completed, students will receive an Incomplete grade. Prerequisite: PHCL 761 and an Enrollment Permission Form must be signed by the student and the instructor. In addition, the enrollment card must be stamped by the instructor. LEC.
alpha adrenergics and miscellaneous ANS agents. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 883 Cardiovascular-renal Pharmacology (1). Antihypertensive drugs, antihypertensive cardiac glycosides, serotonin, histamine, polypeptides, diuretics, and antilipidemics. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 884 Pharmacology of the Central Nervous System (1). General principles of the central nervous system, stimulants, hallucinogens, and depressants (hypnotics and sedatives), general and local anesthetics, antikinase agents, tranquilizers, and anticonvulsants. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 885 Chemotherapy (2). Principles of chemotherapy, sulfonamides, penicillins, antihistaminics, anticoagulants, and miscellaneous antineoplastic agents. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 886 Blood-endocrine Pharmacology (1). General principles of endocrine drugs, insulin, sex hormones, thyroxine, and corticosteroids. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 887 Toxicology (1). General principles of toxicology, clinical toxicology, solvents, metals, gases and dusts, corrosives, and plant and animal toxins, pesticides, radiation, and miscellaneous. Prerequisite: PHCL 881 and permission of department. LEC

PHCL 888 Pharmacology (9). Pharmacology covers the following topics: establishment of rational pharmacological basis for drug therapy, physiological and biochemical effects of drugs and foreign compounds on biological systems; mechanisms responsible for the therapeutic and toxic effects, uses, and disadvantages of drugs. Prerequisite: Consent of instructor. LEC

PHCL 890 Research in Pharmacology (1-10). For graduate students beginning their research training. KSH

PHCL 891 Principles of Pharmacology (1). Chemical fundamentals in structure, actions and metabolism of drugs and toxicants. Included are molecular features of drugs and toxicants, stereoisomers, receptor theory, dose-response relationships, agonists and antagonists, absorption, pharmacokinetics, and structure-activity relationships. LEC

PHCL 899 Thesis in Pharmacology (1-10). For students in a master's program in pharmacology. THE

PHCL 901 Module 9 of the IGPBS: Introduction to Research Ethics (1). The objective of this course is to introduce students to research ethics. Students will learn and discuss some of the following areas: history, ethics in research: 1) sources of errors in science, 2) scientific fraud, 3) plagiarism and misrepresentation, 4) conflicts of interests and 5) professionalism. LEC

PHCL 902 Techniques and Experimental Methodology (3). A laboratory course designed to acquaint the student with research methods in a number of specific areas in pharmacology. LAB

PHCL 911 Graduate Pharmacology Core: Chemical (2). Physical, chemical, and pharmacological aspects of drug action. Includes discussions of pharmacodynamic and pharmacokinetic aspects. Prerequisite: PHCL 881 or permission from the Department of Pharmacology. LEC

PHCL 912 Graduate Pharmacology Core: Neuropharmacology (2). Principles of nerve transmission. Emphasis is placed on the central nervous system. Includes a discussion of the neurochemical aspects. Prerequisite: PHCL 881 or permission from the Department of Pharmacology. LEC

PHCL 913 Graduate Pharmacology Core: Cardiovascular Pharmacology (2). Action of drugs on the heart and vascular system. Emphasis will be placed on physiological and biochemical mechanisms of drug action. Prerequisite: PHCL 881 or departmental permission. LEC

PHCL 914 Graduate Pharmacology Core: Immunopharmacology (2). Designed to acquaint students with the actions of drugs on neogenesis and manifestation of the immune response. Drug effects on T and B lymphocytes. Anti-inflammatory drugs. Prerequisite: PHCL 881 or departmental permission. LEC

PHCL 915 Graduate Pharmacology Core: Autonomic Pharmacology (2). Discussion of the effects of drugs on physiological homeostatic mechanisms. Included are the autonomic nervous system, sympathetic and parasympathetic interventions. Prerequisite: PHCL 881 or departmental permission. LEC

PHCL 916 Graduate Pharmacology Core: Cellular Pharmacology (2). Drug action on cells and subcellular organelles. Drug effects on mitotic activity, protein synthesis, protein synthesis, and cell adhesion. Drug effects on tissue cultures. Prerequisite: PHCL 881 or departmental permission. LEC

PHCL 924 Clinical Pharmacology (5). Designed to give practical and theoretical experience with drug trials in humans. Includes animal experimental work when warranted. Clinical principles of drug therapy will be emphasized. IND


PHCL 941 Neuro- and Immunopharmacology (2). Principles of basic, peripheral and central nervous system pharmacology and topics in immunopharmacology and neuroimmunopharmacology. Prerequisite: PHCL 841 or permission of course director. LEC

PHCL 942 Cardiovascular and Endocrine Pharmacology (2). Pharmacological principles of drug actions on the endocrine and cardiovascular systems. This includes the effects of drugs on the interactions of hormones and autacoids with the cardiovascular system. Prerequisite: PHCL 841 or permission of Course Director. LEC

PHCL 990 Research for Dissertation in Pharmacology (1-10). Prerequisite: PHCL 880. KSH

PHCL 999 Dissertation in Pharmacology (1-10). Prerequisite: Open to students of advanced standing enrolled in the doctoral program in Pharmacology. THE

● Toxicology Courses

PTOX 841 and Molecular Cellular Toxicology (4). Molecular foundations of chemical action, including structure of chemicals, kinetics and consequences of chemical-receptor interactions, and methods for characterizing receptors, and receptor-mediated events. Prerequisite: Permission of course director. LEC

PTOX 887 Toxicological Pathology (4). Introductory pathology course for graduate students preparing for a career in basic toxicology research. Topics to be presented and discussed include: cell injury, inflammation, repair and regeneration, immunopathology, neoplasia, tumor pathology, respiratory pathology, liver pathology, nephropathy, miscellaneous organ pathology, and lab animal clinical chemistry. LEC

PTOX 889 Research in Toxicology (1-10). Introductory pathology course for planning on being research toxicologists. Topics to be presented and discussed: cell injury, inflammation, repair and regeneration, immunopathology, neoplasia, tumor pathology, respiratory pathology, liver pathology, nephropathy, miscellaneous organ pathology, and lab animal clinical chemistry. LEC

PTOX 898 Principles of Toxicology (1). Chemical fundamentals in structure, actions and metabolism of toxicants and drugs. Included are molecular features of toxicants and drugs, stereoisomerism, receptor theory, dose-response relationships, agonists and antagonists, absorption, pharmacokinetics, and structure-activity relationships. LEC

PTOX 899 Thesis in Toxicology (1-10). For students in a master's program in toxicology. THE

PTOX 917 Disposition of Xenobiotics (2). Principles of absorption, biotransformation, and excretion of xenobiotics. Prerequisite: PHCL 880 or departmental permission. LEC

PTOX 918 Toxicology (4). Selected topics in environmental, forensic, and industrial toxicology. LEC

PTOX 937 Advanced Disposition of Xenobiotics (1). Detailed discussion of the pharmacokinetics of chemicals and drugs; discussion of the p-450 system; presentation of the biological half-life and toxicity of xenobiotics. Prerequisite: PTOX 917 or departmental permission. LEC

PTOX 938 Advanced Toxicology (2). Individualized discussions dealing with the toxicity of xenobiotics. Subjects to be discussed are the mechanisms of toxic action of pesticides, solvents, metals, radiation, gases, and plant and animal toxins. Prerequisite: PTOX 918 or departmental permission. LEC


PTOX 940 Techniques in Industrial Toxicology (2). A unique course where students are exposed to and have practical experience in techniques used for risk-assessment of chemicals. The course is taught with extensive input by industrial toxicologists who use these techniques on a daily basis. This course is offered at a local industrial setting. Prerequisite: PHCL 881, PTOX 917, PTOX 918, and PTOX 938, or departmental permission. LEC

PTOX 990 Research for Dissertation in Toxicology (1-10). Prerequisite: PTOX 889. KSH

PTOX 999 Dissertation in Toxicology (1-10). Prerequisite: Open to students of advanced standing enrolled in the doctoral program in toxicology. THE
### Preventive Medicine and Public Health

**Kansas City:** Chair: Jasjit S. Ahluwalia  
M.P.H. Director: Won S. Choi  
4004 Robinson Hall, Mail Stop 1008, KUMC  
3901 Rainbow Blvd., Kansas City, KS 66160  
www.kumc.edu/prevmed, (913) 588-2775  
Professors: Ahluwalia, Lai, Neuberger  
Professors Emeriti: Chin, Jerome  
Associate Professors: Ellerbeck, Mayo  
Assistant Professors: Choi, Engelman, Hall, Li, Mahnken, Nollen, Rhode, Richter, Thomas  
Assistant Professors: Hawley, Kramer, Paschal  
The Departments of Preventive Medicine and Public Health on the Kansas City and Wichita campuses offer a Master of Public Health degree. The M.P.H. program serves working health professionals who seek to enhance their ability to assess and respond to the health needs of communities and populations. The M.P.H. degree program is accredited by the Council on Education in Public Health.

**Wichita:** Chair: Craig A. Molgaard  
M.P.H. Executive Director: Linda Frazier  
M.P.H. Director: Suzanne Hawley  
The University of Kansas School of Medicine–Wichita  
1010 North Kansas Ave.  
Wichita, KS 67214-3199  
http://wichita.kumc.edu/prevmed, (316) 293-2693  
Professors: Dismuke, Frazier, Fredrickson, Molgaard  
Clinical Associate Professor: Early  
Assistant Professors: Hawley, Kramer, Paschal  
The Departments of Preventive Medicine and Public Health on the Kansas City and Wichita campuses offer a Master of Public Health degree. The M.P.H. program serves working health professionals who seek to enhance their ability to assess and respond to the health needs of communities and populations. The M.P.H. degree program is accredited by the Council on Education in Public Health.

**Public Health Admission**

Admission to the M.P.H. program is competitive. Students may apply in either Kansas City or Wichita. Admission requires a baccalaureate degree from a regionally accredited institution. An undergraduate grade-point average of 3.0 on a 4.0 scale (or its equivalent) is required for regular admission. An official copy of academic transcripts from all post-secondary institutions attended must be submitted at the time of application. Demonstration of one or more years of responsible work experience in the health field or a degree in a recognized health profession or other evidence of training or experience that indicates adequate preparation for the M.P.H. curriculum is required before admission. Current enrollment in an advanced health professional degree program satisfies the experience requirements.

Applicants who have not received post-baccalaureate degrees must submit official scores from the Graduate Record Examination or an equivalent test of aptitude for post-baccalaureate study (e.g. Medical College Admission Test, Law School Admission Test, Graduate Management Admission Test). Applicants whose native language is not English must comply with Graduate School requirements for demonstration of English proficiency; no applicant whose Test of English as a Foreign Language score is lower than 570 (230 if applicant takes the computerized module) is considered.

All M.P.H. applications must be supported by three letters of recommendation from employers, instructors, or other persons who can assess the applicant’s academic and professional potential. Applicants must submit a résumé or curriculum vitae and are asked to prepare a personal written statement that describes their career goals and their motivation for seeking post-graduate training in public health.

### M.P.H. Degree Requirements

Students must complete at least 36 graduate credit hours as prescribed by the department. Students must complete 15 hours in specified core courses in epidemiology, environmental health, public health administration, biostatistics, and the social and behavioral sciences. Students must complete 14 credit hours in elective courses approved as part of the student’s academic program. Electives must include a 1-hour biostatistical laboratory. Students must complete 6 credit hours in a capstone sequence based on a semester-long practicum in a public health agency or similar organization followed by preparation and defense of a written project report developed from an activity undertaken as part of the practicum.

Students may undertake Master of Public Health studies on a part-time or full-time basis. Most students attend part time while continuing to work as health professionals.

### Dual/Joint Degree Programs

**M.D./M.P.H.** This is a five-year program in which the medical student completes the requirements for the M.P.H. degree in one year. This can be accomplished either between the second and third, or between the third and fourth, years of medical school. Students must complete the M.D. degree requirements of the School of Medicine. They complete the M.P.H. in three semesters, beginning in the summer (June), and proceeding through fall (August) and spring (January), and finishing by the end of May.

**M.S.N./M.P.H.** This interdisciplinary education experience offered by the School of Nursing and the Department of Preventive Medicine and Public Health combines courses from the M.S. in Nursing and the M.P.H. By combining course work the two degrees may be completed in 59 credit hours instead of 79 hours. This program is designed especially for experienced baccalaureate-prepared nurses interested in community or public health. Full or part time study is available. Individual advising and career planning is done by faculty from the School of Nursing and the M.P.H. program. Concentrations include advanced community/public health nursing clinical specialization and the M.P.H. generalist program.

**Ph.D./M.P.H.** The Department of Applied Behavioral Science on the Lawrence campus offers a 72-credit-hour doctoral program in behavioral science. Students learn about a wide array of content areas and theoretical perspectives and achieve proficiency in behavioral analysis, developmental studies, or behavioral intervention. Both the Departments of Applied Behavioral Science and of Preventive Medicine and Public Health promote community/public health and development through collaborative research, teaching, and service. The joint Ph.D./M.P.H. degree is ideal for students interested in prevention through community and public health. Distance-learning options are available for many M.P.H. courses. Students must apply for admission to the M.P.H. and Ph.D. programs separately. Applications are reviewed by the respective admissions committees.
Students admitted to the joint program complete the 36-hour M.P.H. requirements in addition to the Ph.D.

**Distance Education**

The KU-M.P.H. program offers distance education courses as a means of enhancing knowledge and skills for public health professionals and health care practitioners in counties at a distance from teaching sites in Wichita and Kansas City. It serves employed students who are unable to take all the traditional classes they wish because of schedule conflicts.

Instructional methods in mediated courses include readings, online discussions, two-way videoconferencing, videotaped presentations, self-paced CD-ROMs, and other technologies. Permission of the instructor is required before enrollment for each course. Each class is limited to a maximum number of students.

During distance education courses, students meet learning objectives that are essentially identical to objectives that would be met in an on-site class. Course requirements are no greater and no less than for classroom-based courses. The flexibility of a distance education environment allows students to complete courses while living at a distance from campus, or while attending to employment or family commitments during standard class times. However, these benefits come with additional responsibilities for the student. Online students must be self-directed, independent and organized to complete courses successfully.

Certain distance education courses have on-campus components, such as student presentations, which are defined in advance. In addition, students who plan to take 50 percent or more of their course work through the distance program must participate in a day-long orientation at matriculation and in a one-day visit to campus each semester. These face-to-face sessions bridge the end of one semester to the beginning of the next one. While on campus, students network with their peers, make final presentations related to current course work, and receive individual advising and mentoring. Students plan the capstone project with the faculty committee during these visits and present results of the project at the end of the experience. Supplementary visits to campus to complete capstone-related activities may be required by the student’s faculty committee.

**Preventive Medicine and Public Health Courses**

**PRVM 800 Principles of Epidemiology** (3). Basic concepts of epidemiology and methods for identification of factors influencing health and disease in human populations. Considerations are centered on physical, biological, psychosocial, and cultural factors in relation to infectious and non-infectious diseases; interactions between agent, host, and environmental factors as determinants of health and disease; application of the epidemiologic approach to health services; retrospective and prospective, analytical and case-control studies, and behavioral and ecological studies. LEC

**PRVM 801 Introduction to Clinical Medicine I** (3). This course consists of two components: Health Promotion and Disease Prevention (HPDP), and Clinical Skills. HPDP presents an introduction to clinical preventive medicine with particular emphasis on health promotion, disease prevention, behavioral medicine and risk reduction. Through lectures and small group discussions, students examine the physician’s role in promoting health in all its dimensions: physical, psychological, intellectual, emotional, spiritual, social, and behavioral. CLINICAL SKILLS helps students acquire and use the knowledge, skills, and attitudes of a competent, caring clinical. Through lectures, demonstrations, tutorials, standardized patient encounters, and preceptor experiences, students learn and practice patient interviewing and physical examination. This component emphasizes the evaluation of the normal patient and the application of principles introduced in basic science courses (e.g., anatomy and physiology) to the physical examination. Students are evaluated through written examinations and other written assignments, small group presentations preceptor activities, and standardized patient encounters. (Same as ICM 801.) Prerequisite: Consent of instructor. LEC

**PRVM 802 Principles of Epidemiology Lab** (1). This course is an additional supplement to the Principles of Epidemiology course. We will review articles and discuss the major principles of epidemiology through the use of the medical literature. This course is designed for students to obtain practical training in epidemiological methods and public health. Prerequisite: Concurrent enrollment in PRVM 800. LEC

**PRVM 803 Principles of Statistics in Public Health** (3). Introductory course concerning the concepts of statistical reasoning and the role of statistical principles as the scientific basis for public health practice. Prerequisite: Permission of instructor. LEC

**PRVM 805 Public Health Seminar** (1). This course will focus on public health practice. Guest lectures from the State and local public health agencies will present problems and how these problems are being addressed. Topics are expected to vary somewhat from year to year, depending on the priorities of the agencies. However topics might include: issues as smoking prevention, automobile accidents, foodborne outbreaks, cryptosporidium outbreaks, lead poisoning in children, asthma in children, sexuality transmitted diseases diabetes, cancer control, nutrition, cardiovascular diseases, bioterrorism, legal issues and administration of public health. Each topic will be covered in two separate lectures with the first week concentrating on the epidemiology of the problem and the second week concentrating on control of the problem FLD

**PRVM 806 Special Topics:** (1-4). In-depth, individualized investigation of special problems in public health. Designed especially for students with limited background in community health. Prerequisite: Permission of instructor. RSH

**PRVM 807 Field Epidemiologic Investigation** (2). The student will investigate the outbreak of an infectious or chronic disease. This disease could be caused by agents in food, water, or air (etc.). The aim is to gain practical experience in epidemiologic investigation techniques which can later be presented at a seminar. Assignments will be related to state or local health departments, other governmental agencies, ongoing faculty research projects or other investigations. Prerequisite: PRVM 800. RSH

**PRVM 808 Interdisciplinary Research Seminar** (1). This seminar will present locally and nationally recognized clinicians and researchers to discuss various areas of public health and clinical research. The course is designed to expose MPH students to a variety of ongoing research and features speakers from a variety of disciplines including physicians, epidemiologists, biostatisticians behavioral scientists, nursing faculty, nursing students, medical students, allied health faculty and students, and others. Prerequisite: Permission of instructor. LEC

**PRVM 810 Clinical Trials** (3). The design, implementations, analysis, and assessment of controlled clinical trials. Basic biostatistical concepts and models will be emphasized. Issues of current concern to triallists will be explored. Prerequisites: PRVM 804. Principles of Statistics in Public Health, or permission of instructor. LEC

**PRVM 812 Public Health Biostatistical Laboratory** (1). Complements Biometry 811 and Principles of Statistics in Public Health, PRVM 804. Problem-based laboratory that emphasizes the application of statistical methodology to public health practice and research. Students assess how statistical methods are used to address public health issues through computer analysis of actual public health/epidemiologic data sets and through review of statistical aspects of the public health literature. Prerequisite or Co-requisite: BMTR 811, PRVM 804 or PRVM 814. LEC

**PRVM 814 Fundamentals of Biostatistics I** (3). First-semester course of a two-semester introductory statistics course that provides an understanding of the proper application of statistical methods to scientific research with emphasis on the application of statistical methodology to public health practice and research. This course focuses on basic principles of statistical inference with emphasis on one or two sample methods for continuous and categorical data. This course fulfills the core biostatistics requirement. LEC

**PRVM 815 Surveillance and Control of Infectious Disease** (3). This course is concerned with the public health aspects of infectious diseases of importance in the United States. Emphasis will be given to surveillance and control of reportable diseases transmitted via person to person spread, arthropod vectors, lower animals, and common sources. Special considerations are given to characteristics of the agent, host, and environment that influence transmission and selection of control strategies. Instruction is by lecture, seminars and problem-solving sessions. Prerequisite: PRVM 800 or permission of instructor. LEC

**PRVM 816 International Health** (3). This course will deal with international health and disease and their effects on public health at the international and community levels. It will consider health problems of Americans going abroad and health problems brought to America by persons, animals, and objects coming from abroad. It will consider worldwide health problems and geographically contained health problems. It will consider America’s role vis a vis global health, and the effects of foreign health problems in the United States. It will consider preventive health.

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**THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG**
Preventive Medicine & Public Health

measures and the role of national and international health organizations. Prerequisite: PRVM 800 or permission of instructor. LEC

PRVM 817 Fundamentals of Biostatistics II (3). Second level statistics course that provides an understanding of more advanced statistical methods to scientific research with an emphasis on the application of statistical methodology to public health practice, public health research, and clinical research. Special focus will be upon the utilization of regression methodology and computer applications of such methodology. Prerequisite: PRVM 814. LEC

PRVM 818 Social and Behavioral Aspects of Public Health (3). Examination of the characteristics, beliefs and behaviors of groups and individuals concerning health issues as a basis for understanding the role of these factors in public health and their incorporation into strategies designed to address health needs of populations. Course draws on the clinical, social and behavioral sciences to examine issues utilizing concepts of health and non-health; actions taken in response to symptoms or to promote health/prevent illness; interactions with health care systems; vulnerability to specific health problems; and the effects of health on societal agreements and expectations. Prerequisite: Permission of instructor. LEC

PRVM 820 Community Health Promotion (2). This course will acquaint the student with leading approaches to community health promotion, including the Centers for Disease Control model, leading health education programs for community groups, business, and industry will be studied along with public school programs. Prerequisite: Permission of instructor. LEC

PRVM 822 Advanced Topics in Health Promotion (2). This course will focus on patterns of occurrence and methods of change for control of risk factors for chronic disease in terms of related health habits. Instruments for measurement of the prevalence of risk factor health habits will be studied as well as epidemiologic data. Prerequisites: PRVM 820 or permission of instructor. LEC

PRVM 823 Field Experience in Community Health Education (1-3). Internships with community agencies, community preceptors in areas of concentration. Prerequisite: Permission of instructor. FLI

PRVM 825 Child and Family Health (3). Family, maternal, and child health problems will be addressed. Topics include prenatal care (maternal health and habits); fetal growth factors, well baby care (immunizations, nutrition, growth, development, behavior); developmental disabilities; adoption; adolescence; child abuse; family as a support system; long-term medical and social outcomes of chronic illness/disability in children. Subjects are covered through lecture, discussion and field visits under the supervision of a pediatrician. Prerequisite: Permission of instructor. LEC

PRVM 827 Public Health Administration (3). This course provides students with an in-depth understanding of the core functions of public health, assessment, policy development, and assurance. It uses both theoretical and practical material to develop basic administrative competencies necessary for the practice of public health. Particular emphasis is placed on course work which examine how public agencies use resources and private resources most efficiently, effectively, and equitably to maintain or improve the health populations. (Same as HP&M 861). LEC

PRVM 830 Environmental Health (3). This course will identify specific health effects of environmental contaminants and discuss principles of prevention. Specific problem areas will include air and water pollution, solid waste disposal, food preservation, radiation, industrial hygiene, occupational skin and lung diseases, chemical carcinogens accidents, an agricultural health and safety. A number of guest lecturers and field trips will be utilized. LEC

PRVM 832 Environmental and Occupational Epidemiology (2). Epidemiological concepts applied to problems in environmental and occupational health. Theoretical issues include extrapolation from high to low doses, extrapolation from animals to man, synergism, multiple exposures, sensitive populations, and control (comparison) groups. Illnesses of concern include cancer, respiratory disease, and reproductive disease. The concept of surveillance is emphasized. Prerequisite: PRVM 800, PRVM 830. LEC

PRVM 836 Epidemiology in Aging (3). An overview of the aging process, review of current knowledge of epidemiology of selected diseases, such as dementia and osteoporosis, and focus on the populations that primarily affect aging individuals. Emphasis on epidemiologic designs, methods, and issues (e.g., low response rate and measurements) that are pertinent to research on aging individuals. Prerequisite: PRVM 800, BMTR 811/PRVM 884, or permission of instructor. LEC

PRVM 841 Advanced Epidemiologic Methods I (3). Application of the principles of epidemiology and the techniques of statistical analysis to the solution of epidemiologic problems. Emphasis will be placed on theory and application of various techniques in the statistical analysis of epidemiological data. Students will be oriented toward application and interpretation of many statistical techniques. Skills necessary for thesis preparation will also be addressed. Prerequisite: PRVM 800, BMTR 811, or PRVM 814. LEC

PRVM 842 Advanced Epidemiologic Methods II (3). This course will concentrate on concepts and application of various statistical tech-

Dykes Library

hours are Monday to Thursday—7:30 a.m. to 11 p.m. (7:30 a.m. to 10 p.m. in summer)

Friday—7:30 a.m. to 10 p.m.

Saturday—9 a.m. to 6 p.m.

Sunday—1 to 9 p.m.

During final examinations, Dykes Library is open until midnight.

There is a clinical campus of the KU School of Medicine in Wichita.
PRVM 860 Community Nutrition (3). Comparative analysis of the demographic, geographic, and economic structure of various types of communities in Western and non-Western societies. Relationships between these compositional elements of a given community, its food and nutrition resources and services, and the nutritional status of its members. Development of alternative strategies for resource expansion and/or for delivering appropriate nutritional services to target communities. Prerequisite: Permission of instructor. LEC

PRVM 865 Advanced Topics in Medical Ethics (2-4). Advanced study of one or more of the major ethical issues confronting medicine on the current scene. In addition to research resulting in one or more papers, there are guided readings, seminars, and tutorials. Prerequisite: Permission of instructor. LEC

PRVM 866 Advanced Topics in the History of Medicine (2-4). Advanced study in the history of medicine on a period or topic of the student’s choice with approval of the instructor. In addition to the research which must result in one or more papers, there are seminars, guided readings, and tutorials. Prerequisite: Permission of instructor. LEC

PRVM 868 Seminar in Outcomes Management and Research (1). Political, economic, and methodologic issues that affect health care quality and outcome measurement will be discussed and analyzed in this seminar. Visiting faculty experts in outcomes research and management will present models for health care outcomes assessment and evaluation. (Same as HF&M 876 and NRSG 888.) LEC

PRVM 871 Data Management and Descriptive Epidemiology Using SAS (1). Basic SAS software programming and database management skills. Proficiency in SAS programming for basic descriptive epidemiology purposes. Instruction in publishable formatting and applications for basic measures of frequency, correlation and graphics production. Prerequisite: PRVM 800, PRVM 804/BMTR 811 or permission of instructor. LEC

PRVM 872 Grant Writing (3). This course combines instruction and practical exercises to move the participant step-by-step through all stages of planning programs, identifying funding sources, and writing grant proposals. Upon completion of the course, the student will have developed a quality proposal and be able to demonstrate skills in preparing grants. These will include: Development of fundable idea, researching appropriate funding opportunities from foundations, corporations, and governmental sources; Finding grant information on the Internet; Reviewing federal grant applications, including NIH, NSF, and HRSA applications; Development of proposal elements and crafting a quality grant application; Review of certification and assurances required on grant applications; Review of evaluation and program outcome requirements on grant applications; Working with other participants in small groups to act as internal grant reviewers, responding to reviewers, and resubmitting grants. LEC

PRVM 875 Management of Public Health Data (3). A 3 credit hour graduate level course concerning basic computing skills necessary for any advanced epidemiologic or administrative quantitative methods. This course covers basics of variable and dataset creation, building, maintenance and basic descriptive (not interpretive) analysis. The course is designed to be of use to students entering a variety of research, administrative and public health settings in public health, clinical and other fields. Software covered will include SAS, SPSS, Epi Info, KIFHS, Microsoft-EXCEL and ACCESS. The course can stand alone, or prepare students for Biostatistics and Epidemiology courses. Public data presentations will be stressed to prepare students to communicate about data with the lay public. LEC

PRVM 877 Health Communication (3). This course is focused on community health education and promotion, especially designing and evaluating health communication programs for populations with shared risks, exposures or behaviors. Ways in which the general public receives and assigns meaning to health messages will be reviewed. The strengths and weaknesses of specific health communication initiatives will be analyzed in terms of theoretical constructs, costs and outcomes. Students apply public health principles by designing a substantive health communication piece or educational material. Prerequisite: PRVM 800: Principles of Epidemiology and PRVM 818: Social and Behavioral Aspects of Public Health. Permission of instructor may be granted in lieu of these prerequisites. LEC

PRVM 879 Statistical Computing in Research (2). This course will utilize statistical packages (SAS and SPSS) for data management and analysis. Collection and management of data along with one, two and multiple sample parametric procedures will be covered for categorical and continuous data. Simple linear regression will also be covered. LEC

PRVM 880 The Science and Application of Community Health (2-3). Application of scientific principles in community health and epidemiology to a specific program area. This one semester course will provide in-depth coverage of a single academic specialty area. Program areas include epidemiology, health services evaluation, environmental health, and community nutrition. Prerequisite: PRVM 800, PRVM 830, PRVM 827, BMTR 811/PRVM 804, and permission of instructor. LEC

PRVM 882 Nonparametric Statistics (3). This course will study nonparametric methods in many situations as highlighted by the following topics: Students will learn how nonparametric methods provide exact p-values for tests, exact coverage probabilities for confidence intervals, exact experimentwise error rates for multiple comparison procedures, and exact coverage probabilities for confidence bands. This course will be using EXCEL and SAS to conduct various procedures. Prerequisite: PRVM 814 and PRVM 817 or consent of instructor. LEC

PRVM 886 Applied Linear Regression (3). Simple linear regression, multiple regression, logistic regression, nonlinear regression, neural networks, autocorrelation, interactions, and residual diagnostics. Applications of the methods will focus on health related data. Prerequisite: 1) Fundamentals of Biostatistics I (PRVM 814) or the equivalent and 2) Fundamentals of Biostatistics II (PRVM 817) or Analysis of Variance (BMTR 801) or Permission of the Instructor. LEC

PRVM 891 Community Health Practicum (3). Students will complete a practicum of at least 8 hours per week in a community health setting. (Same as NRSG 825.) Prerequisite: PRVM 800, PRVM 818, BMTR 811/PRVM 804, and permission of instructor. LEC

PRVM 893 Community Health Project (1-3). Completion of a written project based on the community health practicum. The student will be examined orally over the methodology and content of the project. (This course may be repeated for a maximum of six credit hours.) Prerequisite: PRVM 891 and permission of instructor. LEC
School of Nursing

Karen L. Miller, Dean
G040 School of Nursing Bldg., Mail Stop 2029
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Kansas City, KS 66160, www2.kumc.edu/son

Master of Science Program in Nursing ...... 341
Admission ................................................................. 341
M.S. Degree Requirements .................................. 341
Advanced Practice Nursing .................................. 341
Nurse Midwife ........................................................... 341
Leadership ................................................................. 341
Post-master's Certificate Programs .................... 341
Joint Degree Options ............................................. 341
Common Core .......................................................... 342
Advanced Practice Core ....................................... 342
Research ................................................................. 342
Clinical/Functional Specialization ...................... 342
Nursing/Cognate Elective ...................................... 342
Thesis/Project Option ............................................ 342
Flexible Scheduling ............................................... 342

Doctor of Philosophy Program in Nursing .... 342
Program Options ..................................................... 342
Admission Criteria .................................................... 342
Post-Master's Option ............................................... 342
Post-Baccalaureate Option ...................................... 342
Course Requirements ............................................. 343
Major: Nursing ......................................................... 343
Minor: Area of Student Choice ......................... 343
Support Courses ....................................................... 343
Joint Degree: M.B.A./Ph.D. in Nursing .............. 343
Nursing Courses ....................................................... 343

Photo, page 338:
Murphy Administration Building is on KU's Medical Center campus in Kansas City, Kansas, about 45 minutes away from the main campus in Lawrence.
School of Nursing

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Professors: Aaronson, Bleich, Connors, Miller, Neuberger, Popkess-Vawter, Smith, P. Williams
Associate Professors: Bergquist, Bonnel, Boyle, Bridges, Clifford, Hamera, Langner, Pallikkathayil, Pierce, Rempusheski, Scheibmeir, Teel, Thompson, Wambach, Warren, Wingate
Assistant Professors: Bott, Leenerts, K. Williams

A cademic programs at the University of Kansas Medical Center are offered through the Schools of Allied Health, Medicine, and Nursing. Graduate programs are components of KU’s Graduate School. The Office of the Dean of Graduate Studies at KUMC handles matters related to the graduate programs in Allied Health, Medicine, and Nursing.

Master of Science Program in Nursing

Admission
Regular admission to the Master of Science in Nursing program requires completion of a nationally accredited baccalaureate program in nursing, a graduate statistics course completed in the last six years, a course in physical assessment, an undergraduate average of B or above, being licensed as a registered nurse in one state, and one year of work experience. Applicants are considered on an individual basis. Students who do not meet the grade-point requirement for regular admission status may be considered for admission through special admission categories. Applicants whose programs were not nationally accredited may request a special review.

M.S. Degree Requirements
The M.S. in Nursing requires completion of an approved curriculum with a grade-point average of B or above, a written thesis or project, and a general oral examination.

The program enlarges the focus of nursing, using as its foundation the basic baccalaureate nursing program. The program’s goals are directed toward educating the clinical nurse specialist, the nurse practitioner, the nurse midwife, and the nurse leader.

The advanced practice nursing major prepares the nurse for clinical nurse specialist or nurse practitioner positions. The clinical nurse specialist track includes adult/gerontological nursing. It prepares nurses to perform in the expanded role of caring for a particular kind of patient/client or to function in a particular kind of setting. The nurse practitioner track prepares nurses to provide primary health care to clients and families across the life span. Family nurse practitioner, adult/gerontological nurse practitioner, and psychiatric mental health tracks are available. In conjunction with the family nurse practitioner major, focus areas in psychiatric nursing and women’s health are available. The nurse practitioner is prepared to provide primary health care in a variety of settings.

The nurse midwife major focuses on the care and management of well women’s primary and reproductive health care needs throughout the life span.

The leadership major includes tracks in organizational leadership, public health nursing, and health care informatics. Each of these tracks requires 40 credit hours of specific courses. The organizational leadership track prepares nurses to assume leadership positions in hospitals and other health agencies. The public health track prepares nurses to develop advanced community-based interventions and determine outcomes with emphasis on health promotion and disease prevention strategies for a targeted population.

The health care informatics track prepares the nurse with skills in analysis, design, implementation and evaluation of information systems that support a full range of clinical and patient care functions.

Post-master’s certificate programs include Nurse Educator, Nurse Midwifery, Psychiatric Mental Health, Family Nurse Practitioner, Public Health Nursing, Organizational Leadership, Health Care Informatics, and Outcomes Management and Research. Additional content areas are being developed as post-master’s certificates.

Students in the leadership major may choose one of two joint degree options. Students may combine the Master of Science degree in nursing (organizational leadership) with the Master of Health Services Administration degree or the Master of Science in nursing (public health nursing) with the Master of Public Health degree. By combining some course work, the two degrees may be completed in fewer hours than if they were pursued independently.

The program’s goals are directed toward educating the clinical nurse specialist, the nurse practitioner, the nurse midwife, and the nurse leader.

The advanced practice nursing major prepares the nurse for clinical nurse specialist or nurse practitioner positions. The clinical nurse specialist track includes adult/gerontological nursing. It prepares nurses to perform in the expanded role of caring for a particular kind of patient/client or to function in a particular kind of setting. The nurse practitioner track prepares nurses to provide primary health care to clients and families across the life span. Family nurse practitioner, adult/gerontological nurse practitioner, and psychiatric mental health tracks are available. In conjunction with the family nurse practitioner major, focus areas in psychiatric nursing and women’s health are available. The nurse practitioner is prepared to provide primary health care in a variety of settings.

The nurse midwife major focuses on the care and management of well women’s primary and reproductive health care needs throughout the life span.

The leadership major includes tracks in organizational leadership, public health nursing, and health care informatics. Each of these tracks requires 40 credit hours of specific courses. The organizational leadership track prepares nurses to assume leadership positions in hospitals and other health agencies. The public health track prepares nurses to develop advanced community-based interventions and determine outcomes with emphasis on health promotion and disease prevention strategies for a targeted population.

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All majors present a theoretical base, part of which is held in common and included in courses completed by all master’s students. The theoretical base specific to each major is included in the major area courses and accompanied by clinical or practical experience that allows the student to apply the theory in a health care setting.

The M.S. in nursing curriculum has four major components. These are the common core, advanced practice or leadership core, research, and clinical or functional specialization segments. Forty-two to 45 credit hours are required for the clinical nurse specialist track, 44 to 46 hours for the nurse practitioner track, 47 for the nurse midwife track, and 40 hours for each track in the leadership major.

**Common Core.** Common core nursing courses provide the core knowledge and skills essential to the nurse practicing in any advanced area of nursing. Courses in this area are NRSG 750, NRSG 751, NRSG 752, NRSG 753, and NRSG 755.

**Advanced Practice Core.** Advanced practice core courses provide the basis for expert clinical patient care. Courses in this category are NRSG 809, NRSG 810, NRSG 811, NRSG 812, and NRSG 813.

**Research.** Research courses focus on the ability of the nurse to understand and use research and to participate in the development of new knowledge in nursing and health care. Courses in this category are NRSG 754, NRSG 898 or NRSG 899.

**Clinical/Functional Specialization.** Courses in this category provide the information necessary for advanced practice in the area chosen. The student may choose clinical nurse specialist courses in nurse practitioner, nurse midwife, or leadership.

**Nurse Midwife.** Courses for the clinical nurse specialist track, and nurse practitioner track can be identified by their titles.

**Leadership.** Courses provide the theoretical basis for the organizational leadership track, the public health nursing track, and the health care informatics track. Courses in this category are NRSG 880, NRSG 820, NRSG 808, NRSG 885 and NRSG 826. The student must complete four of these five courses.

**Nursing/Cognate Elective.** This category offers the student the opportunity to individualize the program to meet his or her specific needs. Courses may be chosen from nursing areas in or outside the student’s major or from areas outside nursing.

**Thesis/Project Option.** In some majors, the student may choose to complete a thesis for 6 credit hours or to complete a project for 2 credit hours and take 4 additional credit hours of elective course work. In these majors, students who complete either the thesis or the project must complete the same total number of credit hours for graduation. Other majors assume the completion of the project instead of the thesis. The project involves applying aspects of the research process to the student’s area of nursing practice. A number of options are available for the project. Both thesis and project involve a formal paper and an oral examination covering the area of study.

**Flexible Scheduling.** The majority of students in the Master of Science program are part-time students. Most of these students are employed full time. Therefore, most on-campus classes are scheduled in the late afternoon and evening to accommodate these employed students. In addition, many courses are offered on the Internet or in a compressed format. These flexible schedules allow students to pursue graduate study without undue interference with work responsibilities. In addition, an option exists in which selected students who are registered nurses can pursue the baccalaureate degree and the master’s degree in nursing by taking some courses concurrently in the undergraduate and graduate programs.

**Doctor of Philosophy Program in Nursing**

The Ph.D. program prepares graduates to function in faculty positions in college and university settings; to conduct independent research and scholarly endeavors in nursing; to generate and expand the theoretical, empirical, and philosophical bases for nursing practice; and to provide leadership to the profession and interpret nursing to society. Students have opportunities to expand their theoretical knowledge and research skills in a minor area, to develop expertise in nursing theory development, to expand research skills, and to gain a historical and philosophical perspective that broadens their professional orientation and provides a basis for understanding changing social expectations, cultural perspectives, and economic and political trends.

**Program Options**

Students can apply to the doctoral program after completing the master’s degree in nursing or after completing the baccalaureate degree with a major in nursing. The post-baccalaureate entry option is for exceptionally well-qualified B.S.N. graduates whose career goals are research oriented and who wish to progress as rapidly as possible toward the doctorate in nursing. A Ph.D./M.B.A. joint degree also is offered.

**Admission Criteria**

**Post-Master’s Option**

1. Completion of a master’s degree in nursing from a nationally accredited program is required. Prerequisite preparation must include the following courses:
   - Basic Statistics—3 credit hours
   - Analysis of Variance—3 credit hours

2. Preference is given to students with 3.25 grade-point averages for the master’s degree in nursing.

3. Required Graduate Record Examination scores are 1,000 on the verbal and quantitative sections and at least 4 on the analytical writing section (or a score of 1,500 on the three-part GRE, if taken before October 2002).

4. Potential for leadership and scholarship in nursing should be demonstrated.

**Post-Baccalaureate Option**

1. Completion of a baccalaureate degree in nursing from a nationally accredited program is required.

2. Satisfactory completion of the following courses:
   - Basic Statistics—3 credit hours
   - Analysis of Variance—3 credit hours

3. A cumulative grade-point average of 3.5 on a 4.0 scale.

4. Required Graduate Record Examination scores are 1,000 on the verbal and quantitative sections and at least
4 on the analytical writing section (or a score of 1,500 on the three-part GRE, if taken before October 2002).
5. Potential for leadership and scholarship in nursing should be demonstrated.

Course Requirements

Major: Nursing. The nursing portion of the doctoral program has three major components: empirics, theory, and clinical aesthetics. A total of 47 hours of course work is required.

Theory (6 hours)
- NRSG 950 Philosophy of Science and Theory Development in Nursing
- NRSG 951 Middle-range and Practice Theories for Nursing

Empirics (16 hours plus 18 hours of doctoral research and dissertation)
- NRSG 802 Qualitative Research I
- NRSG 802 Qualitative Research II
- NRSG 953 Measurement Strategies in Nursing Research I
- NRSG 954 Quantitative Research Issues and Strategies
- NRSG 955 Measurement Strategies in Nursing Research II
- NRSG 959 Research Experience
- NRSG 960 Doctoral Research
- NRSG 999 Dissertation

Clinical Aesthetics (5 hours)
- NRSG 900 History and Philosophy of Nursing
- NRSG 962 Futuristic Issues in Nursing

Special Topics (2 hours)
- NRSG 965 Special Topics

Minor: Area of Student Choice. This includes 12 hours of courses in the student’s area of choice. These courses also must support the student’s research. Examples are American studies, anatomy, anthropology, biochemistry, business, child development, communications, economics, education, history, pathology, pharmacology, philosophy, physiology, political science, psychology, sociology, or any other area offered by the KU Graduate School.

Support Courses. This area requires these courses:

Statistics (6 hours)
- PRE 904 Regression Analysis
- PRE 905 Multivariate Analysis

The program also requires foreign language or research skills competence, satisfactory completion of comprehensive examinations, and dissertation defense.

Post-Baccalaureate Entry Option. Students in the post-baccalaureate entry option complete a minimum of 71 credit hours, including dissertation. Students do not earn a master’s degree. However, students who want a clinical focus for research may develop the program around an advanced practice focus and seek Advanced Registered Nurse Practitioner status. In addition to the courses listed above, the following are required:

Empirics
- NRSG 754 Health Care Research

Theory
- NRSG 748/NRSG 749 Theories: Bridge to Practice and Research/Practicum

Minor. Twenty-one to 23 hours are required for the Advanced Practice focus.

Total. A total of 71 credit hours is required for Advanced Practice.

Joint Degree: M.B.A./Ph.D. in Nursing

The School of Nursing and the School of Business offer a joint Ph.D./M.B.A. degree program, for nursing students interested in moving into the administrative and teaching sectors of health care. The joint degree program allows the nurse to develop skills in the scientific study of health care issues (systems or clinical focus) as well as knowledge and expertise in the practical aspects of day to day management of a health system (from unit level to hospital system). This unique combination places the graduate in a position of strength for the changing health care field.

Apply candidates must be admitted to both programs, the Ph.D. in Nursing through the School of Nursing and the M.B.A. program through the School of Business. All applicants must submit scores for the Graduate Management Admission Test and the Graduate Record Examination. International applicants must submit scores for the Test of English as a Foreign Language. All examinations are administered by the Educational Testing Service, Princeton, New Jersey.

The combined M.B.A./Ph.D. in Nursing program consists of 53 hours of doctoral nursing courses and 40 hours of graduate business courses. The combined program takes four years to complete and results in separate M.B.A. and Ph.D. in Nursing degrees. Write or call the Nursing Student Affairs Office, (913) 588-1621, or contact the director of the M.B.A. program, Lawrence campus, School of Business, Summerfield Hall, 1300 Sunnyside Ave., Lawrence, KS 66045-7585, for information.

Nursing Courses

- NRSG 505 Caregiving: Creating Partnerships with Families (2-3).
- NRSG 506 Nursing Case Management of the Older Adult (2-3).
- NRSG 507 Pain Management (2).
- NRSG 508 Violence: The Forensic Perspective (2).
- NRSG 510 Health Care at the End of Life (2).
- NRSG 514 Nursing, Health Care, and Human Sexuality (2).
- NRSG 556 Interdisciplinary Wellness Promotion for People with Psychiatric Disabilities (2).
- NRSG 564 Health Care of Persons with Patterns of Addiction (1-2).
- NRSG 565 Nursing Care of Persons with Patterns of Chemical Dependency: Practicum (2).
- NRSG 576 Promoting Wellness: Community Experience with People with Psychiatric Disabilities (1).
- NRSG 720 Introduction to Nursing Informatics (2). This course will provide an overview of health care information systems, nursing informa-
ion systems, artificial intelligence and micro and mainframe comput-
ers. Interactive laboratory experiences will examine microcomputer uses for problem solving in nursing education, nursing research, nurs-
ig practice, nursing administration. Prerequisite: Admission to the
graduate nursing program or consent of instructor. LEC
- NRSG 721 Understanding and Changing Health Behavior (3). Student
is introduced to theories, research, and issues related to health behavior. Health behavior includes actions or activities undertaken for
the purpose of promoting, preserving, or restoring wellness, and ac-
tions or activities that endanger wellness or cause illness. Internal and
external influences are considered. The problems encountered by per-
sons who are attempting to alter their own health behavior are ad-
dressed. The role of nurses in changing health behaviors in individu-
als, families, communities, and the larger society are examined. Pre-
 requisite: NRSG 752 or consent of instructor. LEC
- NRSG 722 Scholarly Writing for the Health Professional (3). Develop-
ment of scholarly writing skills is emphasized to promote professional
communication and to enhance professional image. Students enrolled
in this interdisciplinary course analyze their own and others' writing to
improve their written communications. Writing skills are practiced and
developed by critiquing published articles, and by preparing written
memorandums, letters, abstracts, and a manuscript. Legal and ethical
issues related to the publication process are explored. Prerequisite: Ad-
mission to the graduate program or consent of instructor. LEC
- NRSG 723 Advanced Practice Geriatric Nursing of the Frail Older
Adult (2-3). The knowledge and skills necessary to provide holistic
care for the frail elderly client are emphasized in the advanced practice
nursing course. Physical and multidimensional functional assessments
are discussed as a basis for establishing functional approaches to care
and planning effective therapeutic interventions in various long-term
care settings. Strategies for coordination of services and collaboration
with an interdisciplinary team for comprehensive health care are inte-
Nursing Courses

KU’s School of Nursing was tied for 20th in the nation in the 2006 edition of U.S. News’ “America’s Best Graduate Schools.”

The leadership major in the M.S. program includes tracks in organizational leadership, public health nursing, and health care informatics.

KU’s School of Nursing ranks in the top 10 schools of nursing in research funding from the NIH’s National Institute for Nursing Research.

NURS 748 Theories: Bridge to Practice and Research (2). Theory development and analysis techniques provide the framework for the study of concepts and theories from nursing and related disciplines. These concepts and theories are used to guide therapeutic nursing interventions and research for individual, family, and basic health client systems. Systems theory and theories related to cultural environments are analyzed to assess and intervene for complex systems. Prerequisite: Admission to the B.S.N. adult/Geri, Family, and Basic Health Client System. Corequisite: NURS 749 LEC

NURS 749 Theories: Bridge to Practice and Research Practicum (1). Selected individual, family, and community client systems are observed in practice to assess the correspondence of theoretical and research literatures. Field study and participant observations provide the means for comparing findings from research and practice. Corequisite: NURS 748. LEC

NURS 750 Theories for Practice I: Individual, Family, and Group (2). Basic elements of theory, theory development and critique are discussed. Theories as they relate to health and human functioning of individual, family, and group client systems across the life span are explored. Developmental, structural, functional and interactional theories and related research are analyzed and critiqued. These theories from nursing and related disciplines are used as a guide for therapeutic nursing interventions. Prerequisite: Admission to the graduate nursing program or consent of instructor. LEC

NURS 751 Theories for Practice I: Practicum (1). Selected concepts are used in a practice setting for understanding and describing the health and human functioning of individual, family, and group client systems, and as a guide to identifying therapeutic nursing interventions. Corequisite: NURS 750. LEC

NURS 752 Theories for Practice II: Organizations, Community, Culture, and Society (2). Organizational, sociological, and cultural theories in relation to the internal and external environments of complex client systems are explored. Structural, functional, power, and/or other macrotheories may be included. Critical components of these theories are applied to issues of health and functioning of organizations, communities, cultural groups and society through assessment and proposed therapeutic interventions. Prerequisite: NURS 750 or consent of instructor. LEC

NURS 753 Theories for Practice II: Practicum (1). Selected organizational, sociological and cultural theories are applied in practice to the analysis of health and functioning of complex client systems. Corequisite: NURS 752. LEC

NURS 754 Health Care Research (3). Methods for analyzing and conducting research and evaluating research findings for use in practice are explored. Research which focuses on health risks of client systems, practice guidelines, therapeutic management and on cost and outcomes will be examined. Emphasis is placed on generating research questions and practical applications. Prerequisite: Admission to graduate program or consent of instructor. LEC

NURS 755 Health Care Professionalism: Issues and Roles (3). Health Care Professionalism in nursing as influenced by social, cultural, political and economic forces interacting with complex client systems is examined. Issues that develop in the changing health care environment that impact health and solutions to problems associated with these issues are explored in relation to ethical and legal parameters. Innovative methods and skills essential for nurses are developed in a laboratory setting. Prerequisite: Admission to the graduate nursing program or consent of instructor. Priority given to CRNA students. LEC

NURS 801 Analysis Variance (2). One-way analysis of variance (ANOVA), two-way ANOVA, repeated measures ANOVA, and analysis of covariance are emphasized. Post-ANOVA tests, power and testing assumptions required in ANOVA are discussed and applied. Outlier detection using robust estimators also are incorporated. Boxplots, histograms and scatterplots are used to display data. Prerequisite: ERE 730. Corequisite: NURS 750 LEC

NURS 802 Qualitative Research I (3). Students explore various qualitative research methodologies such as ethnography, phenomenology/hermeneutics, historiography, grounded theory and/ or others. Emphasis is placed on the appropriateness of each methodology for description and explanation of phenomena. Experience is provided in problem formulation and development of the qualitative research proposal. Practice in data collection methods and initial phases of analysis is provided. Prerequisite: NURS 754 or admission to the doctoral program or consent of instructor. LEC

NURS 809 Health Promotion and Complementary Therapeutics (3). Current trends in health promotion and clinical preventive care across the life span are examined. Specific guidelines for assisting clients to maintain/improve health and/or prevent illness are reviewed. Attention is given to the roles of the health care provider and care recipient in screening, communication, and counseling. The use of complementary (non-pharmacological) therapeutics in assisting clients to achieve goals of health promotion is examined. The recommendation and use of non-pharmacological clinical interventions will be research findings related to selection of therapeutics and measurement of expected outcomes following use of a particular intervention. Prerequisite: Admission to the graduate nursing program or consent of instructor. LEC

NURS 810 Advanced Health Assessment and Physical Diagnosis (3). Building upon clinical skills, the advanced practice nurse will be placed on the adult model; however, major expected differences in special populations will be presented. Corequisite: NURS 811 Advanced Health Assessment and Physical Diagnosis. Practicum LEC

NURS 811 Advanced Health Assessment and Physical Diagnosis: Practicum (1). Content learned in the co-requisite didactic course (N810) will be applied in this practicum. Directed laboratory and simulated experiences afford the opportunity to apply the clinical decision making process too accurately and efficiently gather and analyze subjective and objective data. Co-Requisite: NURS 810 Advanced Health Assessment and Physical Diagnosis. LEC

NURS 812 Advanced Pathophysiology (3). An in-depth scientific knowledge base relevant to selected pathophysiological processes confronted in primary care is explored. This information provides a basis for the formulation of clinical decisions related to diagnostic tests and the initiation of therapeutic regimens. Age specific and developmental alterations are considered in the clinical diagnosis and management. Application is made through age appropriate emergency cases. Prerequisite: Admission to the graduate nursing program or consent of instructor. LEC

NURS 813 Applied Drug Therapy (3). The clinical application of specific categories of drugs, clinically significant side effects are discussed. The use of protocols, prescription writing, and the ethical/legal, and economic issues surrounding the advanced nurse’s role in prescribing and monitoring pharmacological agents and therapeutic outcomes are discussed and applied. Cross-listed with BMTR 801. Prerequisite: Admission to the graduate program or consent of instructor. LEC

NURS 814 Primary Care I: Management of Common Health Problems Throughout the Life Span (3). Common health problems seen in individuals and families throughout the life span are discussed in this first of two sequential courses. Applications of current research and theory based interventions appropriate for protocol based management by advanced registered nurse practitioners are analyzed. Strategies to manage common health problems, in urban and rural patients, are explored. Interventions to restore individual and family level of pre-illness health, and positive lifestyle behaviors are emphasized. Prerequisite: NURS 809 and NURS 810 and NURS 811. Corequisites: NURS 750 and NURS 751 and NURS 812. Corequisite: NURS 815. LEC

NURS 815 Primary Care I Practicum: Management of Common Health Problems Throughout the Life Span (3). Opportunities to develop beginning skills in advanced practice nursing care setting are provided. Emphasis is on assessment, clinical decision making, and management of clients/client systems of all ages/stages who are experiencing common health problems. Internal and external environmental factors as well as legal, ethical and economic concerns related to the presenting common health problems are explored. Current research outcomes and theory based interventions appropriate for management by advanced practice nurses are stressed. Collaboration and consultation (including referrals) with appropriate health providers is emphasized. Corequisite: NURS 814. LEC

NURS 816 Primary Care II: Management of Complex Health Problems Throughout the Life Span (3). Complex health problems seen in individuals and families throughout the life span are discussed in this second sequential course. Applications of current research and theory based interventions appropriate for protocol based management by advanced registered nurse practitioners are analyzed. Strategies and protocols to manage complex patient problems, in urban and rural patients, are explored. Interventions to restore individual and family level of pre-illness health, including secondary and tertiary levels of care are emphasized. Prerequisite: NURS 810 and NURS 815. Prerequisite or Corequisite: NURS 762, NURS 753, and NURS 813, or consent of instructor. Corequisite: NURS 817. LEC

NURS 817 Primary Care II Practicum: Management of Complex Health Problems Throughout the Life Span (3). Opportunities to develop intermediate skills as advanced practice nurses in a primary care setting are provided. Emphasis is on assessment, clinical decision making, and management of clients/client systems of all ages/stages who are experiencing complex health problems. Internally and externally, internal and external environmental factors as well as legal, ethical and economic concerns related to the presenting complex health problems are explored. Cur-
Clinical competencies for nurse-midwifery management of well neonates up to first 28 days of life are developed. Management experiences include the nurse-midwifery role, intervention, consultation, referral, and consent. Corequisites: NRSG 810 or consent of instructor. LEC

NRSG 833 Nurse Midwifery in Women's Health Care Practicum (2). The nurse-midwifery management process is applied. Development of beginning competencies for promotion of optimal physical and mental health of women client systems seeking gynecologic, contraceptive, health promotion, and maintenance services are included. Nurse-midwifery care is delivered collaboratively. The development of a skill base for intrapartal emergencies is addressed. Nurse-midwifery management practices are implemented in the role of labor and delivery postpartum and in collaboration, co-management, and referral when medically necessary. Prerequisite: NRSG 830 or consent of instructor. Corequisite: NRSG 833 or consent of instructor. LEC

NRSG 835 Primary Women's Health Care Across the Life Span (3). Psychological, sociological, and physiological issues of health and human functioning of the female client systems across the life span are explored. Theory and research based therapeutic management of acute, episodic, and chronic conditions for psychosocially based health concerns and their families will be planned. Professional values including standards of practice, certification, cultural, legal and ethical issues, and professional roles will be addressed. The health care delivery system will be analyzed for cost effectiveness and sensitivity to women. Corequisites: NRSG 815, NRSG 817, NRSG 834, or consent of instructor. LEC

NRSG 836 Nurse Midwifery in the Intrapartal and Post Partum Period (3). Nurse-midwifery care of uncomplicated mother/infant client systems through the intrapartal, postpartum, and newborn period is represented and analyzed. Intrapartal and Postpartum complications and emergency events are addressed. Complementary practice models demonstrating various management modalities are described. Concepts of research, ethical, legal and political issues, nutrition, pharmacotherapeutics, health promotion, and selected high-risk deviations from normal are included. Prerequisite: NRSG 830 or consent of instructor. Prerequisite or Corequisite: NRSG 822. LEC

NRSG 837 Nurse Midwifery in the Intrapartal and Postpartum Period Practicum (2). Competencies for nurse-midwifery management according to national standards of practice for low risk healthy women during labor, birth, and postpartum are demonstrated. Development of a skill base for intrapartal emergencies is addressed. Nurse-midwifery management practices are implemented in the role of labor and delivery postpartum and in collaboration, co-management, and referral when medically necessary. Corequisite: NRSG 836 or consent of instructor. LEC

NRSG 840 Care of Women Integration Practicum (4). The theoretical, clinical, and role components of care delivered by the advanced practice student are implemented through an intensive supervised clinical practicum. Advanced professional clinical skills and evidence-based practice in the assessment, management and care of women and newborns are applied. The client system for this experience includes well women, childbearing women and may include neonates in a variety of environments. Emphasis is on increased independence and decision making embracing the function and scope of advanced practice of nurse-midwifery. Prerequisite: Consent of instructor. LEC

NRSG 842 Topics in Mental Health Nursing (1-5). Investigation of special issues or problems relevant to selected client systems in mental health nursing. Prerequisite: One graduate clinical course in mental health nursing or consent of instructor. LEC

NRSG 844 Psychiatric Assessment for Advanced Nursing Practice (2). Advanced psychiatric assessment of children, adults, and the elderly will be covered including conducting caring and competent interviews in simulated situations. Assessment data including suicide and homicide potential, substance use, mood and anxiety disturbances, psychosis, and dementia are emphasized. Prerequisite or Corequisite: NRSG 810 or consent of instructor. LEC

NRSG 845 Psychiatric Mental Health Nursing I: Short-term Illness (2). Short-term mental health problems (e.g., crises and grief reactions) and psychiatric disorders (e.g., anxiety, depression, and behavioral problems) are discussed. Intervention frameworks such as behavioral, cognitive and crisis theories, and supporting outcome research are analyzed as they apply to individual, group, and family client systems across the life span. Focus is placed on environmental factors that relate to health promotion, disease management, and behavior change. Professional issues that commonly occur in implementing the advanced practice role in psychiatric and mental health care are emphasized. Prerequisite: NRSG 750 Theories for Practice I: Individual, Family, and Group. Prerequisite or Corequisite: NRSG 751. LEC

NRSG 846 Psychiatric Mental Health Nursing I: Practicum (2). The role of the psychiatric mental health advanced practice nurse in developing short-term and episodic interventions with individuals, groups, and families is implemented. Students have the opportunity to conduct mental health assessments, formulate diagnoses, and implement psychotherapy for
Nursing Courses

culturally diverse clients from different age groups, theory and research based nursing therapeutics and standards of practice are applied in clinical practice. Prerequisite: NRSG 545 Psychiatric Mental Health Nursing I: Short-Term Illness. LEC
NRSG 847 Psychiatric Mental Health Nursing II: Chronic Illness (2). Individual, family, and group client systems of varying ages with chronic and complex alterations in mental health, such as schizoaffective disorder, substance abuse, addiction, and eating disorders. Biobehavioral, rehabilitation, and psychoeducation frameworks are used in examining factors that contribute to alterations in functioning in the client system's internal and external environment. Likewise these frameworks and research outcomes related to rehabilitation goals are considered in implementing the advanced practice role. Prerequisite or Corequisite: NRSG 752 Theories for Practice II: Organizations, Community, Culture, and Society; NRSG 754 Health Care Research; NRSG 810 Advanced Health Assessment; NRSG 813 Applied Drug Therapy; NRSG 844 Psychiatric Assessment for Advanced Nurs- ing Practice; or consent of instructor. LEC
NRSG 848 Psychiatric Mental Health Nursing II: Practicum (2). Individual, family, and group client systems with chronic and complex alter- ations in psychological functioning are managed. Selected theoretical frameworks such as biobehavioral, rehabilitation, and psychoeducation are managed. Selected theoretical frameworks such as biobehavioral, rehabilitation, and psychoeducation frameworks are used in examining factors in the client system's internal and external environment that contribute to alterations in psychological functioning. These frameworks and research outcomes related to rehabilitation goals are considered in implementing the advanced practice role. Prerequisite or Corequisite: NRSG 810 Advanced Health Assessment; NRSG 813 Applied Drug Therapy; NRSG 844 Psychiatric Assessment for Advanced Nurs- ing Practice; or consent of instructor. LEC
NRSG 852 Topics in Pediatric Nursing (1-3). Investigation of special problems of a selected client system (infants, toddlers, preschoolers, school-age children, or adolescents) in pediatric nursing. Prerequisite: One graduate clinical course in pediatric nursing or consent of instructor. LEC
NRSG 853 Abstraction and Modeling of Health Care Information (3). This information system development life cycle process are presented with emphasis on determination and analysis of information system re- quirements and system design that meet the identified health care in- formation requirements. Object-oriented techniques will be intro- duced, including UML and Rumbaugh’s Object Modeling Technique. Methodology, to facilitate process analysis and design proposal develop- ment. Prerequisites: NRSG 820 or consent of instructor. LEC
NRSG 854 Knowledge Management in Health Care (3). Knowledge management is the creation, curation, and dissemination of health care organizations’ knowledge assets. Defining knowledge, de- scribing the knowledge creation cycle, and the identification of the knowledge worker and his/her impact on the organization are dis- cussed. Information technology and communities of practice are pre- sented in a balanced approach supporting a systematic viewpoint of the knowledge management process. Knowledge management theory is balanced the importance of a knowledge audit and the develop- ment of knowledge management tools. Prerequisites: BUS 738, NRSG 820, or consent of instructor. LEC
NRSG 855 Topics in Health Care Informatics (2). Investigation of cur- rent issues and trends relevant to health care information. Prerequisite: One graduate course in information or consent of instructor. LEC
NRSG 856 Health Care Informatics Practicum (3). In collaboration with health care information faculty, preceptors, students design an expe- rience to facilitate application of the knowledge of health care information. Emphasis is on the application of the information system development life cycle. Students analyze the leadership and technical behaviors of various informatics roles and negotiate an informatics project to be completed within the semester. Prerequisite: NRSG 854, Leadership Core, NRSG 853, BUS 738. Prerequisite (or Co-requi- site): NRSG 854, NRSG 855, NRSG 888 or consent of instructor. LEC
NRSG 860 Health Care at the End of Life (3). Complex issues that in- fluence care for clients and their family systems at the time of end sur- rounding death provide the focus for this course. Contemporary atti- tudes surrounding death and dying as well as ethical, legal, cultural, social, and financial issues are examined. The needs of individuals and families and the consequences of death, varying from physical, psycho-spiritual care, and bereavement are discussed in relation to contemporary causes of death. Collaborative role development with other members of the health care team surrounding care of the dying are explored. Prerequisite: Corequisite: NRSG 770. LEC
NRSG 861 Topics in Adult Nursing (1-5). Investigation of special is- sues or problems relevant to a selected client system in Adult Nursing. Prerequisite: One graduate clinical course in Adult Nursing or permis- sion of the instructor. LEC
NRSG 862 Adult/Gerontological Health Care I (3). Knowledge and skills necessary to provide holistic care for the culturally diverse adult in multiple care settings are emphasized. Clinical manifestations and patient response to selected problems of sensory, psychologic, neuro- logic, musculoskeletal, and dermatologic systems and infections are ex- amined. Physical and multidimensional functional assessments are em- phasized as a basis for establishing differential diagnoses and planning effective therapeutic interventions. Coordination of care and collabor- ation with an interdisciplinary team for comprehensive health care are integrated throughout the course. Prerequisite: NRSG 810. Prereq- uisite or Corequisite: NRSG 750, NRSG 869, NRSG 812, NRSG 813, or consent of instructor. LEC
NRSG 863 Adult/Gerontological Health Care I: Practicum – CNS (2). Management of the primary, acute, and chronic health care needs of a culturally diverse population of adults across the life span with spe- cific system dysfunction are explored. Clinical practice will include a multidisciplinary coordination of comprehensive managed care. Con- sultative, patient education, quality improvement, and project develop- ment activities will be major focuses. Corequisite: NRSG 862 Adult/Gerontological Health Care I. LEC
NRSG 864 Adult/Gerontological Health Care II: Practicum – NP (2). Assessment of adults across the life span and the management of common acute and chronic health problems are executed in consultation with the appropriate provider. Opportunities to manage adult and medical therapeutics will be provided. Nursing therapeutics and case manage- ment based on theory and research are applied in a variety of community and institutional practice settings. Emphasis is on health promotion and health maintenance for culturally diverse adult individuals and groups. Corequisite: NRSG 862 Adult/Gerontological Health Care I. LEC
NRSG 865 Adult/Gerontological Health Care III (3). Knowledge and skills necessary to provide holistic care for the culturally diverse adult in multiple care settings are emphasized. Clinical manifestations and patient responses to selected problems of cardiovascular, respiratory, renal, urinary, endocrine, reproductive, gastrointestinal and immuno- logical systems, musculoskeletal, and dermatological systems are exam- ined. Physical and multidimensional functional assessments are emphasized as a basis for establishing differential diagnosis and planning effective therapeutic interventions. Coordination of care and collaboration with an interdisciplinary team for comprehensive health care are inte- grated throughout the course. Prerequisite: NRSG 752, NRSG 862, or consent of instructor. Corequisite: NRSG 866 or NRSG 867. LEC
NRSG 866 Adult/Gerontological Health Care II: Practicum – CNS (2). Management of the primary, acute and chronic health care needs of a culturally diverse population of adults across the life span with spe- cific system dysfunction are explored. Clinical practice will include in- terdisciplinary care coordination in comprehensive managed care. Con- sultative, patient education, quality improvement, and project develop- ment activities will be major focuses. Corequisite: NRSG 865 Adult/Gerontological Health Care II. LEC
NRSG 867 Adult/Gerontological Health Care II: Practicum – NP (2). Assessment of adults across the life span and the management of com- mon acute and chronic health problems are executed in consultation with the appropriate provider. Opportunities to manage pharmacologi- cal and medical therapeutics will be provided. Nursing therapeutics and care management based on theory and research are applied in a variety of community and institutional practice settings. Emphasis is on health promotion and health maintenance for culturally diverse adult individuals and groups. Corequisite: NRSG 865 Adult/Gerontological Health Care II. LEC
NRSG 868 Adult/Gerontological Health Care III: Preceptorship – CNS (3-5). The theoretical, clinical, and research role components of care as delivered by the adult/gerontological CNS are implemented. Opportu- nities are provided to utilize diagnostic reasoning, nursing therapeutics, pharmacological therapeutics, interdisciplinary treatment plans, project development, consultation, referral, and research findings in the man- ageent and evaluation of culturally diverse clients experiencing spe- cific system dysfunction. The client system for this preceptorship in- cludes adults (and their families) experiencing a selected system dys- function. Emphasis is on health promotion and health maintenance, consultative, patient education, quality improvement, and project develop- ment activities will be major focuses. Corequisite: NRSG 865 Adult/Gerontological Health Care III. LEC
NRSG 869 Adult/Gerontological Health Care III: Preceptorship – NP (5). The theoretical, clinical, and research role components of care as delivered by the adult/gerontological nurse practitioner are imple- mented. Opportunities are provided to utilize diagnostic reasoning, nurs- ing therapeutics, pharmacological therapeutics, interdisciplinary treat-
principles, methods, and processes of curriculum and instruction in nursing education provide the framework for discussing curricular and program planning theories/models, resources for decision-making, research, and evaluation methods that create a learner centered environment. Attention is given to effective learning strategies, research findings, and evaluation methods with diverse students. Professional issues, educational trends, changing role of the educator and student in designing a learning environment are considered. The role components of the nurse educator are implemented with a preceptor in selected educational settings. Opportunities are provided to utilize teaching and learning strategies, research finders, and evaluation methods with diverse students. Professional issues, educational trends, changing role of the educator, and self-assessment are incorporated in accompanying modules. Prerequisite: Completion of NRSG 770, NRSG 671, NRSG 873. LEC NRSG 875 Women's Health: Adolescence and Young Adult (3). The role of the advanced practice nurse in examining and assessing the health of young adults entering adulthood is examined. The nurse educator is implemented with a preceptor in selected educational settings. Opportunities are provided to utilize teaching and learning strategies, research findings, and evaluation methods with diverse students. Professional issues, educational trends, changing role of the educator, and self-assessment are incorporated in accompanying modules. Prerequisite: Completion of NRSG 870, NRSG 671, NRSG 873. LEC NRSG 886 Practicum in Organizational Leadership (3). All aspects of preparing grant applications (client, family, and student or health care professional) in Nursing Education. Prerequisite: Consent of instructor. LEC NRSG 888 Seminar in Outcomes Management and Research (1). Students admitted to the Certificate in Outcomes Management and Research program interact to build on the integrative content from the other outcomes certificate courses. During seminars the students discuss and analyze presentations and publications reporting studies and projects undertaken to describe, evaluate, and improve clinical, financial, and quality-of-life outcomes of medical health care interventions. (Same as HP&M 867 and FRVM 868.) Prerequisite: Admission to the Certificate in Outcomes Management and Research program or permission of instructor. LEC NRSG 889 Grant Writing (3). All aspects of preparing grant applications are covered. This includes writing an actual grant application containing all the usual elements of grants—background, objectives, sources, and scientific text. In addition, different funding agencies, building research teams, the review process, responding to reviewers, and resubmitting grants will be covered. (Same as ANAT 889 and agement, price-setting, budget preparation, cost-benefit/break-even analysis, managed care contracting, and interpreting financial ratios while concurrently acquiring a financial vocabulary with various stakeholders. Financial reports such as balance sheet, budget forms and expense reports are studied and formulated related to government agencies, small clinical operations, grant-funded projects, and start-up programs. Statistical models and the financial management of acute and chronic conditions, affecting both the educator and student in designing a learning environment that increases student retention and learning success for diverse multicultural student populations. Attention will be given to the relationship between the setting, methodologies of clinical teaching, and the assessment of competencies. Prerequisite: NRSG 752, NRSG 754, or consent of instructor. LEC
Nursing Courses

The innovative Ph.D. program in nursing began in 1983.
Hospital Pharmacy .................................. 351
    Admission .................................................. 351
    M.S. Degree Requirements ............................. 351
    Facilities .................................................. 351
    Pharmacy Practice Courses ............................ 351

Medicinal Chemistry ................................ 352
    Admission .................................................. 352
    M.S. Degree Requirements ............................. 352
    Ph.D. Degree Requirements ............................ 352
    Facilities .................................................. 353
    Medicinal Chemistry Courses .......................... 353

Neurosciences ......................................... 354
    Programs .................................................. 354
    Admission .................................................. 354
    M.S. Degree Requirements ............................. 354
    Ph.D. Degree Requirements ............................ 354
    Core Curriculum for the Ph.D. in Neurosciences ... 355
    Neurosciences Courses .................................. 355

Pharmaceutical Chemistry ............................ 356
    Admission .................................................. 356
    M.S. Degree Requirements ............................. 356
    Ph.D. Degree Requirements ............................ 356
        Prerequisites ......................................... 356
        Special-interest Courses ............................ 356

    Precomprehensive Biannual Review .................... 356
    Foreign Language or Other Research Skills
        Requirement ......................................... 356
    Comprehensive Examination .......................... 357
    Seminar Requirements .................................. 357
    Dissertation ............................................. 357
    Takeru Higuchi & Nigel Manning Intersearch
        Ph.D. Program ......................................... 357
    Financial Aid ............................................. 357
    Facilities .................................................. 357
    Pharmaceutical Chemistry Courses .................... 357

Pharmacology & Toxicology ........................... 358
    Admission .................................................. 358
    M.S. Degree Requirements ............................. 358
    Ph.D. Degree Requirements ............................ 358
    Course Work ............................................. 358
    Research Skills Requirement .......................... 359
    Comprehensive Examinations .......................... 359
    Dissertation ............................................. 359
    Facilities .................................................. 359
    Pharmacology & Toxicology Courses .................... 359

Takeru Higuchi & Nigel Manning Intersearch
    Ph.D. Program .......................................... 360
School of Pharmacy

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The School of Pharmacy offers graduate programs through the Departments of Medicinal Chemistry, Pharmaceutical Chemistry, Pharmacology and Toxicology, and Pharmacy Practice. The Department of Pharmacy Practice offers the M.S. with a major in hospital pharmacy. The other three departments offer both the M.S. and the Ph.D. with majors in their respective disciplines. All of the graduate studies programs offered by the School of Pharmacy leading to the M.S. and Ph.D. degrees are under the control and supervision of the Graduate School. Since the requirements for admission and baccalaureate preparation may vary with each department, the requirements of each department or program are discussed separately.

Address inquiries and correspondence about graduate studies to the program or department of interest. See Admissions in the General Information chapter of this catalog for information about application fees.

Hospital Pharmacy
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(913) 588-2330
Professors: Godwin, Howard
Clinical Professor: Generali
Associate Professors: Henry, Lacy, Oszko, Shireman
Assistant Professor: Grauer
Clinical Assistant Professors: Backes, Barnes, Couldry, Davidow, Eng, Moeller, Ragan, Scott, Woods

Admission
In addition to meeting the general requirements for admission to the Graduate School, applicants are considered for admission if they are graduates of a school of pharmacy accredited by the American Council on Pharmaceutical Education and are eligible for licensure as registered pharmacists by the Kansas State Board of Pharmacy. A bachelor of science degree or a doctor of pharmacy (Pharm.D.) degree with a major in pharmacy is required.

Submit your application to the Graduate School online at www.graduated.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535
Send all other requested application materials to

The University of Kansas
Department of Pharmacy Practice
Malott Hall, 1251 Wescoe Hall Dr., Room 6050
Lawrence, KS 66045-7582

M.S. Degree Requirements
A minimum of 30 credit hours, with a majority of hours in pharmacy, is required for the degree. These courses may be selected from related fields after approval by the department. Examples are hospital pharmacy, clinical pharmacy, nuclear pharmacy, computer science, business administration, health policy and management, and related fields. An approved project, representing 6 to 9 credit hours of original research, is required. It may be in pharmaceutical sciences, clinical pharmacy, pharmacy practice, pharmacotherapy, or hospital pharmacy.

To provide practical experience, an accredited specialty residency in pharmacy practice management in an approved hospital is required of each student. Requirements for the residency program include eligibility for licensure as a pharmacist in Kansas. The student must complete the residency concurrently with the academic portion of the program. Upon satisfactory completion of the residency, the student receives a certificate of residency from the cooperating hospital. The typical length of the program is two years. For students who have previously completed an American Society of Health-System Pharmacists accredited residency, this part of the program may be waived on approval of the department.

Facilities
Facilities of the pharmacy department at the University of Kansas Medical Center in Kansas City are used in the residency portion of the program.

Pharmacy Practice Courses
PHPR 845 Professional Communications (2). A course designed to give the graduate student a practical experience in areas of professional communications such as administrative proposals, grants, letters, memos, poster presentations, and written papers. The course focuses on the different kinds of communications required to relate to other health care professionals. Prerequisite: Consent of instructor. LEC
PHPR 850 Introduction to Pharmacoepidemiology (3). Pharmacoepidemiology is the application of the principles of epidemiology to the study of medications and their effects on health. Evaluating a drug’s ef-
Hospital Pharmacy; Medicinal Chemistry

fects commences when a chemical entity becomes a drug candidate, intensifies through clinical trials, and continues after products reach the market. These studies are critical for supporting the proper use of medications in terms of efficacy, effectiveness, and cost-effectiveness. This course provides a broad introduction to the principles of pharmacoeconomics with a focus on applications in the medical literature. LEC

PHPR 855 Economic Evaluation of Health Care Programs and Services (3). The course will provide students with an overview and appraisal of the "state-of-the-art" in the evaluation of health care programs and services (with a special emphasis on pharmaceutical programs, services, and products). The purpose of the course is to provide the student with the tools to conduct economic rather than general evaluation of health care programs and services. There will be some discussion of theoretical concepts, but the major emphasis will be on practical methodological issues in economic evaluation of pharmaceutical programs. The course integrates the perspectives of pharmaceutical and health care technology assessment, managed care, outcomes research, and public health. The main topics covered in the course include: cost, cost-minimization, cost-effectiveness, cost-utility, and cost-benefit analyses. LEC

PHPR 860 Seminar in Pharmacy Practice (1). Research reports, reviews, and/or presentations on the current status of various aspects of pharmacy practice. Prerequisite: Consent of instructor. LEC

PHPR 865 Advanced Institutional Pharmacy Services. (3). A course dealing with the planning, justification, implementation, management, and coordination of a progressive, comprehensive institutional pharmacy service. Seminar presentations and case studies are used to analyze recent advances and to apply data from the research literature. Prerequisite: Consent of instructor. LEC

PHPR 875 Health Care Delivery Systems (3). A continuation of PHPR 865 dealing with the current status of health care delivery systems and the impact of changes in this area on pharmacy practice. Prerequisite: PHPR 865 and consent of instructor. LEC

PHPR 885 Human Resource Management in Institutional Pharmacy Practice (3). A course dealing with recruitment, training, motivation, monitoring of performance, and disciplining of personnel. Seminar, case studies, and role playing are used to apply the information to specific human resource management situations in institutional pharmacy practice. Prerequisite: PHPR 865 and consent of instructor. LEC

PHPR 899 Research in Pharmacy Practice (1-6). Original investigation in the area of pharmacy practice. Prerequisite: Consent of instructor. RSH

Applications are evaluated by the entire faculty. Applications must be supported by official transcripts (two copies) of all previous college and university work, both undergraduate and graduate. In addition, three letters of recommendation from current or former teachers, advisers, or employers must be submitted. Students from non-English-speaking countries also must furnish proof of proficiency in English. Graduate Record Examination (general test) scores are required, and applicants are strongly encouraged to take the subject test in chemistry as well. Admission decisions are the consensus of the entire faculty and are based on grade-point averages for previous college work (particularly in the relevant science areas), letters of recommendation, previous research or employment experience relevant to the graduate training being sought, and GRE scores. The number of applicants who can be admitted at any time varies depending on the availability of laboratory space, research facilities, and financial support for research activities but is usually about 10 a year.

Submit your application to the Graduate School online at www.gradschool.ku.edu. Send test scores and transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Medicinal Chemistry
Malott Hall, 1251 Wescoe Hall Dr., Room 4070
Lawrence, KS 66045-7582

M.S. Degree Requirements

Candidates for this degree must satisfy the general requirements of the Graduate School as well as those of one of the following options:

Students who are proceeding toward the Ph.D. degree at KU receive the master's degree after satisfactorily completing the course work requirement for the Ph.D. and passing a comprehensive oral examination.

Students who wish to earn only the M.S. degree must complete a prescribed subset of the course work requirements for the Ph.D. degree, a thesis representing at least 10 credit hours of research, and an oral examination.

Ph.D. Degree Requirements

If credit has not already been obtained in the courses below or their equivalents, students must complete the following undergraduate courses as early as is practical in the graduate program: two semesters of physical chemistry (CHEM 646 and CHEM 648), mammalian physiology (BIOL 646), and biochemistry (BIOL 658 and BIOL 665). Satisfactory completion of a qualifying examination in organic chemistry also is required.

Required graduate course work includes

**Medical Chemistry**

Chair: B. Timmermann
Graduate Adviser: Jane Aldrich, jaldrich@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 4070
Lawrence, KS 66045-7582, www.medchem.ku.edu

(785) 864-4495, medchem@ku.edu

Professors: Aldrich, Aubé, Georg, Grunewald, Hanzlik, Mitscher, Timmerman

Courtesy Professors: Hanson, Huang, Lushington, Vander Velde, Williams, Ye

Adjunct Professors: Anderson, Flynn, Schloss, Thompson

Assistant Professors: Blagg, David, Dutta, Schönbrunn, Scott

Research Assistant Professor: Vigil-Cruz

**Comprehensive Exam**

The applicant wishing to enter the graduate program must have earned a bachelor's or master's degree in pharmacy, medicinal chemistry, chemistry, biochemistry, or a closely related field, and must have completed one year of organic chemistry with laboratory (equivalent to CHEM 624, CHEM 625, CHEM 626, and CHEM 627). In all cases, the general admission requirements of the Graduate School must be met.

Applications are evaluated by the entire faculty. Applications must be supported by official transcripts (two copies) of all previous college and university work, both undergraduate and graduate. In addition, three letters of recommendation from current or former teachers, advisers, or employers must be submitted. Students from non-English-speaking countries also must furnish proof of proficiency in English. Graduate Record Examination (general test) scores are required, and applicants are strongly encouraged to take the subject test in chemistry as well. Admission decisions are the consensus of the entire faculty and are based on grade-point averages for previous college work (particularly in the relevant science areas), letters of recommendation, previous research or employment experience relevant to the graduate training being sought, and GRE scores. The number of applicants who can be admitted at any time varies depending on the availability of laboratory space, research facilities, and financial support for research activities but is usually about 10 a year.

Submit your application to the Graduate School online at www.gradschool.ku.edu. Send test scores and transcripts of all completed college and university course work to

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Malott Hall, 1251 Wescoe Hall Dr., Room 4070
Lawrence, KS 66045-7582

M.S. Degree Requirements

Candidates for this degree must satisfy the general requirements of the Graduate School as well as those of one of the following options:

Students who are proceeding toward the Ph.D. degree at KU receive the master's degree after satisfactorily completing the course work requirement for the Ph.D. and passing a comprehensive oral examination.

Students who wish to earn only the M.S. degree must complete a prescribed subset of the course work requirements for the Ph.D. degree, a thesis representing at least 10 credit hours of research, and an oral examination.

Ph.D. Degree Requirements

If credit has not already been obtained in the courses below or their equivalents, students must complete the following undergraduate courses as early as is practical in the graduate program: two semesters of physical chemistry (CHEM 646 and CHEM 648), mammalian physiology (BIOL 646), and biochemistry (BIOL 658 and BIOL 665). Satisfactory completion of a qualifying examination in organic chemistry also is required.

Required graduate course work includes

**Medical Chemistry**

MDCM 721 Introduction to Medicinal Chemistry
MDCM 722 Principles of Organic Medicinal Chemistry
MDCM 777 Advanced Laboratory Techniques in Medicinal Chemistry
MDCM 790 Principles of Drug Design
MDCM 799 Seminar in Medicinal Chemistry (Lecture Seminar)
MDCM 799 Seminar in Medicinal Chemistry (Research Seminar)
MDCM 999 Doctoral Dissertation

**Organic Chemistry**

CHEM 740 Principles of Organic Chemistry
CHEM 742 Physical Organic Chemistry I
CHEM 763 Organic Synthesis I
CHEM 766 Spectroscopic Identification of Organic Compounds

Plus two of the following:

MDCM 995 Advanced Topics
MDCM 952 Introduction to Molecular Modeling
CHEM 963 Organic Synthesis II

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**The University of Kansas** • **2005-07 GRADUATE SCHOOL CATALOG**
A series of monthly written cumulative examinations is used to assess students’ knowledge of medicinal and organic chemistry. These examinations must be passed at an accelerating rate during the second and third years. After completing the cumulative examinations and the major part of course work and other requirements, the student takes an oral comprehensive examination. After completing this examination satisfactorily, the student prepares an original research proposal for presentation to the faculty of the department. The final requirement for the Ph.D. is the preparation and defense of a dissertation based on original laboratory research conducted by the candidate.

All general requirements of the Graduate School, such as those related to the comprehensive oral examination, the dissertation, and the dissertation defense, are detailed in the General Information chapter of this catalog.

Facilities

The department has research facilities for about 70 graduate students, postdoctoral associates, and research technicians. These are in Malott Hall on the Lawrence campus, which also houses the Departments of Chemistry and of Pharmacology and Toxicology. The Anschutz Library is adjacent to Malott Hall. The department has an excellent complement of modern spectroscopic, biochemical, and chromatographic instrumentation, and other specialized research instrumentation is available through cooperative arrangements with other departments.

Several university-wide service laboratories for biochemical services, X-ray crystallography, nuclear magnetic resonance, computational chemistry, instrument design, mass spectrometry, and tissue culture are in Malott Hall, along with a modern animal facility. These services have professional staff who provide training in specialized research techniques in addition to their service functions.

Medicinal Chemistry Courses

MDCM 514 Introduction to Drug Analysis (3).
MDCM 601 Medicinal Biochemistry I (4).
MDCM 602 Medicinal Biochemistry Laboratory (1).
MDCM 620 Medicinal Biochemistry (5).
MDCM 622 Medicinal Biochemistry Laboratory (1).
MDCM 625 Medicinal Chemistry I: Neuroreceptor Agents (3).
MDCM 626 Medicinal Chemistry II: Homeostatic Agents (3).
MDCM 627 Medicinal Chemistry III: Chemotherapeutic Agents (3).
MDCM 675 Introduction to Drug Design and Development (2-3).
MDCM 690 Undergraduate Research (1-5).
MDCM 691 Research Techniques in Medicinal Chemistry (1).
MDCM 692 Problems in Medicinal Chemistry (1-5).
MDCM 720 Bibliography of Medicinal Chemistry (1). A course on the use of the library as a research tool and the study of bibliographic techniques of literature searching. Emphasis on the literature of pharmacology, biochemistry, and medicinal chemistry. LEC
MDCM 721 Introduction to Medicinal Chemistry (1). An overview of the fields of medicinal chemistry, including discussions of research techniques and the application of organic chemistry to medicinal chemistry problems. Prerequisite: Graduate standing or permission of instructor. LEC
MDCM 722 Principles of Organic Medicinal Chemistry (3). The discovery and properties of pharmaceutical agents, including a survey of the various drug classes important in clinical applications. The relationship between chemical structure and biological mechanism of action will be emphasized. Prerequisite: Graduate standing or permission of instructor. LEC
MDCM 742 Experimental Pharmacology (4). Experimental approaches to understanding mechanism of drug action. Use of drugs as tools to understand functioning of biological systems will also be stressed. Historically important experiments will be discussed along with experiments which are currently used to define drug mechanisms. Topics will include: dose-response, drug receptors, drug metabolism, chemotherapy as well as autonomic CNS, cardiovascular and renal pharmacology. (Same as P&TX 742.) Prerequisite: BIOL 600 and BIOL 648 or equivalent, or consent of instructor. LEC
MDCM 775 Chemistry of the Nervous System (3). A detailed study of the molecular aspects of nerve transmission will be covered with special emphasis on the uptake, storage, release, biosynthesis, and metabolism of specific neurotransmitters. Drugs affecting these processes and current research on receptor isolation and receptor mechanisms will be discussed from a chemical viewpoint. (Same as BIOL 775, CHEM 775, and P&TX 775.) Prerequisite: Consent of instructor. LEC
MDCM 777 Advanced Laboratory Techniques in Medicinal Chemistry (2). A laboratory course designed to acquaint advanced undergraduate and beginning graduate students with laboratory safety, the research notebook, use of advanced instrumental techniques for structural assignment and verification, methods of separation and purification, and the use of advanced reagents and laboratory transformations relevant to research in medicinal chemistry. Prerequisite: Consent of instructor. LAB
MDCM 785 Natural Products of Medicinal Significance (2). A discussion of bioassay-directed screening, the isolation, structure determination, biosynthesis, partial synthesis and total chemical synthesis of organic natural products of medicinal significance. Examples of the classes of compounds to be considered include steroid hormones, cardiac glycosides, alkaloids, antibiotics, terpenes, and the like. Prerequisite: Graduate standing or consent of instructor. LEC
MDCM 790 Principles of Drug Design (3). A discussion of the principles of contemporary drug design with specific examples chosen from the original literature. Prodrugs, biosoesters, Kcat inhibitors; active site directed reversible and irreversible inhibitors; quantitative SAR; modulation of drug absorption, distribution, metabolism and excretion; molecular dissection; rigid analogs; pharmacoepedamides, etc., will be treated. Prerequisite: Graduate standing or completion of MDCM 624 and MDCM 627. LEC
MDCM 791 Principles of Drug Disposition (1). An introduction to the chemical and biochemical principles which govern the interaction of drugs and chemicals with cells and organisms. Topics include absorption, distribution, metabolism, and excretion; passive vs. active processes; pharmacokinetics; bioactivation vs. detoxication; and applications in drug design and improvement. Prerequisite: Consent of one year of organic chemistry and one course in biochemistry. LEC
MDCM 799 Seminar in Medicinal Chemistry (1). Reports by research students and discussions of developments in the field not covered in formal courses. LEC
MDCM 801 Issues in Scientific Integrity (1). Lectures and discussion on ethical issues in the conduct of a scientific career, with emphasis in the conduct of a scientific career, with emphasis on practical topics of special importance in molecular-level research in the chemical, biological, and pharmaceutical sciences. Topics will include the nature of ethics, the scientists in the laboratory, the scientist as author, grantee, reviewer, employer/employee, teacher, student, and citizen. Discussions will focus on case histories. (Same as MDCM 801, NURO 801, P&TX 801, and PHCH 801.) LEC
MDCM 860 Drug Metabolism (2). An in-depth examination of the pathways, enzymes, and mechanisms of xenobiotic biotransformation in a combined lecture-readings-discussion format. Emphasis will be on recent as well as classic methods of findings. Prerequisite: MDCM 790 or MDCM 791 or consent of instructor. LEC
MDCM 861 Drug Metabolism Laboratory (1-3). A laboratory course exemplifying various techniques used in studying the metabolism of foreign organic compounds in mammalian systems. In addition, enzymatic reactions in other plant and microbial systems are studied. Prerequisite: Consent of instructor. LAB
MDCM 895 Research in Medicinal Chemistry (1-12). Hours and credit to be arranged. RSH
MDCM 899 Master’s Thesis (1-12). Hours and credit to be arranged. Independent investigation of a research problem of limited scope. Prerequisite: Consent of instructor. THE
MDCM 950 Advanced Topics: (1-3). An in-depth discussion of topics of current interest to medicinal chemists. Prerequisite: Consent of instructor. LEC
MDCM 952 Introduction to Molecular Modeling (3). Theory and practice of contemporary molecular modeling: real-time computer graphics, model-building routines, use of structural databases, molecular mechanics and molecular dynamics calculations. The laboratory section places emphasis on drug design; work on own problems is welcome. (Same as BIOL 852.) Prerequisite: Graduate standing or consent of instructor. LAB
MDCM 980 Original Research Proposal (1). Preparation of an original research proposal concerning contemporary problems in medicinal chemistry. Prerequisite: Consent of instructor. LAB
MDCM 990 Postdoctoral Research in Medicinal Chemistry (1-12). Advanced level research in collaboration with a faculty member, which may involve projects in one or more of the following areas: drug synthesis, isolation and structure elucidation, metabolism, biochemical mechanisms of drug action. Prerequisite: Doctoral degree or equivalent in an appropriate related area, and consent of instructor. RSH
MDCM 999 Doctoral Dissertation (1-12). Hours and credit to be arranged. Original chemical research in the synthesis and development of medicinal agents, elucidation of the chemical mechanisms of drug action, drug metabolism, and drug toxicities. THE
Neurosciences

Co-director: Elias K. Michaelis, emichaelis@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 5064
Lawrence, KS 66045-7382, (785) 864-4001

Co-director: Paul D. Cheney, pcheney@kumc.edu
3011 Wahl Hall East (A), Mail Stop 3043, KU MC
3901 Rainbow Blvd., Kansas City, KS 66160
www2.pharm.ku.edu/neuroscience, (913) 588-7400

Participating Faculty Members: Aldrich (Medicinal Chemistry), P. Atchley (Psychology), R. Atchley (Psychology), Audus (Pharmaceutical Chemistry), Auer (Speech-Language-Hearing: Sciences and Disorders), Barlow (Speech-Language-Hearing: Sciences and Disorders), Berman (Anatomy and Cell Biology), Bilgen (Molecular and Integrative Physiology), Borchardt (Pharmaceutical Chemistry), Brooks (Hoglund Brain Imaging Center), Cheney (Molecular and Integrative Physiology), Chertoff ( Hearing and Speech), Colombo (Psychology), Dien (Psychology), Dobrowsky (Pharmacology and Toxicology), Durham (Otolaryngology), Enna (Pharmacology, Toxicology, and Therapeutics), Festoff (Neurology and Pharmacology), Floren (Molecular Biosciences), Fowler (Pharmacology and Toxicology), Gamblin (Molecular Biosciences), Grunewald (Medicinal Chemistry), Ilardi (Psychology), Imig (Molecular and Integrative Physiology), Karrer (Mental Retardation Research Center, Cognitive Neuroscience Laboratory), Kelly (Molecular Biosciences), Kim (Pharmacology and Toxicology), Klein (School of Medicine, Faculty Development, Anatomy and Cell Biology), Krumlauf (Anatomy and Cell Biology, Biochemistry and Molecular Biology), Kumar (Center for Neurobiology and Immunology Research), Levant (Pharmacology, Toxicology, and Therapeutics), LeVine (Molecular and Integrative Physiology), Lundquist (Molecular Biosciences), Lunte (Pharmaceutical Chemistry), Lyons (Parkinson’s Disease and Movement Disorder Center), McCarson (Pharmacology, Toxicology, and Therapeutics), E. Michaelis (Pharmacology and Toxicology), M. Michaelis (Pharmacology and Toxicology), Mitchell (Pharmacology and Toxicology), Moskovitz (Pharmacology and Toxicology), Nudo (Molecular and Integrative Physiology), Orr (Molecular Biosciences), Radef (Occupational Therapy), Rice (Speech-Language-Hearing: Sciences and Disorders), Seifert (Pharmacology and Toxicology), Smith (Molecular and Integrative Physiology), Stanford (Molecular and Integrative Physiology), Trainor (Anatomy and Cell Biology), Warren (Applied Behavioral Sciences), Werle (Anatomy and Cell Biology), Wright (Anatomy and Cell Biology)

The Neurosciences Program admits students directly for study on the Lawrence campus, with strengths in all the biomedical and clinical sciences. Each student is asked which campus he or she would prefer. Students earn a Ph.D. degree in the neurosciences. In exceptional circumstances, the program also offers an M.S. degree in neurosciences.

Graduates can pursue careers in university teaching and research or conduct and supervise research in a pharmaceutical/biotechnology company or government laboratory.

Programs
Neuroscience research is a truly multidisciplinary research field. All students are expected to be able to understand the fundamental principles and contributions of each of the major disciplines of the neurosciences core. New students receive training in biochemistry and molecular biology, cell biology, and physiology before proceeding with more focused courses.

Admission
All application materials are reviewed by faculty committees in Lawrence and Kansas City. Students should have B.A. or B.S. degrees in anthropology, behavioral sciences, psychology, biology, chemistry, engineering, neuroscience, or pharmacology. Preference is given to students who have completed courses in introductory and organic chemistry, calculus, physics, introductory biology, and at least one course in advanced biology topics such as biochemistry, physiology, microbiology, molecular biology. Students who do not have sufficient training to complete appropriate courses before admission. The program requires standard Graduate Record Examination scores with all applications, three letters of recommendation, and an essay by the applicant about his or her career goals. Selection is based on grade-point average, GRE scores, letters of recommendation, and evidence of previous experience in research. The minimum standard is a grade-point average of 3.0 on a 4.0 scale.

Submit your application to the Graduate School online at www.graduate.ku.edu. Send transcripts of all completed college and university course work to:

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to:

The University of Kansas, Neurosciences
Malott Hall, 1251 Wescoe Hall Dr., Room 5064
Lawrence, KS 66045-7582

or Neurosciences
3011 Wahl Hall East (A), Mail Stop 3043
KU Medical Center, 3901 Rainbow Blvd.
Kansas City, KS 66160

M.S. Degree Requirements
The M.S. is offered in rare cases where attainment of the Ph.D. is inappropriate. A student may earn the M.S. by completing these minimum requirements:

• The courses outlined in the curriculum of the first year of the Ph.D. training program.
• The course in advanced neuroscience.
• A thesis based on either original research or library research.
• The total credit hours of graduate-level courses required for the M.S. degree by the Graduate School.

Ph.D. Degree Requirements
Neuroscience courses are subdivided into core courses that all students must complete and elective courses representing the two major specializations, Cell and Molecular Neuroscience and Cognitive and Systems Neuroscience. The core curriculum includes research rotations in two laboratories of the student’s choice during the first year. Students also receive training in the responsible conduct of research and in teaching in the neurosciences. For the Ph.D., the student completes the core curriculum as well as research skills training, compre-
hensive oral examination, preparation of a dissertation, and final oral examination and defense of the dissertation.

**Core Curriculum for the Ph.D. in Neurosciences**

<table>
<thead>
<tr>
<th>KU Lawrence</th>
<th>KU Medical Center</th>
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<tbody>
<tr>
<td><strong>Year One, Fall/Spring</strong></td>
<td><strong>Year One, Fall/Semester</strong></td>
</tr>
<tr>
<td>Advanced Biochemistry</td>
<td>Module 1: Protein Structure, Thermodynamics, Kinetics</td>
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<tr>
<td>Biobehavioral Neuroscience</td>
<td>Module 2: Cell Metabolism</td>
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<tr>
<td>Cell Biology</td>
<td>Module 3: Molecular Biology</td>
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<tr>
<td>Lab rotations</td>
<td>Lab rotations</td>
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<tr>
<td>Neuroscience Seminar</td>
<td>Neuroscience Seminar</td>
</tr>
<tr>
<td><strong>Year One, Spring Semester</strong></td>
<td><strong>Year One, Fall Semester</strong></td>
</tr>
<tr>
<td>Advanced Neuroscience</td>
<td>Module 4: Cell and Developmental Biology</td>
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<tr>
<td>BIOL 646 Mammalian Physiology</td>
<td>Module 5: Molecular and Physiological Basis of Disease</td>
</tr>
<tr>
<td>Research Skill-One lecture course or one laboratory course</td>
<td>Lab rotations</td>
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<tr>
<td>Lab rotations</td>
<td>Faculty research seminar series</td>
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<tr>
<td>Neuroscience Teaching Principles</td>
<td>Neuroscience Seminar</td>
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<tr>
<td>Neuroscience Seminar</td>
<td><strong>Year Two, Fall Semester</strong></td>
</tr>
<tr>
<td><strong>Scientific Integrity</strong></td>
<td>Bio-Behavioral Neuroscience</td>
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<tr>
<td>Cell and Molecular Neuroscience</td>
<td>Cell and Molecular Neuroscience</td>
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<tr>
<td>First Elective for Molecular and Cellular Neuroscience or Cognitive and Systems Neuroscience</td>
<td>First Elective for Molecular and Cellular Neuroscience or Cognitive and Systems Neuroscience</td>
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<tr>
<td><strong>Second Elective for Molecular and Cellular Neuroscience or Cognitive and Systems Neuroscience</strong></td>
<td><strong>Year Two, Fall Semester</strong></td>
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<tr>
<td><strong>Neuroscience Seminar</strong></td>
<td>Neuroscience Seminar</td>
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<tr>
<td><strong>Year Two, Spring Semester</strong></td>
<td><strong>Year Two, Spring Semester</strong></td>
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<tr>
<td>Completion of written and oral comprehensive exam</td>
<td>Completion of written and oral comprehensive exam</td>
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<tr>
<td>Research Skill-one lecture course or one laboratory course</td>
<td>Research Skill-one lecture course or one laboratory course</td>
</tr>
<tr>
<td>Bioethics</td>
<td>Neuroscience Teaching Principles</td>
</tr>
<tr>
<td>Neuroscience Seminar</td>
<td><strong>Year Three, Fall/Spring</strong></td>
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<tr>
<td><strong>Dissertation Research</strong></td>
<td><strong>Dissertation Research</strong></td>
</tr>
<tr>
<td><strong>Year Four, Fall/Spring</strong></td>
<td><strong>Year Four, Fall/Spring</strong></td>
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<tr>
<td><strong>Dissertation Research</strong></td>
<td><strong>Dissertation Research</strong></td>
</tr>
</tbody>
</table>

Students must complete one core course from Cognitive and Systems Neuroscience, one from Cell and Molecular Neuroscience, and one from General Neurobiology below, take Bioethics or NURO 801 Issues in Scientific Integrity, and receive training in effective oral communication and teaching by enrolling in one semester of NURO 800 Neuroscience Teaching Principles, which includes a teaching experience.

**Cognitive and Systems Neuroscience**

- Brain Disorders and Neurological Disorders (3)
- Neurophysiology (3)
- Biological Foundations of Psychopathology (3)
- **Cell and Molecular Neuroscience**
- Cellular and Molecular Neurobiology (3)
- Developmental Neurobiology (2)
- Chemistry of the Nervous System (3)
- **General Neurobiology**
- Graduate Neurobiology (3)
- **Neuroscience Seminar**
- Seminar in Neuroscience

**Scientific Integrity**

- Issues Scientific Integrity (1) or Bioethics Module
- Teaching Experience
- Neuroscience Teaching Principles

Laboratory rotations offer first-hand research experience. Students complete two rotations in faculty research laboratories in the first year. Laboratories are selected by the student and the co-directors. After the rotations, each student chooses a research adviser and begins an independent research project.

Continued enrollment in the neuroscience seminar is required, and students present at least two seminars during their graduate careers. In consultation with a five-member faculty advisory committee including at least three members of the neuroscience program, each student chooses electives that provide training relevant to the research goals. All students must complete a research skill. Commonly used areas are radiation biology and radiation safety, cell culture methodology, techniques of electron and confocal microscopy, molecular biology laboratory training, computer science training, statistics, and training in electronics and instrumentation. After the first two years, students take the comprehensive oral examination. This consists of a research proposal in the general area of the doctoral research, written in NIH format, and an oral examination on the proposal and on general knowledge in neuroscience and related fields.

**Neurosciences Courses**

**NURO 799 Neuroscience Seminar Series** (2). Presentations of research papers by faculty, post-doctoral research associates, and graduate students. All graduate students in the Neuroscience program participate in this seminar series throughout their period of training. Each student has to present a seminar once every semester. Presentations by students are evaluated by other graduate students and faculty at the end of each seminar. Prerequisite: Graduate standing in the Neuroscience program.

**NURO 800 Neuroscience Teaching Principles** (2). This course is to be used by graduate students fulfilling the teaching requirements for the Ph.D. in Neuroscience. The student will function as a discussion leader and lecturer in a limited number of class sessions. Each student will meet with faculty whom he or she is assisting in preparation of presentation materials and tests. Each student will be evaluated by the faculty mentor and by the students in the class taught. Prerequisite: Graduate standing in Neuroscience.

**NURO 801 Issues in Scientific Integrity** (1). Lectures and discussion on ethical issues in the conduct of a scientific career, with emphasis on practical topics of special importance in molecular-level research in the chemical, biological, and pharmaceutical sciences. Topics will include the nature of ethics, the scientist in the laboratory, the scientist as a grantee, reviewer, employer/employee, teacher, student, and citizen. Discussions will focus on case histories. (Same as MDCM 801, PETS 801, and PHCH 801.) Prerequisite: Graduate standing in the Neuroscience program.

**NURO 825 Research in Neuroscience** (1-10). Original investigations at an advanced level in the areas of neuroscience. The research by each student will be performed in the laboratory of one of the faculty mentors of the graduate program in Neuroscience. Prerequisite: Graduate standing in the Neuroscience program.

**NURO 844 Neurophysiology** (3). Somatosensory, motor and cognitive function of the brain will be discussed using a combination of lecture and student presentation formats. Current issues and evidence underlying accepted concepts and mechanisms will be emphasized. (Same as PHSL 844.) Prerequisite: PHSL 846 or equivalent and consent of instructor.

**NURO 846 Advanced Neuroscience** (5). Team-taught, in-depth neuroscience course focusing on normal and diseased brain function at the molecular, cellular, and systems level. Lectures and discussions will emphasize current issues in neuroscience research. (Same as ANAT 846, PHCL 846, and PHSL 846.) Prerequisite: Permission of the course instructor.

**NURO 847 Developmental Neurobiology** (2). Development of the nervous system from early induction to the development of learning and memory. Topics include: Induction; Cellular Differentiation; Axon Growth and Guidance; Target Selection; Cell Survival and Growth; Synapse Formation; Synapse Elimination; and Development of Behavior. (Same as ANAT 847 and PHSL 847.) Prerequisite: Advanced Neuroscience (ANAT 846, NURO 846; PHSL 846) or consent of instructor.

**NURO 848 Molecular Mechanisms of Neurological Disorders** (2). An in-depth coverage of pathogenic mechanisms in neurological diseases; cellular and molecular responses to brain injury and disease, neuroinflammatory diseases (e.g., multiple sclerosis), neurodegenerative diseases (e.g., Alzheimer's, Parkinson's, Huntington's, amyotrophic lateral sclerosis, and prion diseases), neurogenetic diseases (e.g., lysosomal and peroxisomal disorders, Down's syndrome and fragile X), trauma, stroke, and viral diseases (e.g., HIV encephalitis). (Same as ANAT 848, PHCL 848, and PHSL 848.) Prerequisite: Advanced Neuroscience (ANAT 846, PHCL 846 or PHSL 846) or an equivalent course and consent of instructor.

**NURO 899 Neuroscience Master's Thesis** (1-11). Hours and credit for this course to be arranged with the mentor. Independent investigation of a research problem in neuroscience, but of limited scope. Prerequisite: Graduate standing in the Neuroscience program and consent of mentor/instructor. THE.

**NURO 999 Neuroscience Doctoral Dissertation** (1-11). Hours and credit for this course to be arranged with the mentor. Conduct of original investigation in neuroscience. Prerequisite: Graduate standing in the Neuroscience program post-advisory committee examination and consent of mentor/instructor. THE.
Pharmaceutical Chemistry

Interim Chair: Elizabeth M. Topp
Simons Laboratories, 2095 Constant Ave., Room 201C
Lawrence, KS 66047-3729, www.hbc.ku.edu/phch
(785) 864-4620, fax: (785) 864-8280
Graduate Adviser: Teruna Siahaan, siahaan@ku.edu,
201D Simons Laboratories, (785) 864-7327

Professors: Audus, Borchardt, Lunte, Middaugh, Schöneich, Siahaan, Stella, Stobaugh, Topp, Wilson
Professor Emeritus: Schowen
Associate Professor: Munson
Assistant Professor: Berkland, Krise, Lawrence

The Department of Pharmaceutical Chemistry was established at KU in 1967 by the late Takeru Higuchi. Higuchi was among the first pharmaceutical scientists to recognize and to teach that drug substances are chemicals and their properties are governed by well-established physicochemical principles.

Success in understanding drug action, in controlling drug delivery across biological membranes and to a drug receptor site, and in the development of stable formulations and the design of sophisticated (bio)analytical methods requires a thorough understanding of the basic aspects of analytical, biophysical, organic, and physical chemistry. These principles are equally important for the development of traditional small-molecule drugs and for emerging biotechnology products such as peptides, proteins, polymeric compounds, and oligonucleotides. Pharmaceutical chemistry at KU includes pharmaceutics, physical pharmacy, preformulation, formulation, pharmaceutical analysis, and bioanalytical chemistry.

Admission

Students with bachelor's or master's degrees in chemistry, pharmacy, biological sciences, material science, chemical engineering, related disciplines, or Pharm.D. degrees are eligible to apply. Admission is based on grade-point average (minimum of 3.0 on a 4.0 scale), the Graduate Record Examination (verbal, quantitative, and analytical), letters of recommendation, and research experience. Submit a completed domestic or international application form, official transcripts from all undergraduate institutions attended, three letters of reference, and results from a recent GRE examination. Students whose native language is not English should submit Test of English as a Foreign Language scores.

Submit your application to the Graduate School online at www.graduated.ku.edu. Send transcripts of all completed college and university coursework to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Pharmaceutical Chemistry
Simons Laboratories, 2095 Constant Ave.,
Room 201C
Lawrence, KS 66047-3729

M.S. Degree Requirements

Except under unusual circumstances, the department does not recruit M.S. degree students. However, all students who pass the comprehensive written and oral examinations for the Ph.D. degree earn a nonthesis M.S. degree. A student seeking a terminal M.S. degree must complete at least one-third of the courses recommended for the Ph.D. degree, present a thesis based on original research or a suitable technical report based on the review of published research in a particular area, and pass a final oral general examination.

Ph.D. Degree Requirements

Prerequisites. Entering students should have completed the standard sequence in calculus plus elementary differential equations, a course in physical chemistry emphasizing thermodynamics, and an introductory course in pharmacokinetics. The expected background includes MATH 320 Elementary Differential Equations, CHEM 640 Biological Physical Chemistry or CHEM 646 Introduction to Physical Chemistry, and PHCH 655 Pharmacokinetics.

Highly recommended:

CHEM 740 Principles of Organic Reactions
CHEM 742 Physical Organic Chemistry I
PHCH 801 Issues in Scientific Integrity
PHCH 862 Pharmaceutical Equilibrium
PHCH 864 Pharmaceutical Analysis
PHCH 866 Pharmaceutical Mass Transport
PHCH 972 Mechanisms of Drug Deterioration and Stabilization
PHCH 976 Advanced Topics in Biopharmaceuticals and Pharmacokinetics
PHCH 865 Pharmaceutical Analysis II or
PHCH 870 Advanced Pharmaceutical Biotechnology

If a student has successfully completed an equivalent course at another institution with a grade B or better, it is not necessary to repeat that course.

Special-interest Courses. Students may select additional special-interest courses in consultation with the research mentor and/or dissertation committee. Some recent special-interest courses have included:

BIOL 672 Gene Expression
BIOL 688 The Molecular Biology of Cancer
BIOL 702 Laboratory Practice: Radiation Safety Procedures
BIOL 703 Radioisotopes and Radiation Safety in Research
BIOL 718 Laboratory in Molecular Biology
BIOL 918 Modern Biochemical and Biophysical Methods
CHEM 711 Applied Electronics for Scientists
CHEM 959 Advanced Topics in Analytical Chemistry
CHEM 966 Physical Organic Chemistry II
MDCM 860 Drug Metabolism

Precomprehensive Biannual Review. Progress in course work is reviewed biannually, and the student has the opportunity to present a summary of research progress to the faculty. The student receives feedback about progress and future expectations. Typically, after two to two-and-one-half academic years, most students have demonstrated sufficient progress in didactic and experimental work to be eligible for the comprehensive written and oral examinations. All students must be eligible to take the comprehensive examinations after three years (three fall and spring semesters), or they are asked to leave the program.

Foreign Language or Other Research Skills Requirement. Before taking the comprehensive written and oral examinations, students must complete the FLORS requirement. Students must either demonstrate competence in a foreign language in which there is a substantial body of scientific literature or complete an acceptable skills development course. Research skills in biometry (BIOL 841), radioactive material handling (BIOL 702, BIOL 703), computer programming (C&PE 121), electronics for scientists (CHEM 711), drug metabolism (MDCM 860), cell culture techniques (BIOL 756), gene expression (BIOL 672), molecular...
biology of cancer (BIOL 688), laboratory in molecular biology (BIOL 718), pharmaceutical analysis II (PHCH 865), animal methods (BIOL 704), and the writing and defense of an original research proposal (PHCH 974) may all fulfill the research skills requirement.

**Comprehensive Examination.** After satisfying course work and demonstrating research skills, the student is eligible to take the preliminary qualifying examination. This evaluates the student's background in the basic biological, chemical, and physical sciences central to research in pharmaceutical chemistry. The written examination is largely derived from, but not limited to, departmental courses, seminar presentations, and research experience. The oral examination usually follows the written exam within three to five days. It allows the committee to explore any areas of apparent weakness revealed by the written exam and to review the adequacy of performance in course work, research, and seminars. After successfully completing the written and oral exams, the student is qualified as a Ph.D. candidate.

**Seminar Requirements.** All graduate students must attend the weekly departmental seminar. Seminars consist of presentations by guest speakers, faculty members, and students. After one year of residence, graduate students present regular seminars. Seminars may be based on progress in research or on a literature review of work related to research.

**Dissertation.** Before the end of the first semester, each student must choose a faculty research adviser. In consultation with the student, the adviser selects a dissertation research project, follows the student's progress in course work and research, and chairs the student's comprehensive oral examination committee and dissertation defense committee. Each Ph.D. candidate must submit and defend a dissertation resulting from research of sufficient originality and quality for publication in peer-reviewed scientific journals. These investigations are conducted under the supervision and guidance of the faculty adviser, with input from the dissertation committee and normally require from 18 to 24 months of sustained effort. A minimum of three academic years in residence is required for the Ph.D. degree.

**Takeru Higuchi and Nigel Manning Intersearch Ph.D. Program.** The KU School of Pharmacy offers a joint program leading to the Ph.D. degree with the Victorian College of Pharmacy in Melbourne, Australia. See the Intersearch section in this chapter of the catalog for further information.

**Financial Aid**
Most students receive financial support upon admission, usually a research assistantship. No special application for financial support is required. Stipends are competitive. The department offers Takeru Higuchi and Siegfried Lindenbaum Fellowships to incoming graduate students. Students with outstanding undergraduate records may be eligible for university awards. (See Fellowships and Scholarships in the Graduate School and International Programs chapter of this catalog.) Students have also competed successfully for National Science Foundation, American Foundation for Pharmaceutical Education, Pharmaceutical Research and Manufacturers’ Association, Parenteral Drug Association, and United States Pharmacopeia Fellowships. Additional application materials must be supplied for many of these awards; contact the graduate studies adviser.

**Facilities**
The department is on West Campus in Simons Research Laboratories, a state-of-the-art, 30,000-square-foot, two-story research facility, completed in 1996. There are 18 general laboratories and an experimental cancer chemotherapeutic-agent testing laboratory, a radioisotope handling room, a molecular biology laboratory, a natural products extraction laboratory, and a liquid chromatography mass spectrometry laboratory. A state-of-the-art computer network accesses, among others, the central computational facility, the library system, and the Internet. Macintosh and PC microcomputer platforms are available and supported. The laboratories contain an extensive array of equipment and instrumentation maintained for faculty and student research, including incubators and laminar flow hoods for cell and tissue culture, numerous high-pressure liquid chromatographs, several capillary electrophoresis systems, calorimetric equipment, thermal analysis instrumentation, a circular dichroism spectrophotometer for the analysis of protein conformation, instrumentation to perform time-resolved and static fluorescence, and an FTIR and light-scattering instrumentation that can perform static and dynamic measurements. The department also maintains a small library of books and current periodicals.

KU also has numerous research support laboratories equipped with sophisticated large instrumentation and highly specialized research equipment. Staffed by trained personnel, these laboratories help researchers conduct specialized experiments.

● **Pharmaceutical Chemistry Courses**
PHCH 517 Pharmacy Calculations (2).
PHCH 518 Physical-chemical Principles of Solution Dosage Forms (3).
PHCH 625 Pharmacokinetics (3).
PHCH 626 Biopharmaceutics and Drug Delivery (3).
PHCH 667 Introduction to Clinical Chemistry (2).
PHCH 686 Special Topics in Pharmaceutical Chemistry (1-5).
PHCH 690 Undergraduate Research in Pharmaceutical Chemistry (1-5).
PHCH 694 Problems in Pharmaceutical Chemistry (1-5).
PHCH 700 Experimental Methods in Pharmaceutical Chemistry (1-5).
PHCH 715 Drug Delivery (3). The course will survey the latest technology for delivering pharmaceuticals and biologicals to reduce side effects and enhance drug efficacy. The course will survey the latest research in this area and examine more classical delivery methods. A qualitative and quantitative understanding of drug delivery practice and theory is the goal. Prerequisite: Master’s or Ph.D. candidate in Engineering, Chemistry, Medicinal Chemistry, or Pharmaceutical Chemistry (by appointment for seniors or graduate students in departments not listed). LEC
PHCH 720 Bibliography of Pharmaceutical Chemistry (1). A course on the use of the library as a research tool and the study of bibliographic techniques of literature searching. Emphasis on the literature of pharmaceutical chemistry and physical pharmacy. LEC
PHCH 725 Molecular Cell Biology (3). Fundamental and advanced concepts in cell biology and the molecular interactions responsible for cell function, homeostasis and disease will be presented. Current analytical methods for examining cells and their molecular components will be discussed. Emphasis will be placed on the chemical and physical properties of individual proteins, nucleic acids and lipids and their assembly into cellular and subcellular structures. LEC
PHCH 745 Advanced Drug Delivery (2). An advanced course focusing on current and future strategies for targeted drug delivery to specific tissue sites. The emphasis of lectures and discussions is on routes of drug permeation across biological barriers; macromolecules, viruses, microparticulates, and cells as drug carriers; and produg delivery
systems. Students are required to individually review selected topics. 
Prerequisite: Graduate standing or consent of the instructor. LEC

PHCH 801 Issues in Scientific Integrity (1). Lectures and discussion on ethical issues in the conduct of a scientific career, with emphasis on practical topics of special importance in molecular-level research in the chemical, biological, and pharmaceutical sciences. Topics will include the nature of ethics, the scientists in the laboratory, the scientist as author, grantee, reviewer, employer/employee, teacher/student, and citizen. Discussions will focus on case histories. (Same as MDCM 801, NURO 801, and P&TX 801.) LEC

PHCH 862 Pharmaceutical Equilibrium (3-4). A course on equilibria in aqueous and non-aqueous systems with emphasis on solutions of interest to pharmaceutical technology. Included are association-dissociation equilibria, complexation, protein binding calculation of species concentrations, estimation of solubility and ionization constants. Methods for the determination of chemical potential in solution are presented. LEC

PHCH 864 Pharmaceutical Analysis (3). Advanced course on pharmaceutical analysis. LEC

PHCH 865 Pharmaceutical Analysis II (2). This course is intended to be a comprehensive treatment of contemporary techniques used to validate analytical methods for the determination of drugs in the bulk form, pharmaceutical formulations, biological samples and other relevant media. The emphasis will be on chromatographic techniques reflecting the preeminent position that those techniques occupy in the field of pharmaceutical and biomedical analysis. Prerequisite: Previous or concurrent enrollment in PHCH 684. LEC

PHCH 866 Pharmaceutical Mass Transport (2). A course on mass transport problems of pharmaceutical interest. Topics include physiological pharmacokinetic models, diffusion transport, drug delivery systems. Prerequisite: MATH 520 or equivalent. LEC

PHCH 870 Advanced Pharmaceutical Biotechnology (3). A course designed to emphasize the important facets of recombinant proteins as pharmaceutical agents. Basics of protein structure and analysis will be introduced, and methods for production, isolation, and purification of recombinant proteins will be described. Potential chemical and physical degradation processes and strategies for circumventing these difficulties will be discussed. Prerequisite: BIOL 600 or consent of instructor. LEC

PHCH 895 Research in Pharmaceutical Chemistry (1-11). Advanced level research in collaboration with a faculty member in pharmaceutical chemistry or related areas. This course is limited to students who are doing research, but not necessarily working toward either a master's or a doctoral degree. RSH

PHCH 899 Master's Thesis (1-11). THE

PHCH 972 Mechanisms of Drug Deterioration and Stabilization (2-4). A course dealing with mechanisms and chemical kinetics of drug deterioration and stabilization. LEC

PHCH 974 Advanced Special Topics in Pharmaceutical Chemistry (1-3). Various topics pertinent to the area of pharmaceutical chemistry will be explored. LEC

PHCH 976 Advanced Topics in Biopharmaceutics and Pharmacokinetics I (3). A quantitative treatment of the processes involved with drug absorption, distribution, metabolism, and excretion in living systems. LEC

PHCH 977 Advanced Topics in Biopharmaceutics and Pharmacokinetics II (2). A course addressing special topics in biopharmaceutics and pharmacokinetics including complex modeling, treatment of data using computers, cell culture systems, and research topics. LEC

PHCH 978 Pharmaceutical Chemistry Seminar (1). A seminar on the chemistry of pharmaceutical systems. LEC

PHCH 990 Postdoctoral Research in Pharmaceutical Chemistry (1-11). Advanced level research in collaboration with a faculty member involving projects in pharmaceutical chemistry or related areas. Prerequisite: Doctoral degree or equivalent in an appropriate related area and consent of instructor. RSH

PHCH 999 Doctoral Dissertation in Pharmaceutical Chemistry (1-11). THE

The Pharmacology and Toxicology program prepares students to become academic scientists in universities or researchers in the pharmaceutical/ biotechnology industry or government labs.

Pharmacists are employed by the pharmaceutical industry, government agencies, armed services, public health services, the Peace Corps, hospitals, scientific publications, drug wholesalers, and as community pharmacists.

Pharmacology and Toxicology
Chair: Elias K. Michaelis, emichaelis@ku.edu
Malott Hall, 1251 Wescoe Hall Dr., Room 5064
Lawrence, KS 66045-7582, www.pharm.ku.edu/pharmtox
(785) 864-4001
Graduate Adviser: Jeff Staudinger, stauding@ku.edu,
5044 Malott Hall, (785) 864-3951
Professors: Faiman, Fowler, E. Michaelis, M. Michaelis
Courtesy Professors: Alterman, Audus, Decedee
Associate Professors: Dobrowsky, Seifert

Courtesy Associate Professor: Kumar
Assistant Professors: Kim, K.E. Mitchell, Moskovitz, Staudinger
Courtesy Assistant Professor: K. Mitchell

Admission
Admission is based on the student's undergraduate record in a relevant field, Graduate Record Examination scores, and three letters of recommendation. A minimum grade-point average of 3.0 on a 4.0 scale is required. Applications from non-English-speaking countries must include a copy of the Test of English as a Foreign Language score. Acceptance of a student into the graduate program depends on the availability of funding, space, and faculty commitment.

Students are expected to have bachelor's degrees in pharmacy, biological or physical sciences, or the equivalent. Prerequisite courses include four semesters of chemistry and four semesters of biology including laboratory courses in biochemistry and mammalian physiology. Prerequisites may be completed after admission, with the deficiencies to be corrected as soon as possible.

Submit your application to the Graduate School online at www.graduated.ku.edu. Send transcripts of all completed college and university course work to

The University of Kansas
Graduate Application Processing Center
1450 Jayhawk Blvd., Room 313
Lawrence, KS 66045-7535

Send all other requested application materials to

The University of Kansas
Department of Pharmacology and Toxicology
Malott Hall, 1251 Wescoe Hall Dr., Room 5064
Lawrence, KS 66045-7582

M.S. Degree Requirements
The department offers an M.S. degree in pharmacology and toxicology only in special cases where attainment of the Ph.D. is inappropriate. To obtain an M.S. degree, a student must take advanced courses in pharmacology and toxicology and in related fields, including biotechnology. A thesis based on original research generally is required.

Ph.D. Degree Requirements
Course Work. Students must obtain credit in the following courses or their equivalents:
P&TX 700 Professional Issues in Biomedical Sciences
P&TX 725 Biomedical Bibliography
P&TX 730 Advanced Pharmacology I
P&TX 735 Advanced Pharmacology II
P&TX 740 Advanced Biotechnology
P&TX 742 Experimental Pharmacology
P&TX 746 Experimental Toxicology
P&TX 790 Pharmacology and Toxicology Seminar
P&TX 800 Pharmacology and Toxicology Teaching Principles
P&TX 801 Issues in Scientific Integrity

Students also must complete 3 credit hours of advanced graduate work in an elective course.

A graduate student is accepted into the Ph.D. program after having a commitment from one faculty member to function as the student's adviser. The adviser secures from two other faculty members agreement to serve on the student's advisory committee.

On passing the comprehensive oral examination, an aspirant for the Ph.D. degree becomes a candidate, and a dissertation committee is appointed, in accordance with
Graduate School regulations. The dissertation committee normally consists of the original advisory committee of three members, plus two other members of the graduate faculty. Three members of the committee must be pharmacology and toxicology faculty members.

Research Skills Requirement. In consultation with the adviser, each student develops research skills relevant to the chosen research program. A great deal of flexibility is allowed in selecting the research skills. All graduate students must complete training in an area that can become useful in future research design and data analysis. Representative areas for such training are computer science; statistical methodology; cellular imaging techniques; histocitochemistry and cytochemistry; tissue culture methods; radioisotope techniques; methods in immunology, molecular biology, or protein chemistry; bioinformatics; and molecular modeling procedures. Students usually enroll in laboratory classes in the two areas selected.

Comprehensive Examinations. The Ph.D. aspirant takes the comprehensive examination after completing most of the course work and fulfilling the research skills requirement. The comprehensive examination is composed of three parts:

1. Written Comprehensive Examination: Each student must complete two written examinations.
2. Preparation of a Literature Review and Research Proposal: Each student must prepare a literature review and a research proposal on a current topic in pharmacology or toxicology.
3. Oral Comprehensive Examination: After approval of the literature review/research proposal by the student's advisory committee, each student, in consultation with the adviser, takes an oral examination covering the student's major field.

Dissertation. Shortly after entering the program, the student, with the adviser's assistance, selects a dissertation project. After the oral comprehensive examination, the student presents the dissertation research project to the advisory committee and receives periodic advice from this committee throughout the project. Upon acceptance of the dissertation by the advisory committee, the candidate must pass a final oral examination, including a defense of the dissertation before the dissertation committee and any other interested members of the graduate faculty.

Facilities
Research facilities offer a range of modern instrumentation and many research support services. Major instruments include state-of-the-art tissue culture rooms, monoclonal antibody facilities, ultra-centrifuges, flow cytometry, scintillation counters, high-pressure liquid chromatography systems, computer-driven fluorometers and spectrophotometers, and light and fluorescence microscopy systems. Several laboratory groups have more specialized equipment for molecular biology, protein purification and analysis, electrophysiology and calcium imaging, immunochemistry, and related techniques. All labs have state-of-the-art computer technology, including hardware and extensive software for imaging, data analysis, data reduction, protein and gene analysis, and statistical tests. Specialized research support labs include a confocal and an electron microscopy laboratory with both transmission and scanning scopes; a transgenic and knockout mouse facility; a gene-chip and microarray facility; a biochemical research services laboratory with DNA sequencing, DNA microarrays, peptide synthesis, fermentation, and MALDI-TOF instrumentation; a molecular graphics laboratory with extensive data bases for protein structures; an X-ray crystallographic laboratory; a mass spectrometry facility; and an instrument design laboratory.

Pharmacology and Toxicology Courses

P&TX 514 Pathophysiology (3).

P&TX 601 Biotechnology (3).

P&TX 625 Pharmacology I (4).

P&TX 626 Pharmacology II (4).

P&TX 627 Toxicology (2).

P&TX 630 Pharmacology I (4).

P&TX 694 Undergraduate Laboratory: Research in Pharmacology and Toxicology (1-5).

P&TX 698 Library Problems in Pharmacology and Toxicology (1-5).

P&TX 700 Professional Issues in the Biomedical Sciences (2). A course designed to assist doctoral students in the biomedical sciences in their professional development by providing presentations, discussions, and practical experiences related to career planning. Topics include diverse career opportunities and expectations of each, preparation of vitae/resumes and other elements of a successful job search, writing scientific papers and dealing with editors, developing programmatic research programs, balancing professional obligations, advancing through promotions, and related topics. LEC

P&TX 710 Behavioral Neurobiology (2). This course will examine the bases for reciprocal dynamic interactions between central nervous system function and structure ("nature") and experience ("nurture"). "Nature" will be explored using principles and methodologies derived from systems and molecular pharmacology, and neurochemistry. The effects of "nurture" on brain will involve issues derived from behavioral pharmacology, environmental enrichment, and human brain imaging. During the course, with the help of the instructor, students will be expected to discuss and critically analyze research articles for subsequent presentation to the class. LEC

P&TX 725 Biomedical Bibliography (1). The use of the library as a research tool and the study of bibliographic techniques of literature searching. Emphasis on pharmacological, physiological, biochemical, and medical literature. Prerequisite: Graduate standing. LEC

P&TX 730 Advanced Pharmacology I (4). A detailed study of the fundamentals of drug action, drug metabolism, autonomic and cardiovascular pharmacology. The students will attend P&TX 624 lectures, and meet separately with the faculty for additional discussions of more advanced material on these topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology. LEC

P&TX 735 Advanced Pharmacology II (4). A continuation of P&TX 730. Topics include hormones and related compounds, CNS drugs, chemotherapy of infectious diseases and neoplasia. The students will attend P&TX 635 lectures and meet separately with the faculty for additional discussions of more advanced material on these topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in pharmacology and toxicology. LEC

P&TX 740 Advanced Biotechnology (4). An examination of basic principles of molecular biology, immunology, and protein chemistry as they apply to the identification, production, stability, delivery, and monitoring of new therapeutic agents provided by the expanding biotechnology industry. Students will attend lectures in P&TX 601 and meet separately with faculty for additional discussions of more advanced material on these topics. The students will be examined on the advanced material. Prerequisite: Graduate standing in Pharmacology and Toxicology. LEC

P&TX 746 Experimental Toxicology (2). The experimental basis for understanding the fundamental mechanisms involved in the poisoning and detoxification processes will be covered. Topics will include: role of phagocytic cells in organ toxicity, lung, liver, and kidney toxicity. Prerequisite: BIOL 600 and BIOL 726 or equivalent, or consent of instructor. LEC

P&TX 747 Molecular Toxicology (4). The molecular basis involved in the poisoning and detoxification process will be covered. Topics will include drug metabolism and disposition, chemical, genetic, and developmental toxicology. Prerequisite: BIOL 600, BIOL 762 or equivalent, or consent of instructor. LEC

P&TX 755 Chemistry of the Nervous System (3). A detailed study of the molecular aspects of nerve transmission will be covered with spe-
The School of Pharmacy operates one of the most extensive programs of research and graduate education in the pharmaceutical sciences in the country.

Some departments do not offer all courses in any one semester. See www.registrar.ku.edu/timetable for current course offerings.

Takeru Higuchi and Nigel Manning Intersearch Ph.D. Program

Chair: Valentino J. Stella
Simons Laboratories, 2095 Constant Ave., Room 121B
Lawrence, KS 66047-3729, www.hbc.ku.edu/phch/takeru
(785) 864-4820
Professors: Borchardt, Chapman (Australia), Grunewald, E. Michaelis, Fincham, Reed (Australia), Stella, Stewart (Australia)

The Takeru Higuchi and Nigel Manning Intersearch Program is an international pharmaceutical graduate research program conducted by the United States and Australia through the University of Kansas and the Victorian College of Pharmacy, Monash University, Melbourne, Australia. It is a cooperative program with the Departments of Medicinal Chemistry, Pharmaceutical Chemistry, and Pharmacology and Toxicology. Intersearch trains doctors of philosophy by teaching methods of research and, at the same time, offers a broadening international experience.

A joint degree is possible under the names of both institutions. Graduates receive training suitable to the needs of the pharmaceutical industry and institutions of higher learning in both countries.

The program admits students from either institution to either campus. Each student entering the program must study for at least 12 months on each campus. Round-trip tourist-class fares are provided, and additional financial support generally is available.
School of Social Welfare

Ann Weick, Dean
Twente Hall, 1545 Lilac Lane, Room 212
Lawrence, KS 66044-3184, www.socwel.ku.edu

Doctor of Philosophy ................................ 363
  Do Your Goals Include ........................................ 363
  Then Consider Our Program ................................. 363
The Curriculum .................................................. 363
Teaching & Research ............................................. 363
Ph.D. Admission .................................................. 363
  Qualifications for Admission ............................... 363
  Admission Criteria ........................................... 364
  Application Procedure ...................................... 364
Ph.D. Degree Requirements ................................ 364
  Doctoral Courses .............................................. 364

Master of Social Work ............................. 364
  M.S.W. Admission ............................................. 364
  Two-year Full-time or Part-time Program .................. 364
  Advanced-standing Criteria ................................. 365
  Application Procedure for All Options .................... 365
  Final Deadlines ............................................... 365
  Planning Your Commitment ................................... 365
M.S.W. Degree Requirements ......................... 365
M.S.W. Foundation Curriculum ......................... 365
  Social Work Practice ....................................... 365
  Community & Organizational Practice .................... 365
  Social Policy & Program Analysis ........................ 365
  Human Behavior in the Social Environment ............. 365
  Social Work Research ....................................... 365

Field Practicum .............................................. 365
  Foundation Courses ........................................ 365
M.S.W. Advanced-level Curriculum ....................... 366
  Clinical Social Work Concentration ....................... 366
  Social Work Administrative & Advocacy Practice
    Concentration ............................................... 366
Field Practicum .............................................. 366
  Alternative Plans ........................................... 367
  Employment-based Practicum ................................ 367
Prior Work Experience ....................................... 367
Credit for Course Work Taken Outside
the School of Social Welfare ............................... 367

Joint Degree in Social Work & Law ................... 367
School Social Work .......................................... 367
Testing Out of First-year Courses ...................... 368
Intermit & Withdrawal ....................................... 368
  Changing from Full-time to Part-time Status ......... 368
Grading .......................................................... 368
Financial Aid .................................................. 368
  Scholarships & Awards .................................... 368
International Students .................................... 368
Social Welfare Courses ..................................... 368
School of Social Welfare

Doctor of Philosophy

Challenging ideas and creative thinking are happening at KU’s School of Social Welfare. Our doctoral program is committed to advanced research and scholarship. Our school continues to be a leading innovator in advancing the strengths perspective for social work practice. Doctoral students have played a key role in this exciting initiative.

Do Your Goals Include
• Joining an educational program whose philosophical focus builds on individual, family, and community strengths?
• Conducting research in the communities where clients live?
• Helping to build social work knowledge through all avenues of inquiry?
• Participating in a curriculum that critiques, extends, and revises conventional social work wisdom?
• Contributing to a social work knowledge base that promotes justice and celebrates diversity?

Then Consider Our Program

The Curriculum

Our courses prepare students as scholars with conceptual and methodological sophistication.
• Proseminars focus on the intellectual history and current status of social work ideas and ideologies and on developing a critique and revision of that knowledge.
• In the research sequence, students learn both qualitative and quantitative methodologies, designs and advanced modes of analysis, and how to apply them to situations.
• The policy/practice courses provide the opportunity to analyze policies of interest to students and discover “best” practices as they affect a population. Students critically consider human problems, strengths, and strategies for change and transformation.

Teaching and Research

Our Ph.D. program contributes significantly to the model of strengths and community-based research, service, and education developed by the school. Under the direction of faculty members, many Ph.D. students help with research projects and serve as teaching assistants or field instructors. For example, doctoral research assistants work in such fields as aging, child welfare, criminal justice, cultural diversity issues, health and disability, mental health, social policy, and spiritual diversity.

It is part of the school’s mission to focus on teaching, inquiry, and practice that benefit populations who suffer oppression of all kinds. The school is committed to diversity and multicultural perspectives. Many research and service projects are committed to direct and positive impact on people of color, status minorities, and oppressed peoples, individually, collectively, and internationally.

Ph.D. Admission

Qualifications for Admission. To be considered for admission, an applicant must meet these requirements:
1. M.S.W. degree with minimum graduate grade-point average of 3.5 preferred. The admissions committee considers applicants without the M.S.W. who, through their professional activity, have been closely identified with the profession, its practice, and its values and ethics.
2. Completion of the Graduate Record Examination within the past five years. Scores in at least the 50th percentile on two of three test areas are preferred.
3. Basic statistical competence as demonstrated by completion of a basic statistics course at the graduate or undergraduate level with a grade of B or above within the last five years, or plan to complete the course.

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www.socwel.ku.edu
Phone: (785) 864-4720, Fax: (785) 864-5277
Professors: Berry, Canda, Chapin, Ezell, Lieberman, McDonald, Petr, Rapp, Weick
Associate Professors: Adams, Banerjee, Kapp, Ortega, Peterson, Scanlon, Severson, Spano
Assistant Professors: Beverly, Crisp, Hartnett, Nelson-Becker, Postmus
4. Two years of social work or related practice; two years of post-master’s professional social work experience is preferred.
5. Ability for doctoral study in social work, demonstrated by a written statement of interests in research relevant to social work practice, letters of recommendation, and a record of scholarly or other professional achievement or both.
6. Demonstrated ability for and interest in advanced scholarship and revision of existing bodies of knowledge.
7. International students: Test of English as a Foreign Language examination, completed within the past five years.
8. Other requirements established by the Graduate School.

Admission Criteria. Criteria used in judging applications are the applicant’s potential for excellence in academic performance, professional practice experience, and potential for contributions to knowledge-building for social work. Sources of judgment of these criteria include undergraduate and graduate transcripts; publications, presentations, research proposals, and scholarly works; references concerning professional practice and qualifications for doctoral-level study and research; statement of research and scholarly interests; and information on the applicant’s experience in professional practice.

Application Procedure. Complete the Application for Admission to Graduate School and Supplemental Application form, online at www.graduates.ku.edu. Send two official transcripts of all completed undergraduate and graduate college and university course work to The University of Kansas Graduate Application Processing Center 1450 Jayhawk Blvd., Room 313 Lawrence, KS 66045-7535

Submit the following materials directly to the KU School of Social Welfare:
• Graduate Record Examination scores.
• Letters of reference.
• International students must submit Test of English as a Foreign Language scores.
• Copies of scholarly work, such as journal articles, papers delivered, research reports, monographs.
• Statement of statistics course taken: title, institution, date of completion, and grade, or plan to complete the course.
• Statement of scholarly and research interests in social work practice.

Application fees are as follows:
Domestic Ph.D. students in Social Welfare:
• paper $55,
online $55.
International Ph.D. students in Social Welfare:
• paper $60,
online $55.

Substantive electives ........................................ 12
SW 999 Dissertation .......................................................... 18

International students: Test of English as a Foreign Language scores.

Doctoral Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SW 970 Methods of Naturalistic and Qualitative Research</td>
<td>3</td>
</tr>
<tr>
<td>SW 980 Proseminar</td>
<td></td>
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<tr>
<td>SW 981 Advanced Research Methods I</td>
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<tr>
<td>SW 982 Social Policy Analysis</td>
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<tr>
<td>SW 983 Advanced Research Methods II</td>
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<tr>
<td>SW 984 Social Work Practice</td>
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<tr>
<td>SW 985 Advanced Proseminar</td>
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<tr>
<td>SW 986 Research Practicum</td>
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<td>Substantive electives</td>
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Master of Social Work

The Master of Social Work degree prepares graduates for advanced social work practice in one of two broad areas—clinical social work practice with individuals, families, and groups or social work administrative and advocacy practice aimed at macro-level practice. The first level of the master’s curriculum is a generalist foundation required of all students. The foundation consists of six classroom courses and a two-semester practicum that reflects the generalist intent.

At the advanced level, students choose a concentration in clinical social work practice with a focus in a particular field of practice (child and family, health/mental health, aging, school social work) or social work administrative and advocacy practice. The advanced-level practicum implements students’ choice of concentration.

Full-time students complete the program in two years. Students admitted for part-time study may extend the program for up to four years.

The advanced-standing program admits individuals with B.S.W. degrees with strong records in their foundation programs. Applicants generally have relevant post-degree work experience.

The regular M.S.W. program is available full time or part time. Part-time students complete the program in either three or four years. On KU’s Edwards Campus, part-time students can complete the M.S.W. curriculum in afternoon and evening classes.

M.S.W. Admission

Two-year Full-time or Part-time Program. Applicants must have bachelor’s degrees from accredited universities before the start of M.S.W. course work. Degrees must include liberal arts course work—skill in communication, understanding of ways in which knowledge is gained and applied, knowledge of social, biological,
and behavioral sciences, history, and an understanding of values among differing cultures.

**Advanced-standing Criteria.** The Advanced-standing program requires a bachelor's degree from a CSWE-accredited social work program with a grade-point average of at least 3.0. Higher grade point averages are an advantage. If you have less than two years of post-B.S.W. social work experience, a copy of your practicum evaluation is required, and one of your three references must be from your practice class instructor. If you have two or more years of experience in the social work field, a reference from your social work supervisor should be submitted. The amount and type of applicant's social service experience are factors in admission decisions. Admission to the Advanced-standing program is on a full-time basis only. Under special limited circumstances, a part-time program may be considered, providing the plan meets the educational mission of the school and has been approved by the associate dean for academic programs. To be considered for Advanced Standing, current seniors should submit transcripts that document their fall semester grades and successful practicum experience.

**Application Procedure for All Options.** A minimum undergraduate grade-point average of 3.0 on a 4-point scale is expected. The admissions committee may make exceptions, taking into account special circumstances such as improvement of grades in upper-division or graduate courses. We look for evidence of an applicant’s commitment to the well-being of people and communities; a well-developed sense of self, emotional maturity; and the ability to think clearly, creatively, and independently. Graduate Record Examination scores are not required. Applicants are evaluated on undergraduate grade-point average, graduate course work (if any), volunteer and work experience especially related to social work, and evidence of potential for a social work career in the application narrative and references. The School of Social Welfare application and the applicant’s narrative statement can be submitted online at [www.socwel.ku.edu](http://www.socwel.ku.edu). In addition, the applicant is responsible for gathering the following supporting materials and submitting them in one envelope: one copy of student-issued transcripts from all previously attended schools regardless of degree status, three letters of reference on forms provided, and a nonrefundable application fee. If the applicant is completing a paper application, the application and narrative statement should also be included.

**Please observe the specific instructions provided in application packets and on our Web site.** Applications are reviewed beginning in October. Admission decisions are made in the spring of each year. Advanced-standing M.S.W. students begin in June; all other M.S.W. students (full time and part time) begin in August.

**Final Deadlines.** All applications are reviewed upon receipt. The deadline for the Advanced-standing program is **January 15.** The deadline for applications to the Regular M.S.W. program (full time or part time) is **February 15.** Early application is encouraged. For students submitting paper applications by December 1, the application fee is waived. To ensure your privacy, we are unable to provideadmission decisions over the telephone. All applicants will be notified in writing. All application materials become the property of KU.

**Planning Your Commitment.** Students are admitted on either a full- or a part-time basis. In making decisions about full- or part-time study, students should consider that each class requires several hours of preparation each week. The program is demanding; students can expect reading assignments and paper preparation, and should be prepared to fulfill practicum commitments averaging two-and-one-half to three days per week. Students admitted part-time take 3 to 6 credit hours each semester their first year. Full-time students enroll in 16 credit hours each semester. Currently, the M.S.W. Program is a weekday program with late-afternoon and evening courses offered on the Edwards Campus.

**M.S.W. Degree Requirements**

The School of Social Welfare requires a total of 64 credit hours for the M.S.W. degree, consisting of:
- Thirty-six credit hours of classroom work maintaining a grade-point average of 3.0 (B)—a total of 108 grade points on a 4-point grading system.*
- Twenty-eight credit hours of field practicum with an S grade for satisfactory performance.
- Recommendation of the faculty of the School of Social Welfare to the chancellor that the master’s degree be granted.

*Students who maintain grade-point averages of at least 3.0 in the foundation courses are eligible to take additional courses beyond the minimum requirement.

**M.S.W. Foundation Curriculum**

**Social Work Practice** (SW 710, SW 711). Based on the school’s unique strengths perspective, courses provide core knowledge and skills essential for working with individuals, families, and groups.

**Community and Organizational Practice** (SW 713). Gives students an understanding of the core elements of practice in organizations and communities.

**Social Policy and Program Analysis** (SW 720). Emphasizes the effects of social problems, policies, and programs on people and gives students the skills to analyze the effectiveness of policies and programs.

**Human Behavior in the Social Environment** (SW 730). Theoretical underpinnings essential for effective social work practice and for understanding the behavior of individuals, families, groups, and communities.

**Social Work Research** (SW 740). Offers students the opportunity to become informed consumers of social-work-relevant research and to develop skill in evaluating the effectiveness of their own work with clients and the effectiveness of the programs in which they work.

**Field Practicum** (SW 701). Community agencies throughout Kansas and western Missouri offer practicum opportunities for the application of knowledge gained in other sequences. Field experiences for foundation students extend the curriculum goal of generalist social work and are designed so that fundamental skills across multiple levels of intervention are acquired.

**Foundation Courses.** The following courses are required (32 credit hours):

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SW 701</td>
<td>Basic Field Practicum</td>
<td>7</td>
</tr>
<tr>
<td>SW 710</td>
<td>Social Work Practice I</td>
<td>3</td>
</tr>
<tr>
<td>SW 713</td>
<td>Community and Organizational Practice</td>
<td>3</td>
</tr>
<tr>
<td>SW 720</td>
<td>Social Policy and Program Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>
M.S.W. Advanced-level Curriculum

Students at the advanced level select a concentration in either clinical social work practice or social work administrative and advocacy practice in accordance with their goals of either working directly with individuals, families, and groups or at the macro-level of practice in social program design and administration. Students may not enroll in advanced-level classes before completing foundation requirements.

Clinical Social Work Concentration (32 credit hours).

The clinical social work concentration prepares students for social work practice with individuals, families, and small groups. The focus is on selecting and evaluating interventions based on needs in each situation, whether personal, interpersonal, or environmental. Social work theory and methods taught are applicable to the variety of practice settings in which clinical services are provided, as reflected in the list of practicum settings at the end of this catalog.

Students expecting to sit for the Licensed Specialist Clinical Social Worker examination two years after the M.S.W. should take the clinical social work practice concentration.

Diversity and cultural variation among the student body are highly valued.

Graduate social work education has been offered at KU for more than 50 years, longer than any other institution in the state.

Scholarships made possible through donations to the KU Endowment Association are available to M.S.W. students.

Field Practicum

The field practicum office works with community agencies throughout Kansas and western Missouri to provide field education opportunities for students. Students are placed in these agencies through a collaborative process involving the office, the student and the community agency. The office arranges all placements and is responsible for ensuring that they provide appropriate learning opportunities for students and that qualified field instructors are available.

Students have two practicum placements, one during the foundation level and one during the advanced level of the program. Each placement is for two consecutive semesters, 14 credit hours per year. Foundation-level students engage in practicum for 20 hours a week, in a two-semester period of 30 weeks for a minimum of 600 clock hours. Advanced-level students spend 24 hours a week in practicum for the two-semester period for a minimum of 720 clock hours. In both years, the practicum is concurrent with required practice courses. Practicum is graded on an S/U basis. A satisfactory (S) grade in both the foundation and advanced level practicum is a requirement for the M.S.W. degree. At the end of the first semester, a grade of P is given for satisfactory progress toward completion of the course. No credit is given for partial completion (fewer than 14 credit hours) of either practicum.

The foundation-level field practicum provides the necessary learning opportunities for the achievement of foundation curriculum objectives and development of a generalist perspective on practice. Advanced-level practicum provides the learning opportunities essential for completing the learning objectives of either the clinical or social work administrative and advocacy practice concentrations. Clinical concentration practica are linked to integrative seminars in the following fields of practice: children and families, health/mental health, aging, or school social work.

An orientation is held in the fall, before the beginning of classes, for all students entering a field practicum and the field liaisons who represent the school. The Field Practicum Handbook explains practicum-related expectations and policies. Students are responsible for the material in the handbook.

Every student in practicum has both an M.S.W. practicum instructor and a field liaison. The practicum instructor is responsible for designating learning opportunities, planning practicum assignments, and serving as the student’s teacher in the practicum. The field liaison is employed by the School of Social Welfare to work with practicum instructors and students in each agency, to help integrate practicum and class instruction, to evaluate student performance, and to assist if difficulties arise.

Field placements are mainly in the Kansas City, Topeka, and Wichita areas, with a limited network of settings in Lawrence, Leavenworth, and other Kansas and Missouri communities. Most agencies also require students to have transportation available for agency travel. Scholarships are available to students.

THE UNIVERSITY OF KANSAS • 2005-07 GRADUATE SCHOOL CATALOG
assignments. Students are responsible for transportation to the assigned field practicum.

Because of the necessity for continuity in client service and learning, the maximum time for a break between semesters in practicum is three weeks, regardless of time allowable according to the university calendar.

Alternative Plans. When a student’s current employment includes appropriate practice opportunities, but the student is not interested in applying for an Employment-based Practicum (see below), the practicum may be postponed by approval of the associate dean for academic programs until other courses at that level have been completed. The student must submit a practicum exception form to the director of practicum, who makes a recommendation to the associate dean. Following the completion of course work, a practicum may be completed either in a two-to-three-day, two-semester plan or a block plan, four to five days a week over a shorter time than two semesters. Enrollment and fees for practicum are required during the time the student is in the field practicum. All practicum placements require that students be available for a minimum of eight hours per week in a setting during weekday hours, with more time required depending on the learning needs of the students and program needs of the agency. Practicum placements that provide any night and weekend hours are extremely limited.

Employment-based Practicum. An Employment-based Practicum (EBP) allows students to use their places of employment as sites for field practicum. Students may apply for an EBP if they meet these criteria:

1. The student is working in a human service agency that can provide educational opportunities for the student to acquire the knowledge and skills necessary for advancement to the next level of practice.

2. These educational opportunities can be specified and are clearly distinguished from the student’s employment responsibilities.

3. The agency is supportive of the student’s educational objectives and provides support for the student. For example, this support may be shown through providing the student with released time for course and field instruction or reassignment of the student to a different position in the agency that will provide the needed educational opportunities.

4. A qualified field instructor, who is not the student’s employment supervisor, is available to supervise the student.

An Employment-based Practicum is not an avenue for students to get educational credit for the work they do in their places of employment, a way for employers to get more hours of work out of an employee they value through adding the practicum on to a full-time job, or a special practicum. Although the setting for an EBP may be different from a traditional practicum, all of the expectations for field practicum specified by the School of Social Welfare are still requirements for an Employment-based Practicum.

Employment-based Practicum application forms and guidelines are available from the practicum office. To be considered, the completed EBP application must be submitted to the practicum office by the deadline dates listed on the application.

Prior Work Experience. In accordance with national curriculum policy, prior employment and life experience may not be credited toward classroom course work or practicum requirements.

Credit for Course Work Taken Outside the School of Social Welfare

Clinical students who wish to substitute a course taken outside the School of Social Welfare for the clinical elective must petition the clinical committee before the beginning of the semester (for fall, August 1; for spring, December 15). Petitions must include the course syllabus, verification that the course is a graduate course, and a transcript upon completing the course showing a grade of B or higher. Requests submitted after the beginning of the semester will not be considered. Students who choose field placements that require particular course work are responsible for meeting the academic requirements of the school as well as the field agency. No more than 3 hours of course work taken outside the school will be accepted to meet the elective program requirement.

Social work administrative and advocacy practice students interested in taking a course offered outside the program must consult the chair of the social work administrative and advocacy practice committee.

Credit for continuing education institutes and workshops or programs conducted by nonaccredited or nondegree-granting organizations are not accepted.

Students who request transfer from other programs accredited by the Council of Social Work Education must go through the admission process and provide transcripts, a syllabus for each course for which credit is being requested, descriptions of field practicum content, written evaluations of field practicum performance, and the number of practicum clock hours.

Students who request transfer from nonaccredited programs are expected to test out of some required foundation courses. Applications for transfer must be received by January 15.

Joint Degree in Social Work and Law

The M.S.W./J.D. program combines into four years the two-year M.S.W. program offered by the School of Social Welfare and the three-year J.D. program offered by the School of Law. The program offers a thorough academic grounding in both areas. Contact each school for separate admission information. The Law School Admissions Test is required for admission to the law school. Applicants must apply to and meet the criteria for admission to both schools.

School Social Work

The Kansas Department of Education no longer certifies school social workers. However, the School of Social Welfare strongly recommends that students interested in practicing in a school setting take the following:

• A practicum experience at the advanced level in a public school setting under the direct supervision of a certified school social worker.

• Clinical social work concentration.

• Integrative seminar in school social work: SW 834 Social Work in Schools.

• SPED 725 is highly recommended as an elective choice for students planning a future in school social work.
Testing Out of First-year Courses

Students who believe they have already mastered the content of SW 720, SW 730 or SW 740 may attempt to test out of the course at a designated time at the beginning of the semester in which the course is offered. To test out, students take the equivalent of a final examination for the course. Up to 6 credit hours may be waived for testing out successfully. A student may attempt to test out of a course only once.

Intermit and Withdrawal

Students in good academic standing may apply to intermit (not take courses) after completion of at least one semester, for a period of one year without the necessity of readmission. Application for intermit status must be submitted to the associate dean of academic programs for approval and must include a statement of support from the student’s academic adviser. Students granted intermit status must verify in writing their intention to return by February 1 for the fall semester or by September 1 for the spring semester.

Any student who is considering intermit status or withdrawal must consult with his or her adviser. An exit statement must be submitted for the record, indicating the reason for intermit or withdrawal.

Changing from Full-time to Part-time Status

Full-time students who drop any class during the foundation year also must drop SW 701 Basic Field Practicum and SW 710/SW 711 Social Work Practice I and II.

Grading

The basic system for M.S.W. courses is an A, B, C, F system, in which A represents exceptional performance, B represents graduate standards, C represents below graduate standards, and F represents failure, unsatisfactory work with no credit granted toward a degree. Plus/minus grades may be given and are calculated in the overall grade-point average.

No course may be retaken to improve a grade.

Financial Aid

For financial assistance for all program locations, apply to the University of Kansas, Office of Student Financial Aid, Strong Hall, 1450 Jayhawk Blvd., Room 50, Lawrence, KS 66045-7535, (785) 864-4700, osfa@ku.edu. Financial aid for Lawrence and Kansas City is processed through the Lawrence campus office. The Free Application for Federal Student Aid must be filed for you to be eligible for federal grants and programs administered by the University of Kansas. The FAFSA is available online at www.fafsa.ed.gov. Start the process early, before you know your admission status. A small number of advanced-level field practicum placements may pay a stipend to students. Effort is made to assign these settings to students whose financial need is high.

Scholarships and Awards

Scholarships are awarded to advanced-level M.S.W. students from the following funds established with the Kansas University Endowment Association:

- Aase George Scholarships
- Cecilia Robinson Scholarship
- Dot Simmons and Dodie Abbot Scholarship
- Esther Twente Scholarships

- Mildred Webb Sigler Scholarship in Health Care
- School of Social Welfare Advisory Board Scholarships

Awards for outstanding field practicum performance are given annually in recognition of Margaret Schutz Gordon, Director of Practicum, 1970-1983.

William and Monte Murphy Fellowships are available based on need. William Palm Fellowships are available for underrepresented ethnic groups. Students must be in good academic standing. The FAFSA must be filed as part of the application process. Please contact the school for more information.

International Students

All students from abroad, including students from English-speaking countries, must visit KU’s Applied English Center for verification of English language skills. You may be required to take an English Language Proficiency Test and to enroll in English language courses if you do not pass that test. The need to take English courses may delay your start in the M.S.W. program. See Minimum English Requirements under Admission in the General Information chapter of this catalog for further information.

Social Welfare Courses

SW 701 Basic Field Practicum (4-14). Students are assigned to social service agencies that provide generalist practice opportunities that prepare students for entry in an advanced level in either clinical social work practice or social work administration. All students work under the supervision of a qualified field instructor where they have the opportunity to apply and test social work knowledge, values, and skills. This course is generally taken for two semesters, with credit being given only after completion of the second semester. Open only to first-level M.S.W. students. Enrollment must be concurrent with enrollment in SW 701 and SW 711. FLD

SW 710 Social Work Practice I (3). The first of two-course sequence prepares students to begin to translate theory into strategies of intervention that cut across social work practice with all sized systems. Presents an integrating framework of generic social work based on a strengths perspective and a person-in-environment frame of reference. Course taken concurrently with SW 701 which provides students an opportunity to integrate theory and practice in work with clients. LEC

SW 711 Social Work Practice II (3). Second of two-course sequence extends the work begun in SW 710. Focus in the second course is on mastery of the basics of helping relationships and the development of intervention skills for the middle and ending phases of intervention. Content is structured to prepare students to enter the advanced level of the M.S.W. program. Course taken concurrent with SW 701. Freq required:

SW 712 Social Work Practice Seminar (3). Introduces advanced standing students to the themes of the school. Special emphasis is given to the Strengths perspective, a multicultural approach to practice, and developing the skills to critically and reflectively think about one’s own practice. Advanced standing status required. LEC

SW 713 Community and Organizational Practice (3). Students will be exposed to a body of knowledge and skills with communities and organizations. An advocacy perspective will act as the course's unifying theme with client well-being acting as the driving force behind the activities of community and organizational practitioners. LEC

SW 720 Social Policy and Program Analysis (3). Course provides a broad social context for identifying and analyzing social problems and social policy/program responses. Ecomonic and social injustice policies are exemplars for understanding societal dynamics and evaluating related policies. Emphasis is given to the development of conceptual skills in identifying and analyzing needs addressed by programs and policies. LEC

SW 730 Human Behavior in the Social Environment (3). Course provides foundation knowledge about bio-psycho-social aspects of individual and family behavior. Theoretical perspectives on well being, dysfunction, and developmental processes are analyzed critically, especially concerning applicability to social work practice that supports client strengths, diversity, and social justice. A holistic conceptual framework is used to integrate these micro-system perspectives with larger environmental socio-political concerns. LEC

SW 740 Social Work Research (3). An examination of professionally relevant aspects of the nature of science: the nature of knowing, a constructed reality, the logic of explanation and inquiry, the nature of con-
cepts, hypotheses, and assumptions. The content will include such issues as sampling, measurement, reliability, and validity, developing survey questions, analyzing qualitative and quantitative research, and an introduction to descriptive and inferential statistics. LEC

SW 755 Studies: (1-3). This course provides the opportunity for experimentation with innovative course content in accordance with guidelines presented by department. Subject matter topics include Social Work with AIDS, Family Mediation, Family Violence. LEC

SW 801 Advanced Field Practicum: Clinical Practice (3.5-14). Students are assigned to social service agencies that provide opportunities for advanced level clinical social work practice. All students work under the supervision of a qualified field instructor where they have the opportunity to integrate theory and practice and develop beginning competence in social work practice. This course is generally taken for credit beginning in the fall semester and must be concurrent with enrollment in SW 840, SW 841, and SW 849 and in Spring semester enrollment must be concurrent with enrollment in SW 842, and SW 843. Prerequisite: Completion of all foundation requirements. LEC

SW 805 Social Work Practice and Analysis of Social Programs (3). The focus is on the development and analysis of social programs within a specific analytic framework. Emphasis is placed on the tasks, roles, and functions of managers. Majority of the course is devoted to client centered human service management, including the variety of skills needed to effectively manage and advocate with and on behalf of different human service communities. Throughout the course, skill-based exercises are presented to aid in understanding theoretical concepts. Prerequisite: Completion of all foundation requirements. LEC

SW 841 Advanced Policy and Programs (3). The focus is on the development of skills to stay abreast of and knowledgeable about critical federal and state policies, regulations, and funding structures and streams in students’ chosen field of practice. Students will also learn how to search the literature on best practice and effective programs. All of these skills and consequential knowledge will be used to inform program design, resource acquisition, financial management, personnel management, and evaluation of information systems. Prerequisite: Completion of all foundation requirements. LEC

SW 842 Using Outcomes for Administrative and Advocacy Practice (3). Emphasis is on the use of information to improve human service programs and student outcomes. Includes content on implementing, implementation, and evaluation of information systems. Prerequisite: Completion of all foundation requirements. LEC

SW 843 Strengthening Staff Performance in a Diverse Workplace (3). Builds knowledge and skills in effective supervision and human resource management with emphasis on maximizing client and community well-being by increasing job satisfaction, enhancing staff morale, and creating and maintaining workplaces that reflect, contribute to, and celebrate diversity in the larger community. Prerequisite: Completion of all foundation requirements. LEC

SW 844 Facilitating Organizational and Community Change (3). Focus on the development and practice of strategies to influence agencies and programs to be client-centered; identify client centered program enhancements, plan change efforts, and practice integrating strategies to implement them. Prerequisite: Completion of all foundation requirements. LEC

SW 845 Seminar in Client-centered Leadership and Management (3). This course offers students an opportunity to apply their knowledge and skills to specific organizational and community change processes that students are implementing in their current work. Prerequisite: Completion of all foundation requirements. LEC

SW 846 Advanced Community and Advocacy Practice (3). This course is designed to build on the content of the foundation course on community and organizational practice by further developing the theories, methods, and skills of community and advocacy practice. The course will help students know and develop the administrative and technical skills needed to effectively manage and advocate with and on behalf of different human service communities. Throughout the course, skill-based exercises are presented to aid in understanding theoretical concepts. Prerequisite: Completion of all foundation requirements. LEC

SW 847 Grantwriting and Fundraising (3). This course is designed to acquaint students with the knowledge and skills necessary for human service programs to acquire resources through grantwriting and fundraising. Focus is on prospective research for public and private fund-finding, the preparation of a fundable grant proposal, and other fundraising techniques used by agencies to support their client-centered missions. Prerequisite: Completion of foundation requirements. LEC

SW 848 Fundamentals of Client-centered Management (3). Services to clients can often be most effectively provided by interventions at the organizational and community levels. Using client strengths and needs as the focus, students learn basic theories and skills necessary to provide such interventions. Topics covered include client-centered management; assessing outcomes, managers and programs; program design, and program evaluation. Prerequisite: Completion of all foundation requirements. LEC

SW 849 Mastering the Use of Financial Resources for Social Work Practice (3). Focus on the use of resources needed to operate a client-centered program. Includes budgeting techniques and their application, use of budget for decision making, and problems of resource allocation. Prerequisite: Completion of all foundation requirements. LEC

SW 852 Social Work with Groups (3). Theory and practice of social work in the wide range of groups in which social workers participate as workers and co-workers. Focus on the social worker’s tasks and behaviors in establishing group services and facilitating work in the group from the time of its formation to its termination as a service entity. Prerequisite: Completion of foundation requirements. LEC

SW 855 Studies: (1-3). Course provides opportunity for experimentation with innovative content in accordance with guidelines established by faculty. Topics include Spiritual Aspects of Practice, Intrafamilial Sexual Abuse, and other timely subject areas. LEC

SW 860 Loss and Grief (3). Examines the multiple faces of loss and grief throughout the human life cycle. Examines personal and societal attitudes toward death and dying and the processes of grieving. Course includes exploration of assessment and interventions that enable individuals and their families to cope with loss. Prerequisite: Completion of all foundation requirements. LEC

SW 861 Family Mediation (3). This course is designed to provide education in both theory and skills to prepare the student to intervene as a neutral in family disputes. This is, in effect, a practice course which serves to introduce students to the breadth and depth of family mediation. The student will study written materials and lecture presentations, as well as practice using mediator skills within role-plays. Prerequisite: Completion of all foundation requirements. LEC

SW 862 Intrafamilial Sexual Abuse (3). This course will focus on sexual abuse that occurs within the family system. Students will obtain a comprehensive understanding of sexual abuse that occurs within the family system and develop assessment and helping skills needed when working with abusive families. Theoretical and practical aspects of intrafamilial sexual abuse will be examined. Prerequisite: Completion of all foundation requirements. LEC

SW 863 Mental Health and Psychopathology (3). Theories of mental health and psychopathology are considered, and we will examine the role of classification, assessment, and treatment of distress and mental disorders. Theories and practices are evaluated critically for their usefulness in a
Social Welfare Courses

strengths approach to social work in mental health settings. Prerequisite: Completion of all foundation requirements. LEC

SW 864 Supervision in Social Work (3). Course focuses on supervision as a practice in social work, with emphasis on the use of authority, group and peer supervision, and mediation or joint advocacy between staff members and between staff and clients. Supervisory practice is examined from different role perspectives of the social administrator, educator, and clinical practitioner. Prerequisite: Completion of all foundation requirements. LEC

SW 865 Social Work Ethics (3). Immerses students in the ethical dimensions of social work practice. Includes examining moral and ethical decision making, and the development of skills necessary to make both clinical and administrative practice decisions. Prerequisite: Completion of all foundation requirements. LEC

SW 866 Social Work Practice with Children and Adolescents (3). Developmental norms and processes in childhood and adolescence and related implications for assessment and intervention methods in work with children and adolescents. Topics include countertransference issues in work with children, working with parents and children, intervention tools, stress in childhood, special issues, and concerns in adolescence, sexual abuse of children. Prerequisite: Completion of all foundation requirements. LEC

SW 868 Crisis Intervention (3). Principles of planned short-term intervention generally and of crisis intervention specifically are addressed. Empirical evidence bearing on crisis theory and outcomes of crisis intervention are examined. Anticipated and unanticipated crises, including disaster, are considered as they may affect individuals, families, or larger groups. Prerequisite: Completion of all foundation requirements. LEC

SW 869 Social Work with Clients with Alcohol and Drug-related Problems (3). Focus is on developing value consciousness and multidimensional understandings in relation to drug use and abuse. Patterns of drug use, sociocultural attitudes toward drug use and definitional issues in the drug field will be examined. Explanatory theories and contemporary interventions, including the applicability of generalist social work practice models are presented and critically assessed. Prerequisite: Completion of all foundation requirements. LEC

SW 870 Spiritual Aspects of Social Work Practice (3). This course provides a framework of knowledge, values, and skills for spiritually-sensitive social work practice. In order to prepare students to respond competently and ethically to diverse spiritual perspectives, a comparative, critically reflective approach to content is employed. The role of religion and spirituality in supporting or impeding individual strengths and social justice is considered. Prerequisite: Completion of all foundation requirements. LEC

SW 871 Social Work with Persons with AIDS (3). The purpose of this course is to educate social work practitioners about the impact of the growing AIDS epidemic in the United States. Facts about the incidence, transmission, and treatment of persons who test positive for HIV or have been diagnosed with AIDS will be provided. The focus will be on the implications for patients, families, and friends, as well as the social and economic costs of the disease. Prerequisite: Completion of all foundation requirements. LEC

SW 872 Cultural Diversity in Social Work Practice (3). Provides students with a framework of knowledge, values, and practice methodologies for culturally competent social work practice emphasizing diversity of oppression and empowerment, culture-specific strengths and resources, and multicultural/transcultural perspectives. Prerequisite: Completion of all foundation requirements. LEC

SW 873 Social Work with Gay, Lesbian, Transgendered and Bisexual Clients (3). The purpose of this course is to introduce students to the basic knowledge, values, and skills needed to work effectively with people who are gay, lesbian, and bisexual. The course will reflect a person-environment perspective, focusing on strategies that empower lesbians, gay men, and bisexuals to develop personal and environmental resources from a strengths perspective. Throughout the course, attention will be given to issues of diversity within the lesbian and gay population. Prerequisite: Completion of all foundation requirements. LEC

SW 874 Social Work Practice with Women (3). Expands knowledge and practice skills in working with women in diverse social work practice settings. Critical examination of traditional and feminist practice approaches to problems that frequently confront women. Prerequisite: Completion of all foundation requirements. LEC

SW 875 Readings and Investigations (1-3). Opportunity for scholarly investigation in an area of special interest. Students pursue independent study in an area of social work practice through the guidance of a selected faculty member. RSH

SW 876 Social Work with Male Clients (3). This course is intended to help students improve their clinical practice skills with male clients. Topics covered include gender differences in communication styles, males as children and teenagers, and “men’s movement,” fatherhood, similarities and differences across races and cultures, homosocial males, men who batter, and females as workers for male clients. Prerequisite: Completion of all foundation requirements. LEC

SW 878 Social Work with African-American Families (3). The purpose of this course is to introduce students to the basic knowledge, values, and skills needed to work effectively with African American clients and their families. Critical examination of issues such as racism, oppression, and the historical context and their impact on African American families. Prerequisite: Completion of all foundation requirements. LEC

SW 879 Human Sexuality (3). Seminar to provide knowledge base about role sexuality plays in the human experience, typical sexual problems with both etiology and possible solutions studied, an understanding of alternative methods of sexual expression, and an exploration of personal feelings of sexuality. Prerequisite: Completion of all foundation requirements. LEC

SW 890 Current Issues in Professional Social Work Education: (0.5-3). Course provides opportunity for innovative course content designed for the social work professional. Subjects offered include: Psychopathology: A Biopsychosocial Approach. Ethics and the Social Worker, Mediation, Solution Focused Practice, Strengths-based Management, Outcome-based Measurement of Practice. LEC

SW 955 Doctoral Studies: (1-5). This course provides the opportunity for exploration of innovative content under the guidance of Ph.D. faculty. LEC

SW 979 Methods of Naturalistic and Qualitative Research (3). Introduces the concept of different methods for different questions - the distinction between quantitative and qualitative approaches and methods in the analysis of qualitative data: focus group interviews, key informant interviews, participant observation methods, text and content analysis, the use of archival data, and unobtrusive behavioral observation. LEC

SW 980 Proseminar (5). Provides an educational structure in which various aspects of the problem of interest can be intensively explored. Students survey current state of the art in area of interest and develop a written prospectus on a question suitable for dissertation research. LEC

SW 981 Advanced Research Methods I (3). Develops a sophisticated understanding of the research process, including the process of question formulation, choices among research strategies, and technical standards of research design. Includes a one hour lab. Prerequisite: Basic course in statistics. LEC

SW 982 Social Policy Analysis (3). Focus is on social policy analysis and critique; development of an understanding of legal issues related to social policy and historical development; development of the skills and appreciations that foster analysis, critique and comparisons. LEC

SW 983 Advanced Research Methods II (3). Advanced statistical and methodological techniques including higher order analysis of variables, regression analysis, nonparametric techniques, and further development of computer skills. LEC

SW 984 Social Work Practice (2). How to use and integrate methods of inquiry and research to discover the current state of practice within a specific area of students' interests; evaluate and critique the current 'state of the art' and reconceptualize best practices in terms of program development and evaluation. LEC

SW 985 Advanced Proseminar (5). Provides an educational structure for the refinement of dissertation proposals through class presentation and critique. Specific techniques and alternatives in studying a variety of dissertation questions are compared. LEC

SW 986 Research Practicum (3). Provides a field research experience designed to explore a specific area of research interest using quantitative and/or qualitative methods. LEC

SW 990 Graduate Research (1-9). Individual research preparatory to defense of dissertation prospectus. (By arrangement with doctoral chair.) RSH

SW 998 Doctoral Applied Research and Education Studies (1). This course provides the opportunity for doctoral students to learn about research or teaching through direct application of research or teaching skills under the mentorship of faculty. RSH

SW 999 Dissertation (1-12). THE
Programs and departments whose names follow that of
the institution in which the highest degree was earned
are those in which the person holds Graduate Faculty
membership and do not necessarily reflect the pro-
grams or departments in which university appointment
is held. The faculty lists in this catalog reflect the sta-
tus of the members as of June 1, 2004.

Jane Abrahamson. Professor, Chair, Dept. of Anatomy & Cell Biology, Ph.D., Virginia. Anatomy & Cell Biology.
Glenn Adams. Assistant Professor, Ph.D., Stanford. Psychology.
Arvin Agah. Associate Professor, Ph.D., Southern California. Electrical Engineering & Computer Science.
Jasjit S. Ahluwalia. Sosland Family Professor & Chair, Dept. of Preventive Medicine & Public Health & Professor of Internal Medicine, Family Medicine, & Pediatrics. Director, Cancer Prevention, Control, & Population Sciences, Kansas Cancer Institute. M.D., M.P.H., Tulane Univ. Preventive Medicine & Public Health.
Rohini Ahluwalia. Associate Professor, Ph.D., Ohio State. Business.
Omonofiole Ajayi-Soyinka. Associate Professor, Ph.D., Nigeria. Theatre & Film.
Cynthia Akagi. Assistant Professor, Ph.D., Kansas State. Health, Sport, & Exercise Sciences.
Sandra L. Albrecht. Associate Professor, Ph.D., Virginia. Anatomy & Cell Biology.
Jane Aldrich. Professor, Ph.D., Michigan. Medicinal Chemistry.
David E. Alexander. Professor, Chair, Dept. of Spanish & Portuguese, and Film.
Omofolabo Ajayi-Soyinka. Associate Professor, Ph.D., Nigeria. Theatre & Film.
Elissa Armstrong. Assistant Professor, M.F.A., Alfred. Design.
Barbara J. Anthony-Twarog. Associate Professor, Ph.D., Texas. Sociology.
Christopher Anderson. Associate Professor, Ph.D., Pittsburgh. Business.
Danny Anderson. Professor, Chair, Dept. of Spanish & Portuguese, Ph.D., Kansas. Spanish & Portuguese.
Barbara J. Anthony-Twarog. Associate Professor, Ph.D., Texas. Sociology.
Robert J. Antonino. Chancellors Club Teaching Professor, Ph.D., Notre Dame. Sociology.
Elissa Armstrong. Assistant Professor, M.F.A., Alfred. Design.
Wilfred N. Arnold. Professor, Ph.D., Cornell. Biochemistry & Molecular Biology.
Ronald A. Ash. Professor, Ph.D., South Florida. Business.
Elizabeth Asiedu. Associate Professor, Ph.D., Illinois. Economics.
Paul Atchley. Associate Professor, Ph.D., California (Riverside). Psychology.
Ruth Atchley. Associate Professor, Ph.D., California (Riverside). Psychology.
G. Douglas Atkins. Professor, Ph.D., Virginia. English.
Barbara Atkinson. Professor, Executive Dean, School of Medicine, Vice Chancellor for Clinical Affairs, M.D., Thomas Jefferson Univ. Pathology & Laboratory Medicine.
Gregory Ator. Associate Professor, M.D., Baylor. Hearing & Speech.
Jeffrey Aubé. Professor, Ph.D., Duke. Medicinal Chemistry.
Kenneth Audus. Professor, Dean, School of Pharmacy, Ph.D., Kansas. Pharmaceutical Chemistry.
Ronald Aust. Associate Professor, Ph.D., Washington. Teaching & Leadership.
Bruce Baker. Associate Professor, Ed.D., Columbia. Teaching & Leadership.
Mary Banwart. Assistant Professor, Ph.D., Oklahoma. Communication Studies.
Philip S. Baringer. Professor, Ph.D., Indiana. Physics & Astronomy.
Vincent Barker. Associate Professor, Ph.D., Illinois (Urban). Business.
Steven Barlow. Professor, Ph.D., Wisconsin. Speech-Language-Hearing: Sciences & Disorders.
Philip H. Barnard. Associate Professor, Ph.D., State Univ. of New York (Buffalo). English.
Barbara Barnett. Assistant Professor, Ph.D., Univ. of North Carolina. Journalism & Mass Communications.
Frank Barron. Professor, Ph.D., California (Berkeley). Germanic Languages & Literatures.
Philippe Barrière. Associate Professor, Ph.D., Sorbonne. Architecture.
Arlene Barry. Associate Professor, Ph.D., Wisconsin. Teaching & Leadership.
Michail Barybin. Assistant Professor, Ph.D., Minnesota. Chemistry.
Michael Baskett. Assistant Professor, Ph.D., Univ. of California-Los Angeles. Theatre & Film.
Sharon Bass. Associate Professor, M.A., Texas. Journalism.
C. Daniel Batson. Professor, Ph.D., Princeton. Psychology.
Lorraine Bayard de Volo. Associate Professor, Ph.D., Michigan. Political Science.
Margaret Bayer. Professor, Ph.D., Cornell. Mathematics.
Robert Bayliss. Assistant Professor, Ph.D., Indiana Univ. Spanish & Portuguese.
Nancy Baym. Associate Professor, Ph.D., Illinois (Urbana). Communication Studies.
Barry Baysinger. Professor, Ph.D., Virginia Polytechnic Inst. & State Univ. Business.
Thomas D. Beisecker. Associate Professor, Ph.D., Wisconsin. Communication Studies.
Stuart Beil. Professor, Dean, School of Engineering, Ph.D., Texas A&M Univ. Mechanical Engineering.
Stephen Benedict. Associate Professor, Ph.D., Vanderbilt. Molecular Biosciences.
Timothy A. Bengtson. Clyde & Betty Reed Teaching Professor, Ph.D., Northwestern. Journalism.
Leslie Bennett. Assistant Professor, M.F.A., Boston Univ. School for the Arts. Theatre & Film.
David Benson. Associate Professor, Ph.D., California (Los Angeles). Chemistry.
Chuck Berg. Professor, Chair, Dept. of Theatre & Film, Ph.D., Iowa. Theatre & Film.
Elizabeth Berghout. Assistant Professor, D.M.A., Kansas. Music & Dance.
Sandra Bergquist. Associate Professor, Ph.D., Iowa. Nursing.
Nancy E.J. Berman. Professor, Ph.D., Massachusetts Inst. of Technology. Anatomy & Cell Biology.
Graduate Faculty

Daniel Bernstein. Professor, Ph.D., California (San Diego). Psychology.
Cindy Berrie. Assistant Professor, Ph.D., California (Berkeley). Chemistry.
Marianna Beyer. Professor, Ph.D., California. Social Welfare.
David Bessom. Professor, Ph.D., Rutgers. Physics & Astronomy.
Sondra Beverley. Assistant Professor, Ph.D., Washington. Social Welfare.
Peter L. Beyer. Associate Professor, M.S., Missouri. Dietetics & Nutrition.
Surendra Bhana. Professor, Associate Professor, Ph.D., Kansas. History.
Gautam Bhattacharyya. Associate Professor, Ph.D., Rochester. Economics.
Montica Bienart. Professor, Ph.D., Michigan. Psychology.
Melissa Birch. Associate Professor, Ph.D., Illinois. Business.
George Bittlinger. Wagnon Distinguished Professor, Ph.D., Chicago. Business.
Alan Black. Professor, Ph.D., Cornell. Urban Planning.
Ross Black. Associate Professor, Ph.D., Wyoming. Geology.
Phillip Blackhurst. Associate Professor, M.A., San Francisco State. Art.
Brian Blagg. Assistant Professor, Ph.D., Utah. Medical Chemistry.
Michael Bleich. Professor, Ph.D., Nebraska (Lincoln). Nursing.
John T. Booker. Associate Professor, Ph.D., Minnesota. French & Italian.
Andrew Borovik. Professor, Ph.D., North Carolina. Chemistry.
Jefforie Bott. Assistant Professor, Associate Dean, Research, School of Nursing, Ph.D., Kansas. Nursing.
Ruth Bowman. Assistant Professor, M.F.A., Kansas. Design.
Kristin Bowman-James. Professor, Ph.D., Temple. Chemistry.
Beverly M. Boykin. Professor, Ph.D., Columbia. English.
Diane Boyle. Associate Professor, Ph.D., Kansas. Nursing.
David A. Braaten. Associate Professor, Ph.D., California (Davis). Physics & Astronomy.
Nyla R. Branscombe. Professor, Ph.D., Purdue. Psychology.
John J. Bridges. Professor, Ph.D., Edinburgh. Philosophy.
Barbara Bridges. Associate Professor, Ed.D., Kansas. Nursing.
Ann M. Brill. Associate Professor, Dean, School of Journalism & Mass Communications. Ph.D., Minnesota. Journalism.
John Broholm. Associate Professor, Graduate Director, School of Journalist & Mass Communications. Ph.D., Missouri. Journalism.
Kari Brooks. Assistant Professor, Ph.D., Kansas. History.
Frank M. Brown. Associate Professor, Ph.D., Edinburgh. Electrical Engineering & Computer Science.
J. Christopher Brown. Assistant Professor, Ph.D., UCLA. Geography.
Melisa Brown. Associate Professor, Ph.D., Nevada (Las Vegas). Special Education.
Rafe Brown. Assistant Professor, Ph.D., Univ. of Texas-Austin. Ecology & Evolutionary Biology.
Robert D. Brown. Professor, Ph.D., California (Berkeley). Mathematics.
JoAnn Browning. Associate Professor, Ph.D., Purdue. Civil, Environmental, & Architectural Engineering.
Matthew Browne. Associate Professor, Ph.D., Wisconsin. Molecular Biosciences.
Ruben D. Bunag. Professor, M.D., Univ. of the Philippines. Pharmacology, Toxicology, & Therapeutics.
Louis C. Burnstine. Professor, Ph.D. Purdue. Mechanical Engineering.
Daryle H. Busch. Roy A. Roberts Distinguished Professor, Ph.D., Illinois. Chemistry.
Michael D. Butler. Associate Professor, Ph.D., Illinois. English.
Ralph Byers. Professor, Ph.D., Cornell. Mathematics.
Willard Calwell. Associate Professor, Ph.D., Illinois. Chemical & Petroleum Engineering.
Duane Caminoe-Santangelo. Associate Professor, Ph.D., California (Irvine). Piano.
Marta Caminoe-Santangelo. Associate Professor, Ph.D., California (Irvine). English.
Lelon R. Capps. Professor, Ph.D., Minnesota. Teaching & Leadership.
Diana Carlson. Professor, Dean, Graduate School & International Programs. Ph.D., Nebraska. Communication Studies.
Maria Carlson. Professor, Ph.D., Indiana. Slavic Languages & Literatures.
Robert G. Carlson. Professor, Ph.D., Massachusetts Inst. of Technology. Chemistry.
James B. Carothers. Professor, Ph.D., Virginia. English.
Mary A. Carothers. Professor, Ph.D., Iowa. Hearing & Speech.
William Carrell. Associate Professor, Associate Dean, School of Architecture & Urban Design, Director, Architecture program. Ph.D., University of New Brunswick. Architecture.
Paulyn Cartwright. Assistant Professor, Ph.D., Yale Univ. Ecology & Evolutionary Biology.
Petra J. Casagrande. Professor, Ph.D., Indiana. English.
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Jerry D. Chauffin. Professor, Ed.D., Kansas. Special Education.
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Bala Chandran. Professor, Ph.D., India. Microbiology, Molecular Genetics, & Immunology.
Jae Chang. Assistant Professor, Ph.D., Univ. of Michigan. Architecture.
Rosemary Chapman. Professor, Ph.D., Minnesota. Social Welfare.
John Charnes. Professor, Ph.D., Minnesota. Business.
Keith W. Chauvin. Assistant Professor, Associate Dean, Academic Affairs, School of Business. Ph.D., Illinois (Urbana). Business.
Paul D. Cheney. Professor, Chair, Dept. of Molecular & Integrative Physiology. Co-director, Neurosciences Program. Ph.D., State Univ of New York (Upstate Medical Center). Molecular & Integrative Physiology.
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Mark Chertok. Associate Professor, Ph.D., Wisconsin. Hearing & Speech.
Margaret Childs. Associate Professor, Ph.D., Pennsylvania. East Asian Languages & Cultures.
Kelly H. Chung. Assistant Professor, Ph.D., Univ. of Chicago. Sociology.
Dennis Christilles. Associate Professor, Ph.D., Kansas. Theatre & Film.
James D. Church. Professor, Associate Professor, Ph.D., Nebraska. Mathematics.
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Gary M. Clark. Professor, Ed.D., George Peabody. Special Education.
Katherine Clark. Assistant Professor, Ph.D., Johns Hopkins. History.
Rita Clifford. Associate Professor, Associate Dean, Student Affairs, School of Nursing. Ph.D., Kansas. Nursing.
Edith Cloeser. Professor, Ph.D., Yale. Slavic Languages & Literatures.
E. Benton Cobb. Associate Professor, Ph.D., Nebraska. Mathematics.
John Colombo. Professor, Ph.D., State Univ of New York (Buffalo). Psychology.
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Paul M. Comoll. Associate Professor, Ph.D., Purdue. Economics.
Helen Connors. Professor, Associate Dean, Academic Affairs, School of Nursing. Ph.D., Kansas. Nursing.
Kathryn Conrad. Associate Professor, Ph.D., Pennsylvania. English.
Anthony Corbeli. Professor, Ph.D., California (Berkeley). Classics.
Victoria Corbin. Associate Professor, Ph.D., Harvard. Molecular Biosciences.
Sally Cornelison. Assistant Professor, Ph.D., Courtauld Inst. of Art. History of Art.
Luis Corteguera. Associate Professor, Ph.D., Princeton. History.
Jose Sequeira Costa. Cordelia B. Murphy Distinguished Professor of Piano, Lisbon Conservatory College. Piano.
Christian Crandall. Professor, Ph.D., Michigan. Psychology.
George J. Crawford. Associate Professor, Ph.D., Ohio State. Teaching & Leadership.
Shannon Criss. Associate Professor, Ph.D., Harvard. Architecture.
Ann E. Cudd. Professor, Chair, Women's Studies Program, Ph.D., Pittsburgh. Philosophy.

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Cameron Currie. Assistant Professor, Ph.D., Toronto. Ecology & Evolutionary Biology.

Rebecca Curtis. Assistant Professor, M.F.A., Syracuse (fiction); M.A. New York Univ. English.

Ivan Damjanov. Professor, M.D., Zagreb. Pathology & Laboratory Medicine.

Paul D'Anieri. Associate Professor, Ph.D., Cornell. Political Science.


Mary Danielson. Assistant Professor, Ph.D., Toronto, English.


James Daugherty. Associate Professor, Ph.D., Florida State. Music & Dance.


Raymond G. Davis. Associate Professor, Ph.D., California (Davis). Political Science.


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Robert K. DeKosky. Associate Professor, Ph.D., Wisconsin. History.

Robert G. Delaney. Associate Professor, Ph.D., Case Western Reserve. Anatomy & Cell Biology.

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Michael Dennis. Assistant Professor, Ph.D., Purdue. Communication Studies.


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Donald D. Deshler. Professor, Ph.D., Arizona. Special Education.

Amy J. Devitt. Esther Conger Gabel & M. Wren Gabel Teaching Professor, Ph.D., Michigan. English.

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Leslie Dienes. Professor, Ph.D., Chicago. Geography, Russian & East European Studies.

Walter Dimmick. Associate Professor, Ph.D., Southern Illinois. Ecology & Evolutionary Biology.


S. Edwards Dismuke. Kansas Health Foundation Distinguished Professor, Dean, School of Medicine-Wichita, M.D., Tennessee. Preventive Medicine & Public Health.

Rick Dobrowolsky. Associate Professor, Ph.D., North Carolina State. Pharmacology & Toxicology.


Brian Donovan. Assistant Professor, Ph.D., Northwestern. Sociology.


Ronald Dougherty. Professor, Chair, Dept. of Mechanical Engineering, Ph.D., Missouri (Rolla). Mechanical Engineering.


Cal Downs. Professor, Ph.D., Michigan State. Communication Studies.

Laurence R. Draper. Professor, Ph.D., Chicago. Molecular Biosciences.


Tyrene E. Dunn. Professor, Ph.D., Stanford. Mathematics.

Robert Dunn. Professor, Ph.D., California (San Diego). Chemistry.

Winifred W. Dunn. Professor, Chair, Dept. of Occupational Therapy, Ph.D., Kansas. Occupational Therapy.


Apurba Dutta. Assistant Professor, Ph.D., Northeastern Hill, India. Medicinal Chemistry.

Arienne Dwyer. Assistant Professor, Ph.D., Washington. Anthropology.

Jonathan Earle. Associate Professor, Ph.D., Princeton. History.

James Early. Clinical Associate Professor, M.D., Indiana. Preventive Medicine & Public Health.

Dietrich Edelmart. Associate Professor, Ph.D., Wisconsin (Madison). Economics.

Howard H. Elmer. Associate Professor, Ph.D., Missouri. Teaching & Leadership.

Susan Egan. Associate Professor, Ph.D., Cornell. Molecular Biosciences.

Stephen Egbert. Associate Professor, Ph.D., Kansas. Geography.

Ben Eggleston. Assistant Professor, Ph.D., Pittsburgh. Philosophy.

David Ekerdt. Professor, Chair, Gerontology Program, Ph.D., Boston. Sociology.

Charles C. Eldredge. Hall Family Foundation Distinguished Professor, Ph.D., Minnesota. History of Art.

Mohammed A. El-Hodiri. Professor, Ph.D., Minnesota. Economics.


Carol Elliott. Assistant Professor, Chair, Dept. of Nurse Anesthesia, M.P.A., Kansas. Nurse Anesthesia.

Dorice Williams Elliott. Associate Professor, Ph.D., Johns Hopkins. English.

Cliff Ellis. Associate Professor, Ph.D., California (Berkeley). Urban Planning.

James Ellis. Associate Professor, Ph.D., Kansas. Teaching & Leadership.

Susan Embestrom. Professor, Ph.D., Minnesota. Psychology.

George Enders. Associate Professor, Ph.D., California (San Francisco). Anatomy & Cell Biology.

Michael Engel. Associate Professor, Ph.D., Cornell. Ecology & Evolutionary Biology.

Kimberly Engelman. Assistant Professor, Ph.D., Kansas. Preventive Medicine & Public Health.

Salvatore Enna. Professor, Ph.D., Missouri (Kansas City). Pharmacology, Toxicology, & Therapeutics.

Charles Epp. Associate Professor, Ph.D., Wisconsin. Public Administration.


Michael Ettredge. Professor, Ph.D., Texas (Austin). Business.


Richard L. Eversole. Associate Professor, Ph.D., Wisconsin. English.

Mark EWing. Associate Professor, Chair, Dept. of Aerospace Engineering, Ph.D., Ohio State. Aerospace Engineering.

Mark Ewicz. Professor, Ph.D., Florida State. Social Welfare.


Morris D. Faiman. Professor, Ph.D., Minnesota. Pharmacology & Toxicology.

Tamara Falicov. Associate Professor, Ph.D., California (San Diego). Theatre & Film.

Frank Farmer. Associate Professor, Ph.D., Louisville. English.

Saeed Farokhi. John & Winifred Sharp Teaching Professor, Associate Dean, Graduate School, Ph.D., Massachusetts Inst. of Technology. Aerospace Engineering.

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Daphne Faustin. Professor, Ph.D., California (Berkeley). Ecology & Evolutionary Biology.


Johannes Feddem. Associate Professor, Ph.D., Delaware. Geography.

Hume Feldman. Associate Professor, Ph.D., State Univ. of New York (Stony Brook). Physics & Astronomy.

John Ferraro. Carolyn Doughty-Margaret Kemp Professor Chair, Dept. of Hearing & Speech, Ph.D., Denver. Hearing & Speech.


Mare C. Fey. Professor, Ph.D., Purdue. Child Language, Hearing & Speech.

Michael Finger. Assistant Professor, Ph.D., Minnesota. Psychology.

Iris Smith Fischer. Associate Professor, Ph.D., Indiana. English.

Kenneth Fischer. Assistant Professor, Ph.D., Stanford. Mechanical Engineering.

James L. Fishback. Associate Professor, M.D., Kansas. Pathology & Laboratory Medicine.


Mark Fischer. Associate Professor, Ph.D., Illinois. Biochemistry & Molecular Biology.

A. Max Fiskin. Professor, Ph.D., Johns Hopkins. Microbiology, Molecular Genetics, & Immunology.

Barry Fitzgerald. Associate Professor, M.F.A., Buffalo. Design.

William G. Fleisner. Professor, Ph.D., California (Berkeley). Mathematics.

Erik Floor. Associate Professor, Ph.D., California (Davis). Molecular Biosciences.


Ivan Fortushniak. Assistant Professor, M.F.A., Univ. of Cincinnati. Art.

Bryan Foster. Associate Professor, Ph.D., Michigan State. Ecology & Evolutionary Biology.


Diane R. Fourny. Associate Professor, Chair, European Studies Program, Ph.D., Stanford. French & Italian.


Sherry Fowler. Associate Professor, Ph.D., Stanford. History of Art.

Stephen Fowler. Professor, Ph.D., Princeton. Applied Behavioral Science, Pharmacology & Toxicology.

Michael Fox. Associate Professor, Interim Chair, Dept. of Health Policy & Management, Sc.D., Johns Hopkins. Health Policy & Management.

Ronald A. Francisco. Professor, Ph.D., Illinois. Political Science.

David W. Frayer. Professor, Ph.D., Michigan. Anthropology.


Bryant C. Freeman. Professor, Ph.D., Yale. French & Italian.

Bruce Frey. Assistant Professor, Ph.D., Kansas. Psychology & Research in Education.

Paul Friedman. Associate Professor, Ph.D., Pennsylvania State. Communication Studies.

Benjamin S. Friessen. Professor, Ph.D., Iowa State. Molecular Biosciences.

Elizabeth Fris. Assistant Professor, Ph.D., Wichita State. Mechanical Engineering.


William Fuerst. Professor, Dean, School of Business, Ph.D., Texas Tech. Business.


Sheryle Gallant. Associate Professor, Ph.D., Connecticut. Psychology.

Fred Galvin. Professor, Ph.D., Minnesota. Mathematics.

Truman Gamblin. Assistant Professor, Ph.D., Vanderbuilt. Molecular Biosciences.

John Gauch. Associate Professor, Ph.D., North Carolina. Electrical Engineering & Computer Science.


Sandra Gauth. Associate Professor, Vice Provost for Faculty Development, Ph.D., Missouri (Columbia). Special Education.

Estela Gavosto. Associate Professor, Ph.D., Washington. Mathematics.

Alicia Gay. Associate Professor, Ph.D., Oklahoma State. Mathematics.

A. Susan Gay. Associate Professor, Ph.D., Oklahoma State. Teaching & Leadership. Mathematics.

Peter A. Gegenheimer. Associate Professor, Ph.D., Washington. Molecular Biosciences.

Anthony C. Genova. Professor, Ph.D., Chicago. Philosophy.

James Gentry. Professor, Ph.D., Missouri. Journalism.

Gunda I. Gerg. University Distinguished Professor, Ph.D., Phillips Univ. Medicinal Chemistry.

Elaine Gerbert. Associate Professor, Ph.D., Yale. East Asian Languages & Cultures.

John W. Gergacz. Professor, J.D., Indiana. Business.

Deborah J. Gerner. Professor, Ph.D., Northwestern. Political Science.

Jane Gibson. Associate Professor, Ph.D., Florida (Gainesville). Anthropology.

Maureen Gillespie. Assistant Professor, Ph.D., New York. French & Italian.

Donna Gintner. Associate Professor, Ph.D., Wisconsin (Madison). Economics.

Douglas Girod. Professor, M.D., California-San Francisco. Hearing & Speech.

Richard S. Givens. Professor, Ph.D., Wisconsin. Chemistry.

Douglas R. Glassmann. Professor, Ph.D., George Peabody. Psychology & Research in Education.


Jennifer Gleason. Assistant Professor, Ph.D., Yale. Ecology & Evolutionary Biology.


Michael Godard. Assistant Professor, Ph.D., Ball State. Health, Sport, & Exercise Sciences.

Stephen Goddard. Professor, Ph.D., Iowa. History of Art.

Alan Godwin. Assistant Professor, Ph.D., Yale. Molecular & Integrative Physiology.

Harold N. Godwin. Professor, Chair, Dept. of Pharmacy Practice, M.S., Ohio State. Pharmacy Practice.


Ellen Reid Gold. Associate Professor, Ph.D., Illinois. Communication Studies.

Robert H. Goldstein. Merrill W. Haas Distinguished Professor, Chair, Dept. of Geology, Ph.D., Wisconsin (Madison). Geology.

Luis Gonzalez. Associate Professor, Ph.D., Michigan. Geology.

Norberto C. Gonzalez. Professor, M.D., Universidad Nacional de La Plata. Molecular & Integrative Physiology.

Manuela Gonzalez-Bueno. Associate Professor, Ph.D., Pennsylvania State. Teaching & Leadership.

Marliu Goodyear. Associate Professor, Vice Provost for Information Services, Ph.D., Colorado. Public Administration.

Michael A. Gordon. Associate Professor, Ph.D., California (San Francisco). Nurse Anesthesia, Pharmacology, Toxicology, & Therapeutics.

Pamela Gordon. Associate Professor, Chair, Dept. of Classics, Ph.D., Bryn Mawr. Classics.


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In its final report, the National Survey of Student Engagement Institute at Indiana University said, “We made a good choice by including KU in the DEEP project (“Documenting Effective Educational Practice”). Many other colleges and universities will benefit from learning about KU’s policies and practices.” For more information, see www.iub.edu/~nsse.

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The University of Kansas
Lawrence Campus

Legend
- Building symbol
- Dormitory symbol
- Reserved for physically impaired
- Bus stop
- Motorcycle parking
- Emergency phone
- Flex deposit box
- Traffic information booth

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Lawrence Area

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