
UNIVERSITY of LOUISVILLE[®]

The Graduate School
105 Houchens Building
University of Louisville
Louisville, KY 40292
Phone: (502) 852-6495
Web: graduate.louisville.edu

Summer 2007 - Spring 2008
Graduate Catalog



Revised May 2007

The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate, bachelor, master, specialist, doctoral, and first-professional degrees (D.M.D., J.D., M.D.). Individuals who wish to contact the Commission on Colleges regarding the accreditation status of the university may write the Commission at 1866 Southern Lane, Decatur, Georgia 30033-4097, or call (404) 679-4500.

The University of Louisville reserves the right to change programs of study, academic policies, academic requirements, fees, schedules of courses, procedures for the confirmation of degrees, or the announced academic calendar without prior notice.

The provisions of this publication do not constitute an express or implied contract between the University and any member of the student body, faculty, or general public.

The University of Louisville is an equal-opportunity institution and does not discriminate against persons because of race, religion, sex, age, handicap, color, citizenship or national origin. Inquiries or complaints about illegal discrimination including

sexual harassment or handicap access can be made to the Affirmative Action director (502-852-6538) if response from the unit staff is unsatisfactory.

The Redbook is the official statement of the organizational structure, the rules of governance and procedures and university wide policies of the University of Louisville. If there is any conflict between the policies, procedures or other statements contained within this catalog, the Redbook shall govern. A copy of The Redbook is available on the university's web page at louisville.edu/provost/redbook/. Official copies are maintained by all University Libraries, the Student Government Association Office, and the student grievance officer. Other policies and information covering students can be found in the Student Handbook.

This publication was prepared by the University of Louisville and printed with state funds.
KRS 57.375.

Table of Contents

General Information 5	
Welcome 5	Master of Arts in History 63
The Graduate School 5	Master of Arts in Humanities 66
Mission Statement for the University of Louisville 6	Doctor of Philosophy in Humanities 68
Structure of the University 6	Master of Science in Administration of Justice 69
Graduate Degree Programs 6	Graduate Certificate in Police Executive Leadership Development 71
Academic Calendar 8	Master of Arts in Mathematics 72
Application to the Graduate School 8	Doctor of Philosophy in Applied and Industrial Mathematics 73
Admissions 11	Master of Arts in Pan-African Studies 76
For the New Graduate Student 12	Graduate Certificate in Pan-African Studies 77
Academic Policies, Procedures and Requirements 12	Master of Science in Physics 78
Academic Standing 14	Doctor of Philosophy in Physics 80
Course and Credit Requirements 14	Master of Arts in Political Science 81
Grades and Grading Policies 16	Doctor of Philosophy in Clinical Psychology 84
Requirements for Graduate Degrees 17	Doctor of Philosophy in Experimental Psychology 85
Application for Degree 20	Master of Public Administration 88
Graduate Student Honors 20	Master of Arts in Sociology 92
Graduate School Academic Grievance Procedure 21	Master of Arts in Spanish 95
University Policies and Procedures 24	Graduate Certificate in Latin American Studies 97
Privacy of Student Records 28	Master of Fine Arts in Theatre Arts 99
Drug-Free Schools and Communities Act Amendments of 1989 29	Graduate Certificate in African American Theatre 100
Americans with Disabilities Act 29	Doctor of Philosophy in Urban and Public Affairs 101
Special Facilities and Services 30	Master of Urban Planning 104
Financial Aid and Financial Settlement 32	Master of Arts in Women's and Gender Studies 106
Residency Policy and Fees 35	Graduate Certificate in Women's and Gender Studies 108
College of Arts and Sciences 43	College of Business 111
Master of Arts in Art (Creative) and Art History 43	Doctor of Philosophy in Entrepreneurship 111
Doctor of Philosophy in Art History 45	School of Dentistry 115
Master of Science in Biology 47	Master of Science in Oral Biology 115
Doctor of Philosophy in Biology 49	College of Education and Human Development 117
Master of Science in Chemistry 51	Master of Arts in Teaching in Art Education 117
Doctor of Philosophy in Chemistry 53	Doctor of Philosophy in Education Counseling and Personnel Services 118
Master of Arts in Communication 55	
Master of Arts in English 57	
Doctor of Philosophy in English Rhetoric and Composition 59	
Master of Arts in French, Language and Literature 61	

Master of Education in Counseling and Personnel Services	120	Master of Education in Secondary Education	152
Doctor of Philosophy in Curriculum and Instruction	123	Rank I Program in Secondary Education	153
Master of Arts in Teaching in Early Elementary Education	125	Master of Education in Special Education	154
RANK I Program in Elementary Education	126	Rank I Program in Special Education . . .	161
Master of Education in Early Elementary Education	127	Master of Science in Sport Administration	162
Master of Education in Educational Administration	128	The Graduate School	163
Specialist in Education in Educational Administration	129	Interdisciplinary Master of Arts in Bioethics and Medical Humanities	163
Doctor of Education in Educational Leadership and Organizational Development	129	Master of Arts in Interdisciplinary Studies	165
Doctor of Philosophy in Educational Leadership and Organizational Development	131	Master of Science in Interdisciplinary Studies	167
Master of Science in Exercise Physiology	132	Doctor of Philosophy in Interdisciplinary Studies	169
Master of Education in Health Education	134	Kent School of Social Work	171
Graduate Certificate in Health Professions Education	135	Master of Science in Social Work	171
Master of Arts in Higher Education	135	Doctor of Philosophy in Social Work . . .	180
Master of Science in Human Resource Education	136	Post Master's Certificate in Marriage and Family Therapy	182
Professional Certificate for Instructional Leadership	137	School of Medicine	185
Master of Arts in Teaching in Interdisciplinary Early Childhood Education	139	Master of Science in Anatomical Science and Neurobiology	185
Master of Education in Instructional Technology	141	Doctor of Philosophy in Anatomical Science and Neurobiology	187
Rank I Program in Middle Grades Education	142	Doctor of Audiology	193
Master of Arts in Teaching in Middle School Education	143	Master of Science in Biochemistry and Molecular Biology	194
Master of Education in Middle School Education	145	Doctor of Philosophy in Biochemistry and Molecular Biology	196
Master of Arts in Teaching in Music Education	146	Master of Science in Communicative Disorders	201
Master of Arts in Teaching in Physical Education	149	Master of Science in Microbiology and Immunology	204
Master of Education in Reading Education	149	Doctor of Philosophy in Microbiology and Immunology	205
Master of Arts in Teaching in Secondary Education	151	Master of Science in Pharmacology and Toxicology	208
		Doctor of Philosophy in Pharmacology and Toxicology	212
		Master of Science in Physiology and Biophysics	218
		Doctor of Philosophy in Physiology and Biophysics	220

Table of Contents

<p>School of Music 225</p> <p> Master of Music in Music Composition . . 225</p> <p> Master of Music Education 227</p> <p> Master of Music in Music History and Literature 230</p> <p> Master of Music in Music Performance . . 232</p> <p> Master of Music in Music Theory 237</p> <p>School of Nursing 241</p> <p> Master of Science in Nursing 241</p> <p> Doctor of Philosophy in Nursing 252</p> <p>School of Public Health and Information Sciences 259</p> <p> Master of Science in Biostatistics-Decision Science. 259</p> <p> Doctor of Philosophy in Biostatistics-Decision Science. 260</p> <p> Master of Science in Clinical Investigation Sciences. 262</p> <p> Graduate Certificate in Clinical Investigation Sciences. 263</p> <p> Master of Science in Epidemiology. . . . 264</p> <p> Doctor of Philosophy in Public Health Sciences. 266</p> <p> Master of Public Health. 279</p> <p>J. B. Speed School of Engineering 285</p> <p> Master of Engineering in Bioengineering 285</p> <p> Master of Engineering in Chemical Engineering 286</p> <p> Master of Science in Chemical Engineering 287</p> <p> Doctor of Philosophy in Chemical Engineering 289</p> <p> Master of Engineering in Civil Engineering 290</p> <p> Master of Science in Civil Engineering . . 291</p> <p> Doctor of Philosophy in Civil Engineering 291</p> <p> Master of Engineering in Computer Engineering Computer Science 292</p> <p> Master of Science in Computer Science. 293</p>	<p> Doctor of Philosophy in Computer Science and Engineering 294</p> <p> Master of Engineering in Electrical Engineering 296</p> <p> Master of Science in Electrical Engineering 297</p> <p> Doctor of Philosophy in Electrical Engineering 298</p> <p> Master of Engineering in Engineering Management 300</p> <p> Graduate Certificate in Environmental Engineering 301</p> <p> Master of Engineering in Industrial Engineering 302</p> <p> Master of Science in Industrial Engineering 303</p> <p> Doctor of Philosophy in Industrial Engineering 304</p> <p> Graduate Certificate in Logistics and Distribution 306</p> <p> Master of Engineering in Mechanical Engineering 307</p> <p> Master of Science in Mechanical Engineering 308</p> <p> Doctor of Philosophy in Mechanical Engineering 308</p> <p> Graduate Certificate in Data Mining . . . 309</p> <p>Institutional Accreditation and Memberships 311</p> <p> Institutional Accreditation 311</p> <p> Professional Accreditation 311</p> <p> Other Accreditation 312</p> <p>University Administration 312</p> <p> Administrative Officers of the University . 312</p> <p> Administrative Officers of the Graduate School 312</p> <p> Deans 312</p> <p> 2006-2007 Graduate Council 313</p> <p>Graduate Faculty 313</p> <p> Emeritus/Emerita Faculty 342</p>
---	--

Table of Contents

General Information

Welcome

Experience the excitement of discovery. Create new knowledge in your field of study. Learn the practical applications of theory from world-class faculty.

At the University of Louisville, we believe a graduate program should change your work...and your life.

Uof L is a metropolitan research university with an attractive main campus in Kentucky's largest city and a Health Sciences Center in the downtown medical complex. Enrollment is more than 20,000, with 6,000 students pursuing graduate degrees.

Louisville is an exciting, vibrant city, centrally located within the United States. With lots of charm and much to see and do, from the cultural arts to sports, it is home to almost one million people from across the U.S. and around the world.

Ronald M. Atlas, Ph.D.

Dean of the Graduate School

The Graduate School

The University of Louisville is an urban institution that has had close historical and legal ties with the city of Louisville and Jefferson County (now Louisville-Jefferson County Metro). Founded in 1798 as Jefferson Seminary, later known as Louisville College, in 1846 it became the University of Louisville with an academic department and a medical school. Also in 1846, a School of Law was added, and a charter was obtained from the Commonwealth of Kentucky. Under that charter the University has functioned ever since. Currently, it includes the following units: College of Arts and Sciences, College of Business, College of Education and Human Development, Graduate School, School of Dentistry, Raymond A. Kent School of Social Work, Louis D. Brandeis School of Law, School of Medicine, School of Music, School of Nursing, School of Public

Health and Information Sciences, and J.B. Speed School of Engineering.

In July of 1970, the University of Louisville officially entered the state university system of the Commonwealth of Kentucky, and thus began a new era of service to community, state, and nation. Through the Graduate School, the University assumes its responsibility not only to teach but to contribute to the sum of knowledge. It encourages investigation, promotes research, and endeavors to organize the store of human knowledge to serve the needs of present-day life. By fostering the spirit of inquiry and research in the members of its faculties, it not only strengthens undergraduate instruction but also advances knowledge. Through its graduate courses, it furnishes advanced preparation for those who are planning to become investigators or teachers in the social sciences, humanities, and natural sciences. Because of its location in a major metropolitan area, the Graduate School is very much aware of both the research opportunities and the obligations in teaching and public service that such a location presents.

The Graduate School of the University of Louisville was formally established in 1915, with advanced degrees awarded as early as 1908. Other advanced courses were offered by the Schools of Medicine and Law as early as 1856. It is a member of the Council of Graduate Schools.

The legislative functions of the Graduate School are vested in the Graduate Council which consists of elected representatives of the Graduate Faculty. The Council is responsible for establishing policies relating to graduate education and for maintaining a standard of excellence for graduate work within the University. The Dean of the Graduate School serves as chair of this body and of the Graduate Faculty.

The dean and the dean's staff are responsible for the administration of the rules and regulations of the Graduate School and are expected to maintain and safeguard the standards and policies of the school as outlined by the Graduate Faculty and the Graduate Council.

Graduate students participate in the operation and decision-making process of the Graduate School through the Graduate Student Union (to which all Graduate School students belong) and its executive committee, the Graduate Student Council, which consists of one elected representative from each duly constituted graduate stu-

dent organization. A representative of the Graduate Student Council is a voting member of the Graduate Council. Students are actively sought as members of many of the standing committees of the Graduate School, and they are urged to participate and become involved in the administration of the Graduate School through these channels.

Mission Statement for the University of Louisville

The University of Louisville shall be a premier, nationally recognized metropolitan research university with a commitment to the liberal arts and sciences and to the intellectual, cultural, and economic development of our diverse communities and citizens through the pursuit of excellence in five interrelated strategic areas: (1) Educational Experience, (2) Research, Creative, and Scholarly Activity, (3) Accessibility, Diversity, Equity, and Communication, (4) Partnerships and Collaborations, and (5) Institutional Effectiveness of Programs and Services.

Source: The University of Louisville Board of Trustees, April 18, 2006.

Structure of the University

In accordance with the statutory authority of the Commonwealth of Kentucky, the Board of Trustees of the University of Louisville shall exercise final jurisdiction over the University. It shall select the President of the University; and upon recommendation of the President, it shall make all appointments of individuals in administrative capacities who serve at the pleasure of the Board. The Board of Trustees shall adopt a budget annually for the ensuing year and grant all degrees conferred by the University.

Graduate Degree Programs

At the present time the following programs for advanced degrees are available:

Doctor of Audiology – Au.D.

Doctor of Education - Ed.D.

Education Leadership and Organizational Development

Doctor of Philosophy – Ph.D.

Anatomical Science and Neurobiology
Applied and Industrial Mathematics

Art History
Biochemistry and Molecular Biology
Biology
Biostatistics: Decision Science
Chemical Engineering
Chemistry
Civil Engineering
Clinical Psychology
Computer Science and Engineering
Counseling and Personnel Services
Curriculum and Instruction
Educational Leadership and Organizational Development
Electrical Engineering
English Rhetoric and Composition
Entrepreneurship
Experimental Psychology
Humanities
Industrial Engineering
Interdisciplinary Studies
Mechanical Engineering
Microbiology and Immunology
Nursing
Pharmacology and Toxicology
Physics (Joint Program with UK)
Physiology and Biophysics
Public Health Sciences
Social Work
Urban and Public Affairs

Master of Arts – M.A.

Art (Creative) and Art History
Clinical Psychology
Communication
English
French Language and Literature
Higher Education Administration
History
Humanities
Interdisciplinary Studies
Mathematics
Pan-African Studies
Political Science
Sociology
Spanish
Women's and Gender Studies

Master of Arts in Teaching – M.A.T.

Art Education
Early Childhood Education
Early Elementary Education
Middle School Education
Music Education
Physical Education
Secondary Education

Master of Education – M.Ed.
 Counseling and Personnel Services
 Early Elementary Education
 Educational Administration
 Health Education
 Health Professions Education
 Instructional Technology
 Middle School Education
 Reading Education
 Secondary Education
 Special Education

Master of Fine Arts – M.F.A.
 Theatre Arts

Master of Music – M.M.
 Music Composition
 Music History and Literature
 Music Performance
 Music Theory

Master of Music Education – M.M.Ed.

Master of Public Administration – M.P.A.

Master of Public Health – M.P.H.

Master of Science – M.S.
 Administration of Justice
 Anatomical Science and Neurobiology
 Biochemistry and Molecular Biology
 Biology
 Biostatistics: Decision Science
 Chemical Engineering
 Chemistry
 Civil Engineering
 Communicative Disorders
 Computer Science
 Electrical Engineering
 Epidemiology
 Exercise Physiology
 Experimental Psychology
 Human Resource Education
 Industrial Engineering
 Interdisciplinary Studies
 Mechanical Engineering
 Microbiology and Immunology
 Oral Biology
 Pharmacology and Toxicology
 Physics
 Physiology and Biophysics
 Sport Administration

Master of Science in Clinical Investigation Sciences – M.Sc.

Master of Science in Nursing – M.S.N.

Master of Science in Social Work – M.S.S.W.

Master of Urban Planning – M.U.P.

Specialist in Education – Ed.S.
 Educational Administration – Instructional Leadership

Professional Degrees

Doctor of Dental Medicine - D.M.D.
 offered through the School of Dentistry

Doctor of Medicine - M.D.
 offered through the School of Medicine

Juris Doctor - J.D.
 offered through the Brandeis School of Law

Master of Accountancy – M.Ac.
 offered through the College of Business

Master of Business Administration – M.B.A.
 offered through the College of Business

Master of Engineering – M.Eng.
 Bioengineering
 Chemical Engineering
 Civil Engineering
 Computer Engineering Computer Science
 Electrical Engineering
 Engineering Management
 Industrial Engineering
 Mechanical Engineering

offered through the J.B. Speed School of Engineering

Cooperative Ph.D. Program

The University of Louisville participates in a cooperative Ph.D. program in education administration with Western Kentucky University. To enroll in this program, a student must be admitted to both institutions. Those who complete the program will receive a diploma that states the degree is awarded by the University of Louisville in cooperation with Western Kentucky University.

Dual Degrees

- Combined Doctor of Medicine and Master of Business Administration (M.D./M.B.A.)
- Combined Doctor of Philosophy and Doctor of Medicine (M.D./Ph.D.)

- Combined Doctor of Philosophy in Applied and Industrial Mathematics and Master of Science in Biostatistics-Decision Science
- Combined Juris Doctor and Master of Arts in Humanities (J.D./M.A.)
- Combined Juris Doctor and Master of Arts in Political Science (J.D./M.A.)
- Combined Master of Arts in Pan-African Studies and Master of Science in Social Work (M.A./M.S.S.W.)
- Combined Master of Arts in Women's and Gender Studies and Master of Science in Social Work (M.A./M.S.S.W.)
- Combined Master of Business Administration and Juris Doctor (M.B.A./J.D.)
- Combined Master of Business Administration and Master of Engineering (M.B.A./M.Eng.)
- Combined Master of Business Administration and Master of Accountancy (M.B.A./M.A.C.)
- Combined Master of Public Administration and Master of Urban Planning (M.P.A./M.U.P.)
- Combined Master of Science and Doctor of Dental Medicine (M.S./D.M.D.)
- Combined Master of Science and Doctor of Medicine (M.S./M.D.)
- Combined Master of Science in Social Work and Juris Doctor (M.S.S.W./J.D.)

Graduate Certificates

- African American Theatre
- Clinical Investigative Sciences
- Data Mining
- Environmental Engineering
- Health Professions Education
- Latin American Studies
- Logistics and Distribution
- Marriage and Family Therapy - Post Master's
- Pan-African Studies
- Police Executive Leadership Development
- Women's and Gender Studies

Interdisciplinary Degrees

It is possible to establish interdisciplinary programs for individual students in the areas not represented by the traditional disciplines at the masters and doctorate level.

- Interdisciplinary Studies - M.A.
 - Bioethics and Medical Humanities
- Interdisciplinary Studies - M.S.
- Interdisciplinary Studies - Ph.D.

Academic Calendar

Links to the academic calendars for the various schools within the University of Louisville are linked below. In most cases, the graduate and undergraduate academic calendars are the same. If you have any questions about which calendar a school is using, contact that school directly.

School of Dentistry: louisville.edu/calendars/academic/dmd.html

School of Law: louisville.edu/calendars/academic/jd.html

School of Medicine: louisville.edu/calendars/academic/md.html

All other graduate programs (follow the undergraduate calendar): louisville.edu/calendars/academic/undergrad-grad.html

Application to the Graduate School

It is the applicant's responsibility to consult the appropriate department, school or program for application deadlines and specific program requirements. The university reserves the right to change programs of study, academic requirements, tuition and fees, schedule of courses, the announced academic calendar and deadlines without prior notice.

Requirements for All Applicants (see below for details):

- Application
- Application fee
- Transcript(s)
- Letters of recommendation
- GRE/GMAT Test Scores

Additional Requirements for Some Applicants:

- PRAXIS II Speciality Exam
- Personal Statement
- TOEFL Examination
- Test of Spoken English

Application for Admission

Apply online at graduate.louisville.edu/apply

A paper application is available at the Graduate School (to request an application be mailed, call the Graduate School at 502-852-3101).

Paper applications and each of the credentials listed below should be sent to the Office of Graduate School Admissions, University of Louisville, Louisville, KY 40292 at least six weeks prior to the beginning of the semester or summer session in which the student wishes to enroll; otherwise the application may not be reviewed in time for registration. Six weeks is a general deadline. Any program may have a different deadline and may require additional credentials or higher standards than those described in this General Information Section. Applicants should consult the pertinent departmental section of this bulletin or check directly with the department office.

The application and supporting documents become the property of the University of Louisville and will not be returned to the applicant or forwarded to another university.

If you do not enroll, your academic credentials will be retained in the Graduate School for two years.

Application Fee

A \$50.00 (US currency) non-refundable application processing fee is required. When applying online, the fee may be paid with a credit card or electronic check to College Net (details are provided online at the time of application).

If a paper application is submitted, payment must be made via check, money order or credit card. Checks should be made payable to the University of Louisville for the paper application only - be sure to include applicant's full name and birth date on the check.

Exceptions: Applicants who were accepted and enrolled in the University of Louisville Graduate School previously, and who have not attended another college or university since enrollment at UofL, do not have to pay the fee again. Students on any type of public assistance or who have a disability, may be exempt from the fee with supporting documentation.

Applications are processed when the application fee is received.

Transcripts

Official transcripts showing all degrees awarded and all undergraduate and all graduate work

completed at all colleges/universities previously attended must be furnished by all degree-seeking applicants. The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution.

All transcripts that are not in English must be translated verbatim into English and must be notarized. International applicants may be required to have transcripts evaluated by a credential evaluation service:

- World Education Services: www.wes.org
- Educational Credential Evaluators: www.ece.org/

Unofficial or faxed copies of transcripts will not be accepted.

Test Scores

The Graduate Record Exam (GRE) General Test is required for most programs. Test registration and information about the exam can be found at www.gre.org. The applicant must instruct the Educational Testing Service to forward the results to the Office of Graduate School Admissions, Belknap Campus, University of Louisville, Louisville, Kentucky, 40292. University of Louisville institution code for score-reporting is 1838.

The Subject Test Section may be required at the discretion of a department, and the applicant should consult the pertinent departmental section of this catalog.

The Kent School of Social Work does not require the GRE for the Master of Science in Social Work degree, unless the undergraduate grade point average is below a 2.75. Applicants to the Doctoral Program in the Kent School of Social Work must provide GRE scores.

Students may substitute the Medical College Admissions Test for the Graduate Record Examination with the approval of the department chair or graduate program advisor.

Graduate Management Admissions Test (GMAT) is required for all applicants to the College of Business degree programs. Test registration and information about the exam can be found at www.gmac.com.

Applicants, who have completed a terminal degree, may be exempt from submitting GRE or GMAT test scores pending departmental approval.

The PRAXIS II Speciality Exam is the certification exam students must pass in their subject matter to be certified to teach in Kentucky and

will be required of all applicants applying to teacher certification programs. Information about the required PRAXIS II Speciality Exam Principles of Learning and Teaching (PLT) test and passing scores for the PRAXIS specialty exams in each certification area can be found at: kyepsb.net/TestingResearch/beg_tch_exams.html.

The College of Education and Human Development (CEHD) offers free classes to help teacher candidates prepare for the PRAXIS II Speciality Exam and the CEHD Dean's Office has copies of the PRAXIS Registration Bulletin.

PRAXIS toll free number: 1-800-334-8635.

Letters of Recommendation

A minimum of two letters of recommendation are required; however some departments require three (it is advisable to discuss admissions requirements with department representatives). It is recommended that the letters be written by someone who can speak to the applicant's academic and/or professional capabilities. Letters of recommendation may be sent via College Net (online application service), to gradadm@gwise.louisville.edu or by regular mail.

Personal Statement

Some programs require a personal statement, addressing specific issues pertaining to knowledge, work experiences, and/or interests in the chosen field of study. It is advisable to discuss admissions requirements with department representatives.

International Students

Students from foreign countries must meet three criteria before they can be granted admission: (1) they must meet the regular admissions standards as applied to all successful applicants, (2) if English is not the student's primary language they must show proficiency in English by scoring 210 or higher on the computer-based TOEFL examination or successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, and (3) approval from the University of Louisville International Center by presenting evidence of financial resources adequate to support their educational and living expenses in the United States for the duration of their studies. The award of a University Fellowship or Graduate Assistantship is considered evidence of adequate financial resources.

The Test of English as a Foreign Language (TOEFL) is required of all foreign students from countries in which English is not the native language. Applicants holding a baccalaureate or advanced degree from an accredited college or university in the United States are exempt from the TOEFL requirement.

Information about the times and places for the examination may be obtained from the Educational Testing Service, TOEFL, Princeton, New Jersey 08540 (www.TOEFL.org), University of Louisville Testing Services (www.louisville.edu/student/services/testing/).

Graduate programs may require higher TOEFL scores than the Graduate School minimum. Applicants who have not scored 210 or more on the computer-based TOEFL Examination may choose to apply to the Intensive English as a Second Language Program. Successful completion of the Advanced Level of this program will be considered adequate proof of the English proficiency required for course work in the chosen graduate program. Acceptance to the Intensive English Program does not constitute acceptance to the Graduate School. For information and application forms, write to: IESL, University of Louisville, Louisville, Kentucky 40292, U.S.A. www.louisville.edu/a-s/iesl/.

Students whose native language is not an American or British dialect of English may not be awarded teaching assistantships unless they present an acceptable score on the Test of Spoken English (TSE) or a locally administered teaching competency demonstration. Applications and information about the times and places for the TSE may be obtained from www.ets.org, TSE, Princeton, NJ, 08540. The teaching competency demonstration is administered by the Intensive English as a Second Language program www.louisville.edu/a-s/iesl/.

The International Center is your primary liaison with the Department of Homeland Security and the Department of State. International Center staff members are well informed about general immigration regulations and can advise you on proper compliance with DHS procedures. Make an appointment with the International Student Advisors to discuss specific questions or concerns. It is important that you do not rely on the advice of friends regarding immigration matters. Please refer to the International Center web page at: www.louisville.edu/provost/intcent/.

Admissions

Upon evaluation of the application and credentials, the department in which the applicant wishes to enroll forwards a recommendation concerning admission to the Graduate School. A recommendation for admission will specify the admission status and any conditions of admission. The official admission letter will come from the Graduate School.

Degree status

In order for a student to be recommended unconditionally for admission to degree status, all admission credentials must have been received and evaluated. The applicant must have earned a grade-point average of at least 2.75 on a 4-point scale in either his/her complete undergraduate program or the senior-college years. Each student in this classification is a prospective candidate for an advanced degree and is expected to pursue a program leading to the master's degree, specialist's degree, or doctoral degree. Each applicant should consult the departmental sections of this catalog to determine any additional admissions criteria or any more restrictive requirements for admission to this status.

Degree status - provisional

This status is intended for students who have furnished their application and baccalaureate transcript but whose remaining application materials are incomplete. Students in provisional status must also meet the general academic requirements of their program. Students may not enroll for a second consecutive term in provisional status. Not all departments allow admission on a provisional basis.

Degree status - special conditions

This status is intended for students who have furnished all application materials, but whose academic background is slightly below the minimum for their program. Students admitted in this status will be expected to meet certain criteria within a specific time-frame outlined by the admitting department.

Degree status - provisional/special conditions

An applicant who has both missing credential(s) and academic criteria below the minimum may be admitted in this status, pending program approval. Students in this status will be expected to meet certain criteria within a specific time-frame outlined by their program.

A student has one semester to furnish any missing admission credentials and clear any conditions made at the time of admission. Failure to complete the admission process within a semester may result in refusal of permission to register in the next semester.

A student admitted with an undergraduate grade point standing of less than 2.75 may be subject to departmental limitations on the number of hours in which he/she may enroll for each semester. Graduate credits earned prior to achieving good academic standing are not automatically applicable to the degree program.

Probation

Any student admitted with a point standing below 2.75 will be considered "on probation." Students who fail to attain the required 3.0 GPA or other higher GPA required by their program in the first term of enrollment following admission, or who do not meet any other departmental requirements outlined in the admission letter, may be subject to academic dismissal from their program.

No applicant with a grade-point average of less than 2.50 will be admitted to graduate study. Under unusual circumstances, exceptions to this policy may be made upon specific recommendation and documented justification for admission by the department chairman or graduate program advisor. Such justification must be provided in writing to the Graduate Dean, who must approve or disapprove the recommendation.

Non-degree status

Pending program approval, applicants who do not desire to seek an advanced degree may be permitted to enroll under non-degree status. Application credentials must include the application form, \$50.00 application fee and an official undergraduate transcript showing the award of a baccalaureate degree. Please note that not all programs will admit under non-degree status, thus it is advisable that applicants contact check with the specific department they wish to apply to if wanting to be admitted in non-degree status. Six hours of course work taken in a non-degree status may be applied to a graduate degree program with departmental approval.

Students may accumulate a maximum of fifteen hours while in non-degree status. Exceptions to this policy are the RANK I and II programs in the College of Education and Human Development,

the Nurse Practitioner program in the School of Nursing, and certificate programs.

Auditors

Auditing at the graduate level is available only to persons who are enrolled in at least one course for credit, unless permission is granted by the department and Graduate Dean. The fee for auditing a course is equal to the tuition for enrolling in the class for credit.

The Graduate School does not require that auditors take examinations, submit papers, or take part in any evaluative activity. However, the instructor, at his or her discretion, may demand or deny the auditor's participation in class to whatever extent is deemed desirable. A "W" (withdrawn) shall appear on the transcript unless a student attends at least 75% of the classes.

Students wishing to audit courses must obtain permission in writing from the course instructor and program director. A graduate student may not satisfy a stated prerequisite for a graduate course or stated degree requirement through auditing a class.

Visiting Students

A graduate student from another university or college may enroll for graduate course work as a visiting student at the University of Louisville pending program approval. The visiting student is responsible for having the home institution provide a letter certifying that the student is in good standing as well as approving the transfer of credits from the University of Louisville to the home institution at the end of the semester. A graduate application is required and transcripts may also be required by some departments.

University of Louisville graduate students who attend another Graduate School as a visiting student must have the permission of their department chair or advisor before the courses are taken in order to transfer credits earned. Visiting student status may be granted only to a student who is in good standing.

For the New Graduate Student

Overview

The University of Louisville operates on a semester system that includes a Fall Semester, Spring Semester, and Summer semester with multiple terms. The University has a computer-

ized admissions and registration system. Students are advised to include their full name and date of birth on all correspondence with the University to facilitate the identification of admission credentials and requests for information. Students who do not enroll for the semester for which they apply may be required to reapply and resubmit credentials. The University holds credentials on applicants for a limited time.

Student Responsibility

It is the responsibility of the graduate student to become familiar with and observe all policies and requirements of the Graduate School and of his or her particular degree program and department. Policies, procedures, and requirements are subject to change, and it is the responsibility of the graduate student to keep her/himself apprised of current regulations. All students must respond to official notices issued by administrative offices and instructors, whether these notices be posted on official bulletin boards, are sent through postal, or e-mail. A student's status is not dependent upon a written notification but is a consequence of circumstances in the admission process and the student's academic performance. Written notification is simply a verification of status.

Graduate Credit

Courses listed in this catalog are offered for graduate credit. To receive graduate credit, a student must register for the course through the Graduate School or through another graduate-level program, such as the Master of Engineering. Students who take these courses as post-baccalaureate registrants do not receive graduate credit.

Prerequisites

Prerequisites for all courses include graduate status and the consent of the graduate advisor (for registration). Specific course prerequisites are indicated in the course listing at htmlaccess.louisville.edu/crseCatalog/searchCrseCatalog.cfm.

Academic Policies, Procedures and Requirements

The general policies, procedures and requirements for advanced degrees are stated below; however, each advanced degree has requirements, specific to that degree. These specific requirements are detailed in the program

descriptions that follow this section. These requirements must be consulted, so that the graduate student may be fully apprised of the conditions he/she must meet in order to receive an advanced degree.

The policies and regulations described in this catalog cannot be superseded or invalidated by either oral or written agreement with faculty, staff, or administrators, unless such agreement is confirmed in writing by the Dean of the Graduate School.

Registration

The University of Louisville uses a touch-tone and an on-line web registration system. The schedule of courses for each term may be reviewed at htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm. A limited number of paper copies of the schedule may be available through the Registrar's Office, Dean's Offices, or Campus Bookstore. Students must first contact their department advisor to discuss course selections. The service indicator is changed within the department. If a student is in good standing and admitted UNCONDITIONALLY, he/she may proceed with the registration process. If, however, a student still has conditions on his/her admission, he/she must contact their department for further instructions. If a student is on academic probation, he/she must contact the Graduate Dean's office for further instructions. A student must participate in touch-tone or on-line web registration. No in-person registration is permitted. A student may add courses through the touch-tone or on-line system through the first day of classes. One may also drop or withdraw from courses by touch-tone or on-line (for more information consult: www.louisville.edu/student/services/registrar)

Full-and Part-Time Study

Full-time study is defined as being nine (9) hours of credit during a regular semester, six (6) hours during the summer term, or in degree candidacy status.

Full-Time Study for University Fellows and Graduate Assistants

All University Fellows and Graduate Assistants must be enrolled as full time students during the period for which they are receiving financial support.

Course Loads

Unless a department or program requires a larger number of hours for all full-time students, the maximum number of hours that may be taken in a regular semester is 12; or 15 hours if 3 or more hours are research credit. The maximum number of hours that may be taken in the summer session (both terms) is 12, including research hours.

Overloads

Any student who wishes to enroll in more than the maximum number of hours must obtain the permission of the Dean of the Graduate School. Permission to enroll for excess hours is rarely granted.

Continuous enrollment

Continuous enrollment is defined as being registered in both fall and spring if registering for coursework. If a student has been admitted to either masters or doctoral degree candidacy, continuous registration is defined as fall, spring and summer terms (only one term of registration is required in summer terms).

Satisfactory Progress

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who fail to enroll for a period of more than 12 months will be considered to have withdrawn from the program. Students who seek to return after such a period of time are required to apply to their departments for readmission. Based on the request of the department, the Dean of the Graduate School will consider the student for readmission. Prior to reapplying, students should speak with their department. Students may submit a re-enrollment form to the Office of the Registrar if it has been less than two years since their last enrollment.

Satisfactory progress also involves maintaining the standards of academic and professional integrity expected in a particular discipline or program and, in some disciplines, may include demonstration of the ability to function as a professional practitioner. Failure to maintain these standards or demonstrate such abilities may result in termination of the student's admission to the program.

Degree Candidacy

Degree Candidacy is intended to meet the enrollment need of students who have completed all

formal course work and thesis/dissertation hours but who are continuing to perform research for the Masters or Doctorate degree or complete course requirements in other required coursework. It is the responsibility of the student and his/her mentor to maintain contact throughout the program of study to ensure continuous progress towards the timely completion of the degree.

Doctoral students may not enroll in Degree Candidacy until successful completion of the qualifying exam in addition to completion of the required course work in their program of study.

Although a student must complete all required courses before entering Degree Candidacy, students have the option of taking additional specialized courses, e.g. courses offered by visiting or new faculty, while in Degree Candidacy (in those cases payment of both the candidacy fee and the course tuition will be required).

When necessary, a student may enroll in Degree Candidacy in order to meet the requirement that all students must be enrolled in the Graduate School during the semester in which he/she wishes to graduate.

Enrollment in Degree Candidacy requires the approval of the Graduate School. Once a student is admitted to candidacy, enrollment in Degree Candidacy status must be continuously maintained year round (i.e. Fall, Spring, and Summer) until the degree is awarded. The only exception to this policy of continuous enrollment is if the Graduate Dean has granted the student a formal leave of absence.

Once a student enrolls in Degree Candidacy, the Registrar will automatically enroll the student in Degree Candidacy until the student applies to graduate. Failure to pay the candidacy fee will be cause to cancel a student's Degree Candidacy. In order to restore Degree Candidacy, the student must receive approval of his/her department Chair and that of the Graduate Dean. To re-establish Degree Candidacy, the student will be required to pay the candidacy fee for each semester during which candidacy was voided and/or not maintained.

Academic Standing

Good Standing

A graduate student is in good standing when his/her graduate grade point average is 3.0 or higher. Graduate grade point average includes

all coursework listed on a graduate transcript, whether the courses are undergraduate or graduate-level. A student must be in good standing in order to receive their degree.

Academic Probation

A student who has a graduate GPA which falls below a minimum level of academic quality (3.0 on a 4-point scale) will be placed on academic probation until the student regains a 3.0 average or is dismissed. Students are ordinarily not permitted to continue on academic probation for more than one semester. Upon request of the student's academic department, the Graduate Dean may approve continuation beyond a single semester.

Plagiarism and Cheating

It is expected that a student in the Graduate School will refrain from plagiarism and cheating. Plagiarism and cheating are serious breaches of academic conduct and may result in permanent dismissal. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty.

Extension of Time

The Graduate School has policies on time limitations for both Master's (six (6) years) and Doctoral (four (4) years after Qualifying Exam) students. Requests for extension of time must be submitted in writing to the Chair or Graduate Coordinator of the student's department. Once reviewed by the department, the request is forwarded to the Graduate Dean with supporting documentation for his review. While extensions of time are rare, each request is reviewed thoroughly with an appropriate outcome communicated to all interested parties. Students must be considered in good standing for the request to be considered.

Course and Credit Requirements

Transfer of Credit

Earned graduate credit may be transferred from accredited institutions that offer advanced degrees. The maximum number of semester hours transferable, upon request, is six. Up to six additional hours may be requested, in a master's

program, provided that these additional hours are not credit earned by extension, thesis or practicum and provided also that the residency requirement of 24 semester hours is maintained by the addition of University of Louisville credits to the total program.

In unusual circumstances, a lesser residency credit requirement may be considered by the Graduate Council. Requests for such exceptions must be supported by the major department and the program advisor. In no case will a master's degree be awarded to a candidate who has completed fewer than 18 semester hours at the University of Louisville. Final approval rests with the Graduate Council.

Credit earned more than six years prior to the student's application to the Graduate School of the University of Louisville will not normally be considered for transfer; however, the Graduate Council and the Dean may make an exception upon the recommendation of the student's department.

The course work being considered for transfer must have been taken while the student was enrolled in an accredited graduate or professional school and must be evaluated for transfer by the head of the department in which the student is seeking additional graduate work. Six hours may be transferred from previously earned master's degrees toward a second master's degree, subject to the approval of the second degree program and the Dean of the Graduate School. Hours earned toward a culminating experience such as a thesis, practicum, or internship shall not be transferable to the second master's degree. Only courses in which the student earned grades of "B" or better will be considered for transfer. Hours and quality points earned at other institutions are not included in the calculation of a student's GPA.

Courses in which grades of "P" were earned must have the approval of the Graduate Dean in order to be transferred. In case of questions regarding the transferability of course work, the Graduate Council is empowered to decide.

Courses requested to be transferred that have been taken on the quarter system are equivalent to two-thirds the credit hours at the University of Louisville.

Transfers of credit from constituent schools and colleges of the University of Louisville are not subject to the above limitations on transfers but

require the recommendation of the student's department and the approval of the Dean of the Graduate School.

Course Numbering System

Courses with numbers from 500 to 599 may be open to both advanced undergraduate and graduate students and can be taken by graduate students for graduate credit. Those numbered 600 and above are primarily for graduate students.

Graduate students who wish to receive graduate credit for 500-level courses must demonstrate a level of mastery of the course material substantially above that required for undergraduate credit. This mastery must be verified in writing by the instructor if graduate credit is requested after course is completed.

Demonstration of an appropriate degree of mastery may include term papers, independent study, comprehensive examinations, or other more stringent requirements than those applied for undergraduate credit. The nature of the differences between the requirements for graduate credit and those for undergraduate credit must be described in course syllabi.

Only those 500-level courses that appear in this catalog are available for Graduate School credit. The student is advised to consult his/her department for information on any particular 500-level course.

Undergraduates Taking Graduate Courses

Undergraduate students with special permission of their undergraduate dean, the Dean of the Graduate School, and the instructors in the courses involved may register in graduate courses, including those at the 600 level. It is understood that such courses will replace courses in the normal undergraduate curriculum and therefore cannot be used for subsequent graduate credit. The student should be registered for at least one undergraduate course if requesting to enroll in a graduate course.

Undergraduate students at the University of Louisville who are within six semester hours of completing the baccalaureate requirements may register in graduate courses, including those at the 600 level, with the permission of the undergraduate dean, the Dean of the Graduate School, and the instructors involved. Subsequent graduate credit can be obtained only if these courses have not been used to satisfy part of the baccalaureate requirements, and if the recommendation of the chairman of the department

involved and the approval of the graduate dean are obtained. Exceptions are those students enrolled in an accelerated Bachelor/Master's program in the College of Arts and Sciences.

Grades and Grading Policies

University Grade Point Average (GPA)

The GPA appearing on the University transcript at the end of each semester of enrollment will be the official GPA for determining Graduate School academic standing. The GPA will be based upon all courses taken at the undergraduate and graduate level. Courses taken at the 500-level and above will be counted as graduate courses. The University transcript may only include up to a maximum of 6 credit hours in undergraduate course work. Any undergraduate courses beyond this 6 credit hour limit must be taken pass/fail. While possibly including undergraduate coursework, this transcript will determine the overall Graduate GPA. The post-admission advising office with the Graduate School will monitor this Graduate GPA.

Grading System

The Graduate School utilizes a plus/minus grading system. It is at the discretion of the instructor to determine the use of plus/minus grading.

The following is the grading scale:

Grades	Quality Points		Grade	Quality Points
A+	4.0		C	2.0
A	4.0		C-	1.7
A-	3.7		D+	1.3
B+	3.3		D	1.0
B	3.0		D-	0.7
B-	2.7		F	0.0
C+	2.3			

C Grades

The student's academic department may approve six hours of coursework in which a grade of "C+, C, or C-" was received to count toward the completion of degree requirements. Approval of the Graduate Dean must be secured

in order to count additional hours with any grade of C in any course that is part of the degree program.

In no case may more than nine hours of "C" be used to fulfill graduate degree requirements. Some programs may not permit any courses in which a grade of C+, C, or C- has been earned to be used in fulfillment of degree requirements. Although grades below C- will be calculated in the graduate student's grade point average, courses in which these grades have been earned will not be counted towards the fulfillment of degree requirements.

Other Grades

"W" - means Withdrew and carries no quality points. No student may withdraw from any course after the published drop date. In exceptional cases, the dean may grant a student's request to withdraw from courses because of illness or conditions beyond the student's control. Poor performance is not a valid reason to grant an exception.

"I" - means Work in Course Incomplete. If the work is not completed by the end of the next term, regardless of whether the student is enrolled, the "I" automatically becomes an "F".

"X" - means course work has not been finished because of the nature of the research or study involved, e.g., thesis work. This grade is reserved for courses that by their nature extend beyond one semester. This grade may not be used for coursework that is confined to a semester but not completed by the student. During the time an "X" grade is carried on the transcript, continuous enrollment is not required.

Graduate students enroll in courses on a term basis. Graduate courses may not be extended beyond the enrollment term, except as noted for open-ended courses eligible for the "X" or deferred grade. An "I" grade does not extend the course, but rather extends the time a student has for completion of work assigned in the course. The "I" must be removed within one semester and the new grade assigned for the term in which the student was originally enrolled or the "I" is changed to an "F".

Pass/Fail Grading Option

Each department has the discretion of extending a Pass/Fail option to any or all of its graduate students and graduate courses.

Because the advisability of such an arrangement varies from department to department, each department, subject to approval of the Graduate Council, works out the arrangement that is most suitable. The student is referred to his/her departmental chair for details.

When using the Pass/Fail option for graduate students enrolled in graduate courses, A+ through C will be passing grades and C- through F will be failing grades.

Changes of Grades

No changes of grades can be made without a request and explanation on the part of the faculty member giving the grade and the approval of the Dean of the Graduate School.

Missing Grades

All missing grades will be changed to failing grades one year after the completion of the semester in which the course was taken.

Repetition of Courses

A student who has received the grade of "C" (in a course that is a degree requirement), "D" or "F" may repeat that course upon the approval of the graduate program advisor and the graduate dean. When a student repeats a course, the grade point average will be calculated on the basis of the last grade earned, although all previous grades will remain on the transcript.

Requirements for Graduate Degrees

Requirements for the Doctor of Philosophy Degree

In addition to the particular rules of the various departments as stated in their sections of this catalog, the following general rules apply to all Doctor of Philosophy programs.

The award of a Doctor of Philosophy degree indicates that a student has attained mastery of a field and has demonstrated the capacity to perform independent scholarly research and to appreciate the importance of that research within the broad context of his or her discipline. Accordingly, no specific minimum number of credit hours has been established for Ph.D. programs. However, it has been customary to consider the equivalent of three years of full-time graduate study as minimal.

Application for the Doctorate

To become an applicant for the doctorate, the student must be admitted to the Graduate School (see previous sections on Admission to the Graduate School and Admission Statuses) and be accepted by the department of specialization. Only students with exceptional scholarship and originality are accepted for work towards the degree of Doctor of Philosophy, and departments are expected to have more restrictive criteria for admission to this program than those for admission to a master's degree program.

The degree is not awarded solely upon completion of a curriculum of prescribed courses, even though the student has done superior work in them; rather, it is awarded in recognition of creative scholarship as demonstrated by a substantial contribution in the candidate's chosen field. Only students who offer promise of meeting this high standard will be accepted by a department to begin work toward this degree. The prospective student should consult in person with the department in which he/she wishes to major.

Program of Study

Each applicant for the doctorate is expected to take such courses as may be required for the advancement of scholarship in general and for training in his/her field of specialization. The major professor shall design a program of study to fit the needs of the individual student subject to approval by the department's graduate program committee and/or department chair. This program may be modified at any time upon the recommendation of the major professor and approval of the department head and the graduate dean. The program will consist of a major field and such minor fields as the major professor and the department head may agree upon.

All courses offered by the University, at any level and in any school, shall be accessible to the doctoral student, subject to approval by the instructors. The student is expected to receive high marks in these courses; grades lower than "B" will usually be regarded as evidence of poor scholarship and may bar the student from admission to candidacy.

Residency

In order that the student may be assured of an opportunity to utilize the educational facilities properly and to participate in the intellectual life and research atmosphere of the University, at least two years of study must be spent at the

University of Louisville and at least one must be spent in full-time residency.

To be considered in full-time residency for one year, a student must be registered for a minimum of 18 credit hours in a twelve month period.

Foreign Language Requirement

Foreign language proficiency is no longer a general requirement of the Graduate School. However, certain departments may have established such requirements, which will be specified in their sections of this Catalog.

Qualifying Examination and Candidacy

The applicant for a Doctor of Philosophy degree must pass a qualifying examination, oral or written, or both. Its purpose is to verify that the student has sufficient understanding of and competence in his/her field to become a candidate for the degree. This examination may be referred to by some departments as the preliminary, comprehensive, or candidacy examination.

To be eligible for this examination, the student must have satisfactorily completed the major portion of the prescribed course work and must have met the foreign language requirement, according to departmental policy. It is the student's responsibility to be aware of departmental policy on the consequences of failure of all or part of the examination. A student who fails the examination may not be allowed to retake it more than once.

A doctoral degree student must have been admitted to candidacy not later than the end of the ninth month prior to the awarding of the degree, that is:

- August graduation-November 30 of preceding year
- December graduation-March 31 of same year
- May graduation-August 31 of preceding year

Although the prescribed course work may have been completed, the candidate must maintain an active registration status until the degree is awarded (see previous section on General Academics Policies and Requirements, subsection Maintaining Candidacy).

Time Limitation

The candidate must complete all other requirements for the degree of Doctor of Philosophy within four calendar years after passing the qualifying examination. In exceptional cases, the

Dean of the Graduate School is empowered to grant limited extensions of this four-year period.

Dissertation

A dissertation is required of all candidates for the degree of Doctor of Philosophy. It is to be a scholarly achievement in research, and should demonstrate a thorough understanding of research techniques in the field of inquiry and the ability to conduct independent research.

The dissertation is to be submitted in completed form to the head of the major department at least thirty days before the end of the term in which the candidate expects to be graduated, and the candidate is not eligible for final examination until the dissertation has been approved.

The dissertation shall be read by a reading committee, chaired by the major professor, and appointed by the Dean of the Graduate School upon the advice of the head of the major department. This committee shall consist of not fewer than three members, and must include one representative of an allied department. The dissertation must be approved by the committee and the head of the major department.

One unbound copy of the dissertation, signed by dissertation committee, must be deposited with the Office of the Graduate School before graduation. Graduate students completing a dissertation in a Ph.D. program offered through the J. B. Speed School of Engineering are required to submit additional copies. Students should contact the dean of that school for specific information.

Standards for the Preparation of Thesis and Dissertations is available on the Graduate School website (graduate.louisville.edu/pubs/theses-dissertations/). Alternate standards must be approved if in conflict with this standard.

Final Oral Examination

This examination is to be a defense of the dissertation and a demonstration of the candidate's mastery of his/her field. The examination will be given by a committee of Graduate Faculty members appointed by the Dean of the Graduate School upon recommendation of the head of the major department. The Committee will consist of five or more members representing the major department and at least one allied department. The major professor shall be chair and must be a Senior Member of the Graduate Faculty. The remaining Committee members must be Members of the Graduate Faculty.

The Graduate Dean's Office shall notify all members of the Graduate Faculty at least one week in advance that they are invited to participate in the examination, but only members of the committee may vote. At the discretion of the major department, a portion of the examination may be written.

The examination must be taken at least fourteen days before the end of the semester in which the degree is to be granted. To be passed in this examination, the student may not receive more than one abstention or dissenting vote.

Requirements for the Master's Degree

The departmental announcements in this catalog should be consulted in all instances; however, the following rules apply to all master's degree programs.

Course Credit

A minimum total of 30 semester hours of graduate credit is required for the master's degree. At least 15 semester hours must be in courses of the major subject area, and the remaining hours in the program distributed as recommended and approved by the major department. At least one-half of the credits counted toward the degree (exclusive of thesis, practicum and internships) must be in courses open to graduate students only (600 level or above). A grade average of 3.0 or better must be maintained.

Time Limitation

There is a time limit imposed, stipulating that credit earned more than six years prior to the completion of the degree may not be counted toward meeting its requirements. This time period may be extended upon recommendation of the student's department head and the approval of the Dean of the Graduate School.

Maintaining Candidacy

Refer to previous section entitled, General Academic Policies and Requirements, see subsection entitled Maintaining Candidacy.

Thesis

Students completing degree programs that include a thesis must submit the thesis to their major professor at least thirty days in advance of graduation (guidelines may be found at graduate.louisville.edu/student_info/theses.html).

Acceptance of the thesis shall be at the discretion of a special reading committee composed of the major professor and two other persons of professorial rank recommended by the department and appointed by the Dean of the Graduate School. One person so appointed shall be from a different department, and all three must be members of the Graduate Faculty. The major professor must be a Senior Member of the Graduate Faculty. The committee shall complete its review of the thesis at least one week prior to the final oral examination.

One unbound copy of the accepted thesis, signed by the committee members, must be deposited with the Office of the Graduate School (see Schedule of Courses for due date). Graduate students completing a thesis in an M.S. program offered through the J. B. Speed School of Engineering are required to submit additional copies. Students should contact the office of the dean of that school for specific information.

The thesis normally carries 6 semester hours of graduate credit, which is in addition to the 15-hour minimum taken within the major department. In certain departments, a professional paper may be required in lieu of a thesis. For procedures in these instances, consult the head of the department.

Final Oral Examination

The final oral examination shall be conducted by a committee of Graduate Faculty members recommended by the head of the major department and appointed by the Dean of the Graduate School in the same manner as the thesis reading committee.

The examination must cover the materials presented in the thesis or professional paper and may include the content of courses taken or other matters pertinent to the candidate's admissibility to the master's degree. At the discretion of the major department, a portion of this examination may be written. The recommendation for the degree shall be determined by a simple majority of the committee members.

Recommendation shall be made to the graduate dean at least one week prior to graduation.

In the event of an unfavorable vote, the committee may refuse the candidate's admissibility to the master's degree, or it may recommend another examination with or without additional work.

Application for Degree

Degrees are awarded in August, December, and May. Candidates who expect to receive degrees on a particular award date must complete the application for degree on ULink before the deadline specified in the University calendar (see Schedule of Courses).

The University holds two commencement ceremonies each year. For specific information regarding the ceremonies, apparel, dates, etc. please visit the Commencement web-site: www.louisville.edu/commencement/

Each student who is required to submit a dissertation or thesis to fulfill degree requirements must follow the guidelines approved by the Graduate School. These guidelines *The Preparation of a Dissertation and The Preparation of a Thesis* may found on the Graduate School website graduate.louisville.edu/pubs/theses-dissertations/. Prior to submission of the final copy of a dissertation/thesis, students must contact the Graduate School to schedule a review of the document.

Microfilming and Copyrighting

The University of Louisville, by action of its graduate faculty, requires that all theses and dissertations be microfilmed. Copyrighting the paper is an optional choice for its author. Candidates for advanced degrees that require theses or dissertations must submit agreements for microfilming and copyright applications on the appropriate forms supplied by the Graduate School Office. A completed application, one extra copy of the abstract, and one extra copy of the title page must accompany the unbound copies of each dissertation or thesis. The extra copies of the abstract and title page are used by UMI/Proquest. in its abstracting journals. A limitation of 350 words is set on the abstracts for doctoral dissertations and 150 words for theses for master's degrees.

Graduate Student Honors

Graduate Dean's Citation

Graduate Dean's Citations are awarded at each commencement to students recommended by their departments in recognition of superior accomplishment (e.g., publications, professional service) in their graduate studies beyond the achievement of a high grade point average. Each school or college may recommend up to 10 percent of its graduate students completing their

degrees in August, December, and May of the academic year. Recommendations are to be based on the student's achievements both in their area of scholarship and outside the classroom.

Alice Eaves Barns Award

This award is named in honor of Mrs. Alice Eaves Barns for her many years of outstanding service as a staff member of the Graduate School at the University of Louisville. This award recognizes a student who has displayed tenacity in the face of adversity, while attaining excellence in both the classroom and outside endeavors. The Award is given in recognition of outstanding achievement in a Master's Program. Nominations may be submitted to the Graduate Dean for the May and December convocations.

Guy Stevenson Award

The Guy Stevenson Award for Excellence in Graduate Studies honors a former dean of the Graduate School. The Stevenson Award is presented to a doctoral degree recipient who excels in scholarship, leadership, and other areas within their discipline. The recipient of this award must attend commencement as they will carry the graduate school banner, leading all doctoral students in the processional. This student will be a candidate for student commencement speaker.

John Richard Binford Memorial Award

The John Richard Binford Memorial Award honors a former chairman of the Department of Psychology. Doctoral nominees for this award will be assessed in the same manner as those students considered for the Stevenson award. The recipient of this award is not required to attend commencement.

John M. Houchens Prize

The John M. Houchens Prize honors a former Registrar of the University. In the spring and fall of each year doctoral dissertations are submitted for consideration. If one is considered to be of special merit, a committee may recommend that its author be awarded the Houchens Prize.

Nominations for these awards are submitted to the Graduate Dean for December and May commencement recognition. Those individuals who received their degrees in August must be nominated for consideration during the December Commencement program.

Dissertations to be considered for the Houchens Prize are submitted by the same route. Only

those students expected to complete their doctoral degree by the end of the current term (or August in the case of December consideration) are eligible for consideration of this award.

Graduate School Academic Grievance Procedure

The Graduate School follows the procedures for academic grievance as published in the University governance document, The Redbook, Chapter 6, Article 8. This policy is stated below. Any student considering filing such a grievance is advised to consult with the Graduate School Student Advocate for advice and information. The Graduate School Academic Grievance Committee is the committee of original jurisdiction for issues involving graduate students enrolled for graduate credit.

Section 1: Introduction

This procedure is designed to provide fair means of dealing with student complaints regarding a specific action or decision made by the faculty or a faculty member. "Students who believe they have been treated unfairly, discriminated against, or have had their rights abridged may initiate a grievance" (The Redbook, Section 6.8.1).

The Graduate School Academic Grievance Committee has the power to hear all grievances of graduate students involving academic matters other than substantive grade appeals. "Academic matters are defined as those concerning instructional activities, research activities, activities closely related to either of these functions, or decisions involving instruction or affecting academic freedom" (The Redbook, Section 6.8.3). Because the "authority for the determination of grades in any course shall rest with the faculty of the academic unit offering the course" (The Redbook, Section 6.6.2), appeals over individual grades must be made to the faculty member, department chair, and/or dean of the academic department in which the course is offered. Grievance over grades can only be filed by students who "believe they have been treated unfairly, discriminated against, or have had their rights abridged" after they have used the academic unit's appeals procedures. The Graduate School Academic Grievance Committee may review allegations that a course grade has resulted from an unfair procedure. However, the committee should not substitute its judgment on the merits of such allegations regarding unfairness or dis-

crimination as an evaluation of academic performance in the course.

All grievances should be pursued, if possible (assuming procedures are available), in the Academic Department or Unit where the student's program is housed before approaching the Graduate School Academic Grievance Committee.

To assist the student, a Student Grievance Officer is provided, who is responsible for "informing students of their rights and obligations under the grievance procedure and especially the deadlines that have been established. The Student Grievance Officer shall seek to resolve informally as many grievances as possible" (The Redbook, Section 6.8.2). Students are encouraged to seek the assistance of the Student Grievance Officer at any stage of the grievance process.

The procedures established for the Graduate School Academic Grievance Committee are described below.

Section 2: Preliminary Steps

To pursue a grievance concerning academic matters within the academic unit, the following steps of the grievance procedure should be observed:

- The student should first discuss the matter with the person(s) directly involved and attempt to resolve the grievance through informal discussion.
- If there is no resolution, the student should discuss the matter with that person's supervisor or the person to whom such person reports (e.g., department chair and/or dean), who should attempt to mediate a resolution.
- If the student has not been able to obtain a resolution, he or she may request the Student Grievance Officer (S.G.O.) to attempt informal mediation of the problem.
- If the matter has not been satisfactorily resolved through the informal process, the student shall submit a written statement of the grievance to the Graduate School Academic Grievance Committee through the Office of the Dean of the Graduate School. The statement shall contain:
 - A complete narrative of the condition giving rise to the grievance;
 - identification of the parties involved indicating those to be designated as respondents; and
 - statement of the specific remedy requested.

Section 3: Committee Action

Upon receipt of the written statement, the Graduate School Academic Grievance Committee, or its representatives, shall:

- Contact the student and the Student Grievance Officer to obtain assurance that all steps of the above informal process were completed and that those issues in the statement were discussed at all levels.
- Notify the parties named in the statement of the grievance naming them; and send a copy of the statement to the named parties and to all committee members.
- Notify the grievant and the respondent(s) of the right to challenge committee members for cause, and request early notification of challenge(s) to expedite the grievance procedure. Challenges or notification that no challenges will be made must be received from the grievant in order for the grievance process to go forward. Challenges from respondents must be received no more than ten (10) working days after the right to challenge notification(s) is mailed. Included in this notification will be a list of the names of all current, regular grievance committee members. The Graduate School Student Advocate, in consultation with the Chair of the Graduate School Academic Grievance Committee, will determine if sufficient cause is represented in any challenge to exclude a Committee member from participating in the grievance process.
- Meet within twenty (20) working days after receiving both the written statement of any grievance and the grievant's response to the right to challenge committee members and recommend to the Dean of the Graduate School whether sufficient grounds exist to accept a case for hearing. If the Committee recommends against holding a hearing and the Dean concurs, the grievance process is ended. If the Committee recommends against holding a hearing and the Dean does not concur, the Dean can instruct the Committee to hold a hearing. If the Committee recommends that a hearing be held, the Committee shall hear the case. The Committee shall notify, in writing, all persons directly involved as to the reasons for its recommendation. If a grievance statement is received less than fifteen (15) working days before the end of the spring semester and the grievance committee is unable to convene a meeting due to the absence of some of its

members from campus during the summer term, the Grievance Committee will meet within ten (10) working days after the beginning of the fall semester.

- If a hearing will be held, notify in writing all the parties involved, including any witnesses, of the date, time and place of the hearing at least ten (10) days prior to the hearing date (which shall be within thirty (30) working days of receipt of the written grievance).
- Request in writing from all parties involved any pertinent material deemed necessary for review by the committee prior to the hearing. These materials, and any additional materials either party chooses to submit, must be submitted to the committee not later than four (4) days prior to the hearing. Any person named in a grievance may submit a written statement to the committee outlining issues from that person's perspective.
- Maintain confidentiality throughout the entire grievance process.
- If a hearing will be held, request in writing from all parties involved to indicate if they wish to bring an advisor with them to the hearing and whether or not that advisor is an attorney. Note: If present during the hearing, an advisor may act only as a consultant to the grievant or respondent and is not permitted to speak on behalf of the grievant or respondent, ask any questions of any involved parties, or present any evidence. This information should be submitted to the committee at least seven (7) days prior to the hearing.
- If a hearing will be held, request in writing from all parties involved a list of the name(s) of any witness(es) they wish to invite to the committee at least seven (7) days prior to the hearing date.

The action of the grievance committee as to whether to grant a hearing when accepted by the Dean of the Graduate School shall be final and binding on all parties except when subject to the condition of appeal, as described in Sections 6 and 7.

All communications among the committee, the grievant(s), and the person(s) named in the statement of grievance will be confidential.

Section 4: Hearing Process

All hearings conducted by the Graduate School Academic Grievance Committee shall be conducted confidentially in the following manner:

- The grievant(s) and the respondent(s) must be present during the information-gathering portion of the hearing. Witnesses will be available and will be called when needed. The committee reserves the right to allow the presence of a secretary or a technical assistant.
- A grievant or respondent may have one advisor present at the hearing. An advisor may act only as consultant to the grievant or respondent and is not permitted to speak on behalf of the grievant or respondent, ask any questions of any involved parties, or present any evidence. The grievant or respondent must notify the committee no less than seven (7) days prior to the hearing whether or not the advisor is an attorney. If the grievant chooses to have an attorney present, the University may decide to retain an attorney to act as advisor to the Committee members or to the respondent(s).
- All statements during the information-exchange phase of the hearing will be tape-recorded. This record will be preserved in the University Archives for a minimum of five years and shall be confidential.
- Any committee member may question any of the participants at the hearing.
- The grievant will present his or her statements and/or witnesses to the committee.
- The respondent will have the opportunity to question the grievant(s) and the witnesses about their statements.
- The respondent will present his or her statements and/or witnesses to the committee.
- The grievant will have the opportunity to question the respondent(s) about their statements.
- After all information is exchanged, all persons except the committee members and the recording secretary will leave the committee room.
- The grievant(s), the respondent(s), and the witnesses will continue to be available to the committee should further information be needed.
- The Committee will meet in closed session to decide upon its recommendation(s) to the Dean of the Graduate School.
- The committee shall submit its report with recommendation(s) and reasons for the recom-

mendation(s), to the grievant(s), the respondent(s), and the Dean of the Graduate School. If the grievance directly involves the Dean, the report and recommendation(s) of the Graduate School Academic Grievance Committee shall be referred for decision to the University Provost.

- The student's grievance will not be included as part of the student's record, unless it results in a change in student status or the student voluntarily inserts the information.
- Until the grievance is resolved, the student may continue the natural academic progression through the academic unit, subject to the requirements of Article 6.6, "Academic Review, Advancement, Probation, and Dismissal of Students," and Article 6.7, "Nonacademic Disciplinary Procedures," of The Redbook.

Section 5: Decision

The Dean of the Graduate School (or the Provost in cases where the Graduate Dean is directly involved in the grievance) shall approve or reject the committee's recommendation(s) within twenty-eight (28) days after receiving it (them). If the decision of the Dean or Provost is not in accord with the committee's recommendation(s), the Dean or Provost shall state the reasons for that decision, in writing, to all persons directly involved in the grievance and to the committee. The Dean or Provost shall then take appropriate action to implement his or her decision after the time for appeal has elapsed.

Section 6: Rehearing

A grievance committee, within twenty-one (21) days after delivery of its report, may be petitioned to reconsider its decision upon the basis of evidence of misrepresentation of materials, facts, or upon the basis of newly discovered evidence clearly not available at the original hearing.

Section 7: Appeal

Any party to the grievance may appeal to the University Student Grievance Committee within twenty-one (21) days from the date of the final decision of the Dean of the Graduate School or Provost if the Dean's or Provost's decision does not concur with the recommendation of the grievance committee.

Revised by the Graduate Council, June 26, 2007

University Policies and Procedures

Student Grievance Officer

The University of Louisville Student Grievance Officer is a tenured faculty member who is responsible for informing students of their rights and obligations under the University Student Grievance procedure and especially the deadlines that have been established.

The Grievance Officer will assist the student in efforts to achieve informal resolution in as many academic or non-academic complaints possible.

One of the main goals of the Student Grievance Officer is to establish an understanding among students, faculty, staff and administration when there is conflict.

Problems pertaining to grades, financial aid, University parking, housing, food services, registration, etc., may all be discussed with the Student Grievance Officer as a means of seeking direction for the pursuit of a resolution. Any aspect of the University that creates a problem for students is a matter of concern for the Student Grievance Officer.

This service is available to all students. Voice mail is available (852-0440) but e-mail (bghart01@gwise.louisville.edu) is the preferred method of contact.

Code of Student Conduct

The Code of Student Conduct is the University's policy regarding nonacademic misconduct and discipline of students. The primary purpose for the imposition of non-academic discipline in the University campus setting is to preserve and protect a quality educational environment. The Code of Student Conduct is published in the Student Handbook and is also available on the worldwide web at www.louisville.edu/student/life/code.htm and through the Student Life Office, Student Activities Center, Room W302. If you have any questions or would like information pertaining to reporting an alleged incident of non-academic misconduct, please contact the Associate Director of Student Life at 852-5787.

Code of Student Rights and Responsibilities

Section 1. Purpose

The Code of Student Rights and Responsibilities is set forth in writing in order to give students general notice of their rights and responsibilities at the University of Louisville. Further rights and responsibilities are set forth in other University rules and policies, including the Code of Student Conduct, Residence Hall contracts, and academic unit bulletins. It is the students' responsibility to be aware of all University rules and policies; students should check with the office of the Assistant Vice President for Student Life and with their academic units if they have any questions about the purposes or intent of these policies.

The University is a public educational institution for adults rather than a custodial institution. Consistent with the role of the University to educate its students and to stimulate student autonomy and independence, University regulation and supervision of student life on and off campus is limited. The University does not assume responsibility or liability for the conduct of its students; responsibility and liability for student conduct rests with the student as inherent attributes of his or her adult status, concurrently with the student's freedom of choice regarding his or her presence at the University and his or her own conduct and associations.

Section 2. Definitions

When used in this Code:

1. The term "academic dishonesty" means obtaining or seeking to obtain an unfair academic advantage for oneself or for any other student; it includes lying, cheating, stealing, or engaging in otherwise dishonest conduct in the course of or related to any academic exercise.
2. The term "academic exercise" means a test, quiz, examination, speech, presentation, paper, field or laboratory work, or any other academic activity on which a student is evaluated.
3. The term "group" means a number of persons who are associated with each other and who have not complied with the University requirements for recognition as an organization.
4. The term "organization" means a number of persons who are associated with each other

and who have complied with the University requirements for recognition.

5. The term "student" means any person taking courses at the University, either full time or part time, pursuing undergraduate, graduate or extension studies on a regular quarter, semester, or summer-term basis.
6. The term "student broadcast" means oral material published on a student operated radio or television station.
7. The term "student press" means either a student publication or a student broadcast.
8. The term "student publication" means written material published by a student organization.
9. The term "teacher" means any person hired by the University to conduct classroom activities. In certain situations, a person may be both "student" and "teacher." Determination of the person's status in a particular situation shall be determined by the surrounding circumstances.
10. The term "University" means the University of Louisville and, collectively, those responsible for its control and operation.

Section 3. Admission and Financial Aid

All applicants for admission and financial aid to the University shall be considered without regard for race, color, national origin, religion, sex, handicap not affecting qualification, or political beliefs.

Section 4. Classroom Rights and Responsibilities.

1. A student shall be evaluated on demonstrated knowledge and academic performance, and not on the basis of personal or political beliefs or on the basis of race, color, national origin, religion, sex, age, or handicap not affecting academic performance.
2. A student has freedom of inquiry, of legitimate classroom discussion, and of free expression of his or her opinion, subject to the teacher's responsibilities to maintain order and to complete the course requirements.
3. A student is responsible for fulfilling the stated requirements of all courses in which he or she is enrolled.
4. A student has the right:
 - a. To be informed in reasonable detail at the first or second class meeting about the nature of the course and to expect the course to correspond generally to its

description in the appropriate University catalog or bulletin;

- b. to be informed in writing and in reasonable detail at the first or second class meeting of course requirements and assignments;
 - c. to be informed in writing and in reasonable detail at the first or second class meeting of standards and methods used in evaluating the student's academic performance;
 - d. to be informed in writing of any necessary changes in assignments, requirements, or methods of grading during the semester with the reasons for such changes.
5. A student has the right to confidentiality in the student/teacher relationship regarding the student's personal or political beliefs. Disclosures of a student's personal or political beliefs, expressed in writing or in private conversation, shall not be made public without explicit permission of the student.

Charges of violations of these classroom rights and responsibilities shall be handled through the appropriate academic unit level procedures.

Section 5. Academic Dishonesty

Academic dishonesty is prohibited at the University of Louisville and all of its programs. It is a serious offense because it diminishes the quality of scholarship, makes accurate evaluation of student progress impossible, and defrauds those in society who must ultimately depend upon the knowledge and integrity of the institution and its students and faculty.

Academic dishonesty includes, but is not limited to, the following:

1. *Cheating*:
 - a. Using or attempting to use books, notes, study aids, calculators, or any other documents, devices, or information in any academic exercise without prior authorization by the teacher.
 - b. Copying or attempting to copy from another person's paper, report, laboratory work, computer program, or other work material in any academic exercise.
 - c. Procuring or using tests or examinations, or any other information regarding the content of a test or examination, before the scheduled exercise without prior authorization by the teacher.

- d. Unauthorized communication during any academic exercise.
- e. Discussing the contents of tests or examinations with students who have not yet taken the tests or examinations if the instructor has forbidden such discussion.
- f. Sending a substitute to take one's examination, test, or quiz, or to perform one's field or laboratory work; acting as a substitute for another student at any examination, test, or quiz, or at a field or laboratory work assignment.
- g. Conducting research or preparing work for another student, or allowing others to conduct one's research or prepare one's work, without prior authorization by the teacher.

Except when otherwise explicitly stated by the teacher, examination questions shall become public after they have been given.

2. *Fabrication*: Inventing or making up data, research results, information, or procedures, such as:
 - a. Inventing or making up data, research results, information, or procedures.
 - b. Inventing a record of any portion thereof regarding internship, clinical, or practicum experience.
3. *Falsification*: Altering or falsifying information, such as:
 - a. Changing grade reports or other academic records.
 - b. Altering the record of experimental procedures, data, or results.
 - c. Altering the record of or reporting false information about internship, clinical, or practicum experiences.
 - d. Forging someone's signature or identification on an academic record.
 - e. Altering a returned examination paper in order to claim that the examination was graded erroneously.
 - f. Falsely citing a source of information.
4. *Multiple Submission*: The submission of substantial portions of the same academic work, including oral reports, for credit more than once without prior authorization by the teacher involved.
5. *Plagiarism*: Representing the words or ideas of someone else as one's own in any academic exercise, such as:

- a. Submitting as one's own a paper written by another person or by a commercial "ghost writing" service.
 - b. Exactly reproducing someone else's words without identifying the words with quotation marks or by appropriate indentation, or without properly citing the quotation in a footnote or reference.
 - c. Paraphrasing or summarizing someone else's work without acknowledging the source with a footnote or reference.
 - d. Using facts, data, graphs, charts, or other information without acknowledging the source with a footnote or reference. Borrowed facts or information obtained in one's research or reading must be acknowledged unless they are "common knowledge". Clear examples of "common knowledge" include the names of leaders of prominent nations, basic scientific laws, and the meaning of fundamental concepts and principles in a discipline. The specific audience for which a paper is written may determine what can be viewed as "common knowledge": for example, the facts commonly known by a group of chemists will differ radically from those known by a more general audience. Students should check with their teachers regarding what can be viewed as "common knowledge" within a specific field or assignment, but often the student will have to make the final judgment. When in doubt, footnotes or references should be used.
6. *Complicity in Academic Dishonesty*: Helping or attempting to commit an academically dishonest act. The academic units may have additional guidelines regarding academic dishonesty. It is the student's responsibility to check with their teachers and academic units to obtain those guidelines.

Section 6. Discipline Procedures for Academic Dishonesty

Charges of academic dishonesty shall be handled through the appropriate academic unit level procedures.

An academic unit that determines that a student is guilty of academic dishonesty may impose any academic punishment on the student that it sees fit, including suspension or expulsion from the academic unit. A student has no right to appeal the final decision of an academic unit. However, a student who believes that he or she has been

treated unfairly, has been discriminated against, or has had his or her rights abridged by the academic unit may file a grievance with the Unit Academic Grievance Committee, pursuant to the provisions of the Student Academic Grievance Procedure; the Unit Academic Grievance Committee may not substitute its judgment on the merits for the judgment of the academic unit.

An academic unit that suspends or expels a student from the academic unit because the student has been found guilty of academic dishonesty may recommend to the University Provost in writing that the student also be suspended or expelled from all other programs and academic units of the University. Within four weeks of receiving such a recommendation, the Provost shall issue a written decision. Neither the student nor the academic unit shall have the right to appeal the Provost's decision. However, a student who believes that he or she has been treated unfairly, has been discriminated against, or has had his or her rights abridged by the issuance of a decision by the Provost may file a grievance with the University Student Grievance Committee, pursuant to the provisions of the Student Academic Grievance Procedure; the University Student Academic Grievance Committee may not substitute its judgment on the merits for the judgment of the Provost.

Section 7. Campus Expression

1. Students have the right of freedom of expression to the extent allowed by law.
2. Students may picket or demonstrate for a cause, subject to the following conditions:
 - a. The students must act in an orderly and peaceful manner.
 - b. The students must not in any way interfere with the proper functioning of the University.
 - c. Where students demonstrate in an area not traditionally used as an open public forum, the University reserves the right to make reasonable restrictions as to time, place, and manner of the student demonstrations.
3. Students may distribute written material on campus without prior approval, providing such distribution does not disrupt the operations of the University or violate University rules.
4. Students may invite to campus and hear on campus speakers of their choice on subjects of their choice; approval will not be withheld by

any University official for the purpose of censorship.

Section 8. The Student Press

1. The student press is free to deal openly, fearlessly, and responsibly with issues of interest and importance to the academic community. There shall be no prior approval of student press content by the University.
2. The student press is responsible for adhering to the canons of responsible journalism and for complying with the law. Student publications and broadcasts shall not publish libelous or slanderous matter, or any other content that violates the law.
3. All student publications and broadcasts shall explicitly state that the opinions expressed are not necessarily those of the University or its student body.
4. Students may not be disciplined by the University for their participation with the student press except for violations of University rules that are not inconsistent with the guarantees contained herein.

Section 9. University Facilities

Appropriate University facilities shall be available to organizations within the University community for regular business meetings, for social programs, and for programs open to the public.

1. Reasonable conditions may be imposed to regulate the timeliness of requests, to determine the appropriateness of the space assigned, to regulate time and use, and to insure proper maintenance.
2. Preference may be given to programs designed for audiences consisting primarily of members of the University community.
3. Allocation of space shall be made based on priority of requests and the demonstrated needs of the organization.
4. Charges may be imposed for any unusual costs for use of facilities.
5. Physical abuse of assigned facilities may result in reasonable limitations on future allocation of space to offending parties and will require restitution of damages.
6. The organization requesting space must inform the University of the general purpose of any meeting open to persons other than members and the names of outside speakers.

Section 10. Use of University Name and Insignia

No individual, group, or organization may use the University name or insignia without the express authorization of the University except to identify the University affiliation. University approval or disapproval of any policy or issue may not be stated or implied by any individual, group, or organization.

Section 11. Campus Residence Facilities

Students have the right of privacy in campus residence facilities.

1. Nothing in the University relationship or residence hall contract may expressly or impliedly give the institution or residence hall officials authority to consent to search of a student's room or residence by police or other law enforcement officials unless they have obtained a search warrant.
2. The University reserves the right to enter a student's room in a residence hall or a student's apartment in a campus residence:
 - a. in emergencies where imminent danger to life, safety, health, or property is reasonably feared;
 - b. to make necessary repairs, improvements, or alterations in the facility;
 - c. to provide necessary pest control services;
 - d. to inspect the facility as deemed necessary by the University.

Section 12. Student Records

The privacy and confidentiality of all student records shall be preserved in accordance with applicable laws. The University shall establish and adhere to a clear and definitive records policy.

Section 13. Campus Organizations

Organizations and groups may be established within the University for any legal purpose. Affiliation with an extramural organization shall not, in itself, disqualify the University branch or chapter from University privileges. A group shall become a formally recognized organization through procedures established by the Student Government Association, upon approval of the Vice President for Student Affairs.

1. Groups of a continuing nature must institute proceedings for formal recognition if they are to receive benefits from the University.

2. Recognition of an organization by the University infers neither approval nor disapproval of the aims, objectives, and policies of the organization, nor liability for the actions of the organization.
3. Membership in all University-related organizations shall be open to any member of the University community who is willing to subscribe to the stated aims and meet the stated obligations of the organization, provided such aims and obligations are lawful.
4. Membership lists are confidential and solely for the use of the organization, except that names and addresses of current organization officers shall be reported to the University as a condition of continuing University recognition.
5. Any organization that engages in activities either on or off campus that are illegal or contrary to any University policy may have sanctions imposed against it, including withdrawal of University recognition.

Section 14. Promulgation of University Rules Affecting Students

Rules and Policies affecting students shall be published in the Student Handbook, in the appropriate University catalogs, or in any other appropriate publication prior to their enforcement. Included in the Student Handbook are the following: Academic Grievance Procedure, Code of Student Conduct, Code of Student Rights and Responsibilities, Policy on Consumption of Alcoholic Beverages for Recognized Student Organizations, Hazing and Initiation Activities Policy, Non-academic Grievance Policy and the Sexual Harassment Policy. Copies of the Student Handbook are available from the Office of Student Life.

Privacy of Student Records

The University of Louisville hereby notifies students concerning the Family Educational Rights and Privacy Act of 1974 (FERPA). This Act, with which the institution intends to comply fully, was designed to protect the privacy of educational records, to establish the right of students to inspect and review their education records, and to provide guidelines for the correction of inaccurate or misleading information. Students also have the right to file complaints with the Family Educational Rights and Privacy Act Office, Department of Education, concerning alleged failures by the institution to comply with the Act.

The University has adopted a policy which explains in detail the procedures to be used by the University for compliance with the provisions of the Act and the regulations adopted pursuant thereto. Copies of the policy can be obtained from the University Archives and Records Center, Ekstrom Library. Questions concerning the Family Educational Rights and Privacy Act may be referred to the Director, University Archives and Records Center or visit the Website at: library.louisville.edu/uarc/stupriv.htm.

Drug-Free Schools and Communities Act Amendments of 1989

On December 12, 1989, President Bush signed into law the Drug-Free Schools and Communities Act Amendments of 1989. These Amendments require that higher education institutions receiving any federal funding must notify each student and employee annually of its program to prevent the illicit use of drugs and the abuse of alcohol by students and employees.

We at the University of Louisville have begun programs in the past few years to combat the misuse and abuse of alcohol and other chemical substances. We realize; however, that only through a concerted effort by all, can we make any major strides in preventing substance abuse. The following is the University of Louisville's Drug-Free Schools Notice:

Drug-Free Schools Notice

As required by the Federal Drug-Free Schools and Communities Act Amendments of 1989, you are hereby notified by the University of Louisville that on University premises or at University-sponsored activities the following acts are prohibited:

1. distribution, possession, or use of any illegal drug or controlled substance without legal authorization;
2. providing alcoholic beverages to individuals under 21 years of age, or possession of alcoholic beverages by individuals under 21 years of age; or
3. illegal possession of an open container of an alcoholic beverage, public intoxication, driving while intoxicated, and drinking alcoholic beverages in an unlicensed public place.

In addition to imposition of disciplinary sanctions under University procedures including suspension or separation from the University for such acts, students or employees may face prosecution and imprisonment under Federal and Kentucky laws which make such acts felony and misdemeanor crimes.

The Code of Student Conduct lists details of offenses and disciplines for students. Staff may be disciplined under Section 11.1 of the Staff Handbook. Faculty may be disciplined by Deans per Redbook Sections 4.5.3 or 3.2.2 with review per 4.4 for sanctions less than dismissal or suspension for one year.

The health risks associated with the misuse and abuse of mind-altering drugs, including controlled substances and alcohol, include but are not limited to: physical and psychological dependence; damage to the brain, pancreas, kidneys and lungs; high blood pressure, heart attacks, and strokes; ulcers; birth defects; a diminished immune system; and, death.

The Counseling Center and Student Health Services provide assessment and referral services to University students, as well as serving as an alcohol and other drug information/education resource. For further information, call 852-6585. Service for faculty and staff are available through the Faculty/Staff Assistance Program. For further information call 852- 6543.

Americans with Disabilities Act

ADA Policy Statement University of Louisville

The University of Louisville is committed to providing equal opportunity for persons with disabilities in full compliance with the Americans with Disabilities Act of 1990 (ADA), and Section 504 of the Rehabilitation Act of 1973 (504). The University's 504/ADA Coordinator is responsible for all campus activities relevant to Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990. The University Affirmative Action Officer will monitor compliance and assist all unit heads in meeting their equal opportunity obligations. The University Disability Resource Center staff will assist the university community in fulfilling its responsibility by serving as an information resource center and coordinating support services for students with disabilities.

ADA and 504 Grievance Procedures University of Louisville

The following grievance procedure is being recommended to provide prompt and equitable resolution of complaints concerning ADA and Section 504 of the Rehabilitation Act of 1973.

The University of Louisville ADA Grievance Procedure is an internal grievance procedure providing for prompt and equitable resolution of complaints alleging any action prohibited by the U.S. Department of Justice regulations implementing Title II of the Americans with Disabilities Act. Title II states, in part, that "no otherwise qualified individual with a disability shall, solely by reason of such disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination" in programs or activities sponsored by an agency.

General information regarding ADA or 504 can be addressed to:

**Director
Disability Resource Center
Robbins Hall Room 101
852-6938**

Complaints should be addressed to the person who has been designated to coordinate ADA compliance efforts:

**Director
Affirmative Action Office
Personnel Services Building
852-6538**

1. A complaint should be filed in writing, contain the name and address of the person filing it, and briefly describe the alleged violation. Upon receipt of the written notice of complaint, the Director of Affirmative Action/Employee Relations or his/her designee shall acknowledge receipt within five workdays.
2. A complaint should be filed within 180 days after the complainant becomes aware of the alleged violation.
3. An investigation, as may be appropriate, shall follow a filing of complaint. The investigation shall be conducted by the Affirmative Action Office. This internal Complaint procedure contemplates an informal but thorough investigation, affording all interested persons and their representatives, if any, an opportunity to submit evidence relevant to a complaint.
4. A written determination regarding the investigation of the complaint and a description of the resolution, if any, shall be issued by the Affir-

mative Action Office and a copy forwarded to the complainant no later than 60 days after its filing.

5. The Affirmative Action Office shall maintain the files and records relating to the complaints filed.
6. The complainants may request a reconsideration of the case in instances where he or she is dissatisfied with the resolution. The request for reconsideration should be made within 15 work days after receipt of the determination to the Affirmative Action Office.
7. The right of a person to a prompt and equitable resolution of the complaint filed hereunder shall not be impaired by the person's pursuit of other remedies such as the filing of an ADA complaint with the responsible federal department or agency. Use of this grievance procedure is not a prerequisite to the pursuit of other remedies.
8. These rules shall be construed to protect the substantive rights of interested persons to meet appropriate due process standards, and to assure that the University complies with the ADA and implementing regulations.

Special Facilities and Services

University Libraries

The University offers an extensive library system designed to support undergraduate and graduate teaching, learning and research. The Library system consists of the Main Library, the Fine Arts Library, the Law Library, the Music Library, the Health Sciences Library, the Engineering, Physical Science, and Technology Library and the University Archives and Records Center. Total library holdings number approximately two million volumes.

The libraries subscribe to 24,872 journals and to over 30 electronic databases, with electronic access to more than 30,000 journals. In addition, the libraries hold over 2 million items in microform.

The University Libraries provide access to electronic resources and databases covering a wide spectrum of subjects for faculty, staff and students. The Interlibrary Loan units of the Ekstrom and Health Sciences libraries provide access to the collections of the Kentuckiana Metroversity member schools, the Kentucky Commonwealth

Virtual Library (KCVL), and other libraries throughout the state, nation and the world for materials not owned by the University of Louisville Libraries. The libraries' collections are accessed through the Minerva online catalog at: library.louisville.edu/

For more extensive information regarding The University of Louisville Libraries visit their web-site: www.louisville.edu/library/

University Archives and Records Center

The University Archives is a research repository of national significance. It contains primary sources relating to the university, Louisville, and the nation. It attracts students, faculty, and scholars from Louisville, from elsewhere in the U.S., and from other countries. It collects, preserves, and makes available for research historical manuscripts, oral history interviews, and other primary research materials, and thus serves as a research laboratory for humanists, social scientists, and others. Its collections include nineteenth and twentieth century records of area businesses, cultural organizations, social service agencies, and churches; personal papers of politicians, scholars, members of the Jewish and African-American communities, women, and other prominent and representative Louisvillians; and publications, papers, and photographs documenting the history of the university. Students with class projects, theses, or dissertations requiring primary sources are invited to consult this office. Additional information can be found at: library.louisville.edu/uarc.

Information Technology Services

U of L's Information Technology unit (IT) is responsible for planning, implementation, deployment, and management of information technology services in support of the instructional, research, administrative, and service programs of the University.

For more information regarding the many services offered by Information Technology, please visit their web-site: www.louisville.edu/it/

International Center

The International Center is the university-wide clearing house of information and resources for UofL faculty, students, and researchers involved in academic exchanges, overseas "live and learn" opportunities, and academic research. The International Center promotes energetically the internationalization efforts of the University. It

provides advice and counsel to UofL faculty, students, and researchers traveling abroad and assistance to international students, faculty, and researchers coming to UofL for study or work.

E-mail: intcent@louisville.edu
www.louisville.edu/provost/intcent/

Residence Facilities

For complete information regarding accommodations and for application forms inquiries should be addressed to the Residence Administration, Belknap Campus, University of Louisville, Louisville, KY 40292.

www.louisville.edu/student/housing/

Student Health and Insurance

The University of Louisville offers a Comprehensive Medical Plan to meet student health care needs. This Comprehensive plan is a major medical and hospitalization plan which has coverage for both inpatient and outpatient services. Similar to an HMO, the Health Services Office serves as the primary care provider and a referral is necessary for most services rendered outside of the Student Health Services. Purchase of the Comprehensive Plan provides coverage for physician visits at the Health Services Office (HSO) which has two clinical locations.

To be eligible for coverage under the Comprehensive Plan, students must be one of the following:

1. an undergraduate student taking 6 or more credit hours
2. a graduate student taking 3 or more hours or degree candidate,
3. GTA, GTS and GRA students receiving a stipend check from the University receive the Comprehensive Plan coverage as a benefit of their employment. If you believe you are eligible for this benefit please check with your department to verify coverage.

Dependents of insured students are eligible for the Comprehensive Medical benefits for an additional premium. Insured spouses are eligible for coverage at the Health Service Office facilities. Children under the age of 18 are not eligible for the Health Services benefit and cannot be seen in the Health Services Office.

The Health Service Offices operate 12 months of the year. The Belknap Office is located on the main Campus, 2207 South Brook Street, in the Student Health & Counseling Building, between the Student Activities Center and the Post Office.

The Health Sciences Center (HSC) Office is located at 550 South Jackson Street, Ambulatory Care Building (ACB) 1st Floor.

For more information and appointments, please call the Belknap Office at (502) 852-6479 or the HSC Office at (502) 852-6446. The Insurance Advocate can be reached at (502) 852-6519.

Student Services

Student Services Administration, Undergraduate Admissions, Orientation, Testing Services, Financial Aid, Registrar, Enrollment Systems, Commencement, Residency, and Student-Athlete Certification.

Student Life

Housing and Residence Life, Intramural and Recreational Sports, Student Activities, Greek Life, Recognized Student Organizations, Student Government Association, ACCESS (Adult Services), Service Learning, Swain Student Activities Center Administration, Student Disciplinary Services, Counseling Center, Career Development Center, and International Service Learning Program.

Disability Resource Center

The Disability Resource Center coordinates services and programs for students and prospective students with disabilities. Accommodations and support services are individualized, depending on the needs of each student. Services and programs are designed to assure access for qualified students with disabilities to all programs and activities of the university. Students are strongly encouraged to make early contact with the Disability Resource Center to assure adequate time to implement support services.

Financial Aid and Financial Settlement

Continuing Registration

Tuition and fees are due on, or before, the designated due date for the semester. Payment may be made by cash, check, money order, charge card (MasterCard, Visa), or financial aid credit. Payments may be made by mail, by use of the deposit box located in the front entrance of the Houchens Building, or at the Office of the Bursar.

Failure to receive a Statement of Account will not relieve the student of the responsibility for making financial settlement by the designated due date. Continuing registrations which are not

financially settled by the designated due date may have their course registration cancelled and/or be assessed financial penalties. The Continuing Registration designated due dates are listed in the current Schedule of Courses and on the Bursar's web site at: unlink.louisville.edu (Tuition-Fees-Payment Options, Payment Options). Students may view their account via ULink. Financial statements are no longer sent to students via mail. All account information may be found on the students ULink

Regular Registration

Students who register after Continuing Registration should be prepared to fully settle financial obligations by the last day to drop/add for the semester. Failure to fully settle financial obligations may result in course cancellation and/or financial penalties.

Senior Citizen Tuition Remission

The University offers tuition remission to individuals who are classified by Admissions as residents of Kentucky and are at least 65 years of age on, or before, the first day of classes for the semester. Special costs, such as course fees and parking, are not covered by this program and are the financial responsibility of the student. Proof of age may be shown by presenting a driver's license or other age verification document at the Office of the Bursar.

These individuals must secure permission of the Graduate School in order to enroll in graduate-level courses. Normal admission processes must be followed in order to gain admission to a degree program.

Financial Penalties

Students whose accounts are not paid by established semester deadlines may be subject to course cancellation. Students with unpaid account balances will be placed on Financial Hold by the Bursar's Office. Students placed on Financial Hold become ineligible for further registration and transcripts will not be released until the student account is paid in full. A late payment fee of \$50.00 may be assessed when student accounts are not paid by the last day to drop/add. A student whose payment is not honored by the bank on which it was drawn may be assessed a return payment fee. If restitution is not made within 10 days of notification, the student may be subject to course cancellation and/or legal action.

Debtors who do not make satisfactory payment arrangements on their past due accounts may have their accounts placed with a collection agency. It is the policy of the University that unpaid accounts will be assessed the costs and expenses of collection, including attorney fees.

Withdrawal Policy

The effective withdrawal date is the date on which the withdrawal is processed in the Student Records System. This date is used in calculating any applicable tuition reduction.

Financial Aid Recipients

Determinations regarding refunds of resulting credit balances will be based on regulations governing the financial aid awarded to the student.

Federal regulations mandate that students have the right to cancel all or a portion of an EFT loan disbursement and have the loan proceeds returned to the lender. To request cancellation of all or a portion of your loan, contact the Financial Aid Office in writing. (Financial Aid Office, University of Louisville, Louisville KY 40292)

For additional information contact Student Financial Aid Office or review our Consumer Information online at:

www.financialaid.louisville.edu

Financial Settlement Options

Due dates, payment information, payment plan options, and payment plan forms for specific semesters is updated regularly on the Bursar's web site at: www.ulink.louisville.edu,

Tuition-Fees-Payment Options, Payment Options. Any questions may be directed to the Bursar's Office (502-852-6503). You may also address your questions to the Bursar's Office by email and receive an email response (bursar@louisville.edu).

Financial Aid

If federal financial assistance is needed, the Free Application for Federal Student Aid (FAFSA) may be obtained on the web at www.fafsa.ed.gov, by calling the Federal Student Aid Information Center at 1800-433-3243, or in U of L's Financial Aid Office. The formal application period for financial assistance for the following academic year is January 1 to March 15. Applications submitted after March 15 will be evaluated subject to the availability of funds. Applications and information are available from the Student Financial Aid Office, Belknap Campus, University of Louisville,

Louisville, KY 40292 or visit our website www.louisville.edu/student/services/fin-aid.

Contact Information

Student Financial Aid Office
University of Louisville
Louisville, KY 40292

Website: www.financialaid.louisville.edu

Email: finaid@louisville.edu

Call Center: 502-852-5511

Fax: 502-852-0182

Satisfactory Academic Progress for Financial Aid Assessment

All students who apply for aid from the federal financial aid programs must meet the standards of the University's Satisfactory Academic Progress Policy. This policy consists of three components: GPA, FEH, and FAYE. Graduate students are not considered to be meeting the GPA requirement as long as they are allowed to continue to enroll. Financial Aid Earned Hours (FEH) is a quantitative measure to evaluate minimum financial aid earned hours during each term for which federal aid was disbursed. Graduate students who receive federal aid based on at least half time enrollment are expected to earn 4.5 hours each semester or 9 hours fall/spring and 12 if you attended the prior summer term. Financial Aid Years of Eligibility (FAYE) is an index which establishes limitations on the cumulative length of time that a student may be enrolled in a degree program and receive consideration for federal financial aid awards. FAYE is a calculation based on the number of cumulative earned hours toward a degree in a student's career. For graduate students the limit has been set at 54 cumulative earned hours. Graduate School hours are included toward the 90 hour cumulative limit on a Specialist Degree and 108 hours on a Doctorate Degree. Once students have reached the maximum FAYE, they are no longer eligible for federal financial aid at their current degree level.

Aid Recipients Receiving All `F' Grades

A student receiving all `F' grades is required to comply with the federal Title IV Refund Policy as well as the University of Louisville Satisfactory Academic Progress Policy. When federal financial aid either partially or fully pays educational expenses and the student receives all `F' grades, the Financial Aid Office is required by federal regulation to treat the student's financial aid file

as an "Unofficial Withdrawal." The student can avoid this status by providing acceptable proof of attendance or participation in a class related activity beyond the midpoint of the semester. If not, then an unofficial withdrawal status is considered and the Financial Aid Office must cancel and return fifty percent of the University charges back to the Title IV programs.

Scholarships

All students are encouraged to contact their particular College or University Department for information on scholarships and/or fellowship opportunities. Please visit our Outside Scholarship webpage at www.financialaid.louisville.edu for free search websites, guides to avoid scholarship scams, and postings on outside scholarships.

Federal Perkins Loan

The Federal Perkins Loan program provides low interest loans to students who demonstrate exceptional financial need. Eligibility requirements are established by the Student Financial Aid Office, and the University becomes the student's lender. Repayment begins 9 months after a student graduates, leaves school, or drops below half-time status. Award amounts for full-time students at U of L are determined annually. The aggregate total that a graduate may borrow cannot exceed \$40,000 including any Perkins borrowed as an undergraduate.

Federal Stafford Loan Program (subsidized and unsubsidized)

Federal Stafford Loans are low-interest loans made to students by lenders such as banks, credit unions, and savings and loan companies to help students pay for the cost of postsecondary education. Any degree-seeking student attending U of L at least half-time may borrow through this program. Students may qualify for a need-based, subsidized Stafford Loan, a non-need-based, unsubsidized Stafford Loan, or a combination of both. Need-based loans are called subsidized because the federal government pays the interest during in-school and deferment periods. Loan amounts are determined by a student's grade level, financial need, and cost of attendance. Graduate students may borrow up to \$8,500 per year in the subsidized Stafford Loan program, and up to an additional \$10,000 per year in the unsubsidized Stafford Loan program. Graduate students may not borrow more than \$138,500 (\$65,500 in the subsi-

dized program, and \$73,000 in unsubsidized loans). The graduate debt limit includes loans received as an undergraduate. The interest rate for Stafford Loans is variable with a cap of 8.25%. The rate changes every July 1. Repayment of Stafford Loans begins six months after a student graduates, leaves school, or drops below half-time. Subsidized Stafford Loan borrowers will not have to pay any principal or interest during the six month "grace" period; unsubsidized Stafford Loan borrowers will be responsible for the interest during the deferment and grace periods. All Stafford Loans at U of L are processed electronically through Kentucky Higher Education Assistance Authority (KHEAA).

Graduate Training Assistantships

Graduate teaching, research, and service assistantships are available to qualified students in most graduate programs. These assistantships provide tuition remission, health insurance, and a stipend that is adequate to cover basic living expenses.

Applicants who are interested in being considered for assistantships, should write to the chair or graduate advisor of the department to which they are applying for admission, stating their desire to be appointed as a graduate assistant. The award of an assistantship is competitive; students who hope to be considered should present credentials that are well above the minimum required for admission.

The purpose of a graduate assistantship is to provide experience and training that augment a student's academic program. The department chair or graduate advisor will attempt to place a student in an assistantship believed to best serve the career training objective of the student. Although a student is free to make known a preference for a particular placement, the final decision is the prerogative of the department in which the student is enrolled.

The distribution of assistantships across departments may differ from year to year. Moreover, some departmental policies require that a student complete 9-18 graduate credit hours in the program before being eligible for an assistantship.

Minority Student Assistantships/ Scholarships

The Graduate School is committed to providing financial support for the recruitment and retention of qualified, under represented ethnic minor-

ity students. An award candidate must be currently enrolled or have been admitted to the degree program (M.S. or Ph.D.) and be nominated by the Department Chair and Dean. These assistantships include a monthly stipend, tuition remission and health insurance.

Resigning Appointments

As a member of the Council of Graduate Schools in the United States, the University of Louisville subscribes to the Resolution Regarding Scholars, Fellows, Trainees, and Graduate Assistants:

Acceptance of an offer of financial support (such as a graduate scholarship, fellowship, traineeship, or assistantship) for the next academic year by a prospective or enrolled graduate student completes an agreement that both student and graduate school expect to honor. In that context, the conditions affecting such offers and their acceptance must be defined carefully and understood by all parties.

Students are under no obligation to respond to offers of financial support prior to April 15; earlier deadlines for acceptance of such offers violate the intent of this Resolution. In those instances in which a student accepts an offer before April 15, and subsequently desires to withdraw that acceptance, the student may submit in writing a resignation of the appointment at any time through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another appointment without first obtaining a written release from any previously accepted offer. It is further agreed by the institutions and organizations subscribing to the above Resolution that a copy of the Resolution should accompany every scholarship, fellowship, traineeship, and assistantship offer.

University Fellowships

A limited number of University fellowships may be awarded to outstanding students in the doctoral programs. These carry a generous stipend, health insurance, and full tuition remission. Nominations are made each spring to the Dean of the Graduate School by the chairs of departments granting the doctorates. Students do not directly apply to the Graduate School for these awards. Students who wish to be considered for fellowships should submit all credentials by January 15.

Residency Policy and Fees

13 KAR 2:045. Determination of residency status for admission and tuition assessment purposes.

RELATES TO: KRS Chapter 13B, 164.020, 164.030, 164A.330(6)

STATUTORY AUTHORITY: KRS 164.020(8)

NECESSITY, FUNCTION, AND CONFORMITY:

KRS 164.020(8) requires the Council on Postsecondary Education to determine tuition and approve the minimum qualifications for admission to a state-supported postsecondary education institution and authorizes the Council to set different tuition amounts for residents of Kentucky and for nonresidents. This administrative regulation establishes the procedure and guidelines for determining the residency status of a student who is seeking admission to, or who is enrolled at, a state-supported postsecondary education institution.

Section 1. Definitions

- (1) "Academic term" means a division of the school year during which a course of studies is offered, and includes a semester, quarter, or single consolidated summer term as defined by the institution.
- (2) "Continuous enrollment" means enrollment in a state-supported postsecondary education institution at the same degree level for consecutive terms, excluding summer term, since the beginning of the period for which continuous enrollment is claimed unless a sequence of continuous enrollment is broken due to extenuating circumstances beyond the student's control, including serious personal illness or injury, or illness or death of a parent.
- (3) "Degree level" means enrollment in a course or program which could result in the award of a:
 - (a) Certificate, diploma or other program award at an institution;
 - (b) Baccalaureate degree or lower including enrollment in a course by a non-degree-seeking post baccalaureate student;
 - (c) Graduate degree or graduate certification other than a first-professional degree in law, medicine, dentistry or "Pharm. D"; or
 - (d) Professional degree in law, medicine, dentistry, or "Pharm. D".
- (4) "Demonstration of Kentucky domicile and residency" means the presentation of documented information and evidence sufficient to prove by a

preponderance of the evidence that a person is domiciled in Kentucky and is a resident of Kentucky.

(5) "Dependent person" means a person who cannot demonstrate financial independence from parents or persons other than a spouse and who does not meet the criteria established in Section 5 of this administrative regulation.

(6) "Determination of residency status" means the decision of a postsecondary education institution that may include a formal hearing that results in the classification of a person as a Kentucky resident or as a nonresident for admission and tuition assessment purposes.

(7) "Domicile" means a person's true, fixed, and permanent home and is the place where the person intends to remain, and to which the person expects to return if absent without intending to establish a new domicile elsewhere.

(8) "Full-time employment" means continuous employment for at least forty-eight (48) weeks at an average of at least thirty (30) hours per week.

(9) "Independent person" means a person who demonstrates financial independence from parents or persons other than a spouse and who can meet the criteria established in Section 5 of this administrative regulation.

(10) "Institution" means an entity defined in KRS 164.001(11) if the type of institution is not expressly stated and includes the Kentucky Virtual University, the Council on Postsecondary Education, and the Kentucky Higher Education Assistance Authority.

(11) "Kentucky resident" means a determination by an institution that a person is domiciled in and is a resident of Kentucky as determined by this administrative regulation.

(12) "Nonresident" means a person who is domiciled outside of Kentucky or who currently maintains legal residence outside Kentucky or who is not a Kentucky resident within the meaning of this administrative regulation.

(13) "Parent" means one (1) of the following:

(a) A person's father or mother; or

(b) A court-appointed legal guardian if:

1. The guardianship is recognized by an appropriate court within the United States;

2. There was a relinquishment of the rights of the parents; and

3. The guardianship was not established primarily to confer Kentucky residency on the person.

(14) "Preponderance of the evidence" means the greater weight of evidence, or evidence which is more credible and convincing to the mind.

(15) "Residence" means the place of abode of a person and the place where the person is physically present most of the time for a non-educational purpose in accordance with Section 3 of this administrative regulation.

(16) "Student financial aid" means all forms of payments to a student if one (1) condition of receiving the payment is the enrollment of the student at an institution.

(17) "Sustenance" means living expenses including room, board, maintenance, transportation, and also may include educational expenses including tuition, fees, books, and supplies.

Section 2. Scope

(1) State-supported postsecondary education institutions were established and are maintained by the Commonwealth of Kentucky primarily for the benefit of qualified residents of Kentucky.

The substantial commitment of public resources to postsecondary education is predicated on the proposition that the state benefits significantly from the existence of an educated citizenry. As a matter of policy, access to postsecondary education shall be provided so far as feasible at reasonable cost to an individual who is domiciled in Kentucky and who is a resident of Kentucky.

(2) The Council on Postsecondary Education may require a student who is neither domiciled in nor a resident of Kentucky to meet higher admission standards and to pay a higher level of tuition than resident students.

(3) This administrative regulation applies to all student residency determinations regardless of circumstances, including residency determinations made by the state-supported institutions for prospective and currently-enrolled students; the Southern Regional Education Board contract spaces; reciprocity agreements, where appropriate; the Kentucky Virtual University; academic common market programs; the Kentucky Educational Excellence Scholarship Program; and other state student financial aid programs, as appropriate.

Section 3. Determination of Residency Status; General Rules

(1) A determination of residency shall include:

- (a) An initial determination of residency status by an institution during the admission process or upon enrollment in an institution for a specific academic term or for admission into a specific academic program;
 - (b) A reconsideration of a determination of residency status by an institution based upon a changed circumstance; and
 - (c) A formal hearing conducted by an institution upon request of a student after other administrative procedures have been completed.
- (2) An initial determination of residency status shall be based upon:
- (a) The facts in existence when the credentials established by an institution for admission for a specific academic term have been received and during the period of review by the institution;
 - (b) Information derived from admissions materials;
 - (c) Other materials required by an institution and which are consistent with this administrative regulation; or
 - (d) Other information available to the institution from any source.
- (3) An individual seeking a determination of Kentucky residency status shall demonstrate that status by a preponderance of the evidence.
- (4) A determination of residency status shall be based upon verifiable circumstances or actions.
- (5) Evidence and information cited as the basis for Kentucky domicile and residency shall accompany the application for a determination of residency status.
- (6) A student classified as a nonresident shall retain that status until the student is officially reclassified by an institution.
- (7) A student may apply for a review of a determination of residency status once for each academic term.
- (8) If an institution has information that a student's residency status may be incorrect, the institution shall review and determine the student's correct residency status.
- (9) If the Council on Postsecondary Education has information that an institution's determination of residency status for a student may be incorrect, it may require the institution to review the circumstances and report the results of that review.

- (10) An institution shall impose a penalty or sanction against a student who gives incorrect or misleading information to an institutional official, including payment of nonresident tuition for each academic term for which resident tuition was assessed based on an improper determination of residency status. The penalty may also include:
- (a) Student discipline by the institution through a policy written and disseminated to students; or
 - (b) Criminal prosecution.

Section 4. Presumptions Regarding Residency Status

- (1) In making a determination of residency status, it shall be presumed that a person is a non-resident if:
- (a) A person is, or seeks to be, an undergraduate student and admissions records show the student to be a graduate of an out-of-state high school within five (5) years prior to a request for a determination of residency status;
 - (b) A person's admissions records indicate the student's residence to be outside of Kentucky at the time of application for admission;
 - (c) A person moves to Kentucky primarily for the purpose of enrollment in an institution;
 - (d) A person moves to Kentucky and within twelve (12) months enrolls at an institution more than half time; or
 - (e) A person has a continuous absence of one (1) year from Kentucky.
- (2) A presumption arising from subsection (1) of this section shall be overcome by presentation of evidence that is sufficient to demonstrate that a person is domiciled in and is a resident of Kentucky.

Section 5. Determination of Whether a Student is Dependent or Independent

- (1) In a determination of residency status, an institution shall first determine whether a student is dependent or independent. This provision is predicated on the assumption that a dependent person lacks the financial ability to live independently of the person upon whom the student is dependent and therefore lacks the ability to form the requisite intent to establish domicile.
- (2) In determining the dependent or independent status of a person, the following information shall be considered as well as other relevant information available at the time the determination is made:

(a)1. Whether the person has been claimed as a dependent on the federal or state tax returns of a parent or other person for the year preceding the date of application for a determination of residency status; or

2. Whether the person is no longer claimed by a parent or other person as a dependent or as an exemption for federal and state tax purposes; and

(b) Whether the person has financial earnings and resources independent of a person other than an independent spouse necessary to provide for the person's own sustenance.

(3) An individual who enrolls at an institution immediately following graduation from high school and remains enrolled shall be presumed to be a dependent person unless the contrary is evident from the information submitted.

(4) Domicile may be inferred from the student's permanent address, parent's mailing address, or location of high school of graduation.

(5) Marriage to an independent person domiciled in and who is a resident of Kentucky shall be a factor considered by an institution in determining whether a student is dependent or independent.

(6) Financial assistance from or a loan made by a parent or family member other than an independent spouse, if used for sustenance of the student:

(a) Shall not be considered in establishing a student as independent; and

(b) Shall be a factor in establishing that a student is dependent.

Section 6. Effect of a Determination of Dependent Status on a Determination of Residency Status

(1) The effect of a determination that a person is dependent shall be:

(a) The domicile and residency of a dependent person shall be the same as either parent. The domicile and residency of the parent shall be determined in the same manner as the domicile and residency of an independent person.

(b) The domicile and residency of a dependent person whose parents are divorced, separated, or otherwise living apart shall be Kentucky if either parent is domiciled in and is a resident of Kentucky regardless of which parent has legal custody or is entitled to claim that person as a dependent pursuant to federal or Kentucky income tax provisions.

(2)(a) If the parent or parents of a dependent person are Kentucky residents and are domiciled in Kentucky but subsequently move from the state, the dependent person shall be considered a resident of Kentucky while in continuous enrollment at the degree level in which currently enrolled.

(b) If continuous enrollment is broken or the current degree level is completed, the dependent person's residency status shall be reassessed when the circumstances detailed in subparagraph 1 of this paragraph are present.

Section 7. Member of Armed Forces of the United States, Spouse and Dependents; Effect on a Determination of Residency Status

(1) A member, spouse, or dependent of a member whose domicile and residency was Kentucky at the time of induction into the Armed Forces of the United States, and who maintains Kentucky as home of record and permanent address, shall be entitled to Kentucky residency status:

(a) During the time of active service; or

(b) If the member, spouse, or dependent returns to this state within six (6) months of the date of the member's discharge from active duty.

(2)(a) A member, spouse or dependent of a member of the Armed Forces of the United States stationed in Kentucky on active military orders shall be considered a Kentucky resident while the member is on active duty in this state pursuant to those orders if the member is not:

1. Stationed in Kentucky for the purpose of enrollment at an institution; or

2. On temporary assignment of less than one (1) year.

(b) A member, spouse or dependent of a member, shall not lose Kentucky residency status if the member is thereafter transferred on military orders while the member, spouse or dependent requesting the status is in continuous enrollment at the degree level in which currently enrolled.

(3) Membership in the National Guard or civilian employment at a military base alone shall not qualify a person for Kentucky residency status under the provisions of subsections (1) and (2) of this section.

(4) A person's residency status established pursuant to this section shall be reassessed if the qualifying condition is terminated.

Section 8. Status of Nonresident Aliens; Visas and Immigration

(1)(a) A person holding a permanent residency visa or classified as a political refugee shall establish domicile and residency in the same manner as another person.

(b) Time spent in Kentucky and progress made in fulfilling the conditions of domicile and residency prior to obtaining permanent residency status shall be considered in establishing Kentucky domicile and residency.

(2) A person holding a nonimmigrant visa with designation A, E, G, H-1, H-4 if accompanying a person with an H-1 visa, I, K, L, N, R, shall establish domicile and residency the same as another person.

(3)(a) An independent person holding a nonimmigrant visa with designation B, C, D, F, H-2, H-3, H-4 if accompanying a person with an H-2 or H-3 visa, J, M, O, P, Q, S, TD or TN shall not be classified as a Kentucky resident, because that person does not have the capacity to remain in Kentucky indefinitely and therefore cannot form the requisite intent necessary to establish domicile within the meaning of this administrative regulation.

(b) A dependent person holding a visa as described in paragraph (a) of this subsection, but who is a dependent of a parent holding a visa as described in subsection (2) of this section, shall be considered as holding the visa of the parent.

(c) A dependent person holding a visa described in subsection (2) of this section or paragraph (a) of this subsection, if a parent is a citizen of the United States and is a resident of and domiciled in Kentucky, shall be a resident of Kentucky for the purposes of this administrative regulation.

(4) A person shall be a Kentucky resident for the purpose of this administrative regulation if the person graduated from a Kentucky high school and:

- (a) Is an undocumented alien;
- (b) Holds a visa listed in subsections (2) or (3)(a) of this section; or
- (c) Is a dependent of a person who holds a visa listed in subsections (2) or (3)(a) of this section.

(5)(a) Except as provided in paragraph (b) of this subsection, a person who has petitioned the federal government to reclassify visa status shall continue to be ineligible until the petition has been decided by the federal government.

(b) A person who has petitioned the federal government to reclassify visa status based on a marriage to a Kentucky resident and who can demonstrate that the petition has been filed and acknowledged by the federal government, may establish Kentucky domicile and residency at that time.

Section 9. Beneficiaries of a Kentucky Educational Savings Plan Trust

A beneficiary of a Kentucky Educational Savings Plan Trust shall be granted residency status if the beneficiary meets the requirements of KRS 164A.330(6).

Section 10. Criteria Used in a Determination of Residency Status

(1) A determination of Kentucky domicile and residency shall be based upon verifiable circumstances or actions. A single fact shall not be paramount, and each situation shall be evaluated to identify those facts essential to the determination of domicile and residency.

(2) The following facts, although not conclusive, shall have probative value in their entirety and shall be individually weighted, appropriate to the facts and circumstances in each determination of residency:

- (a) Acceptance of an offer of full-time employment or transfer to an employer in Kentucky or contiguous area while maintaining residence and domicile in Kentucky;
- (b) Continuous physical presence in Kentucky while in a non-student status for the twelve (12) months immediately preceding the start of the academic term for which a classification of Kentucky residency is sought;
- (c) 1. Filing of Kentucky resident income tax return for the calendar year preceding the date of application for a change in residency status; or
2. Payment of Kentucky withholding taxes while employed during the calendar year for which a change in classification is sought;
- (d) Full-time employment of at least one (1) year while living in Kentucky;
- (e) Attendance as a full-time, nonresident student at an out-of-state institution based on a determination by that school that the person is a resident of Kentucky;
- (f) Abandonment of a former domicile or residence and establishing domicile and residency in Kentucky with application to or attendance at an

institution following and incidental to the change in domicile and residency;

(g) Obtaining licensing or certification for a professional and occupational purpose in Kentucky;

(h) Payment of real property taxes in Kentucky;

(i) Ownership of real property in Kentucky, if the property was used by the student as a residence preceding the date of application for a determination of residency status;

(j) Long-term lease of at least twelve (12) consecutive months of non-collegiate housing;

(k) Marriage of an independent student to a person who was domiciled in and a resident of Kentucky prior to the marriage;

(l) Continued presence in Kentucky during academic breaks; and

(m) The extent to which a student is dependent on student financial aid in order to provide basic sustenance.

(3) Except as provided in subsection (4) of this section, the following facts, because of the ease and convenience in completing them, shall have limited probative value in a determination that a person is domiciled in and is a resident of Kentucky:

(a) Kentucky automobile registration;

(b) Kentucky driver's license; and

(c) Registration as a Kentucky voter.

(4) The absence of a fact contained in subsection (3) of this section shall have significant probative value in determining that a student is not domiciled in or is not a resident of Kentucky.

(5) A person shall not be determined to be a Kentucky resident by the performance of an act which is incidental to fulfilling an educational purpose or by an act performed as a matter of convenience. Mere physical presence in Kentucky, including living with a relative or friend, shall not be sufficient evidence of domicile and residency. A person shall respond to all information requested by an institution.

Section 11. Effect of a Change in Circumstances on Residency Status

(1) If a person becomes independent or if the residency status of a parent or parents of a dependent person changes, an institution shall reassess residency either upon a request by the student or a review initiated by the institution.

(2) Upon transfer to a Kentucky institution, a student's residency status shall be assessed by the receiving institution.

(3) A reconsideration of a determination of residency status for a dependent person shall be subject to the provisions for continuous enrollment, if applicable.

Section 12. Student Responsibilities

(1) A student shall report under the proper residency classification which includes the following actions:

(a) Raising a question in a timely manner concerning residency classification;

(b) Making application for change of residency classification in a timely manner with the designated office or person at the institution; and

(c) Notifying the designated office or person at the institution immediately upon a change in residency.

(2) If a student fails to notify an institutional official of a change in residency, an institutional official may investigate and evaluate the student's residency status.

(3)(a) If a student fails to provide, by the date specified by the institution, information required by an institution in a determination of residency status, the student shall be notified by the institution that the review has been canceled and that a determination has been made.

(b) Notification shall be made by registered mail, return receipt requested.

(c) Notification shall be made within ten (10) calendar days after the deadline for receipt of materials has passed.

(4) A student shall not be entitled to appeal a determination of residency status if the determination made by an institution is because a student has failed to meet published deadlines for the submission of information as set forth in subsection (3) of this section. A student may request a review of a determination of residency status in a subsequent academic term.

Section 13. Institutional Responsibilities.

Each institution shall:

(1) Provide for an administrative appeals process that includes a residency appeals officer to consider student appeals of an initial residency determination and which shall include a provision of fourteen (14) days for the student to appeal the residency appeals officer's determination;

(2) Establish a residency review committee to consider appeals of residency determinations by the residency appeals officer. The residency review committee shall make a determination of student residency status and notify the student in writing within forty-five (45) days after receipt of the student appeal;

(3) Establish a formal hearing process as described in Section 14 of this administrative regulation; and

(4) Establish written policies and procedures for administering the responsibilities established in subsections (1), (2), and (3) of this section and that are:

- (a) Approved by the institution's governing board;
- (b) Made available to all students; and
- (c) Filed with the council.

Section 14. Formal Institutional Hearing

(1) A student who appeals a determination of residency by a residency review committee shall be granted a formal hearing by an institution if the request is made by a student in writing within fourteen (14) calendar days after notification of a determination by a residency review committee.

(2) If a request for a formal hearing is received, an institution shall appoint a hearing officer to conduct a formal hearing. The hearing officer:

- (a) Shall be a person not involved in determinations of residency at an institution except for formal hearings; and
- (b) Shall not be an employee in the same organizational unit as the residency appeals officer.
- (3) An institution shall have written procedures for the conduct of a formal hearing that have been adopted by the board of trustees or regents, as appropriate, and that provide for:

(a) A hearing officer to make a recommendation on a residency appeal;

(b) Guarantees of due process to a student that include:

- 1. The right of a student to be represented by legal counsel; and
- 2. The right of a student to present information and to present testimony and information in support of a claim of Kentucky residency; and

(c) A recommendation to be issued by the hearing officer.

(4) An institution's formal hearing procedures shall be filed with the Council on Postsecondary

Education and shall be available to a student requesting a formal hearing.

Section 15. Cost of Formal Hearings

(1) An institution shall pay the cost for all residency determinations including the cost of a formal hearing.

(2) A student shall pay for the cost of all legal representation in support of the student's claim of residency. (17 Ky.R. 2557; eff. 4-5-91; Am. 22 Ky.R. 1656; 1988; eff. 5-16-96; 23 Ky.R. 3380; 3797; 4099; eff. 6-16-97; 24 Ky.R. 2136; 2705; 25 Ky.R. 51; eff. 7-13-98; 25 Ky.R. 2177; 2577; 2827; eff. 6-7-99; 749; 1238; eff. 11-12-2002.)

Deadline for Filing Residency Appeals

An application for a review of a determination of residency status shall be filed in the Office of Student Services no later than 30 days after the first day of classes of the term for which a determination of residency status is requested. Academic calendars are available in the Schedule of Courses, the University web site, and Offices of Admission. Pursuant to 13 KAR 2:045, Determination of Residency Status for Admission and Tuition Assessment Purposes, an institution may set other deadlines for submission of other information required by the Institution in a determination of residency status.

For specific information regarding the filing of an application, please refer to the Council on Postsecondary Education document 13 KAR 2:045, Determination of Residency Status for Admission and Tuition Assessment Purposes. Copies of the policy document are available in the Office of Student Services and Offices of Admission.

Submit the completed, signed, and notarized affidavit/application and ALL accompanying documentation to:

**Office of Student Services
Houchens Building, Room 160
University of Louisville
Louisville, KY 40292
Phone (502) 852-5813/6528
Fax (502) 852-3146**

General Information

College of Arts and Sciences

J. Blaine Hudson, Ed.D., Dean

The following graduate programs are offered within the College of Arts and Sciences:

- Art (Creative) and Art History - M.A.
- Art History - Ph.D.
- Biology - M.S.
- Biology - Ph.D.
- Chemistry - M.S.
- Chemistry - Ph.D.
- Communication - M.A.
- English - M.A.
- English Rhetoric and Composition - Ph.D.
- French, Language and Literature - M.A.
- History - M.A.
- Humanities - M.A.
- Humanities - Ph.D.
- Justice, Administration of - M.S.
 - Police Executive Leadership Development - Certificate
- Latin American Studies - Certificate
- Mathematics - M.A.
- Mathematics, Applied and Industrial - Ph.D.
- Pan-African Studies - M.A.
 - Pan-African Studies - Certificate
- Physics - M.S.
- Political Science - M.A.
- Psychology - Clinical - Ph.D.
- Psychology - Experimental - Ph.D.
- Public Administration - M.P.A.
- Sociology - M.A.
- Spanish - M.A.
- Theatre Arts - M.F.A.
 - African American Theatre - Certificate
- Urban and Public Affairs - Ph.D.
- Urban Planning - M.U.P.
- Women's and Gender Studies - M.A.
 - Women's and Gender Studies - Certificate

Master of Arts in Art (Creative) and Art History

Major: ART

Degree Awarded: M.A.

Unit: GA

Program Webpage: art.louisville.edu

Program Information

To be considered for admission to the M.A. program, students must submit the following credentials:

- Application to Graduate School
- Application Fee
- Transcripts of all colleges attended (undergraduate or graduate)
- Two letters of recommendation
- Graduate Record Examination scores

Students may receive a Master of Arts degree in the Department of Fine Arts by completing thirty-one (31) hours of graduate study divided between work in the Core Curriculum and work in one of the following three tracks of study: Art History, Critical and Curatorial Studies, or Studio Art.

Curriculum

Master of Arts in Art (Creative) and Art History Core Curriculum Hours

ARTH 541: Modern Perspectives in the Visual Arts	3
Art History Elective (500 or 600 level)	3
Elective - Outside the Department of Fine Arts (<i>with approval of advisor</i>)	3
Fine Arts Elective (<i>outside the chosen Fine Arts Track</i>)	3
Thesis Guidance	3
Graduate Seminar	1
Total	16

Concentration in Art History

Applicants for admission to the Master's Program in this track are expected to demonstrate competence in the history of art, equivalent to an undergraduate major.

Reading knowledge of one foreign language is required for the completion of the Master's degree in the art history track. This requirement should be met during the first year in the program, but must be met before enrolling for Thesis Guidance (ARTH 645/646). Proficiency can be demonstrated in one of two ways: 1) taking an examination administered by the department, scheduled in the fall and spring semesters; 2) completing the intermediate level of the language at the University of Louisville with a grade of B or better.

Each student must complete a core curriculum (16 hours) consisting of Art History 541 ("Modern Perspective in the Visual Arts"), six (6) hours of 500 or 600-level electives in the Department of Fine Arts, three (3) hours of 500 or 600-level electives outside the Department, three (3) hours of thesis guidance, and a one (1) hour graduate seminar.

The concentration in Art History will require fifteen (15) hours of 500 or 600-level courses in art history with a minimum of one course in each of the following areas: Ancient/Medieval; Renaissance/Baroque; Modern/Contemporary; Asian/Non-Western; and independent study (students are permitted one independent study course) concluding with a written thesis. The thesis consists of a research paper demonstrating critical knowledge of relevant sources, skill in analysis and interpretation, and ability to present the results in a well-organized and intelligent manner. The thesis must be defended in an oral examination. A reading knowledge of one foreign language is required (see above). A minimum of 12 hours (exclusive of Thesis Guidance) must be at the 600-level, of which at least 9 hours must be in art history.

Concentration in Critical and Curatorial Studies

Applicants for admission to the Master's Program in this track are expected to demonstrate competence in the history of art, studio art or arts management equivalent to an undergraduate major and an interest in museum theory and work.

Each student must complete a core curriculum (16 hours) consisting of Art History 541 ("Modern

Perspectives in the Visual Arts"), six (6) hours of 500 or 600-level electives in the Department of Fine Arts, three (3) hours of 500 or 600-level electives outside the Department, three (3) hours of thesis guidance, and a one (1) hour graduate seminar (ART/ARTH 600).

The concentration in Critical and Curatorial Studies will require fifteen (15) hours of coursework consisting of ARTH 542: Special Topics (or ARTH 591/691); ARTH 547: Museum Methods I; ARTH 548/648 Curatorial Methods; a 600-level Public Administration arts management course (selected from PADM 600, 603, 609, or 612); ARTH 649 Curatorial Internship; and concluding with a thesis exhibition or curatorial project. The exhibition or curatorial project may be produced in cooperation with the University's Galleries, the Speed Art Museum, or other appropriate institutions authorized by the Department, and should be a culminating experience occurring in the final year of study. To fulfill this requirement, the candidate must submit a prefatory project proposal with the approval of their graduate advisor, produce or implement the thesis practicum proposed and appropriately document the exhibit or project. This documentation will include exhibition or project materials such as press releases, announcements, wall texts, brochures and/or catalog, and digital and/or photographic documentation of the exhibition or project as well as other corollary documentary materials. The thesis project will also include a written portion, in addition to the practicum and documentation, that will provide a narrative basis in critical theory and current professional curatorial practice detailing the planning, implementation and documentation of the project. The written thesis will be submitted in conformity with the regulations governing the form and presentation of the written master's thesis. (Note: 12 hours, exclusive of Thesis Guidance, must be at the 600 level)

ARTH 542: Special Topics	3
ARTH 547/647: Museum Methods I	3
ARTH 648: Curatorial Methods	3
600-level Public Administration Management Course (PADM 600, 603, 609, or 612)	3
ARTH 649: Curatorial Internship	3

Written Thesis with Exhibition or Curatorial Project

Total 15

Concentration in Studio Art

Applicants for admission to the Master's Program in this track are expected to have completed training equivalent to an undergraduate major. To demonstrate his/her ability to pursue study at the graduate level, a student must submit examples of his/her work to the department by October 15 for spring semester admission and January 15 for fall semester admission. Contact the department for complete portfolio requirements.

Each student must complete a core curriculum (16 hours) consisting of Art History 541 ("Modern Perspectives in the Visual Arts"), six (6) hours of 500 or 600-level electives in the Department of Fine Arts, three (3) hours of 500 or 600-level electives outside the department, three (3) hours of thesis guidance, and a one (1) hour graduate seminar.

The concentration in Studio Arts will consist of fifteen (15) hours of 500 or 600-level courses taken in 2-D Studios, and/or 3-D Studios concluding with a thesis exhibition (12 hours, exclusive of Thesis Guidance, must be at the 600 level). The thesis exhibition, which must be authorized by the Department, should take place during the candidate's last semester of study. To accompany this exhibition, the candidate must submit a catalog containing a prefatory statement written by the candidate, a properly documented list of works in the exhibition, photographic reproductions of the work in one of the following forms: black and white photographs, color photographs, or slides placed in plastic sleeves to be bound into the thesis. The catalog will be submitted in conformity with the regulations governing the form and presentation of the written master's thesis.

Concentration Courses

15 hours of Studio courses (500 or 600 level) to be selected in consultation with advisor.

Thesis Exhibition with Thesis Statement.

Total of 15 hours.

Total Program = 31 hours

Doctor of Philosophy in Art History

Major: ARTH

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: art.louisville.edu

Program Information

To be considered for admission to the Ph.D. program, students must submit the following credentials:

- Application to Graduate School
- Application Fee
- Transcripts of all colleges attended (undergraduate or graduate)
- Three letters of recommendation
- Graduate Record Examination scores

Coursework required for the Ph.D. in Art History includes completion of the M.A. plus 15 hours ARTH 500-level electives, 15 hours ARTH 600-level electives, 6 hours of Dissertation Research, and 6 hours of graduate level electives outside the Art History Program, for a total of 72 hours. Additional 600-level courses may be substituted for 500-level.

Up to a total of 15 hours of 500 or 600 level electives outside Art History may be substituted for Art History electives of similar level provided they are appropriate and are approved in advance by the student's advisor.

Students are required to demonstrate facility in two foreign languages, one of which must be relevant to the field of dissertation research (for example, Latin or Greek for ancient art). Some areas of Art History require that students have a mastery of epigraphy and paleography. Students in any field in which extensive language study is necessary in order to conduct research must concentrate on the relevant language or languages before taking their comprehensive exams.

Language proficiency is demonstrated in one of two ways: 1) Taking a proficiency examination administered by the department, scheduled in the fall and spring semesters. The proficiency exam is a one hour translation examination with the use of a dictionary. Students are required to

demonstrate intermediate level facility in the language. 2) Completing the intermediate level of the language course at the University of Louisville with a grade of B or better.

Through course work, independent study, and directed readings, each student must prepare her/himself to pass written comprehensive exams in two areas (major, minor) before admission to candidacy. Language requirements must have been met and all course work completed before a student may take either exam.

After being admitted to candidacy, the student must write a dissertation and defend it in a final oral examination.

Curriculum

General Requirements:

- Minimum 30 credit hours of coursework at the 500 and 600 level (exclusive of course work earned for the M.A. degree).
- ARTH 743 and 744: Directed Readings for Comprehensive Exams (3 credit hours maximum for each).
- ARTH 745: Dissertation Research (12 credit hours maximum).
- Comprehensive exams (upon completion of coursework and before beginning the dissertation).
- Dissertation and defense.

Course Requirements:

500-level electives: 15 credits (maximum for application to degree requirements). In addition, if an equivalent course was not taken at the M.A. level, Ph.D. students must also take ARTH 541: Modern Perspectives of the Visual Arts.

600-level electives: 15 credits (minimum) (note: 600-level courses may be substituted for 500-level courses, with the exception of ARTH 541). Independent Study (ARTH 643/644) may be used to fulfill the 600 level electives above (students are permitted two independent study courses).

500 or 600-level electives: 6 credits outside Art History, preferably courses related to the dissertation.

ARTH 743 and 744: Directed Readings for Comprehensive Exams (3 credit hours maximum for each).

ARTH 745: Dissertation Research (12 credit hours maximum). To be taken only by Ph.D. candidates actively engaged in dissertation research.

Notes:

Students are expected to take any courses necessary in preparation for scholarly research.

A final grade for Dissertation Research is given upon completion of the dissertation and its submission to the Graduate School.

Students must continue to enroll for credit each Fall and Spring, including any semesters after coursework has been completed and before graduation. After completing minimum course requirements for the program, doctoral students must maintain continuous registration until the completion of the degree.

A minimum gpa of 3.5 must be maintained in the Ph.D. program.

The Art History faculty periodically review Ph.D. students who have not yet advanced to candidacy and will discourage from further work those students whose progress and performance are deemed unsatisfactory.

Departmental Faculty

Chair

James Grubola, Professor

Professors

Ying Kit Chan

Lida G. Gordon

Steven Skaggs

John Whitesell

Associate Professors

R. Todd Burns

Mary Carothers

Mitch Eckert

Christopher B. Fulton

Linda M. Gigante

Barbara L. Hanger

Benjamin Hufbauer

Mark A. Priest

Assistant Professors

Karen Britt

Susan Jarosi

Delin Lai

Scott Massey
 Gabrielle Mayer
 Che Rhodes

Adjunct Professors

John Begley

Emeritus/Emerita

Donald Anderson
 Thomas Buser
 Henry Chodkowski, Jr.
 Dario A. Covi
 Robert L. Douglas, Sr.
 Jay M. Kloner
 Stephanie J. Maloney
 Suzanne Mitchell
 William D. Morgan

Master of Science in Biology

Major: BIOL

Degree Awarded: M.S.

Unit: GA

Program Webpage: louisville.edu/a-s/biology/

Program Information

The degree program is available to qualified individuals possessing a bachelor's degree from an accredited college or university.

A biology undergraduate major is preferred. However, other majors containing sufficient biology, chemistry and math may be acceptable.

The Department of Biology offers master's degrees with programs of study tailored to the needs and interests of a diverse student population. Students may enroll on a full or part-time basis. The Department of Biology offers both thesis and non-thesis options.

The thesis option is generally chosen by students with career goals which include a research emphasis. Students choosing this option take course work and carry out an intensive independent research project under the supervision of a member of the Graduate Faculty, culminating in a written thesis based upon the research project.

The non-thesis option is usually chosen by those who wish to advance their knowledge of biology but are not sure of a specific career goal or do not anticipate a research emphasis in their future.

Students who wish to pursue an accelerated non-thesis Master's Degree in Biology (B.A.-B.S./M.S.) will be allowed to apply up to nine (9) hours of coursework taken for graduate credit while enrolled as an undergraduate. An additional twenty-four (24) hours of graduate coursework will constitute the minimum number of credit hours for obtaining the non-thesis master's in the accelerated program.

Program Admission Procedure

The following requirements must be met in order to be admitted to any M.S. graduate program in the Department of Biology:

1. The applicant must have a baccalaureate degree with a major in biology or an acceptable sub-discipline of biology.
2. The applicant must meet the following minimum admission standards:
 - an undergraduate GPA of 3.0/4.0 or higher;
 - a composite score or at least 1100 on the general test section (verbal + quantitative) and 3.5 on the analytical writing section of the GRE. An MCAT composite of 24 (at least 8 in each section) or a DAT composite of 51 (at least 17 in each section) are acceptable alternatives;
 - a TOEFL score (for foreign applicants) of 535 or higher (paper exam), 235 or higher (computer exam) or 83 or higher (internet exam). Students holding a baccalaureate or advanced degree from an accredited institution in the United States are exempt from this requirement.
3. All applicants should review the research specialties of the Departmental faculty to ensure that an area compatible with the student's research interests is available. Faculty research interests and e-mail links are found at louisville.edu/a-s/biology.

Additional guidelines for the accelerated program are as follows:

Students must:

- apply for admission to this program no later than the end of their Junior year [a total of 90 degree applicable hours], and

- must have completed Biology 240/242/244, 329, 301 or 363, and 330/331 with grades of “B” or better.
- Once approved, the student may take a maximum of nine (9) hours for graduate credit while in undergraduate status, which can also apply to the requirements for the B.A. or B.S. in Biology. All graduate coursework must be approved by the Director of Graduate Studies.

Students enrolling in the accelerated program will be non-thesis students and must adhere to all policies pertaining to Graduate Students.

Your application will be complete when we have all of the following (final action on your application cannot be taken until all items have been received):

Send to the Office of Graduate Admissions, University of Louisville, Louisville, KY 40292:

- a completed application form and application fee;
- one official transcript of all previous undergraduate and graduate work;
- Graduate Record Examination Scores (General Test Section), MCAT or DAT scores;
- two or more letters of recommendation from persons familiar with your academic performance and;
- for foreign students, results of the TOEFL Examination.

Send to the Director of Graduate Studies, Department of Biology, University of Louisville, Louisville, KY 40292:

- a completed departmental application (Information Form) which can be found on the Biology web page at louisville.edu/a-s/biology/graduate.html.

Deadline for completed applications to be reviewed are:

- July 15 for Fall admission,
- December 1 for Spring admission, and
- April 15 for Summer admission.

If these dates fall on a weekend, the deadline is the next working day.

The official notification of admission or denial will come from the Graduate School, and will be based on a recommendation from the Department of Biology.

Notification of acceptance to the Department of Biology graduate program does not carry with it

the promise of financial support; however, all students admitted to the program will be considered for one of the following types of financial support, if they qualify.

Graduate Assistantships

Graduate Teaching Assistantships (GTA) are awarded by the Graduate Committee of the Department of Biology to meet instructional needs of the department and enhance the educational progress of the student. A monthly stipend, tuition remission and health insurance are provided. All applicants selected for GTA support by the department will be notified by letter.

Another source of financial support may be available from individual faculty members who have extramural or intramural funding that provides support for a graduate student as a Graduate Research Assistant (GRA). The faculty member holding a grant selects eligible graduate students to fill GRA positions.

If you have questions or need further information, please contact the Director of Graduate Studies, Department of Biology, University of Louisville, Louisville, Kentucky 40292 by mail, phone [(502) 852-6771], or by FAX, [(502) 852-0725]. The current Director of Graduate Studies is Dr. Joseph M. Steffen (E-mail: joe.steffen@louisville.edu).

Curriculum

Requirements for the M.S. degree in Biology and for the Accelerated B.A.-B.S. /M.S. in Biology

One course to be selected from each of two (thesis option) or three (non-thesis option) of the following categories:

	Thesis	Non-Thesis
General Background Courses (500 or 600 level)		
Cellular/Physiology	3 - 4	3 - 4
Subcellular/Genetics	3 - 4	3 - 4
Evolution or Systematics	3 - 4	3 - 4
Population, Community, or Ecosystem Ecology	3 - 4	3 - 4
Total	6 - 8	9 - 12

Other Courses		
Statistics (Biology 650)	4	4
Electives	11 - 14	13 - 17
Thesis Research (600 level)	6	0
Research Experience (Biology 516, 608, 664 or 691)	0	3 - 4
Minimum Total	30	33

NOTE: A minimum of 12 (thesis option) or 17 (non-thesis option) semester hours, exclusive of thesis credit, must be in courses at the 600 level. Students intending to seek a Ph.D. degree later are advised to take as many of their courses as possible at the 600 level or above.

Doctor of Philosophy in Biology

Major: BIOL

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: louisville.edu/a-s/biology/

Program Information

A broad range of courses are taught in most biological disciplines, although the department is focused in two major directions. The Divisions of Molecular, Cellular, and Developmental Biology (MCD) and Evolution, Ecology and Behavioral Biology (EEB) incorporate current areas of special interest in environmental microbiology, population and microbial genetics, developmental biology, plant and animal physiology, metabolism, phycology, plant and animal ecology, behavioral ecology, invertebrate zoology, and community and ecosystem ecology of large rivers, small streams, and wetlands.

Students seeking the Ph.D. Degree in Biology traditionally have a master's degree or its equivalent; however, students may enter the program with only the baccalaureate degree. Generally, the first year or two is spent in course work,

research is begun by the second year, and the thesis/dissertation completed in the final year.

Program Admission Procedure

The following requirements must be met in order to be admitted to the Ph.D. program in the Department of Biology.

1. The applicant must have a baccalaureate degree with a major in biology or an acceptable sub-discipline of biology.
2. The applicant must meet the following admissions standards:
 - an undergraduate GPA of 3.0 or higher;
 - a composite score of at least 1100 on the general test section (verbal + quantitative) and 3.5 on the analytical writing section of the GRE. A composite MCAT score of 24 (at least 8 in each category) or a DAT score of 51 (at least 17 in each category) are acceptable alternatives.
 - for foreign students, a TOEFL score of 535 or higher (paper exam), 235 or higher (computer exam) or 83 (internet exam) is required. Students holding a baccalaureate or advanced degree from an accredited institution in the United States are exempt from this requirement.
3. All applicants must review the research specialties of the departmental faculty to ensure that an area compatible with the student's interest is available. Applicants for the Ph.D. program must communicate with a member of the biology faculty prior to admission and receive agreement that the faculty member will serve as the major professor. Faculty e-mail addresses are available at louisville.edu/a-s/biology/.

Your application will be complete when we have all of the following (final action on an application cannot be taken until all items have been received):

Send to the Office of Graduate Admissions, University of Louisville, Louisville, KY 40292:

1. a completed application form and application fee;
2. one official transcript of all previous undergraduate and graduate coursework;
3. official GRE, MCAT or DAT scores;

4. two or more letters of recommendation from persons familiar with your academic performance; and
 5. for foreign students, official TOEFL scores.
- Send to the Director of Graduate Studies, Department of Biology, University of Louisville, Louisville, KY 40292:

- a completed departmental application (Information Form), found at louisville.edu/a-s/biology

Deadline for completed applications to be reviewed are:

- July 15 for Fall admission,
- December 1 for Spring admission, and
- April 15 for Summer admission.

The official notification of admission or denial will come from the Graduate School based upon a recommendation from the Department of Biology.

Notification of acceptance does not carry with it the promise of financial support. All students admitted to the program will be considered for Graduate Teaching Assistantship (GTA) support. These are awarded by the Graduate Committee of the Department of Biology to meet instructional needs and enhance the educational experience of students. A monthly stipend, tuition remission, and health insurance are provided by the GTA award. All applicants selected will be notified by e-mail and hardcopy letter.

Curriculum

Requirements for the Ph.D. degree in Biology

	Hours	Total
One course to be selected by the student's committee from each Foundations in Biology category:		
Biostatistics	4	
Evolutionary Biology (courses that cover the evolutionary history and/or phylogenetic relationships of molecules or organisms)	4	8
Two courses to be selected from within an Area of Focus:		

A. Ecology, Evolution and Behavioral (EEB) Biology Focus Area:

Population and Community Ecology	4	
Ecosystem Ecology or Behavior	4	16

B. Molecular, Cellular and Developmental (MCD) Biology Focus Area:

Genetics/Cellular (courses that discuss the biochemistry and molecular genetics of life or describe the cell as the structural and functional unit of life)	4	
Physiology (courses that discuss life processes at the level of the organism)	4	16
Advanced Biology Electives	16	32
Dissertation Research	9	41

Departmental Faculty

Ronald D. Fell

Chair

Professor

Ronald M. Atlas

Dean, Graduate School

Professor

Gary A. Cobbs

Professor

Lee A. Dugatkin

Professor

Sarah Emery

Assistant Professor

Paul W. Ewald

Professor

William D. Pearson

Professor

Michael H. Perlin

Professor

Margaret M. Carreiro

Associate Professor

Perri K. Eason

Associate Professor

Hwa Seong Jin
Assistant Professor

Arnold J. Karpoff
Associate Professor

Martin G. Klotz
Associate Professor

Joseph M. Steffen
Associate Professor

James E. Alexander
Assistant Professor

Cynthia Corbitt
Assistant Professor

Awdhesh Kalia
Assistant Professor

Jennifer Mansfield-Jones
Assistant Professor

Susanna K. Remold
Assistant Professor

David J. Schultz
Associate Professor

Charles V. Covell, Jr.
Emeritus

William S. Davis
Emeritus

Roger G. Lambert
Emeritus

Varley E. Wiedeman
Emeritus

Master of Science in Chemistry

Major: CHEM

Degree Awarded: M.S.

Unit: GA

Program Webpage: louisville.edu/a-s/chemistry/

Program Information

The Department of Chemistry, in the College of Arts and Sciences, offers graduate programs leading to the M.S. and Ph.D. degrees in chemistry with options in analytical chemistry, biochemistry, biomolecular structure and engineering, inorganic chemistry, organic chemistry, physical chemistry, and chemical physics.

The general requirements for admission to the Graduate School, for admission to candidacy, and for the master's degree are stated in the General Information section of this catalog. The following additional provisions apply to the program leading to the Master of Science in Chemistry.

Program Admission Procedure

Students seeking a graduate degree in chemistry should meet the following requirements:

1. A B.A. or B.S. degree in chemistry or in a related field such as physics, engineering, or mathematics. It is expected that students will have obtained a background in chemistry equivalent to 36 hours of undergraduate coursework. Students planning to pursue graduate study in chemical physics may substitute some of the chemistry hours with advanced courses in physics or mathematics beyond those required for a B.A. or B.S. in chemistry. Students with inadequate preparation will be required to register for specific courses in the area of deficiency. Some of these courses, subject to approval by the department, may be accepted for graduate credit. Admission to graduate study in chemical physics is made on the recommendation of the entrance committee for that option.
2. A minimum quality point standing of 3.0 on a 4.0 scale.
3. Submission of Graduate Record Examination scores (quantitative and verbal scores totaling at least 1000 with an analytical score of 2.5 or totaling at least 900 with an analytical score of 3.0).

In individual cases, the conditional admission of a student who does not satisfactorily meet the above requirements may be recommended by the department to the Graduate School. If admission is granted, that student will be subject to those conditions specified by the department or Graduate School as being necessary to remedy the conditional admission.

Program Requirements

The requirements for the Master of Science Degree in chemistry are as follows:

1. The general requirements as stated in the General Information section of this catalog.
2. Completion of course curriculum as described in the section on Candidacy for the Ph.D. degree.

3. Students with a native language other than English must show a proficiency in English. This requirement may be met with a grade of "B" in Eng. 101 (or equivalent) or an acceptable score on a standardized test (such as the TOEFL or Michigan test).
4. Acceptable presentation of a one-hour literature seminar on a topic of current chemical interest. This seminar must be presented no later than the fifth semester of graduate studies.

Early Start Program

The Master of Arts in Teaching program in conjunction with the undergraduate programs in Chemistry, Biology, and Mathematics offers a comprehensive and professionally-focused program leading to the degree of M.A.T. Middle or Secondary Education. This early start program enables superior students to receive two degrees within five years. A total of 150 credits are required for the dual degrees: 123 credits of course work devoted toward the baccalaureate degree and 36 credits toward the M.A.T. (nine hours are double counted). This program will be available for students who are entering their junior year. They may take graduate level courses in the College of Education and Human Development (CEHD) in their 4th year.

The current qualifications for the joint degree program have been agreed upon by discipline faculty from the Colleges of Arts and Sciences and Education and Human Development. The criteria vary by discipline.

Chemistry

1. Students must have at least 23 credit hours of chemistry (through CHEM 441 and CHEM 470) with a cumulative GPA of 3.0 in those courses.
2. Applications will be reviewed by the Graduate Committee of the Chemistry Department and the Secondary M.A.T. Screening Committee, the applicant must be approved by both committees.
3. Once approved, the student may take a maximum of nine (9) hours for graduate credit while in undergraduate status, which can also apply to the requirements for the B.A. in Chemistry. All graduate coursework must be approved by the student's M.A.T. faculty advisor.

4. Students enrolling in the accelerated program will be non-thesis students and must adhere to all policies pertaining to Graduate Students.
5. All students must submit an application to the College of Education and Human Development (CEHD) M.A.T. program and meet the admission criteria.

Curriculum

General Requirements - Graduate School

A minimum of 30 semester hours of graduate credit is required. At least 15 semester hours must be in chemistry courses. An overall GPA of 3.0 must be maintained. Details are given in the current "Graduate School Bulletin".

Chemistry Requirements

1. Students must pass at least four graduate courses from at least three of six divisions (or research areas) with a minimum grade of 'C' in any one course. A 'C-' grade is considered unacceptable. The areas are: Analytical Chemistry, Biochemistry, Inorganic Chemistry, Organic Chemistry, Physical Chemistry, and Physics. An overall GPA of 3.0 or greater is required by the Graduate School.
2. Students with a native language other than English must show a proficiency in English. This requirement may be met with a grade of 'B' in Eng. 101 (or equivalent) or an acceptable score on a standardized test (such as the "Michigan test"). A 'B-' in Eng. 101 is considered unacceptable.
3. A one-hour literature seminar on a topic in chemistry of current interest (Chem 695). **The student must present this seminar in the second or third semester of his/her program** (excluding summer).
4. Research: Chem 691-692. A research advisor should be selected by the end of the first semester in the graduate program.
5. Scientific publication is an important element of graduate education and research. Therefore, it is normally expected that a manuscript based on the student's research would have been submitted to a peer-reviewed journal by the time of his/her thesis defense. The student's contribution must be significant to both the scientific content and the manuscript drafting.
6. A written thesis describing the research program is submitted a minimum of seven days

before the defense. The defense consists of a one-hour seminar on the thesis project followed by an oral examination with the Faculty Reading Committee.

Note: Students in the Ph.D. program will be awarded an M.S. degree after successful completion of the Research Seminar and other previous requirements

Doctor of Philosophy in Chemistry

Major: CHEM

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: louisville.edu/a-s/chemistry/

Program Information

The Department of Chemistry, in the College of Arts and Sciences, offers graduate programs leading to the M.S. and Ph.D. degrees in chemistry with options in analytical chemistry, biochemistry, biomolecular structure and engineering, inorganic chemistry, organic chemistry, physical chemistry, and chemical physics.

The general requirements for admission to the Graduate School, for admission to candidacy, and for the doctoral degree are stated in the General Information section of this catalog. The following additional provisions apply to the programs leading to the Doctor of Philosophy in Chemistry.

Program Admission Procedure

Students seeking a graduate degree in chemistry should meet the following requirements:

- A B.A. or B.S. degree in chemistry or in a related field such as physics, engineering, or mathematics. It is expected that students will have obtained a background in chemistry equivalent to 36 hours of undergraduate coursework. Students planning to pursue graduate study in chemical physics may substitute some of the chemistry hours with advanced courses in physics or mathematics beyond those required for a B.A. or B.S. in chemistry. Students with inadequate preparation will be required to register for specific courses in the

area of deficiency. Some of these courses, subject to approval by the department, may be accepted for graduate credit. Admission to graduate study in chemical physics is made on the recommendation of the entrance committee for that option.

- A minimum quality point standing of 3.0/4.0.
- Submission of Graduate Record Examination scores (quantitative and verbal scores totaling at least 1000 with an analytical score of 2.5 or totaling at least 900 with an analytical score of 3.0).

In individual cases, the conditional admission of a student who does not satisfactorily meet the above requirements may be recommended by the department to the Graduate School. If admission is granted, that student will be subject to those conditions specified by the department or Graduate School as being necessary to remedy the conditional admission.

Curriculum

General Requirements - Graduate School

A minimum of 30 semester hours of graduate credit is required. At least 15 semester hours must be in chemistry courses. An overall GPA of 3.0 must be maintained. Details are given in the current "Graduate School Bulletin".

Chemistry Requirements

1. Students must pass at least six graduate courses from at least three of six divisions (or research areas) with a minimum grade of 'C' in any one course. A 'C-' grade is considered unacceptable. The areas are: Analytical Chemistry, Biochemistry, Inorganic Chemistry, Organic Chemistry, Physical Chemistry, and Physics. An overall GPA of 3.0 or greater is required by the graduate school.
2. Students with a native language other than English must show a proficiency in English. This requirement may be met with a grade of 'B' in Eng. 101 (or equivalent) or an acceptable score on a standardized test (such as the "Michigan test"). A grade of 'B-' in Eng. 101 is considered unacceptable.
3. A series of written examinations designed to show a student's in-depth knowledge of the chosen area of concentration. Masters students considering transfer to the Ph.D. program may also take the exams. Students must begin with the first exam of their second

semester. Exams will be given the second week of January, March, May, September, and November. Each division with students actively taking cumulative exams, will write its own exam. Student's may take any available exam, but may only take one exam in a given month. Exams are scored as 0, 1, 2, or 3 points. Students must accumulate 12 points by the end of the 10th consecutive exam to qualify for the Ph.D. program. Students who fail to accumulate 12 points by the end of the 10th exam will be placed in the Masters program.

- The research proposal (RP) is intended to demonstrate the student's ability to develop, explain, and defend research ideas. The proposal may present preliminary results from the student's research and it describes possible future directions. This is not necessarily the work the student intends to complete for their dissertation. Students are encouraged to show their originality and innovation. **The research proposal must be completed prior to the beginning of the 4th year.** Evaluation of the RP is made by the student's graduate advisory committee, which is chaired by the research director.

The RP consists of a written proposal, an oral presentation, and oral examination. The written portion is to be submitted to the committee at least one week prior to the oral portion. The committee may return unsatisfactory written proposals to the student and delay the oral portion until at least one week after an acceptable rewrite is received. A student failing the oral portion may repeat it only one time, at the discretion of the student's graduate advisory committee.

- A one-hour literature seminar on a topic in chemistry of current interest (Chem 695). **The student must present this seminar in the second or third semester of his/her program** (excluding summer).
- Scientific publication is an important element of graduate education and research. Therefore, it is normally expected that prior to the Research Seminar, a manuscript based on the student's research would have been submitted to a peer-reviewed journal. The student's contribution must be substantial to both the scientific content and the drafting of the manuscript. Before completion of the Ph.D. program, a published article and a manuscript submitted

to peer-reviewed journals are expected. It is highly recommended that the student distribute the submitted manuscript (s) to the members of her/his Research Committee.

- A one-hour seminar on the student's dissertation research project is to be **given before the end of the fourth year in the program.** This seminar is intended to help the student organize his/her research efforts, provide the opportunity to present preliminary results on work completed, and to allow the student's research committee a formal setting to evaluate progress and make recommendations. The M.S. degree will be awarded upon successful completion of the research seminar.
- Research: Chem 691-692. A research advisor must be selected in the first semester in the graduate program.

Departmental Faculty

George R. Pack

Professor

Chair

Richard P. Baldwin

Professor

Robert M. Buchanan

Professor

Donald B. DuPré

Professor

Dorothy H. Gibson

Professor

Gerald B. Hammond

Professor

Michael H. Nantz

Professor

Mark E. Noble

Professor

Richard J. Wittebort

Professor

John L. Wong

Professor

M. Cecilia Yappert

Professor

Teresa W. M. Fan

Associate Professor

Craig A. Grapperhaus

Associate Professor

Richard M. Higashi

Associate Professor

Pawel M. Kozlowski
Associate Professor

Frederick Luzzio
Associate Professor

Muriel C. Maurer
Associate Professor

Sergio B. Mendes
Associate Professor

John F. Richardson
Associate Professor

John G. Arnez
Assistant Professor

Aleeta M. Powe
Assistant Professor

Christine V. Rich
Assistant Professor

Heather A. Rypkema
Assistant Professor

Francis P. Zamborini
Assistant Professor

John W. Brown
Emeritus

Thomas H. Crawford
Emeritus

N. Thornton Lipscomb
Emeritus

Gradus L. Shoemaker
Emeritus

K. Grant Taylor
Emeritus

Charles A. Trapp
Emeritus

Master of Arts in Communication

Major: COMM

Degree Awarded: M.A.

Unit: GA

Program Webpage: comm.louisville.edu/

Program Information

The Master of Arts in Communication is a 37-hour program. It includes 22 hours of foundation and core courses, nine hours of electives, and a

six-hour thesis or non-thesis option. The non-thesis option includes a three-hour practicum, with a limit of six hours of practicum credit. At least 19 of the 37 hours must be in courses at the 600 level.

Upon admission to the program, the student will work with the Director of Graduate Studies to establish a plan of study. After the second semester, students choosing the thesis option will select a mentor who will provide guidance for the thesis and selecting two additional faculty to serve on the thesis committee. Students choosing the non-thesis option will select a mentor who will provide guidance concerning the practicum and course selection. Students choosing the non-thesis option will take a written exam administered by the Communication Department faculty.

Applicants need an undergraduate degree in Communication or a related discipline, a 3.0 GPA on a four-point scale, and a 900 on the GRE. Provisional admission is possible for students with lower scores. Other application materials include a copy of university transcripts, a writing sample, a personal statement, three letters of recommendation, an application, and the application fee.

Curriculum

Foundations: (Required of all students) COMM 506 Ethical Problems in Communication COMM 516 Qualitative Communication Research COMM 517 Quantitative Methods in Communication COMM 601 Communication Pro-Seminar (1 hour) COMM 605 Communication Theory & Practice	13 hours
---	----------

<p>Area 1: Interactional Communication (One course) COMM 580 Interpersonal Communication COMM 590 Health Communication COMM 620 Organizational Communication COMM 625 Personality and Communication COMM 650 Corporate Communication COMM 675 Risk Communication</p>	3 hours
<p>Area 2: Integrated Communication (One course) COMM 520 Computer-Mediated Communication COMM 652 Computer-Mediated Communication in Organizations COMM 653 Integrated Marketing Communication Campaigns COMM 654 Public Relations and Crisis Management COMM 660 Selected Topics in Mass Media</p>	3 hours
<p>Area 3: Social Advocacy (One course) COMM 540 Public Communication Campaigns COMM 555 Persuasive Movements COMM 610 Problems of Public Discourse COMM 630 Communication and Multiculturalism COMM 640 Communication in Social Service COMM 651 Conflict Management</p>	3 hours

<p>Electives: Students may concentrate in an area by taking additional area courses as electives. Three hours of Practicum or Directed Reading may be taken beyond the courses taken for a non-thesis option. Three hours may be taken outside of the Communication Department with the consent of the Faculty Mentor. Additional electives may be outside of Communication with consent of the Graduate Director.</p>	9 hours
<p>Thesis (includes oral defense) COMM 698 Thesis Non-Thesis Option COMM 600 Practicum COMM 5xx or COMM 6xx elective</p>	6 hours
Total	37 hours

Pending approval of the department program coordinator, and approval by the Graduate School, a student may transfer up to six hours graduate credit from another institution.

Non-thesis option: Students electing a non-thesis option will complete the 37 hours specified above, with two differences. Students who select the non-thesis option will substitute one 600-level practicum and one elective for the six thesis hours. The non-thesis option also will include a Comprehensive Examination administered by Department Faculty.

Experiential Component

The Master of Arts does not require an experiential component. However, students may choose to do a practicum in a private business, community organization, or government agency that deals with communication. Students may complete the practicum in two ways. A student may turn current work or volunteer experience into a research project, or a student not previously affiliated with the practicum site may develop a project useful to the organization. In both cases, the student will work with a Communication Department faculty member to shape the project and will write a formal paper dealing with the project. Students who choose the practicum will be applying knowledge acquired in Communication

coursework directly to area needs, thus serving the community and helping to build stronger university/community ties.

Departmental Faculty

Julie Berman
 Michael Cunningham
 Vanessa Cunningham
 Lindsay Della
 Margaret D'Silva
 Stuart Esrock
 John Ferré
 Allan Futrell, Chair
 Jennifer Gregg
 Joy Hart
 Greg Leichty
 Selene Phillips
 Steve Sohn
 Robert St. Clair
 William Thompson
 Kandi Walker
 Ede Warner
 Charles Willard
 Shirley Willihnganz

Master of Arts in English

Major: ENGL

Degree Awarded: M.A.

Unit: GA

Program Webpage: coldfusion.louisville.edu/webs/a-s/english/grad.cfm?page=index

Program Information

Mission Statement

The M.A. in English provides graduate training in literatures written in English, linguistics, creative writing, and rhetoric and composition. Goals for the M.A. are that students will 1) gain advanced knowledge of British and American literary traditions, and 2) write a thesis or culminating project in which they initiate and complete specialized research addressing a significant question in literature or rhetoric and composition, or produce a significant body of creative work.

Admission to the M.A. Program

DEADLINES:

M.A. admission with graduate teaching assistantship: Jan. 15

M.A. admission without funding: rolling admission. Applicants should submit all materials at least three weeks prior to the term during which they wish to enroll.

All M.A. degree applicants should present the following documents:

- Complete transcripts of previous undergraduate and graduate work;
- Two academic letters of recommendation (that is, letters from faculty members who can address the applicant's academic performance and potential);
- Score reports on the Graduate Record Examination General Test;
- A sample of critical writing (at least ten pages);
- Applicants who plan to focus on creative writing may submit a sample of their creative work in addition to the required critical essay;
- International students must also submit reports of the TOEFL examination.

Any applicant who wishes to be considered for a Graduate Teaching Assistantship must also submit a GTA application (available at coldfusion.louisville.edu/webs/a-s/english/gtaapplication.pdf). This application should be sent directly to the Department of English. All other application materials should be sent to the Graduate Admissions Office in the Houchens Bldg, Suite 105, Louisville, KY 40292.

Successful applicants for M.A. admission typically present the following credentials, though meeting these minimal requirements is no guarantee of admission:

- A "B" or better average in the major from an accredited college or university;
- A "B" or better average overall from an accredited college or university;
- A score in the 50th percentile or better on the GRE Verbal section;
- Letters of recommendation that give promise of success in the program;
- A writing sample that promises success in the program;
- International students must also present scores of at least 600 on the TOEFL Examination.

tion (paper test) or at least 210 on the TOEFL Exam (computer test).

The Director of Graduate Studies in English reviews all applications and, in consultation with the English Graduate Committee, makes all admission decisions. Complete applications to the Master's program are considered throughout the academic year, though applicants who wish to be considered for graduate teaching assistantships must present all credentials, including the GTA application, by January 15. Applicants with a B.A. in a field other than English, or with fewer than 24 credit hours for an English major, may be eligible for admission to the M.A., but the Graduate Committee may require that such students make up deficiencies on an individual basis.

In extraordinary circumstances, an applicant with incomplete credentials may petition the English Graduate Committee for admission in provisional status. Admission in non-degree status is at the discretion of the English Department Director of Graduate Studies as governed by Graduate School policies.

All applicants must fulfill the general requirements of the Graduate School.

Curriculum

The Master of Arts in English requires 30 hours of academic work at the graduate level. In addition to fulfilling the core requirements, students may take additional work in literary studies, creative writing, or rhetoric and composition.

Required Courses— 15 hours:

- English 601: Introduction to English Studies
- English 691: Contemporary Theories of Interpretation or English 692: Topics in Interpretive Theory
- Two courses in Pre-1800 literature
- One course in Post-1800 literature

Electives – 9-15 hours:

Students may take no more than three 500-level courses. Creative writing courses (including up to six hours of thesis guidance) may total no more than 15 hours.

Students may petition the Graduate Committee to take courses outside the Department of English that are relevant to their individual programs.

Foreign Language Requirement

The student must demonstrate proficiency in an approved foreign language. The foreign lan-

guage requirement must be satisfied before the thesis can be defended. (See the Graduate Program guidelines for more information.)

Admission to Candidacy

Students are admitted to candidacy for the M.A. after they have completed coursework and met the foreign language requirement; they remain master's degree candidates until they complete a thesis or culminating project.

Thesis Option: 24 hours of coursework + 6 hours of Thesis Guidance.

Students who choose this option will be expected to write a critical or creative thesis that is a genuine contribution to the field, show an awareness of current academic practice, and employs methods appropriate to an extended academic project. Students must submit a prospectus and have it approved at least three months before the thesis oral examination is held. Guidelines for writing a prospectus are in the English Department's Graduate Program Guidelines.

Non-Thesis Option: 30 hours of coursework + a culminating project.

Students who choose this option may, as a culminating project, select one of their strongest seminar papers or creative writing projects to revise; the purpose of the project is to give students the opportunity to revise a seminar paper with publication in mind. To this end, students will write a brief prospectus (2-3 pages plus bibliography) detailing the types of revisions they will make to the paper. A screening committee will evaluate the prospectus and, upon its approval, the student will make the necessary revisions under the guidance of a faculty advisor.

Time Limit and Residency for Masters

All work for the M.A. must be completed within six years of admission to the program. The student must complete a minimum of 24 hours at the University of Louisville.

Doctor of Philosophy in English Rhetoric and Composition

Major: ERC

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: coldfusion.louisville.edu/webs/a-s/english/grad.cfm?page=phd

Program Information

Mission Statement

The Ph.D. in Rhetoric and Composition provides graduate training in the history and theory of rhetoric; theory and empirical research in composition; an area of British or American literature; linguistics; and the relation of rhetoric and composition to allied fields (e.g., critical theory, cultural studies, cognitive psychology, educational research). Goals for the Ph.D. are that students will 1) gain specialized and current disciplinary knowledge; 2) write a dissertation in which they initiate and complete specialized research that addresses an original and significant question in rhetoric and composition; 3) acquire experience and expertise as writing teachers.

Admission to the Ph.D.

Openings in the doctoral program are limited; therefore, admission is competitive. All doctoral degree applicants should present the following documents:

1. Complete transcripts of previous undergraduate and graduate work;
2. Three academic letters of recommendation that speak to the applicant's potential for success in a doctoral program; at least one of these should address the applicant's teaching abilities and/or potential;
3. A written statement of no more than a thousand words detailing the applicant's professional goals in the field of rhetoric and composition;
4. Scores on the Graduate Record Examination General Test;
5. A sample of scholarly, critical writing (15-20 pages);

6. International students must also present scores of at least 600 on the TOEFL Examination (paper test) or at least 210 on the TOEFL Exam (computer test);
7. Application for Graduate Teaching Assistantship, available at coldfusion.louisville.edu/webs/a-s/english/gtaapplication.pdf. This application should be sent directly to the Department of English. All other materials should be sent to the Graduate Admissions Office in Houchens Building.

The English Graduate Committee reviews applications for the doctoral program in rhetoric and composition and makes all admission decisions. Applicants must have a Master's degree at the time of matriculation. Completed applications are due no later than January 15th for Fall admission only.

All applicants must fulfill the general requirements of the Graduate School.

Curriculum

All doctoral students are expected to complete a minimum of 51 graduate hours, distributed as follows:

	Semester Hours	Total
Required (12 hours):		
ENGL 602 , Teaching College Composition	3	
ENGL 620 , Research in the Composing Process	3	
ENGL 689 , Directed Reading for Comprehensive Preliminary Exams	3	
ENGL 691 , Contemporary Theories of Interpretation or ENGL 692, Topics in Interpretive Theory	3	12

Additional Requirements (15 hours from the following categories):		
Pedagogy and Program Administration	3	
Rhetoric	3	
Literature (one creative writing course may be used to fulfill the literature requirement; students may also take a second theory course--in addition to the required course listed above--in partial fulfillment of the literature requirement)	9	15
Electives (12 hours):		
Choose from offerings in Rhetoric and Composition . One elective may be taken outside these offerings, including a course outside the department		12
Dissertation (690)	12	12
Minimum Total		51

Ph.D. Language Requirement

Each doctoral student must demonstrate proficiency in one foreign language and either a second foreign language, an advanced level of proficiency in the first foreign language, or a research or retrieval skill (ordinarily statistics or a computer language) approved by the Graduate Director.

Time Limit and Residency for Ph.D.

All work for the Ph.D. must be completed within six years of admission to the program.

A year of full-time residency in the English doctoral program consists of the completion of two consecutive semesters of nine hours each.

For students holding Graduate Teaching Assistantships, a year of full-time residency in the English doctoral program is eighteen semester hours within a single academic year. Students ordinarily take nine hours of course work and teach six hours in the fall and spring terms, though some choose to take two seminars plus three dissertation hours during some semesters.

Professional Requirements

Sometime during their tenure in the doctoral program, students must participate in a year-long supervised teaching-intern program. Intern experience may include teaching in regular first-year and advanced writing courses and tutoring in the Writing Center. Students who wish to complete their intern experience at another institution must make specific arrangements to do so with the Director of Graduate Studies in English. Such arrangements require the approval of the English Graduate Committee.

Graduate Teaching Assistants automatically fulfill the professional requirement once they have completed one successful year as a Graduate Teaching Assistant.

Comprehensive Preliminary Examination

When students have completed coursework, satisfied foreign language requirements, and received the approval of the Graduate Committee, they may sit for the Comprehensive Preliminary Examinations. (See the Graduate Program Guidelines for a detailed explanation of these examinations.)

Admission to Candidacy

Students will be admitted to candidacy for the Ph.D. after they have completed coursework, met the foreign language and professional requirements, and passed the comprehensive preliminary examinations; they remain doctoral degree candidates until they complete the dissertation.

Dissertation

The doctoral dissertation requires the equivalent of a full year of graduate work and involves registration in at least 12 credit hours in English 690.

The Dean of the Graduate School, upon the recommendation of the Director of Graduate Studies in English, in consultation with the student, will appoint the dissertation director and reading

committee. Proof that the prospectus has been approved must be submitted to the Graduate School at least nine months before the final dissertation oral examination.

Guidelines for writing the dissertation prospectus are included in the English Department's Graduate Program Guidelines. The dissertation will be submitted, in the form prescribed by the Graduate School (see graduate.louisville.edu/pubs/theses-dissertations/ for the current guidelines), not less than six weeks before the end of the term in which the doctoral degree is to be conferred.

Final Oral Examination

The defense of the dissertation will be scheduled at least three weeks before the end of the term. The dissertation will then be revised according to the dissertation committee's recommendations. One copy shall be submitted to the Graduate School and one bound copy to the Department of English. Along with the dissertation, the candidate shall submit an abstract for publication in Dissertation Abstracts.

Departmental Faculty

Chair

Susan Griffin, Professor

Professors

Dale B. Billingsley, Associate University Provost

Beth Boehm, Vice Chair

Thomas B. Byers

Geoffrey A. Cross

Julia C. Dietrich

Alan C. Golding

Dennis R. Hall

Suzette A. Henke, Thruston B. Morton, Sr. Professor

Bruce Horner, Endowed Chair of Rhetoric and Composition

Debra Journet

Min-Zhan Lu

Estella C. Majozo

Carol Mattingly

Sena J. Naslund

Jeffrey T. Skinner

Associate Professors

David Anderson

Matthew Biberman

Karen Chandler

Paul F. Griner, Director of Creative Writing

Karen Hadley

Aaron Jaffe

Karen A. Mullen

Glynis Ridley

Mary I. Rosner, Director of the Writing Center

Susan Ryan, Director of Graduate Studies

Ann Elizabeth Willey, Director of Undergraduate Studies

Bronwyn Williams, Director of Composition

Joanna Wolfe

Assistant Professors

Karen Kopelson

Brian Leung

Gabriela Nuñez

Annette Powell

Andrew Rabin

Elaine Wise, Chair of Humanities

Emeritus/Emerita

Lucy M. Freibert

Robert Miller

Harold E. Richardson

Mary Ellen Rickey

Thomas A. Van

Master of Arts in French, Language and Literature

Major: FREN

Degree Awarded: M.A.

Unit: GA

Program Webpage: modernlanguages.louisville.edu

Program Information

Mission Statement

French faculty seek to give graduate students a working knowledge of French and knowledge of the place of French in the world.

Program Information

The Master of Arts in French, Language and Literature requires 30 hours of academic work at the graduate level.

It is possible to complete this program as part of an accelerated B.A./M.A. program in French. Students may consult with the French advisor to take courses in place of the required courses listed below. Students must complete a minimum of 24 hours at the University of Louisville. It is recommended that students take FRE 611 during their first semester in the program and FRE 699 during their last semester in the program.

As part of their graduate program, students are required to spend at least one month in a French-speaking country. Thanks to the Modern Languages Fund, it is possible for the Department of Classical and Modern Languages to assist students financially so as to make a one-month stay in a French-speaking country a reality. The University of Louisville has a long-standing Work-Exchange Program with the city of Montpellier, France, where students spend a month each summer. As with any requirement, after consultation with the French advisor, it may be possible to find an appropriate substitution for this requirement.

Admission Procedures

Admission is on a rotating basis. Students must submit the following: application to graduate school and application fee, transcripts from all colleges/universities where undergraduate and/or graduate credit was earned, two letters of recommendation and GRE exam scores.

Students may begin the program in Fall (preferably), Spring or Summer.

Curriculum

Course Description		Sem Hrs
FRE 523	Advanced Communication Skills	3
FRE 524	Practice and Theory of Translation	3
FRE 531	Special Topics in Literature and Cultural Studies (taught during the summer by a visiting Modern Languages Fund professor)	3
FRE 552	French Work Exchange Research or approved substitute	3
FRE 601	Studies in French Linguistics	3
FRE 602	Studies in French Culture	3
FRE 603	Studies in French Media	3
FRE 604	Studies in French Literature	3
FRE 611	Teaching and Research Methods in French	3
FRE 699	Independent Research. This course is envisaged as a capstone course for this program, with opportunities for the professor to evaluate the language skills and information base of individual students.	3
Total Credit Hours		30

Accelerated B.A./M.A. Program

Students who wish to pursue an accelerated non-thesis Master's Degree will be allowed to apply up to nine (9) hours of undergraduate coursework taken for graduate credit. An additional twenty-one (21) hours of graduate coursework taken in addition will constitute the minimum number of credit hours for obtaining the non-thesis Master's in the accelerated program.

The guidelines for this combined program are as follows:

- Application forms are available in the Department of Classical and Modern Languages office (Humanities 326) or from the French Advisor. It is strongly recommended that at least one of the supporting letters submitted with the application be from a French faculty member.
- Students must (A) apply for admission to this program no later than the end of the Junior year (a total of 90 degree applicable hours) and, (B) must have completed French 320, 321, 322 with grades of "B" or better.
- Application will be reviewed by the French faculty. A 3.35 overall grade point average and acceptable test scores on the GRE will be required for admission to the program.
- Students may take a maximum of nine (9) hours for graduate credit, which will also apply to the requirements for the baccalaureate degree in French. The nine hours must be from the following list: FRE 523, 524, 531, and 552.
- Students who enroll in the accelerated program will be non-thesis students and must adhere to all policies pertaining to Graduate Students in the Department of Classical and Modern Languages.

Departmental Faculty

Wendy Pfeffer

Professor

Coordinator, Graduate Education for A&S

Rhonda Buchanan

Professor

Director, Latin American Studies

William L. Cunningham

Professor

Alan C. Leidner

Professor

Frank Nuessel

Professor

Sydney Schultze

Professor Emerita

Aristofanes Cedeño

Associate Professor

Academic Dean, Governor's Scholars Program

Gregory Hutcheson

Associate Professor

Mary Makris

Associate Professor

Manuel Medina

Associate Professor

Regina Roebuck

Associate Professor

Lisa Wagner

Associate Professor

Matthieu Dalle

Assistant Professor

John Greene

Professor

Clare Sullivan

Assistant Professor

Roy L. Ackerman

Professor Emeritus

Wendy Yoder

Visiting Assistant Professor

David R. Hume

Professor Emeritus

Carmen Cedeño

Visiting Assistant Professor

Hans Peterson

Professor Emeritus

Marilyn Schuler

Professor Emerita

Master of Arts in History

Major: HIST

Degree Awarded: M.A.

Unit: GA

Program Webpage: louisville.edu/a-s/history/

Program Information

General Information

The Master of Arts program in history provides advanced training in historical theory, investigation, and writing. Among other things, it prepares students for further graduate studies in history, employment in educational institutions or in public history, and careers in law and government.

The varied specialties of our faculty, combined with the structure of the program, allow our students to acquire a worldwide vision of history. All students must focus their studies in any two of

the following areas of emphasis, one as their major and the other as their minor concentration: Greater Atlantic World, Greater Mediterranean Basin, Asia-Pacific Rim, and Western Pacific and Indian Ocean World. This both allows students flexibility in course scheduling, and encourages cross-cultural and interdisciplinary scholarship.

Program Admission

Normally, applicants to the M.A. program in history must have:

- a minimum undergraduate GPA of 3.0 on a 4.0 point scale (a GPA based on a 3.0 scale will be converted to a 4.0 scale)
- 21 undergraduate credit hours in history, with a minimum GPA of 3.0
- a combined score of at least 1000 on the Verbal and Quantitative sections of the Graduate Records Examination (GRE)

Students with an undergraduate GPA of between 2.5 and 2.99 may be accepted conditionally into the program at the discretion of the Director of Graduate Studies, provided they meet all other requirements for admission. Conditional admittance requires that the student maintain a GPA of 3.0 in the first 6 hours of graduate coursework.

Students with fewer than 21 undergraduate hours in history will be required to take post-baccalaureate undergraduate courses to bring their total undergraduate hours in history to 21.

At the discretion of the Director of Graduate Studies, non-degree students may be admitted to pursue graduate coursework.

Program Admission Procedures

Applicants must submit the following materials to the University of Louisville Office of Graduate Admissions:

- a completed graduate application (available online at graduate.louisville.edu/app/); there is an application fee of \$50
- official transcripts verifying the receipt of a B.A. from an accredited institution
- scores from the Graduate Records Examination
- at least two letters of recommendation from individuals familiar with the applicant's academic and/or professional capabilities and potential
- a statement, not exceeding 500 words in length, addressing the question "Why are you pursuing an M.A. in history?"

All application materials should arrive in the Office of Graduate Admissions and the Department no later than thirty days before the first day of classes of the semester in which the applicant plans to begin graduate studies.

For a list of the graduate assistantships, scholarships, fellowships and internships, see www.louisville.edu/a-s/history/scholarship.html. Applications for these awards are normally due on April 1.

Curriculum

Program Requirements

Graduate students in this Department normally take 9 hours of coursework per semester (three courses). With the approval of the Director of Graduate Studies, a student may take up to 12 hours (four courses) in a semester. During a student's graduate program, a total of 6 hours of coursework may be taken outside the Department of History, provided it is directly relevant to the student's academic program and has been approved by the Director of Graduate Studies. Except with the approval of the Director of Graduate Studies, no more than 6 hours of directed studies or independent studies (HIST 501, 502, 601, 602) may be applied to an M.A. in History. No pass-fail courses may be applied to an M.A..

If a student's cumulative GPA falls below 3.0, he or she is considered on academic probation, and may be dismissed from the M.A. program. A non-degree student who fails to maintain an average of 2.0 will not be allowed to continue taking graduate courses.

For M.A.-level work in certain areas, knowledge of foreign languages or knowledge of other specialized research tools may be required.

Students will be allowed to transfer up to 6 hours of appropriate coursework from outside the University.

In consultation with the Director of Graduate Studies, each candidate for the M.A. in History will select areas of major and secondary emphasis. The program of study must be approved by the Director, normally before the student enrolls for the second semester of work. The areas of emphasis are:

- Greater Atlantic World, including Europe, Africa, and the Americas.
- Greater Mediterranean Basin, including Europe, Africa, and the Middle East.

- Asia-Pacific Rim, including South Asia, East Asia, Pacific, and the Americas.
- Western Pacific and Indian Ocean World, including East Asia, South Asia, Africa, and the Middle East.

Students may choose to complete the M.A. by thesis, by research papers, or by examinations.

Thesis option: Completion of 24 credit hours of coursework and a thesis. 15-18 hours of coursework must be in the major area of emphasis, and 6-9 hours in the secondary area; one -six hours may be electives. At least 12 hours of coursework must at the 600 level, with at least nine of these hours in the major area of emphasis. The thesis must be in the major area of emphasis. Following an oral defense, it must be approved by a thesis committee, which consists of the thesis director and at least two other faculty members, one of them from another department. The committee must be approved by the Director of Graduate Studies and the Graduate School.

Research paper option: Completion of 33 credit hours of course work and two research papers, each 25-35 pages. 18-21 hours of coursework must be in the major area of emphasis, and 9-12 hours in the secondary area; one-six hours may be electives. At least 18 hours of coursework must be at the 600 level, with at least 15 of these hours in the major area of emphasis. One research paper will normally be in the major area of emphasis, and one in the minor area. A committee will evaluate the written work and conduct an oral examination on the two papers and the relevant areas of history. The committee will consist of three faculty members, normally the two faculty members who directed the research papers and a third faculty member who is usually in the Department of History. The committee must be approved by the Director of Graduate Studies.

Examination option: Completion of 33 credit hours of course work and two written examinations. 18-21 hours of coursework must be in the major area of emphasis, and 9-12 in the secondary area; one-six hours may be electives. At least 18 hours of coursework must be at the 600 level, with at least 15 of these hours in the major area of emphasis. One examination will be in the major area of emphasis, and one in the minor area. A committee will evaluate the written examinations, and conduct an oral examination on their content and the relevant areas of history.

The committee will consist of three faculty members, normally the two faculty members who administered the examinations and a third faculty member who is usually in the Department of History. The committee must be approved by the Director of Graduate Studies.

Accelerated B.A./M.A.

This program allows a history major to use a maximum of six hours of graduate course work towards both a B.A. and an M.A.. After completing the undergraduate program and receiving a BA, the student will enter the graduate program and complete the remaining requirements for an M.A..

To be considered for admission to the accelerated program, students must:

- have a minimum overall grade point average (GPA) of 3.0 and a GPA of 3.35 in history
- complete an application for admission to the graduate program (including Graduate Record Examination scores (GRE) and two recommendations) no later than the end of the junior year (application details are described below)

In addition, students must retain a GPA of 3.35 in history (have a B+ in graduate history courses) during their senior year to remain in the program.

Departmental Faculty

Bruce F. Adams

Professor

Ann T. Allen

Professor

Mark E. Blum

Professor

John T. Cumbler, Jr.

Professor

Benjamin T. Harrison

Professor

Robert B. Kebric

Professor

Thomas C. Mackey

Professor

Justin A. McCarthy

Professor

Lee Shai Weissbach

Professor

Blake R. Beattie

Associate Professor

Christine T. Ehrick
Associate Professor

Tracy E. K'Meyer
Associate Professor
Vice-Chair

John E. McLeod
Associate Professor
Chair

Karen E. Spierling
Associate Professor
Director of Graduate Studies

Bruce M. Tyler
Associate Professor

Jonathan R. Ziskind
Associate Professor

Daniel Krebs
Assistant Professor

Scott C. Levi
Assistant Professor

Yuxin Ma
Assistant Professor

Raphael C. Njoku
Assistant Professor

Master of Arts in Humanities

Major: HUM

Degree Awarded: M.A.

Unit: GA

Program Webpage: louisville.edu/a-s/humanities/

Program Information

The Humanities Division of the College of Arts and Sciences offers three concentrations leading to the degree of Master of Arts. Procedures and standards of admission to the degree program are given in the General Information section of this catalog.

For the traditional concentration, the applicant will be expected to have an undergraduate background of some depth in at least two of the following disciplines: art history, literature, classical and modern languages, linguistics, music history, philosophy, theatre arts, and religious studies, or

in one of the following interdisciplinary cultural studies periods: ancient, medieval-renaissance, early modern (17th and 18th centuries) or modern. Those who do not meet this requirement will be required to take undergraduate courses before admission is granted.

For the concentration in Humanities and Civic Leadership, the applicant will be expected to have worked in a profession for five years (unless the applicant has completed another graduate or professional degree program or is enrolled in the Joint J.D./M.A.HUM program). Scores from the GMAT, LSAT, MCAT, or other professional examinations may be substituted for the GRE General Test. A 1000-word Statement of Intent must be submitted to the Humanities Graduate Advisor before the applicant will be considered for admission.

For the concentration in Linguistics and the Humanities, which is a non-thesis option with a focus on the study of language, the applicant should have an undergraduate background which includes courses in linguistics. The second discipline or area of emphasis will be approved by the Graduate Advisor.

Curriculum

Traditional M.A. concentration (thesis or non-thesis option):

1. A total minimum of 30 semester hours as follows:
 - 12-15 semester hours in one of the following areas:
art history, literature, classical and modern languages, music history, philosophy, theatre arts, religious studies, ancient studies, medieval-renaissance studies, early modern (17th and 18th century) studies, or modern studies;
 - 3 semester hours in methodology (HUM 609 or 610 or appropriate substitute approved by the chair);
 - 6 semester hours in Thesis Guidance (HUM 645 A-F) or three semester hours in directed study project;
 - 9-12 semester hours in second discipline/area.
2. A minimum of 15 semester hours must be in courses at the 600 level, excluding thesis or directed study hours.

3. Students who do not have one of the Humanities 591-596 sequence in their undergraduate record will be required to take one of these as part of their electives.
4. Pass a competency exam in French, German, Spanish, or an approved alternate foreign language.
5. An oral examination covering the content of the thesis.

6. 3 hours in Interdisciplinary Seminar in Humanities and Civic Leadership (636)
7. No foreign language requirement.
8. Demonstrated writing proficiency is required for admission.

*This program is also offered for a dual degree with the Law School (J.D./M.A.HUM). See the catalog of the Brandeis School of Law for details.

Concentration in Linguistics and the Humanities: non-thesis (minimum of 30 hours)

1. 15 credit hours of Linguistic coursework, three hours in each of the 5 areas:

Introduction to Linguistics: Required
LING 518 Foundations of Language

Language and Culture: Choose
ENG 523 History of the English Language
LING 621 Sociolinguistics
LING 623 Culture as the Basis of Foreign Language Teaching
LING 630 Language and Culture

Language and Structure
ENG 522 Structure of Modern American English
LING 535 Applied Linguistics for English Teachers
LING 603 Syntax
LING 606 Historical and Comparative Linguistics
LING 610 Phonetics and Phonology

Language and Cognition: Choose 1
LING 524 Psycholinguistics
LING 622 Psychology of Second Language Learning and Teaching
LING 624 Language and Cognition
LING 641 Recent Philosophy of Language

Any 500-600 level elective course in Linguistics, not already chosen: Choose 1
LING 521 Teaching Techniques in Foreign Language
LING 590 Special Topics in Linguistics
LING 600 Independent Study
LING 605 Summer Workshop for Foreign Language Teachers
LING 620 Special Topics in Foreign Language Education
LING 625 The Teaching of English as a Second Language
LING 690 Seminar in Linguistics

2. 9 credit hours in a second humanities discipline or area

Traditional M.A. with Thesis	Traditional M.A.: Non Thesis
(minimum of 30 hours)	(minimum of 30 hours)
12-15 hours in 1 discipline/area	12-15 hours in 1 discipline/area
9-12 hours in 2nd discipline/area	9-12 hours in 2nd discipline/area
3 hours in Methods	3 hours in Methods
6 hours in Thesis	3 hours of Directed Study Project
Foreign Language Competency**	Foreign Language Competency**
Example:	Example:
12 hours in Philosophy	15 hours in Philosophy
9 hours in Art History	9 hours in Literature
3 hours of HUM 510/610	3 hours of HUM 609
6 hours of thesis	3 hours of Directed Study Project
Foreign Language Competency**	Foreign Language Competency**

Concentration in Humanities and Civic Leadership: non-thesis* (minimum of 30 hours):

1. 12 hours in one discipline/area
2. 3 hours in Methods (609 or 610)
3. 3 hours in second discipline/area
4. 6 hours in Internship (650)
5. 3 hours Direct Study Project (655)

3. 3 credit hours in methodology: Humanities 609 or 610
4. 3 credit hours in Directed Study Project: Humanities 655
5. Foreign Language Competency
6. An Oral Examination will cover the contents of the Directed Study Project
7. A minimum of 15 semester hours must be in courses at the 600 level, excluding HUM 655, The Directed Study Project.

For students who are pursuing an ESL (English as a Second Language) Endorsement, the above M.A. Concentration allows ESL endorsement coursework to count toward the degree. For more information on the ESL endorsement requirements, see www.louisville.edu/a-s/iesl/Endorsement

Accelerated B.A./M.A. in Humanities

Students who wish to pursue an accelerated Masters degree, will be allowed to apply to the Baccalaureate degree up to 9 hours of coursework taken for graduate credit. Twenty-one (21) hours of graduate coursework in addition will constitute the minimum number of credit hours for obtaining the M.A.. The guidelines for the Accelerated (B.A./M.A. in Humanities) are as follows:

1. Students must apply no later than the end of the junior year for admission to the accelerated program.
2. A minimum overall grade point average and major grade point average of 3.35 will be required for admission to and for retention in the program.
3. Student must complete the GRE and fill out the Humanities Division application for the accelerated BA/M.A. in Humanities.
4. Student may take a maximum of 9 hours for graduate credit, which will also apply to the requirements for the baccalaureate degree in Humanities.
5. The accelerated BA/M.A. in Humanities will be offered for the Traditional Concentration and for the Linguistics Concentration, but not for the Concentration in Humanities and Civic Leadership.
6. Students who enroll in the accelerated BA/ M.A. in Humanities may elect the thesis or

non-thesis option, which ever is appropriate to the concentration and course of study.

7. All students in the program will take either HUM 609 or HUM 610 to fulfill the "theory requirement".
8. All requirements remain the same, including the foreign language requirement.

Doctor of Philosophy in Humanities

Major: HUM
Degree Awarded: Ph.D.
Unit: GA
Program Webpage: louisville.edu/a-s/humanities/PHD/

Program Information

Admission to the Ph.D. Program:

1. Completion of a Master's degree or an equivalent number of graduate credits (30) prior to admission.
2. Complete transcripts of undergraduate and graduate work.
3. Reports on the Graduate Record Examination (GRE) are required.
4. Submission of three letters of recommendation about the applicant's potential success in a doctoral program.
5. A written statement of intent of no more than a thousand words detailing the applicant's professional goals.
6. All applicants must fulfill the general requirements of the Graduate School.

Curriculum

All doctoral students are expected to complete a minimum of 48 hours beyond the Masters degree distributed as follows:

Core Required Courses	Total credit hours: 21
Chronological Sequence:	Credit Hours: 6

*HUM 661: Humanistic Studies I	3
*HUM 662: Humanistic Studies II	3
Theory and Methods:	Credit Hours: 3
*HUM 609: Interdisciplinary Theory: Arts and Humanities	
Interdisciplinary Topics Seminars:	Credit Hours: 6
*HUM 671: Interdisciplinary Seminar	3
*HUM 672: Interdisciplinary Seminar	3
Internships:	Credit Hours: 3
*HUM 690: Doctoral Internship	

Capstone Course: **Credit Hours: 3**

*HUM 699: Interdisciplinary Symposium

AREAS OF CONCENTRATIONS Total credit hours: 18

1. Aesthetics and Creativity - Hum. 681 Topics in Aesthetics and Creativity
2. Studies in Culture - Hum. 682 Topics in Studies in Culture

Graduate courses housed within departments in the Humanities Division meet the area concentration requirements in the primary and secondary areas of concentration: (1) Aesthetics and Creativity; and (2) Studies in Culture.

A student in consultation with his/her Supervisory Committee will select courses appropriate to his/her course of study. No more than 12 hours of the 18 hours required in primary and secondary areas of concentration may be taken in one discipline.

Primary Area Credit hours: 12

Creativity and Aesthetics OR Studies in Culture

Secondary Area Credit hours: 6

Creativity and Aesthetics OR Studies in Culture

Dissertation Research: Credit hours: 9

*HUM 700

Complete program credit hours: 48

Students may supplement the minimum of 48 hours with additional coursework in a specific discipline or additional hours for the dissertation.

Departmental Faculty

Faculty: All Division of Humanities faculty members who hold Graduate Faculty appointments

Elaine O. Wise

Assistant Professor and Chair of Humanities Traditional M.A. Concentration Advisor

Annette Allen

Associate Professor Director of Humanities Ph.D and Humanities & Civic Leadership M.A. Concentration Advisor

Mary Ann Stenger

Professor Religious Studies Graduate Advisor

Tatjana Soldat-Jaffe

Assistant Professor Linguistics and Humanities M.A. Concentration Advisor

Arthur J. Slavin

Professor Emeritus

Master of Science in Administration of Justice

Major: ADJ

Degree Awarded: M.S.

Unit: GA

Program Webpage: louisville.edu/a-s/ja

Program Information

The goals of the Department of Justice Administration are for students to achieve a sound liberal arts education and a specialized understanding of the criminal justice system, criminal behavior, legal processes and the relationship of these phenomena to society.

Graduate studies in the Department of Justice Administration provide students with advanced social and behavioral science skills as well as a detailed and thorough understanding of crime,

criminal justice and related processes. Graduates of this program are prepared to continue advanced studies in criminal justice or other social sciences and to assume mid and upper-level leadership positions within criminal justice programs and agencies.

The interdisciplinary nature of the program maintains the dynamic posture that allowed this crime-related discipline to emerge and to mature quickly and successfully. Graduate students are given latitude in choosing elective courses in the Master of Science in the Administration of Justice. Elective courses related to the student's program of study are selected from the resources of the entire University. Courses in social work, public administration, law, business, and the various departments of the College of Arts and Sciences are possible electives that the student and his or her advisor may consider. With proper selection, the electives can complement the core criminal justice courses and produce a balanced, interdisciplinary program which is tailored to meet specific professional and career goals.

The combination of three elements, the degree programs, the Southern Police Institute and the Institute for Community Security and Public Safety, makes the program in Justice Administration a unique blend of theory and practice.

The Southern Police Institute, one of the oldest, most respected police management and administration educational programs in the United States.

The Institute for Community Security and Public Safety, formerly The National Crime Prevention Institute, the only center in the country devoted exclusively to training and educating crime prevention and loss prevention specialists and managers.

Our programs are offered in two formats:

- evening courses on campus, and
- on-line via the internet

Admissions

Anyone seeking admission to the Graduate School, University of Louisville, for purposes of pursuing the Master of Science in the Administration of Justice must provide the following:

- Transcripts of all undergraduate and graduate work completed. The minimum requirement for admission is the Baccalaureate degree or its equivalent.

- Two letters of recommendation from individuals who can speak to the applicant's academic or professional capabilities.
- Scores on the General Test Section of the Graduate Record Examination (GRE).
- An original essay identifying the applicant's background, professional interests and goals. The essay should be 300-500 words and should allow the faculty to better understand the applicant's motivation and potential for graduate work.
- Completed application for admission to the Graduate School, University of Louisville at . . . graduate.louisville.edu/apply/
- \$50.00 application fee, check or money order made payable to the University of Louisville.

The faculty in Justice Administration consider applications and supporting materials and recommend a disposition. The minimum requirements for admission to degree status are a grade point average of at least 2.75 on a 4-point scale in senior-college courses and at least 900 on the combined verbal and quantitative scores of the GRE as well as a positive evaluation of the letters of recommendation and the essay.

General Requirements

The general requirements for the Master of Science degree in the Administration of Justice are the completion of at least 36 graduate credit hours. The completion of these credit hours may include either thesis or non-thesis option. The thesis option requires the completion of 30 semester hours of graduate level courses and a thesis for a total of 36 credit hours. The non-thesis professional paper option requires the completion of 33 semester hours of graduate courses plus a professional paper for a total of 36 credit hours. At least a 3.0 grade average must be maintained for all graduate coursework. Core or specific courses required for graduation total 15 semester hours with the remaining courses being electives. The composition of the list of elective courses will vary from student to student depending on the student's undergraduate major, aspirations and background.

The degree is offered in two formats, our traditional on campus classes and also via the internet, see department web-page for more information. Students may choose either format or a combination of both methods of delivery.

Curriculum

Core Courses	Semester Hours	
	Thesis Option	Prof Paper Option
JA 621 , The Criminal Justice System	3	3
JA 625 , Legal Aspects of Criminal Justice Management	3	3
JA 643 , Theories of Crime and Delinquency	3	3
JA 649 , Applied Statistics in Criminal Justice	3	3
JA 650 , Research Methods in Criminal Justice	3	3
Electives (to be approved by advisor)	15	18
Thesis	6	
Professional Paper		3
Minimum Total	36	36

Departmental Faculty

Deborah G. Keeling

Professor

Chair

Gennaro F. Vito

Professor

Vice-Chair & Graduate Coordinator

J. Price Foster

Professor

Richard A. Tewksbury

Professor

William F. Walsh

Professor

Director, Southern Police Institute

Terry D. Edwards

Associate Professor

Elizabeth L. Grossi

Associate Professor

Thomas W. Hughes

Associate Professor

George E. Higgins

Assistant Professor

Theresa C. Hayden

Lecturer

Geetha Suresh

Lecturer

Alex Ferguson

Lecturer

B. Edward Campbell

Emeritus

Ronald M. Holmes

Emeritus

John C. Klotter

Emeritus

Graduate Certificate in Police Executive Leadership Development

Program Information

Admission to the Program

Applicants must meet the standards for conditional admission to the Master of Science in Administration of Justice, including an earned Bachelor's degree and appropriate letters of recommendation. They must also achieve a qualifying score on the Southern Police Institute's admission examination and be recommended by the Chief Executive Officer of their supporting agency. Applications are reviewed for eligibility by the Southern Police Institute's faculty who are members of the University's Graduate Faculty and the Department of Justice Administration.

The curriculum of the Administrative Officers Course (AOC) of the Southern Police Institute may be taken only by students regularly enrolled in the Institute.

Curriculum

The curriculum of the Administrative Officers Course (AOC) of the Southern Police Institute may be taken only by students regularly enrolled in the Institute.

Courses	
• JA 576	3
• JA 612	3
• JA 625	3
• JA 665	3
Total Hours	12

The Southern Police Institute offers two twelve-week courses annually.

Departmental Faculty

William F. Walsh

Professor
Director of Southern Police Institute

Gennaro Vito

Professor

Terry Edwards

Associate Professor

Alex Ferguson

Associate Director of Southern Police Institute

Master of Arts in Mathematics

Major: MATH

Degree Awarded: M.A.

Unit: GA

Program Webpage: www.math.louisville.edu/graduate/index.html

Program Information

Appropriate preparation for an Master of Arts in Mathematics is undergraduate coursework equivalent to a major in mathematics from an accredited university. This should include a one-year course in either analysis or abstract algebra, equivalent to Mathematics 501-502 and 521-522 at the University of Louisville. Candidates who have not taken both must complete them in the second year of their M.A. program.

Curriculum

Degree Requirements:

Candidates must complete a program of study approved by the department. All courses (maximum of 12 credit hours total) taken outside the

Department of Mathematics must have prior departmental approval.

All students must complete a minimum of 30 credit hours of non-thesis graduate credit, including at least 15 credit hours in the Department of Mathematics, with one full-year sequence in courses numbered 601 through 689.

Students must satisfy **one** of the following three requirements:

- *Master's Level Examination Option:* Pass written examination in three areas of mathematics chosen from a list prepared by the department. At most, two attempts are allowed. Examinations will be approved and administered by the departmental Graduate Studies Committee.
- *Thesis Option:* Write a thesis on an advanced topic in the mathematical sciences. A total of two full-year sequences among courses numbered 601 through 689 must be completed.
- *Ph.D. Qualifier Option:* Pass two qualifier examinations for the departmental Ph.D. Program. These examinations need not be taken together and each may be attempted at most twice.

Students choosing the Thesis Option must pass a final oral examination described under "Requirements for the Master's Degree" in the General Information section of the Graduate School catalog.

Early Start Program

The Master of Arts in Teaching program in conjunction with the undergraduate programs in Chemistry, Biology, and Mathematics offers a comprehensive and professionally-focused program leading to an additional degree of M.A.T. Middle or Secondary Education. This early start program enables superior students to receive two degrees within five years. A total of 150 credits are required for the dual degrees: 123 credits of course work devoted toward the baccalaureate degree and 36 credits toward the M.A.T. (nine hours are double counted). This program will be available for students who are entering their junior year. They may take graduate level courses in the College of Education and Human Development (CEHD) in their 4th year.

The current qualifications for the joint degree program have been agreed upon by discipline faculty from the Colleges of Arts and Sciences and Education and Human Development. The criteria vary by discipline.

Mathematics

1. Students must have at least 21 credit hours of mathematics required for the B.A. with a cumulative GPA of 3.0 in those courses.
2. Applications will be reviewed by the Graduate Committee of the Mathematics Department and the Secondary M.A.T. Screening Committee, and the applicant must be approved by both committees.
3. Once approved, the student may take a maximum of nine (9) hours for graduate credit while in undergraduate status, which can also apply to the requirements for the B.A. in Mathematics. All graduate coursework must be approved by the student's M.A.T. faculty advisor.
4. Students enrolling in the accelerated program will be non-thesis students and must adhere to all policies pertaining to Graduate Students.
5. All students must submit an application to the College of Education and Human Development (CEHD) M.A.T. program and meet the admission criteria.

Accelerated M.A. Option in Mathematics

Students must apply for admission to the program no later than the end of the junior year and must have completed MATH 205, 206, 301, and 325, or equivalent courses, prior to application.

Applicants must have a minimum overall GPA of 3.5, and minimum GPA of 3.66 in mathematics courses. As part of the combined degree, students must complete MATH 405 and at least four (4) of the following: MATH 501, 502, 521, 522, 561, 562, or 581, including at least one sequence from among these courses.

The student may take a maximum of nine (9) hours for graduate credit, which will also apply to the requirements for the baccalaureate degree in Mathematics. All 600-level courses numbered 689 or below qualify, as do 500-level courses, when completed in accord with the stipulations for graduate credit outlined in the syllabus.

Doctor of Philosophy in Applied and Industrial Mathematics

Major: MATH

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: www.math.louisville.edu/graduate/index.html

Program Information

Prerequisites:

Undergraduate coursework equivalent to a major in mathematics from an accredited university. This should include at least a one-year course in either analysis or abstract algebra, equivalent to Mathematics 501-502 and 521-522 at the University of Louisville. Candidates who have not taken both must complete the second in their program.

Curriculum

All students admitted to the program must complete the following or their equivalent:

A. Core Courses - 24 semester hours

Two sequences, each of six (6) semester hours, chosen from:

- Algebra MATH 621-622
- Combinatorics MATH 681-682
- Real Analysis MATH 601-602

Two sequences, each of six (6) semester hours, chosen from:

- Applied Statistics MATH 665-667
- Mathematical Modeling MATH 635-636
- Probability & Mathematical Statistics MATH 660-662

B. Additional Topics and Area of Specialization - 18 semester hours

In addition to the core, an application area of 18 hours will be required. The courses may be in a department outside Mathematics. They will be chosen in consultation with the student's advisory committee.

C. Qualifying Examinations

Students must pass three written examinations. Two of these will be chosen from the areas of Algebra, Combinatorics and Real Analysis. The third will be chosen from the areas of Applied Statistics, Mathematical Modeling and Probability & Mathematical Statistics. Normally, these will be taken within a year of completion of the core coursework. These examinations need not be taken together and each may be attempted at most twice

D. Industrial Internship – six (6) semester hours

Each student, with prior approval of the Graduate Studies Director and the Industrial Internship Director, has to complete at least six (6) hours of an internship in an appropriate industrial or governmental setting, or have equivalent experience.

Computing Project: Each student must complete an approved computer project related to the student's area of concentration.

Candidacy Examination: Each student must pass an oral examination in the chosen area of concentration. Usually, at most two attempts at passing this examination will be permitted. Students who wish to make a third attempt must petition the Graduate Studies Committee of the department for permissions to do so.

Dissertation – 18 to 24 semester hours: A doctoral dissertation is required of each student.

Dual Degree Program in Applied and Industrial Mathematics and Biostatistics - Decision Science

Dual degrees in Biostatistics-Decision Science and Applied and Industrial Mathematics are offered by the College of Arts and Sciences and the School of Public Health and Information Sciences. Upon completion of the program, students will receive a Ph.D. in Applied and Industrial Mathematics and an M.S. in Biostatistics-Decision Science.

Application Procedure

To be admitted to the program, the student is required to apply to and be accepted by both the Department of Mathematics and the Biostatistics-Decision Science Program. A student seeking admission into this program must submit letters to both the Department of Mathematics and the Department of Bioinformatics and Bio-

statistics stating the intent to take advantage of the dual degree program, and stating whether the student is interested in the Biostatistics or the Decision Science concentration. Students must submit two (2) recent letters of recommendation with their letter of intent. Applicants will receive written notification stating whether their admission request has been approved or disapproved.

Degree Requirements**Required Courses**

The required courses for the dual degree program consist of all non-overlapping core courses for both the Ph.D. in Applied and Industrial Mathematics and the M.S. in Biostatistics - Decision Science, as well as the requirements for either the Decision Science or Biostatistics concentration within the Biostatistics-Decision Science program.

Core course requirements for the Ph.D. in Applied and Industrial Mathematics (24 semester hours).

Two sequences, each of six (6) semester hours, chosen from:

- Algebra - Mathematics 621 and 622
- Combinatorics - Mathematics 681 and 682
- Real Analysis - Mathematics 601 and 602

Two sequences, each of six (6) semester hours, chosen from:

- Mathematical Modeling - Mathematics 635 and 636
- Applied Statistics - Mathematics 665 and 667
- Probability and Mathematical Statistics - Mathematics 660 and 662

Courses taken in requirement of the mathematics component of the dual degree program can be used to satisfy the 6 to 9 semester hours of electives required for the M.S. in Biostatistics-Decision Science.

Core course requirements derived from the M.S. in Biostatistics-Decision Science (12 to 18 semester hours).

The following courses are required for both tracks:

- Introduction to Public Health and Epidemiology - PHEP 511 (3 semester hours)
- Social and Behavioral Sciences in Health Care - PHCI 631 (2 semester hours)
- Introduction to Environmental Health

- Health Economics
- Biostatistics-Decision Science Seminar - PHDA 602 (4 semester hours)
- Probability and Mathematical Statistics - PHST 661 and 662 (6 semester hours)*

* This requirement is waived if the student takes the Mathematics 660, 662 sequence listed above.

Requirements from one of the two possible concentrations for the M.S. in Biostatistics - Decision Science. (5 to 6 semester hours)

Biostatistics Concentration Requirements:

- Biostatistical Methods I and II - PHDA 680 and 681 (6 semester hours)

Decision Science Concentration Requirements:

- Ethical Issues in Decision Making - PHDA 605 (2 semester hours)
- Decision Analysis - PHDA 663 (3 semester hours)

Courses taken to satisfy the Biostatistics-Decision Science component of the dual degree program can be applied to the 18 semester hours of electives which are required for the Ph.D. in Applied and Industrial Mathematics.

Combined Industrial Internship, Practicum and Masters Thesis. (6-8 semester hours)

The Industrial Internship required by the Department of Mathematics and the Public Health Practicum and Masters thesis required for the M.S. can be satisfied by a single internship and technical report which simultaneously satisfies the requirements for both degrees. Specifically, the internship must both focus on public health so that it satisfies the Public Health Practicum (PHDA 603 and PHDA 604), and contain advanced mathematical content, so that it satisfies the Ph.D.-level Industrial Internship (Math 694). Likewise, the technical report must meet two requirements: it must satisfy the requirements for a Master's thesis for the M.S. degree (PHDA 666) and it must be written at an advanced mathematical level expected for the Ph.D.-level Industrial Internship. The six (6) to eight (8) semester hours of the internship will be divided evenly between the Department of Mathematics and the Biostatistics-Decision Science Program.

Dissertation and Qualifying Examinations

In order for the student to fulfill the Ph.D. requirements, the student must satisfy both the qualify-

ing examination and dissertation requirements for the Ph.D. in Applied and Industrial Mathematics. Failure to complete these requirements will not jeopardize the M.S. degree, if all its requirements have been satisfactorily completed.

Special Considerations: Students who have already completed a Master's degree in the Department of Mathematics

To preserve the spirit of a dual degree, such students need to complete 36 semester hours of courses as required for the M.S. in Biostatistics-Decision Science. Six (6) semester hours from the previous Master's degree coursework can be applied to this requirement. The remaining semester hours must be chosen from the list of not covered by core courses approved electives for the Department of Bioinformatics and Biostatistics, with preference given to courses in the Departments of Mathematics and Bioinformatics and Biostatistics. Combined Industrial Internship, Practicum and Masters Thesis cannot be replaced by a previous Master's thesis. This requirement must be satisfied as previously described, meeting the specifications of both departments.

Departmental Faculty

Chair

Thomas Riedel, Professor

Director of Graduate Studies

Prasanna Sahoo, Professor

Graduate Advisor

Andre Kezdy

Professors

Patricia B. Cerrito

Udayan B. Darji

Ewa Kubicka

Grzegorz Kubicki

Lee Larson

Robert Powers

Gregory Rempala

W. Wiley Williams

Yongzhi Steve Xu

Associate Professors

Mary E. Bradley

Manabendra Das

Bingtuan Li

Steven Seif

Wei-Bin Zeng

Assistant Professors

Lee Gibson
Ryan S. Gill
Changbing Hu
Jon-Lark Kim
Hamid Kulsoman
Kiseop Lee
Jiaxu Li
Alica Miller
David Swanson
David J. Wildstrom

Adjunct Professors

Chakram S. Jayanthi
Shi-Yu Wu

Emeritus/Emerita

George R. Barnes
Richard M. Davitt
Roger H. Geeslin
Thomas M. Jenkins
Lael F. Kinch
Robert B. McFadden
Lois K. Pedigo
Leland L. Scott
William H. Spragens

Master of Arts in Pan-African Studies

Major: PAS

Degree Awarded: M.A.

Unit: GA

Program Webpage: louisville.edu/a-s/pas/

Program Information

The Pan-African Studies Department offers courses that may be applied toward graduate degrees in other areas. Students must obtain their program advisor's permission before enrolling in these courses. Students who are interested in more information on these courses should contact the Chair of the Department.

Program Admission Information

Students applying for admission to the Master of Arts in Pan-African Studies program must meet the following standards:

- a minimum 2.75 undergraduate cumulative grade point average;
- the submission of an official transcript reflecting previous degree earned;
- at least two letters of recommendation;
- a combined score of a least 900 on the Graduate Record Examination; and
- the submission of a personal statement and CV.

Curriculum

Thesis Option

Core Courses 15

- PAS 601: Graduate Research Methods
- PAS 602: Theories and Issues in Pan-African Studies
- Nine (9) credit hours of PAS courses for graduate credit distributed as follows:
 - Three (3) credit hours in Historical Studies;
 - Three (3) credit hours in Cultural Studies; and
 - Three (3) credit hours in Social Studies.

Concentration Areas:

African American Studies 12

- Nine (9) credit hours of PAS courses for graduate credit focusing on African Americans distributed as follows:
 - Three (3) credit hours in Historical Studies;
 - Three (3) credit hours in Cultural Studies; and
 - Three (3) credit hours in Social Studies.
- Three (3) credit hours in any PAS area focusing on African Americans.

Or

African and Diaspora Studies 12

- Nine (9) credit hours of PAS courses for graduate credit focusing on Africa and/or the Diaspora, distributed as follows:
 - Three (3) credit hours in Historical Studies;
 - Three (3) credit hours in Cultural Studies; and
 - Three (3) credit hours in Social Studies.

- Three (3) credit hours in any PAS area focusing on Africa and/or the Diaspora.
- Thesis: PAS 604 3
- Elective in Related Field (with advisor's approval) 3

Minimum Total 33

Examination Option

Core Courses 15

- PAS 601: Graduate Research Methods
- PAS 602: Theories and Issues in Pan-African Studies
- Nine (9) credit hours of PAS courses for graduate credit distributed as follows:
 - Three (3) credit hours in Historical Studies;
 - Three (3) credit hours in Cultural Studies; and
 - Three (3) credit hours in Social Studies.

Concentration Areas:

African American Studies 12

- Nine (9) credit hours of PAS courses for graduate credit focusing on African Americans distributed as follows:
 - Three (3) credit hours in Historical Studies;
 - Three (3) credit hours in Cultural Studies; and
 - Three (3) credit hours in Social Studies.
- Three (3) credit hours in any PAS area focusing on African Americans.

Or

African and Diaspora Studies 12

- Nine (9) credit hours of PAS courses for graduate credit focusing on Africa and/or the Diaspora, distributed as follows:
 - Three (3) credit hours in Historical Studies;
 - Three (3) credit hours in Cultural Studies; and
 - Three (3) credit hours in Social Studies.
- Three (3) credit hours in any PAS area focusing on Africa and/or the Diaspora.
- Electives in Related Fields (with advisor's approval) 6

Minimum Total 33

Note: Satisfactory completion of a comprehensive examination will be required of all students who do not complete a thesis.

Graduate Certificate in Pan-African Studies

Program Information

Admission

Admission to the graduate certificate in Pan-African Studies is open, potentially, to any student who has completed at a minimum baccalaureate degree. Post-baccalaureate students wishing to pursue the certificate outside the framework of a graduate degree program must apply for admission through and meet the general requirements for admission to the Graduate School. These requirements include the submission of:

- an official transcript reflecting previous degrees earned;
- at least two letters of recommendation; and
- scores on the General Test Section of the Graduate Record Examination.

If resource limitations necessitate the imposition of restrictions, the PAS Graduate Programs Committee will select students based on the following criteria: 1) undergraduate record; 2) letters of recommendation; 3) personal interview; and 4) GRE scores.

Graduate students wishing to pursue the certificate program in Pan-African Studies in conjunction with a graduate degree must meet the requirements for admission to that degree program and should then apply for the certificate program by consulting the PAS Director of Graduate Studies after admission. Depending on the structure of the degree program, coursework toward the certificate may be either additional hours beyond those required for the degree or elective hours toward the degree, or a combination of the two. The PAS Director of Graduate Studies shall then inform the student's degree program chair and work to coordinate the completion of degree and graduate certificate program requirements.

Exceptions

Exceptions to these standards are not anticipated. However, a "Graduate Programs Committee" (comprised of three PAS faculty, one representative from the College of Education and Human Development and one from another Arts

and Sciences department) will be responsible for dealing with exceptional cases as they arise.

Responsibility

The Department of Pan-African Studies Director of Graduate Studies will review and evaluate each applicant's qualifications for admission and make recommendations to the Chair. The Graduate Programs Committee referenced above will be convened only to review exceptional cases.

Curriculum

Requirements for the Graduate Certificate in Pan-African Studies

- A total of fifteen (15) hours in courses approved for graduate credit in accordance with the policies of the Graduate School.
- Nine (9) credit hours must be chosen from the list of "Approved PAS Courses" (available in the Department of Pan-African Studies): three (3) credit hours from the "Historical Studies" area; three (3) credit hours from the "Cultural Studies" area; and three (3) credit hours from the "Social Studies" area. Substitutions must be approved by the Director of Graduate Studies.
- Six (6) credit hours must be chosen from the list of "Approved Electives" (available in the Department of Pan-African Studies"). For students pursuing graduate degrees, at least one course must be outside of the department in which the student is pursuing the degree. Substitutions must be approved by the Director of Graduate Studies.
- At least three hours must be at the 600 level.
- A single course may satisfy more than one of these requirements.

Course work toward the graduate certificate in Pan-African Studies may also count toward the student's graduate degree.

Note: Students may not apply 500-level courses taken for undergraduate credit.

Departmental Faculty

Ricky L. Jones

Associate Professor
Chair

J. Blaine Hudson

Professor
Dean, College of Arts and Sciences

Robert L. Douglas
Professor

Lateef O. Badru
Associate Professor

Mary E. Bani
Associate Professor

Joy G. Carew
Associate Professor

Yvonne V. Jones
Associate Professor

Theresa A. Rajack-Talley
Associate Professor
Director of Graduate Studies

Tomarra Adams
Assistant Professor

Denise Martin
Assistant Professor

Raphael Njoku
Assistant Professor

William Tkweme
Assistant Professor

Master of Science in Physics

Major: PHYS

Degree Awarded: M.S.

Unit: GA

Program Webpage: www.physics.louisville.edu/

Program Information

Mission Statement

The Master of Science degree in Physics will prepare students for Ph.D.-level graduate work in Physics or a related field, or for a science-related career.

General Information

The M.S. is a two-year degree program available to qualified individuals possessing a bachelor's degree in Physics from an accredited college or university. Students with a bachelor's degree in other related subjects, e.g. Mathematics, will also be considered. Ph.D. opportunities are available through co-operative programs with the Chemistry and Mathematics departments and the Uni-

versity of Kentucky Physics department (see below for further details).

Qualified students will be considered for Graduate Teaching Assistantships (GTAs). As part of the educational experience, GTAs perform certain undergraduate teaching responsibilities in exchange for a stipend and full tuition remission.

The M.S. can be earned via a thesis or non-thesis option. The thesis option requires at least six credit hours of research leading to submission of the thesis. Non-thesis students are also encouraged to become involved in research. The details for each option are described below.

Program Admission

Departmental requirements for admission are as follows:

- A baccalaureate degree with at least 24 hours in physics, or the equivalent.
- A minimum quality-point standing of 3.0 (base 4.0) in physics courses.
- Mathematics course work through differential equations. (MATH 405 or equivalent).
- Submission of the Graduate Record Examination scores.

For general information concerning admission to the Graduate School of the University of Louisville consult the application directions at graduate.louisville.edu/students/apply.html.

Program Admission Procedure

Admission into the Physics M.S. program is competitive. The application procedure is as follows:

- Submit a completed graduate application to the University of Louisville Office of Graduate Admissions together with the \$50.00 application fee. Applications may be submitted on-line at graduate.louisville.edu/students/apply.html. Admissions are most commonly accepted to begin their program of studies in the Fall semester (which starts in late August). However, programs beginning in the Spring semester (which begins in early January) can be arranged. There is no formal application deadline, but early applicants will be given priority. International applicants should allow sufficient time to satisfy visa and immigration formalities.
- Official transcripts from each university or college attended must be submitted to the Office of Graduate Admissions.
- Take the general section of the Graduate Record Examination and arrange for the official

score to be sent to the Office of Graduate Admissions.

- Arrange for at least two letters of recommendation to be sent to the Office of Graduate Admissions. These letters should be written by persons familiar with the applicant's academic work. Please use the recommendation form found at graduate.louisville.edu/students/apply.html.
- All applicants, whose native language is not English, are required to achieve a ToEFL score greater than 213 on the computer-based test or greater than 550 on the paper-based test. Students holding a bachelor's degree from an accredited institution in the United States are exempt from this requirement.

In individual cases, the conditional admission of a student who does not satisfactorily meet the above requirements may be recommended by the department to the Graduate School. If admission is granted, that student will be subject to those conditions specified by the department or Graduate School as being necessary to remedy the conditional admission.

B.S. /M.S. Five-Year Accelerated Program

The Department of Physics, in the College of Arts and Sciences, offers a five-year accelerated program leading to a Bachelor of Science degree and Master of Science degree in Physics.

Requirements for admission:

- Applicant will apply for admission to the five-year accelerated program in the second semester of the junior year.
- Applicant will have completed at least 21 credit hours in Physics before applying to the program.
- Applicant will have maintained at least a 3.0 GPA in Physics courses and a 3.35 GPA overall.

Once accepted, the student must meet the following requirements:

- Submit a GRE General test score consistent with Graduate School guidelines.
- Take at least nine (9) credit hours in 500-level physics courses for graduate credit. Two of the courses must be PHYS 542 and PHYS 556. Preferably these courses will be taken during the same semester in the student's senior year.
- Maintain a 3.0 GPA.

Curriculum

General requirements for the M.S. degree are set forth in the General Information section of the *Graduate Catalog*. Specific requirements for the M.S. degree in physics are as follows:

Thesis option: (30)

1. Required courses in physics (12 hours):
 - Theoretical Mechanics PHYS 605 (3)
 - Electromagnetic Theory PHYS 611 (3)
 - Quantum Mechanics I & II PHYS 621-622 (6)
2. Physics electives (six-nine hours): courses numbered 500 and above. Courses at 500 level or above which are required for the B.A./B.S. degree will not normally satisfy this requirement.
3. Courses in one minor field (3-9 hours): Mathematics is the usual minor, but another field may be chosen with the approval of the department.
4. Graduate Research and Thesis PHYS 699 (6 hours).
5. At least 21 credit hours at the 600 level or above.

Non-thesis option: (33)

1. Required courses in physics (12 hours):
 - Theoretical Mechanics PHYS 605 (3)
 - Electromagnetic Theory PHYS 611 (3)
 - Quantum Mechanics I & II PHYS 621-622 (6)
2. Physics electives (12 hours): courses numbered 500 and above. Courses at 500 level or above which are required for the B.A./B.S. degree will not normally satisfy this requirement.
3. Courses in one minor field (3-9 hours): Mathematics is the usual minor, but another field may be chosen with the approval of the department.
4. Graduate Research PHYS 699 (0-3 hours).
5. At least 17 credit hours at the 600 level or above.

B.S. /M.S. accelerated program:

The non-physics undergraduate requirements of this degree are identical to the standard B.S. in physics.

Undergraduate physics requirements are as follows:

Course	Credit hours
PHYS 298 or 298H	4
PHYS 299 or 299H	4
PHYS 295 or 295H	1
PHYS 296 or 296H	1
PHYS 300	3
PHYS 301	1
PHYS 390 and 450	6
PHYS 460, 541 and 555	9
PHYS 498	3
Total	34

Graduate requirements for the five-year B.S. / M.S. program are identical to the standard M.S. program (thesis and non-thesis option) except that the physics electives **must include** PHYS 542 and PHYS 556.

Doctor of Philosophy in Physics

Major: PHYS

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: www.physics.louisville.edu

Program Information

Doctor of Philosophy in Chemistry/Chemical Physics

Students in certain research areas may pursue the Ph.D. in Chemistry in the area of Chemical Physics. Contact the chair of the Department of Chemistry or the chair of the Department of Physics for details

Doctor of Philosophy in Applied and Industrial Mathematics

Students in certain research areas may pursue the Ph.D. in Applied and Industrial Mathematics in the area of Mathematical Physics. Contact the chair of the Department of Mathematics or the chair of the Department of Physics for details.

Joint Doctoral Program

The Department of Physics also participates in a joint doctoral program with the Department of Physics and Astronomy of the University of Kentucky leading to a Ph.D. in Physics from the University of Kentucky. Contact the chair of either department for details.

Departmental Faculty**Chris L. Davis***Professor**Graduate Program Director***Peter W. France***Professor***Chakram S. Jayanthi***Professor***John F. Kielkopf***Professor***Shi-Yu Wu***Professor***David N. Brown***Associate Professor**Chair***Shudun Liu***Associate Professor***Sergio Mendes***Associate Professor***John C. Morrison***Associate Professor***Gamini Sumanasekera***Associate Professor***Gerard M. Williger***Associate Professor***William Hoston***Assistant Professor**Undergraduate Program Director***Xiaoping Tang***Assistant Professor***Victor K. Henner***Adjunct Professor**Professor, Perm State University (Russia)***Joseph S. Chalmers***Emeritus Professor***Joel A. Gwinn***Emeritus Professor***Wei-Feng Huang***Emeritus Professor***Roger E. Mills***Emeritus Professor***P. J. Ouseph***Emeritus Professor***John J. Sinai***Emeritus Professor*

Master of Arts in Political Science

Major: POLS**Degree Awarded:** M.A.**Unit:** GA**Program Webpage:** louisville.edu/a-s/polsci/

Program Information

The Department of Political Science, in the College of Arts and Sciences, offers graduate training leading to the Master of Arts degree. In addition, the Department participates in a joint degree program with the Brandeis School of Law.

The M.A. is designed to allow a student to pursue a degree either full or part time. Most graduate-level courses are offered in the evening. The M.A. is oriented toward those who wish to pursue advanced training in political science or a position in the public, private, or non-profit sector.

The Department of Political Science offers a joint M.A./J.D. program in partnership with the Brandeis School of Law. This program allows the student to obtain the M.A. and J.D. degrees in a four-year course of study. For additional information, see the law school website.

The Department of Political Science also offers its undergraduate majors an opportunity to earn both a B.A. (or B.S.) degree and an M.A. degree in five years of study. This program allows students to earn an M.A. degree at an accelerated pace (approximately one calendar year).

Applicants must meet the general requirements for admission to the Graduate School and must submit an application to the Department of Political Science. Applicants should have an undergraduate major or minor in a social science or have sufficient alternative preparation in the social sciences.

Program admission procedure:

Admission into the M.A. program is competitive. The procedures for admission into the M.A. program are as follows:

1. Submit a completed graduate application to the Office of Graduate Admissions. There is a \$50 application fee. Program candidates are admitted for the Fall semester (which begins in late August), the Spring semester (which begins in mid-January), or the Summer session (which usually begins in early July). The application deadline (and submission of all application materials) for these terms is 30 days prior to the beginning of the semester. If circumstances prevent an applicant from meeting the deadline, the applicant must contact the graduate advisor in the Department of Political Science.
2. Forward official transcripts verifying the receipt of a baccalaureate degree from an accredited institution to the Office of Graduate Admissions. An applicant must hold a B.A. or B.S. (or foreign equivalent) before admission to the program can be granted. Applicants selected for the program have generally earned a 3.0 undergraduate GPA overall or a 3.2 undergraduate GPA in the last 60 semester hours or the equivalent.
3. Send scores from the Graduate Records Examination (GRE) to the Office of Graduate Admissions. The GRE is designed to measure general aptitude for graduate study. Applicants selected for the program generally present a combined GRE score of 1000 (Verbal + Quantitative).
4. Provide two letters of recommendation from individuals familiar with the applicant's academic performance. Professional letters from employers are acceptable only when substantial time has elapsed since the applicant has attended an academic institution.
5. A written personal statement is required. This statement should detail the applicant's educational and professional experiences and goals and relate these goals to the pursuit of graduate study in political science at the University of Louisville. The statement should be approximately 400-500 words in length.
6. International applicants are required to take the TOEFL examination if English is not the native language. Applicants who have not scored 550 or higher on the TOEFL may

choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the advanced level of IESL will be considered adequate proof of the English proficiency required for course work in the M.A. program. Acceptance to the Intensive English Program does not constitute acceptance to the M.A. program. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

The Department may accept applicants who do not meet these requirements on a conditional basis if sufficient additional evidence of promise of success in the graduate program can be shown. No student will be admitted unconditionally until all materials listed above have been received.

You may apply to the graduate admission's office at the university on-line at graduate.louisville.edu/apply/.

Curriculum

Students are encouraged to take advantage of the unique strengths of the Department of Political Science when planning their course of study. In particular, the Department enjoys strong complements of faculty in two broad areas: International Studies and American Politics.

The International Studies field includes the comparative study of various regions and nations throughout the world as well as the study of relations among nations and other global actors. Areas of faculty expertise include: the politics of Africa, Latin America, the Middle East, East Asia, Europe, and the former Soviet Union, development, political economy, revolution, leadership, environment, civil-military relations, foreign policy, defense and security, international organizations, and international law.

The American Politics field includes the study of the American governmental institutions that formulate public policy and the study of the administration of public policy. Areas of faculty expertise include: the presidency, Congress, the judiciary, federalism, public administration, public law, the electoral process, social policy, housing policy, urban policy, environmental policy, and economic development policy.

There are two options for earning an M.A. in Political Science: Thesis (30 hours) and Non-thesis (36 hours).

Thesis Option	Hours
Core Courses (6 hours total):	
Scope of Political Science (POLS 670)	3
Methods of Political Research (POLS 671)	3
Three of the following five courses (9 hours total):	
Seminar in Public Policy (POLS 619)	3
Seminar in Public Administration (POLS 625)	3
Seminar in American Politics (POLS 629)	3
Seminar in International Relations (POLS 639)	3
Seminar in Comparative Politics (POLS 649)	3
Electives* (9 hours total, from Political Science or other departments)	9
Thesis (POLS 699)	6

Non-thesis Option	Hours
Core Courses (6 hours total):	
Scope of Political Science (POLS 670)	3
Methods of Political Research (POLS 671)	3
Three of the following five courses (9 hours total):	
Seminar in Public Policy (POLS 619)	3
Seminar in Public Administration (POLS 625)	3
Seminar in American Politics (POLS 629)	3
Seminar in International Relations (POLS 639)	3

Seminar in Comparative Politics (POLS 649)	3
Electives* (18 hours total):	
Political Science electives	6 or more
Electives from other departments	Up to 12
Directed Research (POLS 695)	3

*Up to nine elective hours may be at the 500-level. Up to six hours may be independent study credit.

Departmental Faculty

Julie M. Bunc
Associate Professor

Anne I. Caldwell
Associate Professor
Internship Advisor

Dewey M. Clayton
Associate Professor

Jasmine I. Farrier
Assistant Professor
Pre-law Advisor

Michael R. Fowler
Associate Professor

Jason Gainous
Assistant Professor

Tricia J. Gray
Assistant Professor
Undergraduate Advisor

Shiping Hua
Associate Professor
Director, Center for Asian Democracy

David L. Imbroscio
Professor

Allison Martens
Assistant Professor

Susan M. Matarese
Professor
Honors Advisor

Rodger A. Payne
Professor
Director, Grawemeyer Award Committee

Laurie A. Rhodebeck
Associate Professor
Graduate Advisor

Ronald K. Vogel
Professor

Sherri L. Wallace

Associate Professor

Okbazghi Yohannes

Professor

Charles E. Ziegler

Professor

Director, Institute for Democracy and Development

Doctor of Philosophy in Clinical Psychology

Major: CPSY

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: louisville.edu/a-s/psychology/

Program Information

Mission Statement

The mission of the Clinical Psychology Doctoral Program at the University of Louisville is to produce clinical psychologists who exemplify the scientist-practitioner model in the following way: (1) they are competent to conduct and to evaluate psychological research in domains that contribute to the enhancement of the practice of psychology; (2) they are current in their knowledge of both the theoretical underpinnings of clinical research and practice and in the empirically-supported applications of these theories; (3) they are competent in implementing research-supported clinical practice; and (4) they are ethical and professional in their relationships with clients, students, and colleagues.

General Information

The Department of Psychological and Brain Sciences, in the College of Arts and Sciences, offers Ph.D. programs in Experimental Psychology and Clinical Psychology.

The Clinical Psychology Ph.D. program usually requires four years of full-time course work and research activities. Each student must also complete a one-year approved internship. Students are required to complete a Master's Research Portfolio. After completion of the Master's portfolio, students write their preliminary examination and then move on to their dissertation work. A

dissertation proposal must be defended by September of the year the student is applying for internship.

Financial support for graduate students in the Ph.D. program is available in the form of research assistantships, Graduate School University Fellowships and part-time jobs and placements in laboratories and community service settings. Information regarding these various awards can be obtained from Ms. Carolyn Mask, Graduate Admissions in PBS, Department of Psychological and Brain Sciences.

Program Admission Procedure

1. Clinical and Experimental Ph.D. Programs
Application Deadline - December 1
2. Submit completed graduate application to the University of Louisville Office of Graduate Admissions. There is a \$50 application fee (on-line at graduate.louisville.edu/apply/) or call the Office of Graduate Admissions at 502-852-3101 for more information. Our Ph.D. programs admit students for the Fall semester only, which begins in late August.
3. The Graduate Record Examination is required or application will not be acted upon. We only require the general section of the GRE (minimum scores for Verbal and Quantitative must be 550 each). Those for whom English is not their native language must also submit TOEFL scores.
4. Transcripts of college records from all schools attended must be submitted to the Office of Graduate Admissions. Students must have earned an undergraduate degree from an accredited college or university and have a minimum grade point average of 3.0 for all undergraduate and prior graduate work.
5. Three letters of recommendation from academic sources are required and must be submitted to the Office of Graduate Admissions.
6. Please contact the Psychological and Brain Sciences for our departmental packet. This packet has information we ask the applicant to complete and return directly to Ms. Carolyn Mask. To request a departmental packet, call 502-852-8272.
7. Only when the application is complete will the Department Review Committee act on the application and inform prospective students of its decision. Usually the last information to be

received is the reference letter, so ask your letter writers well in advance of the deadline.

8. In addition to meeting Graduate School requirements for a doctoral degree (see Graduate School catalog), each student must meet department requirements such as core courses, research, the preliminary examination, a research portfolio, a dissertation, and an approved internship. More detailed information on programs and requirements can be obtained from Ms. Carolyn Mask, Graduate Admissions in PBS, Department of Psychological and Brain Sciences.

Curriculum

The Clinical Psychology Ph.D. curriculum contains 2 basic sets of core courses: department cores and clinical cores. The curriculum closely follows guidelines for accreditation established and maintained by the American Psychological Association's Office of Program Consultation and Accreditation. Students take a two-course assessment sequence, a three-course intervention sequence, courses in psychopathology, personality, legal and ethical issues, and advanced seminars in specific clinical topics.

In addition to the clinical core curriculum, students take basic psychology core courses including a statistics and research methods sequence, behavioral neuroscience, personality, developmental, cognitive, and social psychology. A course on the history of psychology is required for students who have not had an equivalent undergraduate course. Students also complete research hours for master's and dissertation research. Three topical seminars are also required.

Department Core:

- PSYC 620 Human Learning or 621 Cognitive Processes
- PSYC 642 Behavioral Neuroscience
- PSYC 670 Advanced Social Psychology
- PSYC 661 Advanced Developmental Psychology
- PSYC 673 Advanced Personality
- PSYC 610 and PSYC 611 Advanced Statistics I and II
- PSYC 501 History and Systems (waived with an A or B in undergraduate)

Clinical Core:

- PSYC 656 Legal and Ethical
- PSYC 679 and PSYC 680 Assessment I and II
- PSYC 683, PSYC 684, PSYC 697 Interventions I, II, and III
- PSYC 693 Interviewing
- PSYC 689 Advanced Clinical Psychopathology
- PSYC 685 Clinical Practicum

Electives:

Topical seminars are offered to augment the curriculum and allow students more detailed exposure to areas of interest. Recent seminars include: Schizophrenia, Geropsychology, Neuropsychology, Anxiety Disorders, and Behavioral Medicine. Students may also, with approval from their mentor and the director of clinical training, take seminars in other departments of the University.

Students entering the program with graduate courses from another program may request that core courses be waived provided the appropriate instructors judge them to be of equivalent content.

Doctor of Philosophy in Experimental Psychology

Major: EPSY

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: louisville.edu/psychology/

Program Information

General Information

The Ph.D. program in Experimental Psychology at the University of Louisville's Department of Psychological and Brain Sciences trains students to be experts in the conduct of research in modern psychology. Training is based on coursework, active and continuous involvement in research, and close cooperation between students and faculty mentors.

The program currently has significant strength in several topic areas of psychology, including basic and applied areas of cognitive science, child development, developmental disabilities,

hearing, learning, memory, neuroscience, perception, and vision. More detailed information can be found on the websites of individual members of the faculty at: louisville.edu/psychology/faculty.

The Experimental Psychology Ph.D. program requires four years of full-time training. All students must satisfy course requirements (listed below), turn in a portfolio of written work for the Master of Arts degree, take a Preliminary Examination prior to conduct of the dissertation, and complete the dissertation. Active and continuous involvement in research is essential. To remain in good standing, students must maintain a B average in all courses and demonstrate appropriate progress in research. Equivalence of graduate work in psychology completed at another institution will be evaluated on an individual basis.

Financial support for graduate students in the Experimental Psychology Ph.D. program is available in the form of research assistantships, teaching assistantships, and Graduate School University Fellowships. All forms of support are for 12 months with a standard start date of July 1. Support includes stipend, full tuition, and health insurance. Most stipends currently are set at \$22,000 per year.

Program Admission Procedure

1. Experimental Psychology Ph.D. program application deadline – December 1.
2. Submit completed graduate application to the Office of Graduate Admissions. There is a \$50 application fee (on-line at graduate.louisville.edu/apply/). Call the Office of Graduate Admissions at 502-852-3101 for more information. The Ph.D. program admits students once per year, with a typical enrollment date of July 1.
3. The Graduate Record Examination is required for an application to the Ph.D. program to be reviewed. The Experimental Psychology program requires only the general section of the GRE (Verbal, Quantitative, and Analytical Writing). Those for whom English is not their native language must also submit TOEFL scores.
4. Transcripts of your college records from all of the schools you have attended must be submitted to the Office of Graduate Admissions. Students must have earned an undergraduate degree from an accredited college or university and have a minimum grade point average of 3.0 for all undergraduate and prior graduate work.

5. Three letters of recommendation from academic sources are required and must be submitted to the Office of Graduate Admissions.
6. Contact the Department of Psychological and Brain Sciences for the departmental admissions packet. This packet has information we ask the applicant to fill out and return directly to Ms. Carolyn Mask. To request a departmental packet, call 502-852-8272 or send email to carolynmask@louisville.edu.
7. Although no other material is strictly required, you are strongly encouraged to submit a personal statement outlining interests, background, unique experiences, vita, and other information which might be helpful to persons making an admission decision.
8. Only when the application is complete will the Department Review Committee review the application and inform prospective students of its decision. Usually the last information to be received is the reference letters, so ask your letter writers well in advance of the deadline. Since your application will not be sent to the Department Review Committee until completed, it is imperative that you be sure that all materials are received well in advance of the closing date (December 1).
9. Additional information about department programs and admissions can be obtained from Ms. Carolyn Mask, Graduate Admissions in PBS, Department of Psychological and Brain Sciences, University of Louisville, Louisville KY 40292; 502-852-8272; carolynmask@louisville.edu.

Curriculum

Minimum Coursework

Two graduate courses in statistics:

- PSYC 610, Advanced Statistics I
- PSYC 611, Advanced Statistics II

At least three out of four core courses:

- PSYC 661, Advanced Developmental Psychology
- PSYC 621, Cognitive Psychology
- PSYC 631, Perception
- PSYC 643, Principles of Neuroscience

Five additional graduate courses to be determined jointly by the student and their respective faculty mentor (bringing the total credit hours to 30). The five electives must be lecture courses or

seminars. This requirement cannot be satisfied with independent study or thesis credit.

Research Hours

A minimum of three credit hours per semester of research independent study (PSYC 605) with the student's graduate research mentor. These hours are taken every semester, including summer, until the Preliminary Examination is completed.

M.S. Portfolio

A portfolio of written work reporting the research the student has been involved in. The portfolio should be of sufficient scope and quality to (in conjunction with coursework) earn the Master of Science degree. The portfolio typically is turned in at or shortly after the completion of two years of training and must be approved by a faculty committee. After completion of the M.S. portfolio and 30 credit hours of graduate study, the student is awarded the Master of Science degree.

Preliminary Examination

An original review and critique of a research area in the field of psychology. The Preliminary Exam is written in consultation with a faculty committee and must be approved by the committee. The Preliminary Examination typically is completed at the end of the third year of training.

Dissertation

An original research project conducted and described in a report (the doctoral thesis) by the student. The dissertation is conducted in consultation with a faculty committee and must be approved by the committee.

Departmental Faculty

Barbara M. Burns

*Professor
Department Chair, Experimental Psychology Program*

Cara Cashion

*Assistant Professor
Experimental Program*

Paul J. DeMarco

*Associate Professor
Experimental Program*

Stephen E. Edgell

*Professor
Experimental Program*

Edward A. Essock

*Professor
Experimental Program*

Zijiang He

*Professor
Experimental Program*

Richard Lewine

*Professor
Clinical Program*

Keith Lyle

*Assistant Professor
Experimental Program*

Benjamin Mast

*Associate Professor
Clinical Program*

Maureen McCall

*Professor
Experimental Program*

Suzanne Meeks

*Professor
Clinical Program*

Carolyn B. Mervis

*Professor
Experimental Program*

Robert G. Meyer

*Professor
Clinical Program*

Stanley A. Murrell

*Professor
Clinical Program*

Tamara Newton

*Associate Professor
Clinical Program*

John R. Pani

*Associate Professor
Experimental Program*

Heywood M. Petry

*Professor
Experimental Program*

Edna Ross

*Associate Professor
Experimental Program*

Paul G. Salmon

*Associate Professor
Clinical Program*

Sandra Sephton
Associate Professor
Experimental Program

Patrick Shafto
Assistant Professor
Experimental Program

Barbara Stetson
Associate Professor
Clinical Program

Fred Wightman
Professor
Experimental Program

Janet Woodruff-Borden
Professor
Clinical Program

Pavel Zahorik
Assistant Professor
Experimental Program

Joseph F. Aponte
Emeritus

John C. Birkimer
Emeritus

James M. Driscoll
Emeritus

Samuel Z. Himmelfarb
Emeritus

Irwin D. Nahinsky
Emeritus

John A. Robinson
Emeritus

Richard P. Smith
Emeritus

Master of Public Administration

Major: PADM

Degree Awarded: M.P.A.

Unit: GA

Program Webpage: supa.louisville.edu/

Program Information

General Information

The Master in Public Administration Program at the University of Louisville plays an integral part in the University's urban/metropolitan mission. Through its academic curriculum, the Program will provide students with a solid foundation in public administration and prepare its graduates for career placement and advancement in a wide variety of settings. The Faculty will also advance the state of knowledge in the field of public administration through its theoretical and applied research. The Program is offered by the Department of Urban and Public Affairs in cooperation with the Department of Political Science to achieve broad interdisciplinary preparation.

The Program requires a minimum of 42 credit hours for completion: a core curriculum of 27 hours, including 6 hours of practicum, internship or thesis, and 15 hours from one of the areas of specialization. The core curriculum encompasses studies in organizational theory, budgeting, statistics, public policy, research methods, and human resources management. The M.P.A. program is primarily an evening program. A student can enroll on either a part-time or full-time basis. During the Fall and Spring semesters, courses are typically offered Monday through Thursday, one evening a week, from 5:30 until 8:15 p.m. The program includes faculty from various disciplines and is aimed at providing recent college graduates, public sector practitioners, and persons in related fields with theoretical knowledge as well as practical skills. This mix of theory and applied skills prepares students for careers in the non-profit and public sectors. The degree program is available to qualified individuals possessing a bachelor's degree from an accredited college or university. No specific undergraduate major is required; however, back-

ground in political science as well as economics is helpful.

Program Admission Procedures

The procedures for admission into the M.P.A. program are as follows:

1. Submit a completed graduate application to the University of Louisville Office of Graduate Admissions. There is a \$50 application fee (See web graduate.louisville.edu/apply/). Program candidates may be admitted for Fall, Spring or Summer semesters.
2. Official transcripts verifying the receipt of a baccalaureate degree from an accredited institution must be submitted to the Office of Graduate Admissions.
3. The Graduate Record Exam (GRE) is required. An admission decision will not be made without the GRE scores. See web site www.gre.org for further information about the GRE or call 1-800-GRE-CALL (1-800-473-2255).
4. A written personal statement is required. The statement should indicate why the applicant wishes to pursue the M.P.A. degree.
5. Two letters of recommendation are required. Normally, at least one letter should be from someone who can comment about the applicant's academic performance.
6. International applicants are required to take the TOEFL examination if English is not their native language. Applicants who have not scored 550 or higher on the TOEFL (210 or higher on the computer-based version) may choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the advanced level of IESL will constitute proof of English proficiency. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

Curriculum

M.P.A. Core Courses

The core consists of eight required courses, or 27 credits. Six credits of the core consist of a practicum/ internship or a thesis.

	Semester Hours	Total
PADM 500 Economics for Public Affairs	3	
PADM 600 Public Administration and Organizational Theory	3	
PADM 601 Statistics for Public Affairs	3	
PADM 603 Policy Analysis and Program Evaluation	3	
PADM 604 Public Budgeting and Finance	3	
PADM 606 Public Policy	3	
PADM 642 Human Resources Management	3	
PADM 682 Practicum/ Internship or PADM 695 Thesis	6	
Total from core		27

Elective Courses

Elective course work includes 15 credits in an area of specialization.

Public Policy and Administration Specialization

	Semester Hours	Total
PADM 605 Strategic Management and Planning	3	
PADM 607 Planning Theory	3	
PADM 608 e-Government	3	

PADM 610 Administrative Law and Process	3	
PADM 611 Financial Management for Public Administration	3	
PADM 620 Intergovernmental Relations	3	
PADM 621 Politics of Urban Development	3	
PADM 623 Comparative Urban Development	3	
PADM 624 Ethics in Public Administration	3	
PADM 625 Advanced Organizational Behavior	3	
PADM 626 Housing and Community Development	3	
PADM 627 Environmental Policy	3	
PADM 640 Urban Economics	3	
PADM 680 Independent Research in Public Administration	1-3	
PADM 683 Topical Seminar in Public Administration	1-3	
PADM 688 Land Use and Planning Law	3	
Total from electives		15

Labor and Public Management Specialization

	Semester Hours	Total
PADM 605 Strategic Management and Planning	3	
PADM 610 Administrative Law and Process	3	
PADM 624 Ethics in Public Administration	3	
PADM 640 Urban Economics	3	
PADM 644 Collective Bargaining	3	
PADM 647 Arbitration	3	
PADM 648 Mediation and Dispute Resolution	3	
PADM 649 Legal Aspects of Labor Relations	3	
PADM 651 Trade Unions	3	
PADM 652 Equal Opportunity and the Workplace	3	
PADM 654 Special Topics in Worker Management Relations	3	
PADM 680 Independent Research in Public Administration	1-3	
PADM 683 Topical Seminar in Public Administration	1-3	
Total from electives		15

Non-Profit Management Specialization

	Semester Hours	Total
PADM 605 Strategic Management and Planning	3	
PADM 608 e-Government	3	
PADM 609 Introduction to Non-Profit Management	3	
PADM 610 Administrative Law and Process	3	
PADM 611 Financial Management for Public Administration	3	
PADM 612 Non-Profit Grantsmanship	3	
PADM 620 Intergovernmental Relations	3	
PADM 624 Ethics in Public Administration	3	
PADM 625 Advanced Organization Behavior	3	
PADM 626 Housing and Community Development	3	
PADM 640 Urban Economics	3	
PADM 647 Arbitration	3	
PADM 648 Mediation and Dispute Resolution	3	
PADM 680 Independent Research in Public Administration	1-3	
PADM 683 Topical Seminar in Public Administration	1-3	

POLS 620 Topics in Public Policy	3	
SW 622 Issues in Policy and Service Delivery	3	
Total from electives		15

Electives not listed above may be taken with permission of the Director of the M.P.A. Program.

Departmental Faculty

Steven G. Koven

Professor

Director

John I. Gilderbloom

Professor

Peter B. Meyer

Professor

H.V. Savitch

Professor

Ronald K. Vogel

Professor

Dewey Clayton

Associate Professor

Carrie Donald

Associate Professor

Wyatt McDowell

Associate Professor

David Simpson

Associate Professor

Sherri Wallace

Associate Professor

Olga Avdeyeda

Assistant Professor

Jasmine L. Farrier

Assistant Professor

Frank Goetzke

Assistant Professor

Master of Arts in Sociology

Major: SOCI

Degree Awarded: M.A.

Unit: GA

Program Webpage: louisville.edu/a-s/soc/

Program Information

Through its use of scientific methods and systematic theory, sociology is the study of diverse social groups as they emerge, persist, and change over time and of human behavior in social settings. Sociologists seek to identify and explain the underlying patterns of social relations. The substantive focus of sociology at the University of Louisville is the study of social dynamics particularly in reference to social diversity.

The faculty of the Department of Sociology at the University of Louisville is committed to being a vibrant, learning-centered faculty that enhances comprehension of social dynamics through creative and inventive research, graduate training, and applied opportunities. The graduate degree in sociology at the University of Louisville prepares students for continued advanced study and for careers in government, nonprofits, and the private sector.

Our mission is to provide master's level graduate education at the highest standards. We will introduce students to the current state of sociological knowledge and methods through high-quality classroom instruction, faculty-student collaboration, and independent student research and practical learning opportunities.

This mission of graduate education in the Department of Sociology further encourages students to develop and apply a "sociological imagination" in the systematic analysis of all things social. The Department advances the use of the sociological approach in interpreting the causes and consequences of human social behavior, facilitating critical appraisal of social structures and cultures, and assessing public policy.

In addition, the Department pledges to conduct this mission in a climate of fairness, sensitivity to the merits of diverse lifestyles, and appreciation for all manners of social research.

The Department of Sociology, in the College of Arts and Sciences, offers graduate training leading to the Master of Arts.

The M.A. program is designed to allow a student to pursue a degree either full-or part-time. Many courses are offered in the evening so that those employed full-time can also pursue graduate education. Full-time students can normally complete the program in two years; those who are employed full-time typically require three years to complete the program.

The program is designed to fill the needs of students wishing to pursue the Ph.D. in sociology as well as those who are planning careers in the public or nonprofit sectors. The program also provides skills for those seeking employment in private research firms or in the field of information technology and program evaluation.

This program offers both thesis and non-thesis options (practicum or examination). Please contact the Department for specific information.

The areas of specialty of the graduate faculty include: quantitative and qualitative methodology, social theory, criminology/delinquency, education, medical sociology, and work and labor markets.

In addition to the traditional M.A. in sociology, the Department also offers an M.A. in sociology with a concentration in Communications, Urban Geography, or Pan-African Studies. These concentrations are offered in conjunction with their respective departments. For further information concerning these programs, contact the Sociology Department and/or the department of concentration interest.

Program Admission Procedure

Applicants must submit to the Office of Graduate Admissions: a graduate application; official copies of transcripts from all colleges attended; two letters of recommendation, preferably from current or former instructors; Graduate Record Examination (GRE) scores; and TOEFL scores (for international students). Applicants must also submit to the Department of Sociology a "Sociology Department Graduate Admissions Questionnaire" available from the Department or online at louisville.edu/a-s/soc/grad%20qstnaire.html

Those applying to the M.A. program must have: a minimum undergraduate GPA of 3.0; a combined verbal/quantitative GRE score of 900; and previous course work in statistics, research methods, and social theory. (Students may be

allowed to make up deficiencies in previous course work, but credit for such courses cannot be applied toward graduate degree requirements.) International students should have a quantitative GRE score of 450 and a score of 550 on the paper-based TOEFL or 213 on the computer-based TOEFL.

Graduate Assistantships

The Sociology Department has available annually a limited number of graduate assistantships. Applicants wishing to compete for one of these must submit all materials for admission, including GRE scores, not later than February 1 for the fall semester and October 1 for the spring semester. Announcement of awards is normally made about six weeks after the deadlines.

Enrollment and Program Guidance

The Graduate Program Coordinator serves in an advisory capacity to students for enrollment and program planning until such time as an advisor and/or committee chairperson has been formally designated. At this point the thesis advisor and/or committee chair assumes the primary responsibility for guidance of the student.

Academic Standards

In order to be retained in the program, graduate students must receive a grade of 3.0 or higher in each of the department's core courses and must maintain an overall average of at least 3.0 in all course work taken for graduate credit. Any student whose cumulative quality point total falls to three fewer than three times the number of credits attempted will receive a warning in writing from the Graduate Program Coordinator. Any student whose quality point total falls to six fewer than three times the number of credits attempted shall not be retained in the program.

Curriculum

All students enrolled in the M.A. program in Sociology are required to complete the following core courses:

- SOC 510 Computer Data Analysis 3 credit hours
- SOC 604 Graduate Professional Seminar 1 credit hour
- SOC 610 Seminar in Statistics 3 credit hours
- SOC 615 Seminar in Research Methodology 3 credit hours

- SOC 620 Seminar in Sociological Theory 3 credit hours

In addition to the required core courses, students take the appropriate number of electives corresponding to the completion option chosen. (For students who might want to pursue a Ph.D. or a career in a research-related field, the thesis option is strongly recommended.) The three options have different credit hour requirements.

Thesis Option:

- Core Courses: 13 hours
- Electives: 12 hours
- Thesis: 6 hours
- Practicum: 0 hours
- **Total:** **31 hours**

Practicum Option:

- Core Courses: 13 hours
- Electives: 18 hours
- Thesis: 0 hours
- Practicum: 6 hours
- **Total:** **37 hours**

Examination Option:

- Core Courses: 13 hours
- Electives: 24 hours
- Thesis: 0 hours
- Practicum: 0 hours
- **Total:** **37 hours**

No more than six credit hours of 500-level courses may be applied toward the master's degree. Given that all sociology graduate students must take SOC 510 Computer Data Analysis, students are allowed to count one other 500-level course toward the degree.

Up to six credit hours of course work, with approval from the Sociology Department Graduate Coordinator, may be taken outside the Sociology Department. Students may also elect to take up to three credit hours of independent study (independent readings or research). Additional credits of course work outside the department or of independent study counting toward degree requirements require special permission from the Sociology Department Graduate Coordinator.

Accelerated Master's Program

The program offers motivated and academically superior students the opportunity to earn graduate credit hours during their senior year. As

undergraduates, accelerated students may earn between 6-9 graduate credit hours, all of which are applied to the undergraduate degree, as well as the graduate degree, thus allowing students to begin the graduate program in sociology with credits already applied to the graduate degree. NOTE: Students in the accelerated program may only apply their graduate credits earned as an undergraduate toward the graduate degree in sociology at UofL.

Students apply for the program during their junior year and, if accepted, begin the program in their senior year. The graduate courses taken during the student's senior year will depend on what courses the student has remaining to complete his/her undergraduate degree in sociology. The undergraduate advisor works individually with accelerated students regarding their course schedule.

Admission Requirements: 3.35 overall undergraduate GPA at time of application and a combined total GRE score of 900 on the Verbal and Quantitative sections and a 3.5 GRE score on the Analytical Reasoning section. Applicants are also required to submit two letters of recommendation and a completed Graduate Admission Questionnaire. Students must be admitted to the Graduate School.

Master of Arts in Sociology with Concentration in Communication, Urban Geography, or Pan-African Studies

Students pursuing the Master of Arts in Sociology with Concentration in Communication, Urban Geography, or Pan-African Studies complete the core courses required for the M.A. in Sociology as specified above. In addition to the core courses, they take electives in Sociology and in the chosen area of concentration in relationship to the completion option (thesis, practicum, examination).

Thesis Option:

- Core Courses: 13 hours
- Sociology Electives: 0 hours
- Elective hours in concentration: . 12 hours
- Thesis: 6 hours
- Practicum: 0 hours
- **Total:** **31 hours**

Practicum Option:

- Core Courses: 13 hours
- Sociology Electives: 6 hours

- Elective hours in concentration: . 12 hours
- Thesis: 0 hours
- Practicum: 6 hours
- **Total:** **37 hours**

Examination Option:

- Core Courses: 13 hours
- Sociology Electives: 9 hours
- Elective hours in concentration: . 15 hours
- Thesis: 0 hours
- Practicum: 0 hours
- **Total:** **37 hours**

No more than six credit hours of 500-level courses may be applied toward the master's degree. Given that all sociology graduate students must take SOC 510 Computer Data Analysis, students are allowed to count one other 500-level course toward the degree.

Up to six credit hours of course work, with approval from the Sociology Department Graduate Coordinator, may be taken outside the Sociology Department. Students may also elect to take up to three credit hours of independent study (independent readings or research). Additional credits of course work outside the department or of independent study counting toward degree requirements require special permission from the Sociology Department Graduate Coordinator.

Departmental Faculty

L. Allen Furr
Associate Professor
Chair

Jon H. Rieger
Professor

Wayne M. Usui
Professor

J. Allen Whitt
Professor

D. Mark Austin
Associate Professor

Lateef O. Badru
Associate Professor

James K. Beggan
Associate Professor

John A. Busch
Associate Professor

Melissa Evans-Andris
Associate Professor
Coordinator of Graduate Program

Patricia Gagne
Associate Professor

Susan E. Kelly
Associate Professor

Cynthia Negrey
Associate Professor

Karen Christopher
Associate Professor

Clarence Talley
Associate Professor

Robert M. Carini
Assistant Professor

James E. DeBurger
Emeritus/Emerita

K. Robert Durig
Emeritus/Emerita

Master of Arts in Spanish

Major: SPAN

Degree Awarded: M.A.

Unit: GA

Program Webpage: modernlanguages.louisville.edu/spanish/

Program Information

General Information

The M.A. in Spanish seeks to prepare students for a global economy, a multicultural community and a changing workplace through the study of language, culture, linguistics, translation, interpretation and Spanish in the workplace. Prerequisite for admission to the Spanish program is the ability to read, comprehend, speak, and write the language proficiently. Any undergraduate major is acceptable for admission; however, students without the equivalent of a minor in Spanish may be required to take preparatory courses before beginning the M.A. curriculum or in addition to the M.A. curriculum.

The Master of Arts in Spanish requires 30 hours of academic work in Spanish at the graduate level. At least 18 of the 30 hours must be in courses open to graduate students only (i.e.,

courses at the 600 level). All students are required to complete and present a directed study project.

The M.A. in Spanish may be completed in four semesters (fall/spring). Most courses are offered in late afternoon or evening.

Program Admission Procedure

- Students must meet the admission criteria established by the UofL Graduate School (submit a complete application, submit official transcripts verifying the receipt of a baccalaureate degree from an accredited institution, and pay the application fee.) All University of Louisville transcripts will automatically be submitted with completion of an application.
- Students must have a 3.0 GPA in undergraduate work. Provisional admission is possible for students who do not meet this requirement.
- Students must submit two letters of recommendation (submitted directly to the Graduate School), preferably from recent language or literature professors. Letters of recommendation must be current (written within the last year) and should attest to the student's potential to do graduate work and to their proficiency in Spanish.
- Students must achieve a combined score of at least 900 on the GRE verbal and quantitative sections prior to admission. Provisional admission is possible for students with lower scores.
- All applicants for whom English is a second language must also present scores of at least 550 on the TOEFL Examination (paper test) or at least 210 on the TOEFL Exam (computer test) prior to admission.
- Students must submit one sample of critical academic writing of at least five pages, preferably a paper written in English or Spanish as part of the requirements of a university or college course (mail directly to the Director of Graduate Studies in Spanish in the Department of Classical and Modern Languages).
- Students must submit a personal statement of 1-2 pages in Spanish discussing how the M.A. in Spanish relates to the student's professional or personal goals (mail directly to Director of Graduate Studies in Spanish of the Department of Classical and Modern Languages).
- Applicants with a B.A. in a field other than Spanish, or with fewer than 24 credit hours in Spanish beyond the intermediate level may be

eligible for admission to the M.A., but the Director of Graduate Studies in Spanish may require that such students make up deficiencies on an individual basis.

- Students must maintain a 3.0 average in order to remain in good standing.
- Up to 6 hours of graduate-level, “A” or “B” work in Spanish done at another institution may be applied toward the student’s UofL degree, upon approval of the director.

The Director of Graduate Studies in Spanish reviews all applications and, in consultation with the Spanish Graduate Committee, makes all admission decisions. Complete applications to the Master’s program are considered throughout the academic year. No student will be admitted to degree status until all materials required for his or her file have been submitted, and the student meets all other requirements.

In line with Graduate School regulations, the application should be complete no later than thirty days before the first day of classes of the semester in which the applicant plans to enroll.

Applicants who wish to be considered for a Graduate Assistantship should submit all their application materials by March 1 (not postmarked by March 1). Students may enter the program in the Fall or the Spring semester, but all assistantship decisions are made in the spring to take effect in the following academic year.

Time Limit and Residency for Masters

All work for the M.A. must be completed within six years of admission to the program. The student must complete a minimum of 24 hours at the University of Louisville.

Curriculum

		Sem Hrs	Total
SPAN524	Introduction to Hispanic Linguistics	3	
SPAN554	Hispanic Culture through Film and Media	3	
SPAN611	Teaching and Research Methods in Spanish	3	

SPAN624	Studies in Hispanic Linguistics	3	
SPAN634	Spanish for the Workplace and Community	3	
SPAN638	Theory and Practice of Translation	3	
SPAN644	Origins and Development of Hispanic Culture	3	
SPAN648	Contemporary Issues in the Hispanic World	3	
SPAN5XX or SPAN6XX	Two electives in Spanish	6	
Total Credit Hours			30

In addition to coursework, all students are required to complete and present a directed study project prior to graduation.

Accelerated B.A./M.A. in Spanish

This program allows Spanish majors to take up to 9 hours of graduate course work which will meet undergraduate degree requirements and be counted toward the hours required for the M.A. Upon completion of the undergraduate degree, students will begin the graduate program and must complete the appropriate number of hours remaining and other requirements for the degree option they select before being certified for the Master of Arts degree in Spanish. The guidelines for the Accelerated BA/M.A. in Spanish are as follows:

- Students must apply no later than the end of the junior year for admission to the accelerated program.
- A minimum overall grade point average and major grade point average of 3.35 will be required for admission to and for retention in the program.
- At the time of application, students must have completed Spanish 321, 322 and 355 with grades of B or better. It is also recommended that students have completed one course at the 400 level before applying.

- Student must complete graduate application form on-line.
- Students must submit two letters of recommendation (preferably from individuals who can attest to the student's ability to handle graduate level work in Spanish. It is strongly recommended that at least one letter of recommendation come from a Spanish faculty member.
- Students must submit scores from the GRE exam no later than the end of the junior year.

Student may take a maximum of 9 hours for graduate credit, which will also apply to the requirements for the baccalaureate degree in Spanish.

All of the requirements remain the same, including the directed study project.

Departmental Faculty

Rhonda Buchanan

Professor of Spanish

Director, Latin American Studies

Aristofanes Cedeño

Associate Professor of Spanish

Academic Dean, Governor's Scholars Program

William L. Cunningham

Professor of German

Mattieu Dalle

Assistant Professor of French

John P. Greene

Professor of French

Gregory Hutcheson

Associate Professor of Spanish

Alan Leidner

Professor of German

Robert Luginbill

Associate Professor of Classics

Mary Makris

Associate Professor of Spanish

Augustus Matri

Professor of Italian

Manuel F. Medina

Associate Professor of Spanish

Acting Director of Brazilian Studies

Frank Nuessel

Professor of Spanish

Wendy Pfeffer

Professor of French

A&S Coordinator of Graduate Education

Regina Roebuck

Associate Professor of Spanish

Clare Sullivan

Assistant Professor

Lisa Wagner

Associate Professor of Spanish

Li Zeng

Assistant Professor of Chinese

Director of Chinese Studies

Roy Ackerman

Professor Emeritus

David R. Hume

Professor Emeritus

Hans Peterson

Professor Emeritus

Marilyn Schuler

Professor Emerita

Sydney Schultze

Professor Emerita

Graduate Certificate in Latin American Studies

Program Information

The Graduate Certificate in Latin American Studies (LAS) is an interdisciplinary program, involving multiple departments within the College of Arts and Sciences, which provides a specialized concentration focusing on Latin America and Latinos in the US. This program, housed within the Graduate School, offers students a wide range of course options that examine Latin American societies from the perspective of their history, social structure, economic and political structures, literature, art, and culture. The fifteen-hour program may be completed as a "stand alone" program, or in conjunction with other graduate programs.

Admissions Requirements and Process

Applicants need to have completed an undergraduate baccalaureate degree granted by a United States institution of higher education or its equivalent in another country. To be accepted into the LAS Graduate Certificate Program, students must meet the standard criteria for general admission to the University of Louisville Gradu-

ate School, and supply all standard documentation required for admission. Students wishing to pursue the graduate certificate in conjunction with a graduate degree program in another UofL department should first apply and be admitted to the degree program before applying for admission to the LAS Graduate Certificate Program. The Director of the Latin American and Latino Studies Program will interview each student as part of the application process and an Admissions Committee will review applications and decide if a student may be recommended to the LAS Graduate Certificate Program.

Curriculum

1. The minimum requirement for completion of the LAS graduate certificate is 15 credit hours.
2. Three of the five required courses must be taken at the 600 level.
3. Of the 15 required credit hours, students must take courses with a substantial Latin American content from at least three different disciplines. These may include the following disciplines, but could include others if a course is offered with a substantial Latin American content: Anthropology, Art History, History, Humanities, Linguistics, Modern Languages, Pan-African Studies, Political Science, Portuguese, and Spanish, and Women's and Gender Studies.
4. Of the 15 required credit hours, students must take at least one course from the following list: LAS 680 Issues in Latin America, Spanish 670: Special Topics (seminar with a Latin American topic), Political Science 647: Seminar on Latin America, or History 503/PAS 510: Race Class, and Identity in Latin America.
5. Students must meet a minimum language requirement of three hours of Spanish or Portuguese at the 200 level or above, or demonstrate equivalent language proficiency.
6. A single course may satisfy more than one requirement.
7. Substitutions may be made at the discretion of the Director of Latin American and Latino Studies.
8. Course work toward the graduate certificate in LAS may also count toward the student's graduate degree.
9. Students may not apply 500-level courses taken for undergraduate credit.

Additional courses with substantial Latin American content, which are not listed below, may also be taken to fulfill the requirements for the LAS Graduate Certificate. This list is updated regularly on the LALS Website: latinamericanstudies.louisville.edu

- ARTH 542: Special Topics - Mexican Art and Architecture
- ARTH 544: Pan-African Art: Form and Content
- HIST 503: Race Class, and Identity in Latin America
- HIST 533: Revolution and Reform in Twentieth-Century Latin America
- HIST 535/611: The History of Mexico
- HUM 562: Studies in Hispanic Culture
- LAS 680: Issues in Latin American Studies
- LAS 681: Latin American Studies Graduate Internship
- LING 690: Seminar in Linguistics: Theories of Culture/HUM 682/ ENG 682
- LING 690: Seminar in Linguistics: Cultural Metaphors/HUM 682/ ENG 682
- ML 551: Special Topics
- PAS 505: The Black Atlantic
- LAS 510: Race Class, and Identity in Latin America
- PAS 532: Slave Trade and Slavery in the African World
- PAS 533: The History and Popular Culture of the African Diaspora
- AS 542/643: Black Women's Voices
- PAS 581: Pan-African Art: Form and Content
- POLS 554: Democratization and Regime Change
- POLS 563: Women in Developing Countries/ WMST 558
- POLS 647: Seminar on Latin America
- POLS 649: Seminar in Comparative Politics
- SPAN 524: Introduction to Hispanic Linguistics
- SPAN 527: Latin American Literature: Colonial Period through 19th Century
- SPAN 528: Contemporary Spanish-American Theater
- SPAN 529: Spanish-American Poetry
- SPAN 530: Spanish-American Narrative
- SPAN 554/654: Hispanic Culture through Film and Media

- SPAN 599: Special Topics
- SPAN 624: Studies in Hispanic Linguistics
- SPAN 634: Spanish for the Workplace
- SPAN 644: Origins and Development of Hispanic Culture
- SPAN 648: Contemporary Issues in the Hispanic World
- SPAN 670: Special Topics
- WGST 558: Women in Developing Countries
- WGST 593: Global Feminism

Master of Fine Arts in Theatre Arts

Major: TA

Degree Awarded: M.F.A.

Unit: GA

Program Webpage: louisville.edu/a-s/tas/

Program Information

The Department of Theatre Arts offers a Master of Fine Arts with a concentration in Acting/Performance. A Graduate Certificate in African American Theatre is also offered. The department fosters creativity, collaboration, discipline, and artistry. It embraces the theatre as a means of creative expression, cultural understanding, and social development. The African American Theatre Program, founded in 1993, is integral to the department. All students are exposed to the diversity of multicultural theatre.

Admission

Prerequisites for admission to the M.F.A. program are a baccalaureate degree from an accredited college or university and admission to the Graduate School. The department requires that a resume of theatrical experience accompany the application.

Unconditional admission requires completion of basic undergraduate course work in each of the following areas: theatre history, dramatic literature, design/technical theatre, acting/directing. To accomplish this purpose, students may be required to take preparatory courses not to be counted toward the degree.

Applicants for admission to the M.F.A. program must demonstrate theatrical skill which indicates their potential for excellence: students planning to concentrate on Acting/Performance must audition in person (no videotaped auditions are accepted). Students are also interviewed to determine their level of preparation and commitment.

Admission to the Graduate Certificate in African American Theatre requires a baccalaureate degree from an accredited college or university and admission to the Graduate School. Applicants to this program must have an interview with the Director of Graduate Studies.

Curriculum

Requirements for the M.F.A. in Acting/Performance

Students pursuing the M.F.A. in acting must complete 72 semester hours of graduate work. The three-year curriculum consists of the following courses:

Academic Area (14 credits)

- Introduction to Graduate Study, Pedagogy 2
- Script Analysis and Interpretation 3
- Performance Theory 3
- Tools for a Global Theatre 3
- Approaching African American Theatre . . 3

Performance Concentration (42 credits)

- Graduate Movement I-IV 12
- Graduate Voice I-IV 12
- Graduate Acting I-V 15
- Actors Theatre of Louisville Workshop . . 3

Project Area (10 hours)

- M.F.A. Performance Projects 7
- Thesis Guidance (monograph) 3

Electives (3 hours)

- *Community Service in the Arts* (Independent Study) 3

Please observe that the sequence of graduate movement and voice classes, as well as the theory sequence, alternates years.

Academic Policies

Some candidates may enter the program with insufficient knowledge in basic areas that may be important to their future success in the program. These students will be required by their Gradu-

ate Advisory Committee to complete additional courses. For example, many students enter without sufficient knowledge of Theatre History and are then required to take Theatre History during their first year of residence.

Performance/Production Project Requirements

All students enrolled in the M.F.A. program are expected to be active in performance or production projects during each semester in which they are enrolled. TA 625 (Performance Project) provides a mechanism for implementing this expectation and for assessing the quality of the projects undertaken. The number of credits granted for TA 624/625 varies depending on the student's concentration and year of study.

Graduate Certificate in African American Theatre

Program Information

This is the first program of its kind nationally and as far as we know globally.

Requires 15 hours of graduate credit—nine (9) hours in African American Theatre, three (3) hours of theatre-related Community Service, three (3) hours of Electives.

Can be completed as a “stand alone” program or in conjunction with another graduate program (any area).

Specially designed for:

- Teachers, Government and Community Agency Professionals
- Graduate Students (at U of L or another institution)
- Persons preparing for professional careers in the theatre arts
- Community Residents

Curriculum

History, Theory, and Literature (6 credits)

- Advanced African American Theatre History 3
- *One of the following:*
 - Approaching African American Theatre . 3

- Advanced African American Women in Theatre 3
- Advanced Theatre of the African World . 3

Performance/Production (3 credits)

- *One of the following:*
 - Advanced Directing the Black Experience 3
 - Advanced Black Aesthetic on Stage 3
 - Performance Project in an approved play 3
 - Production Project on an approved production 3

Electives (3 credits)

- *One of the following:*
 - Theatre Internship 3
 - Independent Study on an approved topic 3
 - Approved courses in Pan African Studies 3
 - Community Service in the Arts 3

Independent Study 3

Minimum 15

Departmental Faculty

Russell J. Vandenbroucke

Professor
Chair

Garry Brown

Associate Professor
Director of Undergraduate Studies

Nefertiti Burton

Associate Professor
Director of Graduate Studies

Rinda L. Frye

Associate Professor

Zhanna Goldentul

Instructor

Albert J. Harris

Professor

Michael F. Hottois

Professor
Director of Design

Lundeana Thomas

Associate Professor
Director, African American Theatre Program

James R. Tompkins

Associate Professor

Zan Sawyer-Dailey

Adjunct Faculty

Doctor of Philosophy in Urban and Public Affairs

Major: UPA

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: supa.louisville.edu

Program Information

The Ph.D. program prepares students for careers as professors, researchers, and public servants in the fields of *Urban Policy and Administration* and *Urban Planning and Development*.

Students are required to complete 48 credit hours of study. This requires a sequence of core courses consisting of 18 credit hours. Students must complete 18 credit hours in an area of specialization including three required courses. Two field specializations are offered: *Urban Planning and Development* and *Urban Policy and Administration*. Twelve credit hours of dissertation research are also required. Students must pass qualifying examinations on the core and specialty area before commencing formal dissertation work. Students should consult the Program Guidelines for details.

Admission Requirements

- Bachelor's degree with at least a 3.0 GPA (on 4.0 scale);
- Master's degree in an appropriate field with at least a 3.5 GPA (on a 4.0 scale);
- GRE score of at least 500 Verbal, 500 Quantitative, and 4.5 Analytical.
- TOEFL: Those applicants whose native language is not English and who do not hold a degree from a university where the language of instruction is English must also submit scores from the Test of English as a Foreign Language, with a minimum score of 210 on the computer-based test.

Applications must include:

- transcripts from all institutions attended;
- supplemental application (available from program web site);
- at least two letters of recommendation (preferably from professors knowledgeable about your potential to perform doctoral level work).

Part-time Students:

The program gives preference to applicants who intend to study full-time and who can be supported with financial aid (a Graduate Research Assistantship or a Fellowship). A few part-time students may be admitted if they can demonstrate they have flexible schedules and can attend daytime courses and fully participate in school functions. The Graduate School requires every Ph.D. student to complete at least one year of full-time study.

Admission Deadlines:

Fall Admissions:

- July 15
- January 31 to be considered for a University Fellowship
- March 1 to be considered for a Graduate Assistantship

Spring Admissions:

- November 15

Students wishing to enter the program in Spring should discuss their situation with the program director or student advisor. The program is designed to be entered in the Fall.

Academic Policies

Waivers And Prerequisites

Students who have recently and satisfactorily completed equivalent courses elsewhere may request that up to nine hours of course work count towards their 48 hours of required Ph.D. study. Students who are not prepared for advanced study or do not hold the prerequisites for a particular course will be required to complete remedial work. Such courses do not count toward degree credit.

Satisfactory Progress

Students who fall below a 3.0 GPA or fail to receive grades of "B" or higher in their course work are subject to dismissal from the program. No probationary period is provided for students failing core courses. The Admissions and Review committee will review performance of students each semester to ensure students are making satisfactory progress.

Comprehensive Exams

To qualify for Ph.D. candidacy, students must satisfactorily complete (1) the core examination and (2) a field examination. Each student must

sit for the core examination as soon as it is offered after the student completes all core courses. Students sit for the field exam after having completed core and elective courses (36 credits). Students must pass the core exam before proceeding to the field exam. Students must sit for exams as soon as they are eligible to take the exam. Examinations are held in May each year. Examinations always have a written component and may also include an oral component. Consult with the chair of the relevant examination committee for details about a particular exam.

Qualifying exams are graded on a Pass/Fail basis. The written examinations are evaluated independently and anonymously by each examiner. Examining committees ordinarily meet as a group before determining a final grade. Examining committee chairs forward grades to the Program Director who officially notifies students of their results.

Should a student not achieve a Pass on an exam, he or she must take the exam again when offered the following year. The examining committee may specify additional work to be completed before sitting for a subsequent exam. Students will not have more than two opportunities to sit for and satisfactorily complete each qualifying exam. Failure to retake the exam or failing to pass the exam on the second effort will result in dismissal from the Ph.D. program. Students may change field specializations for the second exam as long as they take the field exam within one year of the first effort. In this case, the student will only have one opportunity to pass the exam. Failure to pass a core or field exam may result in a student losing his or her graduate assistantship.

Curriculum

The Ph.D. in Urban and Public Affairs consists of 48 credit hours of study including 18 hours of core courses, 18 hours in a field specialization, and 12 hours of dissertation research.

Students with no prior study of statistics are required to take PADM 601/PLAN 602 Statistics for Public Affairs and SOC 510 Computerized Data Analysis prior to enrolling in SOC 610. Students with previous study of basic statistics, but no experience with statistical software, are required to take SOC 510 prior to enrolling in SOC 610. Students with no prior study in eco-

nomics are recommended to take an introductory course in that subject, such as PLAN 500 Foundations of Economics. These courses do not count toward the 48-semester-hour requirement.

Requirements	Semester Hours	Total
Core Required Courses		
UPA 602 Urban Policy and Governance	3	
UPA 603 Urban Economics	3	
UPA 606 Research Methods	3	
UPA 610 Urban Theory	3	
UPA 621 Policy Analysis and Program Evaluation	3	
SOC 610 Seminar in Statistics	3	
Total Core		18
Core Exam		Pass
Field Specialization (details below)		
Required Field Courses	9	
Elective Field Courses	9	
Total Field Specialization		18
Field Exam		Pass
Dissertation Research		12
Total Credit Hours		48

Field Specialization: Urban Policy and Administration		
Required courses:	Semester Hours	Total
UPA 630 Politics and Urban Policy	3	
UPA 660 Advanced Organizational Behavior	3	
UPA 661 Public Administration and Organizational Theory	3	
		9
Electives:		
Eligible electives are listed on the web site. Students should consult the Student Advisor or Program Director in selecting electives.	9	
		9
Total Field Specialization		18

Field Specialization: Urban Planning and Development		
Required Courses:	Semester Hours	Total
UPA 623 Comparative Urban Development	3	
UPA 683 Land Use Planning	3	
UPA 684 Planning Theory	3	
Electives		9

Eligible electives are listed on the web site. Students should consult the Student Advisor or Program Director in selecting electives.		9
Total Field Specialization		18

Departmental Faculty

- Mark Austin**
Associate Professor
- Leonard Bright**
Assistant Professor
- Steven C. Bourassa**
Professor
Director, Ph.D. Program in Urban and Public Affairs
Chair
- Carrie Donald**
Professor
- Robert M. Carini**
Assistant Professor
- Frank Goetzke**
Assistant Professor
- John I. Gilderbloom**
Professor
- David Imbroscio**
Professor
- Steven G. Koven**
Professor
- Peter Meyer**
Professor Emeritus
- Cynthia Negrey**
Associate Professor
- H.V. Savitch**
Professor
- David M. Simpson**
Associate Professor
- Lyle Sussman**
Professor
- Wayne M. Usui**
Professor
- Ronald K. Vogel**
Professor
- J. Allen Whitt**
Professor Emeritus

Master of Urban Planning

Major: URPL

Degree Awarded: M.U.P.

Unit: GA

Program Webpage: supa.louisville.edu/

Program Information

The Master of Urban Planning Program strives to play an important role in the University of Louisville's urban/metropolitan mission by creating the best possible learning environment for the student whose goal is to become a planning practitioner, by advancing the state of knowledge in the planning field through faculty research, and by bringing that knowledge to bear on the challenges facing the community.

The Department of Urban and Public Affairs offers a Master of Urban Planning (M.U.P.) degree in cooperation with the Department of Geography and Geosciences. The M.U.P. Program prepares students to work in a wide variety of fields, including land use and environmental planning, urban design, historic preservation, transportation planning, open space planning, housing planning, economic development planning, real estate development, and the development of geographic information systems. With the continuing expansion of Louisville and the nation's other metropolitan areas, urban planning is one of the leading professional fields in terms of demand and job satisfaction, according to surveys by Jobs Rated Almanac and the Encyclopedia of Careers and Vocational Guidance.

Students can specialize in one or two of four areas: land use and environmental planning; administration of planning organizations; housing and community development; and spatial analysis for planning. Students have the opportunity to benefit from working on real planning problems through the required internship and studio courses. Studio courses are taught at the Urban Design Studio, located in downtown Louisville and operated by the M.U.P. Program in cooperation with the Louisville Metro government and the School of Architecture of the University of Kentucky.

The degree requires 48 credit hours (two years of full-time study or the equivalent in part-time study), although up to 12 hours of relevant grad-

uate course work may be transferred into the program. Students may enroll on a part-time or full-time basis. Classes are held in the evenings and on weekends to meet the scheduling needs of persons holding full-time jobs.

Admission Procedures

Applicants must hold a bachelor's degree (any major is acceptable), must have taken the Graduate Record Examination (GRE), and must submit two letters of reference (at least one from someone familiar with the applicant's academic abilities) and a statement of purpose. Admission is competitive and generally requires a minimum combined quantitative and verbal GRE score of 1,000 and a minimum undergraduate GPA of 3.0 (B).

An application form can be obtained at the Program website. All required application materials must first be submitted to Office of Graduate Admissions. Those materials will then be forwarded to the M.U.P. Program for review by the Admissions Committee. The program will notify the applicant of the Committee's decision.

Curriculum

Core Courses (24)

- PLAN 500 Economics for Public Affairs 3
- PLAN 600 Planning History and Issues 3
- PLAN 601 Planning Theory 3
- PLAN 602 Statistics for Public Affairs 3
- PLAN 603 Urban Economics 3
- PLAN 604 Applied Research Methods 3
- PLAN 605 Land Use and Planning Law 3
- PLAN 606 Professional Practice 3
- One Specialty Area (listed below) 9
- Other Electives 9
- PLAN 649 Planning Internship 3
- PLAN 650 Capstone 3

Minimum total hours 48

Specializations

The courses available for each specialization are as follows. Other courses not listed below may be substituted with the permission of the Program Director.

Specialization in Land Use and Environmental Planning

Three courses (nine (9) credit hours) from the following:

- PLAN 501 Urban Environmental Quality 3
- PLAN 607 Land Use and Environmental Planning 3
- PLAN 608 Geographic Information Systems . 3
- PLAN 612 Mediation and Dispute Resolution 3
- PLAN 620 Environmental Policy 3
- PLAN 621 Urban Infrastructure 3
- PLAN 622 Urban Design 3
- PLAN 623 Environmental Policy and Natural Hazards 3
- PLAN 651 Urban Design Studio 3
- PLAN 652 Neighborhood Planning Studio . . 3

Specialization in Administration of Planning Organizations

Three courses (nine (9) credit hours) from the following:

- PADM 608 e-Government 3
- PADM 612 Non-profit Grantsmanship 3
- PLAN 609 Public Budgeting and Finance . . . 3
- PLAN 610 Strategic Management and Planning 3
- PLAN 611 Human Resources Management . 3
- PLAN 612 Mediation and Dispute Resolution 3
- PLAN 613 Public Administration and Organizational Theory 3

Specialization in Spatial Analysis for Planning

Three courses (nine (9) credit hours) from the following:

- PLAN 608 Geographic Information Systems . 3
- PLAN 614 Retail Site Analysis 3
- PLAN 615 Spatial Statistics 3
- PLAN 616 Analytical Urban Geography 3
- PLAN 618 Urban Demography 3
- PLAN 619 Urban Geographic Information Systems Applications 3
- PLAN 621 Urban Infrastructure 3
- PLAN 624 Urban Transportation Planning . . 3
- PLAN 628 Economic Conditions and Forecasting 3

Specialization in Housing and Community Development

Three courses (nine (9) credit hours) from the following:

- PLAN 614 Retail Site Analysis 3
- PLAN 617 Housing and Community Development 3
- PLAN 621 Urban Infrastructure 3
- PLAN 622 Urban Design 3
- PLAN 625 Historic Preservation 3
- PLAN 626 Economic Development 3
- PLAN 629 Real Estate Principles 3
- PLAN 630 Real Estate Investment 3
- PLAN 631 Real Estate Development 3
- PLAN 651 Urban Design Studio 3
- PLAN 652 Neighborhood Planning Studio . . 3

Juris Doctor/Master of Urban Planning Dual Degree Program

The Brandeis School of Law will allow students in the dual degree program to apply nine (9) credit hours of approved courses in urban planning as electives toward the J.D. degree. The Brandeis School of Law will accept each of these urban planning courses on a pass/fail basis, provided that the student earn at least a “B” (3.0) in the course. The following M.U.P. courses are approved to be counted as electives toward the J.D. degree:

- Planning Theory
- PLAN 501 Urban Environmental Quality
- PLAN 607 Land Use Planning
- PLAN 612 Mediation and Dispute Resolution
- PLAN 620 Environmental Policy
- PLAN 609 Public Budgeting and Finance
- PLAN 611 Human Resources Management
- PLAN 613 Public Administration & Organizational Behavior
- PLAN 608 Geographic Information Systems
- PLAN 621 Urban Infrastructure
- PLAN 624 Urban Transportation Planning
- PLAN 617 Housing & Community Development
- PLAN 625 Historic Preservation
- PLAN 631 Real Estate Principles
- PLAN 633 Real Estate Development
- Any other M.U.P. course approved by the Associate Dean of Student Life at the Brandeis School of Law, upon individual petition by a dual-degree student.

The urban planning program will allow students in the dual degree program to apply nine (9) credit hours of approved courses in law as electives toward the M.U.P. degree. The urban planning program will accept each of these law courses on a pass/fail basis, provided that the student earn at least a "C" (2.0) in the course. The following J.D. courses are approved to be counted as electives toward the M.U.P. degree:

- Administrative Law
- Energy Law
- Environmental Law
- Constitutional Law II
- Property II
- Real Estate Transactions
- Water Resources Law & Policy
- Any other J.D. course approved by the Director of the M.U.P. Program in the School of Urban & Public Affairs, upon individual petition by a dual degree student.

In addition to the above cross-application of urban planning credits toward the J.D. degree and of law credits toward the M.U.P. degree, students in the dual degree program shall be required to take "Land Use and Planning Law," a 3-credit interdisciplinary course cross-listed in both law and urban planning. Land Use and Planning Law shall count as a three-credit graded elective toward the J.D. degree, and likewise shall count as a three-credit graded elective toward the M.U.P. degree. To receive M.U.P. credit, the student must earn at least a "B" (3.0) in the course.

Departmental Faculty

David M. Simpson

Associate Professor

M.U.P. Director

Steven C. Bourassa

Professor

School Director

John I. Gilderbloom

Professor

Frank Goetzke

Assistant Professor

Steven G. Koven

Professor

Peter B. Meyer

Professor

H.V. Savitch

Professor

Carrie G. Donald

Associate Professor

Clara A. Leuthart

Associate Professor

Master of Arts in Women's and Gender Studies

Major: WGST

Degree Awarded: M.A.

Unit: GA

Program Webpage: louisville.edu/a-s/ws

Program Information

M.A. in Women's and Gender Studies

The WGS M.A. is open to qualified individuals with a bachelor's degree from an accredited college or university. Any undergraduate major is acceptable for admission; however, students without some Women's and Gender Studies background may be required to take preparatory courses before beginning the M.A. curriculum or in addition to the M.A. curriculum.

The 36-hour interdisciplinary degree program is organized around an 18-hour core of two introductory seminars and a selection of courses in four areas. In addition to the core, students complete a concentration area and either a thesis or culminating project. Faculty in the WGS Department, as well as faculty in other departments of the university, offer courses in the M.A. program.

The WGS M.A. may be completed in four semesters (fall/spring). Most courses are offered in late afternoon or evening. Limited summer offerings are also available.

M.S.S.W./M.A. in Women's and Gender Studies

The dual M.S.S.W./WGST program recognizes the value of professional education in two interrelated fields and encourages students who have an interest in both Women's and Gender Studies and Social Work to pursue these degrees simultaneously. Social workers and Women's and Gender Studies scholars often seek to address identical or related societal concerns, albeit from

different perspectives; understanding both disciplines enhances one's effectiveness in both the analysis of and engagement with contemporary social and cultural issues. Women's and Gender Studies courses strengthen the social worker's understanding of the historical foundations for policies and structures that have an impact on social institutions and human conditions; social work courses help Women's and Gender Studies scholars or activists to better understand human behavior, conflict resolution and social welfare institutions. A Women's and Gender Studies and Social Work combination provides the tools of social change for an historic problem of gender inequality and injustice.

The curriculum leading to dual degree, a Master of Arts in Women's and Gender Studies and a Master of Science in Social Work is a 72-credit hour program which combines credits in WGS and the Kent School of Social Work. Students take the core curriculum in both programs, but substitute elective hours with M.A. and M.S.S.W. hours. In addition, the Kent School has tailored its second year-long practicum to focus on issues of gender and women, adding that content and experience for the student. Students must apply and be admitted to both programs in order to pursue the dual degree.

Program Admission Procedure

- Students must meet the admission criteria established by the UofL Graduate School (submit a complete application, submit official transcripts verifying the receipt of a baccalaureate degree from an accredited institution, and pay application fee).
- Students must have a 3.0 GPA in undergraduate work. Provisional admission is possible for students who do not meet this requirement.
- Students must submit two letters of recommendation (submitted to the Graduate School). Letters of recommendation must be current (written within the last year), and members of the WGS Graduate Admissions Committee may not be letter writers.
- Students must achieve a combined score of at least 900 on the GRE verbal and quantitative sections. Provisional admission is possible for students with lower scores.
- Students must submit one academic writing sample of at least five pages (a paper written as part of the requirements of a university or college course), which should be mailed

directly to the Department of Women's & Gender Studies. The Graduate Admissions Committee will determine whether the student has the necessary level of competence in written communication to enter the M.A. program.

- Students must submit a personal statement of one-two pages discussing how the M.A. in Women's & Gender Studies relates to the student's professional or personal goals (mail directly to the Department of Women's & Gender Studies).
- Any undergraduate major is acceptable for admission; however, students without Women's and Gender Studies background may be required to take preparatory courses before beginning the M.A. curriculum or in addition to the M.A. curriculum. This will be determined by the Graduate Admissions Committee.
- Students must maintain a 3.0 average in order to be in good standing.
- Up to six (6) hours of graduate-level, "A" or "B" grade work in Women's and Gender Studies done at another institution may be applied toward the student's UofL degree, upon approval of the director.
- Students enrolled in the UK or WKU graduate certificate programs may transfer up to 12 hours of graduate-level "A" or "B" grade work, upon approval of the director.

Curriculum

The M.A. curriculum includes 18 hours of core courses; 9 hours in a concentration; a thesis or non-thesis option; and three to nine hours of electives, depending on whether the thesis is chosen. At least 18 of the 36 hours must be in courses at the 600 level.

Core Curriculum, 18 hours:

Foundation courses:

- WGST 601: Feminist Research and Theory in the Humanities (3 hours)
- WGST 602: Feminist Research and Theory in the Social Sciences (3 hours)

Women's/Gender History, choose one (3 hours)

- WGST 630: Feminism in Western Civilization
- WGST 631: Women in Europe and the U.S. in the 20th Century

- WGST 633: Women in 19th-Century America
- WGST 532: History of Sexualities
- WGST 591/691: Topics in WGS [recent example: Global History of Women]

Gender, Race, and Colonialism, choose one not chosen in another category (3 hours)

- WGST 612: Gender, Race, Work and Welfare
- WGST 643: Black Women's Voices
- WGST 640: Women's Health in Africa
- WGST 545: Southern Women: Black and White
- WGST 558: Women and Leadership in Developing Nations
- WGST 591, 593, 691, 692: Topics in WGS [recent example: Postcolonial Bodies]

Humanities Perspectives on Women/Gender, choose one not chosen in another category (3 hours)

- WGST 622: The Body in Popular Media
- WGST 520: Women's Personal Narratives
- WGST 560: Feminist Philosophical Literature
- WGST 571: Francophone Women Writers and Critics
- WGST 593/WGST 692: Topics in WGS [recent example: Feminist Theology]

Social Science Perspectives on Women/Gender, choose one not chosen in another category (3 hours)

- WGST 656: Feminist Theory
- WGST 612: Gender, Race, Work and Welfare
- WGST 615: Sociology of Disabilities
- WGST 538: American Women in Sports
- WGST 535: Women's Health Issues
- WGST 545: Southern Women: Black and White
- WGST 643: Black Women's Voices
- WGST 640: Women's Health in Africa
- WGST 558: Women and Leadership in Developing Nations
- WGST 591/691: Topics in WGS [Recent example: Gender and the Law]

Concentration, 9 hours:

For the concentration, students take three courses in a concentration, either around a theme or a more traditional grouping.

Thesis option or non-thesis option, 9 hours:

Thesis option:

In addition to the core and the concentration:

- WGST 695: Practicum **or** elective (need not be in WGS), 3 hours
- WGST: 699: Thesis, 6 hours

Non-thesis option:

In addition to the core and the concentration:

- WGST 695: Practicum or elective (need not be in WGS), 3 hours
- WGST elective, 3 hours
- WGST 698: Culminating Master's Project

Graduate Certificate in Women's and Gender Studies

Program Information

The Women's and Gender Studies (WGS) graduate certificate is a 15-hour program for students who have completed a B.S. or B.A. degree in any field. Students with no prior course work in WGS may be required to take classes in preparation for admission to the certificate program.

Program admission procedure:

Admission to the graduate certificate in Women's & Gender Studies is open to any student who has completed a B.A. or B.S. degree with a 3.0 overall GPA. Students may pursue the certificate outside the framework of a graduate degree program or in conjunction with a graduate degree program in another UofL department. Students wishing to pursue the certificate must apply for admission through the Graduate School by:

1. Completing a Graduate School application form and sending in the application fee
2. Submitting an official transcript reflecting previous degrees earned

Students must also send directly to Women's and Gender Studies a one-to-two page letter of intent, describing how the WGS graduate certificate will further their personal or professional goals.

Students wishing to pursue the graduate certificate in conjunction with a graduate degree program in another UofL department should first apply and be admitted to the degree program before applying for admission to the WGS graduate certificate program.

Curriculum

1. Students must complete a total of 15 hours in courses approved for graduate credit in accordance with the policies of the Graduate School, approved by the WGS chairperson.
2. One course among the 15 hours must be WGST 601 or WGST 602.
3. At least two courses must be at the 600-level.
4. Courses must be chosen from both humanities and social sciences disciplines, with consultation of WGS chairperson.
5. Students pursuing the WGS certificate in conjunction with a graduate degree program must take at least one course outside of the department in which the student is pursuing the degree.
6. A single course may satisfy more than one requirement.
7. Course work toward the graduate certificate in WGS may also count toward the student's graduate degree.

Departmental Faculty

Nancy M. Theriot

*Professor
Chairperson*

Anita Harris

Assistant Professor

Karen Christopher

Associate Professor

Cate Fosl

Associate Professor

Dawn Heinecken

Associate Professor

Kaila Story

*Assistant Professor
Audre Lorde Endowed Chair in Race, Class,
Gender, and Sexuality*

Tomarra Adams

*Affiliated Faculty
Assistant Professor, Pan African Studies*

Ann Allen

*Affiliated Faculty
Professor, History*

Annette Allen

*Affiliated Faculty
Associate Professor, Humanities*

Beth Boehm

*Affiliated Faculty
Associate Professor, English*

Mary Esi Bani

*Affiliated Faculty
Associate Professor, Pan African Studies*

Barbara Burns

*Affiliated Faculty
Professor, Psychology*

Thomas B. Byers

*Affiliated Faculty
Professor, English*

Karen Chandler

*Affiliated Faculty
Associate Professor, English*

Anne Caldwell

*Affiliated Faculty
Associate Professor, Political Science*

Julia Dietrich

*Affiliated Faculty
Professor, English*

Rinda Frye

*Affiliated Faculty
Associate Professor, Theatre Arts*

Patricia Gagne

*Affiliated Faculty
Associate Professor, Sociology*

Alan Golding

*Affiliated Faculty
Professor, English*

Trish Gray

*Affiliated Faculty
Term Appointment, Political Science*

Susan Griffin

*Affiliated Faculty
Professor, English*

Karen Hadley

*Affiliated Faculty
Associate Professor, English*

Susan Herlin

Affiliated Faculty

Associated Professor, Emerita, History and Pan African Studies

Suzette Henke
*Affiliated Faculty
Professor, English*

Mary Hums
*Affiliated Faculty
Associate Professor, HPES*

Katherine Johnson
*Affiliated Faculty
Assistant Professor, University Libraries*

Susan Kelly
*Affiliated Faculty
Associate Professor, Sociology*

Cheryl Kolander
*Affiliated Faculty
Professor, HPES*

Karen L. Kopelson
*Affiliated Faculty
Assistant Professor, English*

Gul Marshall
*Affiliated Faculty
Assistant Professor, Sociology*

Carol Mattingly
*Affiliated Faculty
Associate Professor, English*

Diane Pecknold
*Affiliated Faculty
Visiting Teaching Scholar, Commonwealth Center for the Humanities and Society*

Wendy Pfeffer
*Affiliated Faculty
Professor, Classical and Modern Languages*

Natalie Polzer
*Affiliated Faculty
Assistant Professor, Humanities*

Nancy Potter
*Affiliated Faculty
Associate Professor, Philosophy*

Annette Powell
*Affiliated Faculty
Assistant Professor, English*

Theresa Rajack-Talley
*Affiliated Faculty
Assistant Professor, Pan African Studies*

Edwin S. Segal
*Affiliated Faculty
Professor, Anthropology*

Arthur Slavin
*Affiliated Faculty
Professor, Emeritus, Humanities*

Mary Ann Stenger
*Affiliated Faculty
Professor, Humanities*

Tamara Yohannes
*Affiliated Faculty
Term Appointment, English*

College of Business

R. Charles Moyer, Ph.D., Dean

The following graduate programs are offered within the College of Business:

- Entrepreneurship - Ph.D.

Doctor of Philosophy in Entrepreneurship

Major: ENTR

Degree Awarded: Ph.D.

Unit: GB

Program Webpage: business.louisville.edu/entrepreneurshipphd/

Program Information

Admission to the program is highly competitive. Minimum qualifications are a score of 620 on the graduate management admissions test and a 3.6 grade point average on previous graduate work. Applicants are only admitted on even years in the Fall semester.

No specific graduate or undergraduate major is required. However, applicants can only be admitted provisionally until they have successfully completed coursework equivalent to the UofL's M.B.A. core courses. The completion of these core courses is a prerequisite for receiving a research assistantship. This is a full-time program, requiring year-round study and a 20 hour/week paid research assistantship. Typically, students can finish their course work in two to three years. All students take 12 required seminars in addition to the courses they select for their minor area of study. The total time required to complete the degree depends on the length of time required to complete and defend a dissertation, which demonstrates the ability to independently conduct and report on original research.

All required courses are offered on a rotating basis in the Fall and Spring and Summer semesters, along with a variety of elective courses.

Curriculum

The following are the curriculum requirements for the Entrepreneurship Ph.D. Because the state of the knowledge in the field changes, these content requirements may change in order to address topics of current interest. Nevertheless, changes in required courses will not increase the number of required credits for the program.

Year 1--Fall

Entrepreneurship 700: Current Topics in Entrepreneurship Research

This seminar introduces students to the most influential, recent research findings that are guiding current thinking. It is more than a survey course; it is a critical review that can provide a foundation for future research by students.

Entrepreneurship 710: Sociological Foundations of Entrepreneurship

This seminar emphasizes group influences on the appearance, growth and diminution of entrepreneurial activities. In addition, it treats the organizational and social context of firm formations, as well as bureaucratization, and industrial and organizational selection processes.

Entrepreneurship 720: Economic Foundations in Research in Entrepreneurship

This seminar includes the development of economic thought related to entrepreneurship, ranging from historical figures in economic theory such as Cantillon and Ricardo to contemporary schools of thought on entrepreneurship, including the Austrian perspective. In-depth analyses of pricing strategies, market structures, dynamic vs. static analysis, regulatory issues, and examples of applications of economics in research in entrepreneurship are presented. Other topics may include real options theory, rational expectations, the economics of information, econometrics, transfer pricing, transaction cost economics, and agency theory.

Entrepreneurship 725: Linear Statistics

This seminar covers advanced linear statistical models, the distribution of quadratic forms, estimation and hypothesis testing in the general linear model, including special linear models and their applications. The prerequisites for this seminar are undergraduate matrix algebra and

undergraduate mathematical statistics, which may be taken concurrently.

Year 1--Spring

Entrepreneurship 726: Advanced Multivariate Techniques

This seminar covers all multivariate techniques in common usage, including cluster analysis, factor analysis, discriminant analysis, and covariance structure modeling.

Entrepreneurship 730: Entrepreneurship from a Strategic Perspective

This seminar examines the entrepreneur in an industrial context, which provides insight into such issues, as performance, survival, competitive advantage, the role of a venture's resources, and positioning of the business plan.

Entrepreneurship 733: Psychological Foundations of Entrepreneurship

This seminar provides students with discipline-based foundations of theory and research. Specifically, this seminar explores the intellectual history of psychology in entrepreneurship beginning in the early 1900s to the 1970s. Topics include: the social context of individual behavior, motivation and job satisfaction.

Entrepreneurship 761: Research Design

This seminar is designed to teach students the fundamentals of research design in the social sciences. It is intended for entrepreneurship doctoral students who will conduct empirical research publishable in scholarly journals. Topics include philosophy of science, theory building, causality analysis, overviews of statistical methods, qualitative methods and psychometric theory.

Year 1

A student's dissertation committee must approve all electives required for the satisfaction of program requirements. Any electives that support a student's research objectives may be considered. To maintain maximum flexibility, no list of potential electives has been developed, and as a result, prior permissions to enroll in them have not been obtained. It is a student's responsibility in consultation with his or her committee to select the most appropriate electives.

Year 1--Summer

Entrepreneurship 750: Research Methods I

Research using large data bases and panel studies. Includes survey design and cleaning data

sets, as well as appropriate statistical analysis techniques.

Entrepreneurship 762: Directed Readings

This seminar provides students with an opportunity to focus on research topics of particular interest to them while at the same time requiring them to synthesize and extend what is known about a particular research topic.

Year 2--Fall

Entrepreneurship 753: Venture Capital

This seminar addresses the functioning and operation of venture capital firms and venture capital markets, together with their relationships with the users of funding, typically the founders of high-growth potential new ventures. It also examines the market for business angles and their unique contribution to the founding of new ventures. The emphasis of this seminar is on the development of testing of theory to understand venture capital processes.

Entrepreneurship 770: Directed Readings

This individualized course may treat topics such as the following in detail: classical origins of entrepreneurial thought and analysis; informational economics or entrepreneurial competence. Topics are designed to reinforce a student's research interests.

1 Concentration/Social Science Elective

1 Research Methods Elective

Year 2--Spring

2 Concentration/Social Science Electives

Entrepreneurship 799: Doctoral Workshop

This workshop is a seminar-style review of award winning dissertations in entrepreneurship. The major assignment is to incorporate the best approaches of others into the development and presentation of a dissertation proposal.

Year 2--Summer

Second year paper

Preliminary Examinations

Year 3--Fall

Dissertation Proposal

Electives

A student's program will typically consist of at least 54 credit hours of seminar work and study beyond the master degree. A student's committee, based on a student's research objectives, will determine the exact total. Prerequisites

required to enroll in designated seminars will likely increase this total to 64 credit hours.

Year 3--Spring

Dissertation

Years 4 and 5 as necessary

Dissertation

Departmental Faculty

James O. Fiet

Professor

Brown-Forman Chair in Entrepreneurship

Program Director

Arthur J. Adams

Professor

Melissa Baucus

Associate Professor

Reginald Bruce

Associate Professor

David Dubofsky

Professor

Chair, Ph.D. Program Committee

Bruce H. Kemelgor

Associate Professor

Robert L. Taylor

Professor

Dean Emeritus

Term Appointments:

Howard Aldrich

Professor

Per Davidsson

Professor

Charles Hofer

Professor

Bruce Kirchhoff

Professor

Dean Sheperd

Professor

Scott Shane

Professor

School of Dentistry

**Wood E. Currens, D.M.D., Acting
Dean**

The School of Dentistry offers the following programs through the Graduate School:

- Oral Biology - M.S.

Master of Science in Oral Biology

Major: OBIO

Degree Awarded: M.S.

Unit: GD

Program Webpage: www.dental.louisville.edu/

Program Information

The School of Dentistry offers a program of study leading to the Master of Science Degree in Oral Biology. The program is directed toward a general understanding of the biology of the oral cavity and developing craniofacial region, clinical studies and biomechanics associated with dental sciences. Students obtain the scientific knowledge and biomedical skills required to perform contemporary dental research.

Areas for research training include: molecular, cellular and craniofacial biology; craniomaxillofacial diagnostic imaging; neural crest-related craniofacial and cardiovascular disorders; biochemistry of calcium-regulating hormones; regulation of gene transcription; oral microbiology; cellular mechanisms of salivary gland secretion; gene mapping of complex traits and birth defects; infection control; protein glycosylation; protein expression and trafficking; periodontology; dental materials science; orthodontics; endodontics; prosthodontics; and health services research related to dentistry.

A minimum of 30 semester hours is needed for the M.S. degree. Requirements for the degree include courses in introductory and advanced

oral biology and in data analysis, participation in seminars, and a thesis.

Other course work may be required as individualized programs are developed by students working with their thesis advisor/director and graduate committees. The graduate committee also approves proposed thesis research, reviews the thesis research, reviews the thesis for acceptance, and administers a final oral examination.

The M.S. degree in oral biology offers training particularly important to persons wishing to pursue a career in academic dentistry. The program is available to students wishing to obtain only the M.S. degree, to students enrolled in Dental Specialty Certificate/ Residency Programs, students enrolled in the D.M.D. degree program, and persons who have previously earned a D.M.D. or M.D. (or equivalent) degree.

Application for Admission

The application form is available on-line at: graduate.louisville.edu/apply/. Additionally, there is a \$50.00 non-refundable application fee. Applications are not processed until the application fee is received.

Credentials listed below should be sent to the Office of Graduate Admissions at least eight weeks prior to the beginning of the semester or summer session in which the student wishes to enroll; otherwise the application may not be reviewed in time for registration.

Students currently enrolled in the D.M.D. degree program who wish to apply to the M.S. degree in oral biology program should not do so until after the completion of their first academic year in the D.M.D. program.

Admission Credentials

- Application and application fee
- Transcripts of all college coursework, including evidence of a baccalaureate degree
- Graduate Record Examination scores or acceptable scores on the DAT
- Two letters of recommendation

Curriculum

Major subject required (core) courses:

- OBIO 501 Biomedical Data Analysis: Experimental Design and Statistics (Fall Semester) (3 semester hours)
- OBIO 601 Introduction to Oral Biology Research (Fall Semester) (2 semester hours)

- OBIO 606 Oral Biology Seminar (Spring Semester, Prerequisite: OBIO 601) (1 semester hour)
- OBIO 619 Research (minimum of 8 semester hours required) (8 semester hours)
- OBIO 620 Thesis (minimum of 6 semester hours required; the student must register for at least 1 semester hour of
- OBIO 620 in the same semester as their thesis defense) (6 semester hours)

Major subject selective courses – At least 4 semester hours must be in courses selected from the group identified below:

- OBIO 600 Concepts in Oral Biology (4 semester hours)
- OBIO 602 Bone and Calcium Physiology (3 semester hours)
- OBIO 604 Oral Microbiology (3 semester hours)
- OBIO 611 Craniofacial Osteology (1-3 semester hours)
- OBIO 612 Craniomaxillofacial Diagnostic Imaging (2-4 semester hours)
- OBIO 613 Diagnosis and Treatment of Temporomandibular Disorders (1 semester hour)
- OBIO 614 Advanced Oral Diagnosis/Oral Medicine (1 semester hour)
- OBIO 615 Advanced Clinical Pharmacology (1 semester hour)
- OBIO 616 Overview of Medical Genetics in Oro-facial Disease (1.5 semester hours)
- OBIO 617 Advanced Oral Pathology (1 semester hour)
- OBIO 670 Dental Gross Anatomy (6 semester hours)
- OBIO 671 General and Oral Histology (5 semester hours)
- OBIO 675 Advanced Head and Neck Anatomy (2 semester hours)

Additional approved course semester hours

These courses may be chosen from any 600-level courses offered by the Graduate School that are deemed to be relevant and applicable to the student's program of study and thesis research, and *must be approved by the student's thesis advisor/director and the Program Director*: (6 semester hours)

*Note: *OBIO 610 Advanced Topics in Oral Biology (1-4 semester hours) is strongly recom-*

mended in partial fulfillment to these 6 semester hours.

Total semester hours required for M.S. degree: 30 semester hours

Departmental Faculty

Director

F. John Firriolo

Professors

Norbert J. Burzynski

Gary A. Crim

Connie L. Drisko

Allan G. Farman

Lawrence Gettleman

Allan Gould

Robert M. Greene

Henry Greenwell

Bruce Haskell

B. Edwin Johnson

Zafrulla Khan

Richard L. Miller

Frederick M. Parkins

Michelle L. Pisano

James P. Scheetz

Robert H. Staat

Arthur Van Stewart

John N. Williams

William W. Young

Associate Professors

Janice M. Butters

Douglas S. Darling

Sven-Ulrik Gorr

Margaret Hill

Regan L. Moore

Abbas Parsian

William Scarfe

Anibal M. Silveira

David Tasman

Assistant Professors

Steven Clark

College of Education and Human Development

Robert D. Felner, Ph.D., Dean

The College of Education and Human Development offers the following doctoral, masters, and specialist degree programs through the Graduate School:

- Art Education - M.A.T.
- Counseling and Personnel Services - Ph.D.
- Curriculum and Instruction - Ph.D.
- Counseling and Personnel Services - M.Ed.
- Early Elementary Education - M.A.T.
- Early Elementary Education - M.Ed.
- Educational Administration - M.Ed.
- Educational Administration - Ed.S.
- Educational Leadership and Organizational Development - Ed.D.
- Educational Leadership and Organizational Development - Ph.D.
- Exercise Physiology - M.S.
- Health Education - M.Ed.
- Health Professions Education - Certificate
- Higher Education - M.A.
- Human Resource Education - M.S.
- Instructional Technology - M.Ed.
- Interdisciplinary Early Childhood Education - M.A.T.
- Middle School Education - M.A.T.
- Middle School Education - M.Ed.
- Music Education - M.A.T.
- Physical Education - M.A.T.
- Reading Education - M.Ed.
- Secondary Education - M.A.T.
- Secondary Education - M.Ed.
- Special Education - M.Ed.
- Sport Administration - M.S.

Master of Arts in Teaching in Art Education

Major: EDAR
Degree Awarded: M.A.T.
Unit: GE
Program Webpage: louisville.edu/education/degrees/mat-edar.html

Program Information

Program admission procedure:

1. Bachelor's degree with a suggested 2.75 grade point average.
2. "C" or better in English 102, Speech Communication course.
3. Within 9 credits of completing content area with a 2.50 GPA or above in content area.
4. Admission to Teacher Education.
5. Admission to the Graduate School and completion of official program with advisor.

Initial Assessment:

Admission to Graduate School & Teacher Education.

Curriculum

- EDTP 602 Exploring Teaching Within the Socio-Cultural Context of P-12 Schools 3
- ECPY 607 Learning Theory and Human Growth and Development 3

(NOTE: The above two courses must be taken prior to or concurrent with the next two courses)

- ART 508 Art Education Methods/Research I . . 3
- ART 518 Art Education Methods/Research II . . 3

Mid-Point Assessment: *Prior to Student Teaching:* Satisfactory dispositions assessment; No lower than 2.0 in art education methods/research class; Within 3 credits of meeting content requirements; EDTP 602, ECPY 607, and ART 508 and 518 passed; Satisfactory mid-point portfolio; Positive recommendation from Middle/Secondary Program Committee.

- Choose two from the following three student teaching courses:
 1. EDTP 615/616 Student Teaching Primary or Student Teaching Intermediate 6

2. EDTP 617 Student Teaching Middle Grades	6
3. EDTP 619 Student Teaching Secondary	6
• EDTP 677 Capstone Seminar: Initial Certification ²	3
• EDSP 545 Exceptional Child in the Regular Classroom	3
Certification Assessment: <i>After Student Teaching:</i> Satisfactory dispositions assessment; <i>All certification course work* completed with 2.5 cumulative GPA;</i> 2.5 cumulative GPA in content course requirements; 2.0 or higher in each student teaching; Satisfactory certification portfolio; Passing scores on required PRAXIS content and PLT exams; Positive recommendation from Middle/Secondary Program Committee.	
EDTP 503 Developing Cross-Cultural Competence ¹	3
ART 5xx Academic support course ¹	3
ART 6xx Academic support course ¹	3
EDTP 620 Reading and Writing Across the Curriculum/Adolescent Literature ¹	3
Minimum total hours	36

Degree Assessment: Satisfactory dispositions assessment; All program course work with 3.0 cumulative GPA; Satisfactory degree portfolio.

Notes:

- ¹Can be taken at any point in the program; at least one must be at the 600 level.
- ²Must be taken concurrently with Student Teaching

Departmental Faculty

College of Education and Human Development
 Faculty and Staff Directory
php.louisville.edu/edu/directory/index.php

Department of Fine Arts- Allen R. Hite Institute
 M.A.T. Art Education Graduate Faculty
louisville.edu/a-s/finearts/mat.html

Doctor of Philosophy in Education Counseling and Personnel Services

Major: CPS
Degree Awarded: Ph.D.
Unit: GE
Program Webpage: louisville.edu/education/degrees/phd-cps-collegepersonnel.html

Program Information

Distinctive Characteristics of Doctoral Programs in CEHD.

I. Social Justice and Equity

Aligned with our mission, our students would build experience and expertise in the issues of social justice and equity. This theme would align with our metropolitan mission and that of student achievement.

II. Leadership

This area could be assisted by the Future Faculty/Future Leaders program. Leadership is a distinct focus in other programs in CEHD and the doctoral program should be no exception. In this component students would gain expertise in supervising and leading others to achieve organizational goals and missions, managing complex systems, addressing administrative issues and procedures, conducting research to enhance leadership and teaching others about the art of organizational leadership.

III. Practical Experience

The doctoral programs in CEHD will also contain practicums, internships, or embedded field experience that aligns both with their program studies and their career goals. These experiences are to be mentored and may include a number of the following areas: teaching; research, administration or other appropriate areas.

IV. Scholarship/Research

The emphasis on scholarship would include experience and mentorship in ethics, publications, presentation, grantsmanship, and other forms of creative activity. The research component will be characterized by the development of vertical research teams; senior faculty, junior faculty, doctoral students, masters' students, and in

some programs, undergraduate students, working together on research projects and research areas. These might be bolstered by partnerships with local school districts, businesses, or community agencies.

The doctoral degree is granted in recognition of scholarly proficiency and distinctive achievement in a specific field/discipline. All candidates for a doctoral degree in the CEHD must successfully complete qualifying exams and a dissertation/professional portfolio that clearly indicates the candidate has mastered and can exhibit/articulate the content knowledge, skills and dispositions specific to their discipline and can utilize appropriate research methodologies to contribute to the body of knowledge in their field.

Curriculum

60 Hour Program

Master's Degree prerequisite + 60 hours minimum: The Student and Committee must develop courses, programs and experiences that clearly identify and address the specific themes of Leadership, Scholarship, Social Justice and Equity. These areas of emphasis must have descriptive competencies that the student should attain and the Committee can assess.

Specialty Components (33 hours minimum)
Selected with Program Committee approval . 33

Research Methodology (27 hours minimum)
Selected with Program Committee approval

- Statistics and Methodology I (Stat 601 or equivalent required) 3
- Statistics and Methodology II ^b (701 – Intermediate Multiple Regression) 3
- Statistics and Methodology III (703 - Multivariate educational statistics) 3
- Research Electives: e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.^{a,b} . 6
- Dissertation/Portfolio Research 12

Elective Component or Master's Degree Master's Degree comprises Elective component of program.

- a. Selected with Program Committee approval within program guidelines/framework.
- b. ELFH 600 may not be used for this course.

Minimum total hours: 60

90 Hour Program

The Student and Committee must develop courses, programs and experiences that clearly identify and address the specific themes of Leadership, Scholarship, Social Justice and Equity. These areas of emphasis must have descriptive competencies that the student should attain and the Committee can assess

Specialty Components (42 hours minimum)
Selected with Program Committee approval . 42

Research Methodology (27 hours minimum)
Selected with Program Committee approval

- Statistics and Methodology I (Stat 601 or equivalent required) 3
- Statistics and Methodology II ^b (702 – Applied Multiple Regression) 3
- Statistics and Methodology III (703 - multivariate educational statistics) 3
- Research Electives: e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.^{a,b} . 6

Elective Component (21 hours Minimum)
Selected with Program Committee approval . 21

- a. Selected with Program Committee approval within program guidelines/framework.
- b. ELFH 600 may not be used for this course.

Minimum total hours: 90

Departmental Faculty

College Student Personnel Faculty

- Michael J. Cuyjet
- Amy S. Hirschy
- Thomas R. Jackson
- Bridgette O. Pregliasco
- Fred W. Rhodes
- Gale S. Rhodes
- Linda T. Shapiro

Master of Education in Counseling and Personnel Services

Major: CPS
Degree Awarded: M.Ed.
Unit: GE
Program Webpage: louisville.edu/education/
 departments/ecpy/

Program Information

Master's degree applicants must take the Graduate Record Examination (GRE) and obtain a minimum combined score of 800 on the verbal and quantitative sections. Applicants must have earned a minimum 2.75 grade point average (GPA) in an undergraduate degree from an accredited institution. Applicants for the Concentration in Counseling Psychology must obtain a score of 900 on the verbal and quantitative section of the GRE. Also, applicants for this concentration must have earned a minimum 3.0 grade point average (GPA) in an undergraduate degree from an accredited institution. If the applicant meets one of the above standards and does not meet the other (e.g., receives scores between 700-799 on the GRE, or earns between a 2.50-2.74 GPA), he/she may be considered for admission in a conditional status. Additionally, all applicants should submit two letters of recommendation, the Addendum to the Application, and a statement of professional goals not to exceed 750 words. Deadlines for completed applications are March 1st for the summer and fall and October 1st for the spring semesters. (Extended deadline of June 15 for fall if spaces are available after the March 1 deadline).

Curriculum

Concentration in Counseling Psychology

Initial Assessment: Admission to Graduate School & Counseling Psychology Program.

General Requirement: Undergraduate prerequisite: Degree in psychology or completion of four leveling courses. ¹

Core Professional Area: (total 30 hours)

- ELFH 600 Introduction to Research Methods and Statistics ² 3
- ECPY 540 Evaluation & Measurement . . . 3
- ECPY 600 Introduction to Counseling & Psychotherapy 3
- ECPY 605 Human Development 3
- ECPY 629 Theories and Techniques of Counseling & Psychotherapy 3
- ECPY 650 Group Process & Practice . . . 3
- ECPY 663 Multicultural & Diversity Issues 3
- ECPY 670 Career Counseling 3
- ECPY 730 Social, Legal & Ethical Issues 3

Mid-Point Assessment: Prior to ECPY 680 Practicum: Must complete ECPY 629 with at least a B.

- ECPY 680 Practicum ³ 3

Counseling Psychology Concentration: (total 27 hours)

- ECPY 601 Applied Statistics 3
- ECPY 611 Learning Systems 3
- ELFH 619 Empirical and Theoretical Foundations of Counseling & Psychotherapy . 3
- ECPY 621 Differential Diagnosis & Treatment in Counseling 3
- ECPY 648 Psychological Assessment I . 3
- ECPY 649 Psychological Assessment II . 3
- ECPY 680 Practicum in Counseling ³ . . . 3
- ECPY 683 Internship in Counseling Psychology ³ 3
- ECPY 775 Biological Bases of Behavior . 3

Professional Elective: 3

Minimum total hours: 60

Degree Assessment: All program course work with a 3.0 cumulative GPA.

¹Students admitted to the Counseling Psychology Program who have not completed an undergraduate degree in psychology must complete four leveling courses in the areas of developmental psychology, abnormal psychology, social psychology, and statistics/research design for the social sciences.

²ELFH 600 must be taken within the first 9 hours.

³At least 900 hours of field placement must be completed during the two, practicum and intern-

ship. No less than 10 and no more than 20 hours per week are required during the two practicums. Counseling psychology students take one practicum in counseling and one practicum in psychological assessment.

Concentration in Expressive Therapies

The Master of Education (36 credit hour minimum) does not fulfill the requirements for the American Art Therapy Association (AATA), Kentucky Certified Professional Art Therapist (CPAT), Registered Art Therapist (ATR), and Board Certified Art Therapist (ATR-BC). An additional 24 credit hours as listed below will satisfy the educational requirements for these credentials.

Core Professional Area: (21 hours)

- ELFH 600 Introduction to Research Methods and Statistics 3
- ECPY 605 Human Development 3
- ECPY 629 Theories & Techniques of Counseling 3
- ECPY 650 Group Process and Practice 3
- ECPY 663 Multicultural Issues 3
- ECPY 670 Career Development & Counseling 3
- ECPY 680 Practicum 3

Expressive Therapies concentration: (15 hours)

- ECPY 632 Clinical Art Therapy I: Theories 3
- ECPY 633 Clinical Art Therapy II: Assessment and Practice 3
- ECPY 639 Research in Expressive Therapies 3
- ECPY 641 Applied Methods in Expressive Therapies 3
- ECPY 643 Field Studies in Art Therapy 3

Minimum total hours: 36

The following course work must be completed in order to meet the educational requirements for credentialing as an art therapist (ATR, BC, CPAT)

- ECPY 621 Differential Diagnosis 3
- ECPY 637 Expressive Techniques 3
- ECPY 642 Symbols of Self Actualization 3
- ECPY 680 Practicum (*Must take ECPY 621, 637, & 642 before taking this course*) 9

- Other electives must be approved by advisor 6

Total hours: 60

Concentration in Mental Health Counseling

Initial Assessment: Admission to Graduate School & Mental Health Counseling program.

General Requirement: Undergraduate prerequisite- Course in abnormal psychology ¹

Core Professional Area: (total 30 hours)

- ELFH 600 Introduction to Research Methods and Statistics ² 3
- ECPY 540 Evaluation & Measurement 3
- ECPY 600 Introduction to Counseling & Psychotherapy 3
- ECPY 605 Human Development 3
- ECPY 629 Theories and Techniques of Counseling & Psychotherapy 3
- ECPY 650 Group Process & Practice 3
- ECPY 663 Multicultural & Diversity Issues 3
- ECPY 670 Career Counseling 3
- ECPY 730 Social, Legal & Ethical Issues 3

Mid-Point Assessment: Prior to ECPY 680 Practicum: Must complete ECPY 629 with at least a B.

- ECPY 680 Practicum in Counseling ³ 3

Counseling Psychology Concentration: (total 15 hours)

- ECPY 619 Empirical and Theoretical Foundations of Counseling & Psychotherapy 3
- ECPY 621 Differential Diagnosis & Treatment in Counseling 3
- ECPY 626 Consultation 3
- ECPY 680 Practicum in Counseling ³ 3
- ECPY 682 Internship in Mental Health Counseling ³ 3

Professional Elective from the 9 areas designated in Curriculum Guidelines for LPCC: (12 hours) ⁴ 12

Minimum total hours: 60

Degree Assessment: All program course work with a 3.0 cumulative GPA.

¹Students admitted to the Mental Health Counseling Program who have not completed a

course in abnormal psychology are required to take PSYC 485: Abnormal Psychology as a prerequisite to the program. Students who have successfully completed a graduate-level course in abnormal psychology at another institution may transfer it into the program as an elective course.

²ELFH 600 must be taken within the first 9 hours.

³At least 700 hours of field placement must be completed during the two practicums and internship. No less than 10 and no more than 20 hours per week are required during the two practicums.

⁴Kentucky Board of Licensed Professional Counselors Curriculum Guidelines:

- The helping relationship, including counseling theory and practice.
- Human growth and development.
- Lifestyle and career development.
- Group dynamics, process, counseling, and consulting.
- Assessment, appraisal, and testing of individuals.
- Social and cultural foundations, including multicultural issues.
- Principles of etiology, diagnosis, treatment planning, and prevention of mental and emotional disorders and dysfunctional behavior.
- Research and evaluation.
- Professional orientation and ethics.

Concentration in School Counseling (P-12)

Initial Assessment: Admission to Graduate School & School Counseling Program.

Core Professional Area: (total 30 hours)

- ECPY 540 Evaluation and Measurement in Education 3
- ELFH 600 Introduction to Research Methods and Statistics 3
- ECPY 600 Introduction to Counseling and Psychotherapy 3
- ECPY 605 Human Development 3
- ECPY 630 Theories and Techniques of School Counseling 3
- ECPY 654 Group Procedures in School Counseling 3

- ECPY 663 Multicultural and Diversity Issues 3
- ECPY 670 Career Development and Counseling 3
- ECPY 730 Social, Legal, & Ethical Issues in Counseling 3

Mid-Point Assessment: Prior to Practicum in Counseling- Students must earn at least a B in ECPY 630. Acceptable completion of midpoint portfolio.

- ECPY 680 Practicum in Counseling 3

School Counseling Concentration: (total 15 hours)

- ECPY 512 Learning and Cognition in Education 3
- ECPY 624 Foundations of School Counseling 3
- ECPY 626 Consultation 3
- ECPY 627 Leadership and Professional Orientation in School Counseling 3
- ECPY 640 Assessment Methods for Counselors 3

Minimum total hours: 45

Degree Assessment: All program course work with a 3.0 cumulative GPA; Acceptable portfolio is required for degree.

Notes: Must apply for Practicum: ECPY 680 Practicum in Counseling by March 1 for Fall term and October 1 for Spring term.

1. For school counseling certification, a grade of "B" or better is required in ECPY 680.
2. Transfer of credit is dependent upon receipt of transcript and advisor's approval (no more than six hours may be transferred).
3. Upon admission, students have six years to complete their program.
4. All students must have liability insurance prior to taking practicum.
5. At any point after admission, the faculty reserve the right to review a student's fitness on the basis of personal characteristics, for continuing in the counseling or student personnel program. Such a review shall be initiated upon written recommendation of two faculty members and shall consist of a review of the student's academic result in a recommendation to the Dean for (1) continuation of the student in the program, (2) continuation for a specified provisional period with specific condi-

- tions for continuation thereafter, or (3) dismissal from the program.
6. The program requires the acceptable completion of a program portfolio.
 7. The program is not official unless signed by both advisor and student.

Concentration in College Student Personnel

Initial Assessment: Admission to Graduate School & College Student Personnel Program.

Core Professional Area: (total 30 hours)

- ELFH 600 Introduction to Research Methods and Statistics 3
- ECPY 660 Introduction to Student Personnel Works 3
- ECPY 661 Theories of College Student Development 3
- ECPY 629 Theories and Techniques of Counseling & Psychotherapy 3
- ECPY 650 Group Process & Practice . . . 3
- ECPY 662 Student Affairs Programs, Policies, and Practices 3
- ECPY 663 Multicultural and Diversity Issues 3
- ECPY 670 Career Counseling 3
- ECPY 761 Program Development & Evaluation in Student Affairs 3

Mid-Point Assessment: Prior to Internship in College Student Personnel Services: Must complete ECPY 660.

- ECPY 681 Internship in College Student Personnel Services 3

College Student Personnel Concentration: (total 12 hours)

- ECPY 664 College Student Sub-Cultures 3
- ECPY 681 Internship in College Student Personnel Services 3
- ELFH 682 The Organization and Administration of Higher Education Institutions . . 3
- ECPY 695 Capstone Seminar in College Personnel Work. 3
- Professional Elective 3

Minimum total hours: 45

Degree Assessment: All program course work with a 3.0 cumulative GPA.

Departmental Faculty

College of Education and Human Development Faculty and Staff Directory:
louisville.edu/education/faculty-staff

Doctor of Philosophy in Curriculum and Instruction

Major: EDCI
Degree Awarded: Ph.D.
Unit: GE
Program Webpage: louisville.edu/education/degrees/tl-doctoral-degree.html

Program Information

Distinctive Characteristics of Doctoral Programs in CEHD

I. Social Justice and Equity

Aligned with our mission, our students would build experience and expertise in the issues of social justice and equity. This theme would align with our metropolitan mission and that of student achievement.

II. Leadership

This area could be assisted by the Future Faculty/Future Leaders program. Leadership is a distinct focus in other programs in CEHD and the doctoral program should be no exception. In this component students would gain expertise in supervising and leading others to achieve organizational goals and missions, managing complex systems, addressing administrative issues and procedures, conducting research to enhance leadership and teaching others about the art of organizational leadership.

III. Practical Experience

The doctoral programs in CEHD will also contain practicums, internships, or embedded field experience that aligns both with their program studies and their career goals. These experiences are to be mentored and may include a number of the following areas: teaching; research, administration or other appropriate arenas.

IV. Scholarship/Research

The emphasis on scholarship would include experience and mentorship in Ethics, Publica-

tions, Presentation, Grantsmanship, and other forms of creative activity. The research component will be characterized by the development of vertical research teams; Senior faculty, junior faculty, doctoral students, masters' students, and in some programs, undergraduate students, working together on research projects and research areas. These might be bolstered by partnerships with local school districts, businesses, or community agencies.

The doctoral degree is granted in recognition of scholarly proficiency and distinctive achievement in a specific field/discipline. All candidates for a doctoral degree in the CEHD must successfully complete qualifying exams and a dissertation/professional portfolio that clearly indicates the candidate has mastered and can exhibit/articulate the content knowledge, skills and dispositions specific to their discipline and can utilize appropriate research methodologies to contribute to the body of knowledge in their field.

Curriculum

60 Hour Program

Master's Degree prerequisite + 60 hours minimum: The Student and Committee must develop courses, programs and experiences that clearly identify and address the specific themes of Leadership, Scholarship, Social Justice and Equity. These areas of emphasis must have descriptive competencies that the student should attain and the Committee can assess.

Specialty Components (33 hours minimum)
Selected with Program Committee approval . 33

Research Methodology (27 hours minimum)
Selected with Program Committee approval

- Statistics and Methodology I (Stat 601 or equivalent required) 3
- Statistics and Methodology II ^b (701 – Intermediate Multiple Regression) 3
- Statistics and Methodology III (703 - Multivariate educational statistics) 3
- Research Electives: e.g., *Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.*^{a,b} . 6
- Dissertation/Portfolio Research 12

Elective Component or Master's Degree Master's Degree comprises Elective component of program.

- a. Selected with Program Committee approval within program guidelines/framework.
- b. ELFH 600 may not be used for this course.

Minimum total hours: 60

90 Hour Program

The Student and Committee must develop courses, programs and experiences that clearly identify and address the specific themes of Leadership, Scholarship, Social Justice and Equity. These areas of emphasis must have descriptive competencies that the student should attain and the Committee can assess

Specialty Components (42 hours minimum)
Selected with Program Committee approval . 42

Research Methodology (27 hours minimum)
Selected with Program Committee approval

- Statistics and Methodology I (*Stat 601 or equivalent required*) 3
- Statistics and Methodology II ^b (702 – Applied Multiple Regression) 3
- Statistics and Methodology III (703 - multivariate educational statistics) 3
- Research Electives: e.g., *Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.*^{a,b} . 6
- Dissertation/Portfolio Research 12

Elective Component (21 hours Minimum)
Selected with Program Committee approval . 21

- a. Selected with Program Committee approval within program guidelines/framework.
- b. ELFH 600 may not be used for this course.

Minimum total hours: 90

Departmental Faculty

College of Education and Human Development Faculty and Staff Directory
php.louisville.edu/edu/directory/index.php

Master of Arts in Teaching in Early Elementary Education

Major: ERED

Degree Awarded: M.A.T.

Unit: GE

Program Webpage: louisville.edu/education/degrees/mat-ered.html

Program Information

Program Admission Procedure

1. Bachelor's degree with a 2.75 grade point average.
2. "C" or better in English 102, Speech Communications, passing grades in ART 407, MUS 525, HPES 274, M.A.T.H 151 and 152, one physical and one biological science course, one with a lab.
3. Admission to Teacher Education.
4. Admission to the Graduate School.

Curriculum

Initial Assessment: Admission to Graduate School & Teacher Educational pre-requisites met.

- EDTP 602 Exploring Teaching Within the Socio-Cultural Context of P-12 Schools 3
 - ECPY 607 Learning Theory and Human Growth and Development 3
 - EDTP 501 General Methods 3
- (NOTE: The above three courses must be taken prior to any of the next 4 courses)
- EDTP 603 Language Arts Methods 3
 - EDTP 604 Mathematics Methods 3
 - EDTP 605 Science Methods 3
 - EDTP 606 Social Studies Methods 3

Mid-Point Assessment: Prior to Student Teaching: No lower than 2.0 in each content methods class; all pre-requisites met; all courses listed above passed; Positive recommendation from Elementary Program Committee (including assessment of dispositions and mid-program portfolio).

- EDTP 615 Student Teaching (Primary) 3

- EDTP 616 Student Teaching (Intermediate) . 3
- EDSP 545 Exceptional Child in the Regular Classroom 3

Certification Assessment: After Student Teaching: All certification course work* completed with 2.5 cumulative GPA; 2.0 or higher in each student teaching course; Passing scores on required PRAXIS and PLT exams; Positive recommendation from Elementary Program Committee (including assessment of dispositions and final certification portfolio).

- EDTP 503 Developing Cross-Cultural Competence ¹ 3
- EDTP 504 Teaching with Technology ¹ 2
- EDTP 505 Challenging Advanced Learners ² . 1

Minimum total hours: 36

Degree Assessment: All program course work with 3.0 cumulative GPA; Positive recommendation from Elementary Program Committee (including assessment of dispositions and final degree portfolio).

¹Can be taken at any point in the program

²Must be taken concurrently with student teaching.

* Course is required for certification.

Departmental Faculty

Early Elementary Education Faculty

- Sherri Brown
- Todd Brown
- Jean Anne Clyde
- Betty Doyle
- Marcia Lile
- Maggie McGatha
- Brenda Overturf
- Lea Smith
- Chuck Thompson
- Jennifer Bay-Williams

RANK I Program in Elementary Education

Program Information

Program Admission Procedure

- Hold Certification in P-5 or have an M.Ed. or Rank II Equivalency.
- Admission to Graduate School.
- Completion of Program with advisor is required.

Curriculum

Rank I in Elementary Education Professional Program

EDAP 606 Orientation and Readings (take in first semester of enrollment)	3
ELFH 600 Introduction to Research Methods & Statistics	3
Leadership and change: (select one of the following courses)	3
• EDAP 607 Leadership and Change	
• ELFH 603 Administrative Leadership in a Reform Environment	
• EDAP 624 Curriculum Theory	
• EDAP 625 Social and Ethical Development of Teaching	
Success for All Learners: (select one of the following courses)	3
• EDAP 642 Literacy Learning & Cultural Differences	
• EDAP 626 Affirming Diversity	
• EDTP 503 Developing Cross-Cultural Competence	
AREA OF EMPHASIS	12
EDAP 680 Capstone Course	3
Elective	3
Exit Requirements: Portfolio or Master's Thesis (EDAP 699)	2-5
Minimum total hours	21

Notes

1. Minimum of 18 hours in 600-level courses is required.

2. Transfer credit must be officially accepted by the advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.
3. A maximum of 6 hours taken in non-degree status can be applied toward a Rank I -M.Ed. degree (upon approval of advisor).
4. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".
5. You must have a total of 60 graduate credit hours including a Masters degree.

Rank I Program in Elementary Education Advanced Practitioner

Leading Change (Select one of the following courses)	3
• EDAP 606 Orientation and Readings (take in first semester of enrollment)	
• EDAP 607 Leadership and Change	
• EDAP 624 Curriculum Theory	
• EDAP 625 Social and Ethical Development of Teaching	
• ELFH 603 Administrative Leadership in a Reform Environment	
• ELFH 600 Introduction to Research Methods & Statistics OR	
• From Leadership and Change category	
The Multicultural Learner: (select one of the following courses)	3
• EDAP 642 Literacy learning & Cultural Differences	
• EDTL 626 Affirming Diversity	
• EDTP 503/403 Developing Cross-Cultural Competence	
• SOC 630 Sociology of Education	
• WMST 532 History of American Sexualities	
• WMST 556 Feminist Theory	
• PAS 529 Teacher Institute on African-American Issues	
Area of Emphasis	12
EDAP 680 Capstone Course	3
Electives	9
Exit Requirements: Portfolio or National Board Certification	
Minimum total hours:	30

Notes

1. Minimum of 18 hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.
3. A maximum of 6 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
4. All courses must be completed within 6 years of admission to the program.
5. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".

Master of Education in Early Elementary Education

Major: ERED

Degree Awarded: M.Ed.

Unit: GE

Program Webpage: louisville.edu/education/degrees/med-ered.html

Program Information

Program Admission Procedure

1. Holds certification in a P-5 area (required for M.Ed.)
2. Admission to Graduate School, and
3. An official program sheet completed with advisor are required.

Curriculum

Requirements: Admission to Graduate School and Completion of Official Program with advisor.
 EDAP 606 Orientation and Readings (take in first semester of enrollment) 3
 ELFH 600 Introduction to Research Methods & Statistics 3

Leadership and Change: (select one of the following courses)

- EDAP 607 Leadership and Change 3
- ELFH 603 Administrative Leadership in a Reform Environment 3
- EDAP 624 Curriculum Theory 3
- EDAP 625 Social and Ethical Dev. of Teaching 3

Success for All Learners: (select one of the following courses)

- EDAP 642 Literacy Learning & Cultural Differences 3
- EDAP 626 Affirming Diversity 3
- EDTP 503 Developing Cross-Cultural Competence 3

Area of Emphasis	12
EDAP 680 Capstone Course	3
Elective	3

Exit Requirements

Portfolio or Master's Thesis (EDAP699) 2-5

Minimum total hours: 30

Notes

1. Minimum of 18 hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.
3. A maximum of 6 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
4. All courses must be completed within 6 years of admission to the program.
5. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".

Departmental Faculty

Early Elementary Education Faculty

- Sherri Brown
- Todd Brown
- Jean Anne Clyde
- Betty Doyle
- Marcia Lile
- Maggie McGatha
- Lea Smith

Chuck Thompson
Jennifer Bay-Williams

Master of Education in Educational Administration

Major: EDAD

Degree Awarded: M.Ed.

Unit: GE

Program Webpage: louisville.edu/education/degrees/med-edad.html

Program Information

Program Admission Requirements

1. Admission to Graduate School:
 - Evidence of bachelor's degree.
 - Transcripts of all undergraduate and graduate work.
 - General Test Section score on the Graduate Record Examination.
2. Admission to this Program:
 - Qualification for a Kentucky classroom teaching certificate.
 - General Test Section score on the Graduate Record Examination of 800 (V + Q).
 - A 2.75 grade point average on a 4.0 scale on all collegiate preparation.
 - Successful completion of the Kentucky Teacher Internship Program, as provided in 704 KAR 20:045, or two years (one year = a minimum of 140 contract days) of successful K-12 teaching experience outside the state of Kentucky.

Curriculum

- ELFH 607 Principles of Educational Leadership 3
- ELFH 608 K-12 Leadership 3
- ELFH 609 Internship in Educational Leadership 3
- ELFH 612 Human Resource Management . . 3
- ELFH 620 Legal Issues in P-12 Education . . 3
- ELFH 604 Instructional Leadership & Supervision 3

Cognate Area (Must be approved by the advisor.)

- ELFH 600 Introduction to Res. Methods & Statistics * 3
- ELFH 3
- ELFH 603 Leadership in a Reform Environment 3
- ELFH 3

Minimum total hours: **30**

*Must be taken in first nine hours. This program completes ONLY Level I certification for principal.

Program Completion Requirements

1. A grade point average of 3.0 in all courses counting on this program.
2. Successful completion of a portfolio. Information about the portfolio is found in "Guidelines for Portfolio Completion Requirements," available from you advisor.

NOTE: Awarding of this degree does not result in certification immediately. Completion of this program leads to completion of Level I for certification only.

Certification Requirements

1. Satisfactory completion of the Kentucky assessment program for principal certification. Current information about the Kentucky assessment program may be obtained in the Education Advising Center (Room 124). As of October 1, 1999, assessment includes: 1) a minimum score of at least 85% on the Kentucky Specialty Test of Instructional and Administrative Practices; and 2) a minimum score of at least 155 on the School Leaders Licensure Assessment.
2. Completion of three (3) years of full-time teaching experience.
3. Successful completion of the Kentucky Principal Internship Program.

Specialist in Education in Educational Administration

Major: EDAD

Degree Awarded: Ed.S.

Unit: GE

Program Webpage: louisville.edu/education/departments/elfh/ed-leadership/ed-leadership.html

Program Information

Program Admission Requirements

1. Admission to Graduate School:
 - Evidence of bachelor's and master's degrees
 - Transcripts of all undergraduate and graduate work
 - General Test Section score on the Graduate Record Examination
2. Admission to this Program:
 - General Test Section score on the Graduate Record Examination of 900 (V + Q)
 - A 3.3 grade point average
 - A successful interview with a departmental committee
 - A written rationale for pursuing the degree
 - Successful, relevant professional experience

Curriculum

- ELFH 720 Adv. Internship in Adm. & Supervision 3
- ELFH 796 Research Literature 3
- ELFH Courses 24

Minimum total hours: **60**

*Completion of a Rank I program requires a minimum of 60 hours in an approved program filed before 45 hours are completed. For Rank I purposes, approved graduate hours at the master's level may be counted to reach 60 hours, though some of those hours may not count for certification. Students seeking Rank I simultaneously with this certification program must complete the appropriate form with the advisor. The advisor must approve electives/unnamed courses

NOTE: There are additional admission and completion requirements if certification is sought. Refer to the appropriate Curriculum Contract for the details.

Degree Program Completion Requirements

1. A grade point average of 3.3 in all courses counting on this program.
2. Successful completion of a portfolio. Information about the portfolio is found in "Guidelines for Portfolio Completion Requirement," available from your advisor.

Departmental Faculty

Link to Departmental Faculty Listing:

php.louisville.edu/edu/directory/index.php

Doctor of Education in Educational Leadership and Organizational Development

Major: ELOD

Degree Awarded: Ed.D.

Unit: GE

Program Webpage: louisville.edu/education/departments/elfh/ed-leadership

Program Information

Distinctive Characteristics of Doctoral Programs in the College of Education and Human Development

I. Social Justice and Equity

Aligned with our mission, our students would build experience and expertise in the issues of social justice and equity. This theme would align with our metropolitan mission and that of student achievement.

II. Leadership

This area could be assisted by the Future Faculty/Future Leaders program. Leadership is a distinct focus in other programs in CEHD and the doctoral program should be no exception. In this component students would gain expertise in supervising and leading others to achieve orga-

nizational goals and missions, managing complex systems, addressing administrative issues and procedures, conducting research to enhance leadership and teaching others about the art of organizational leadership.

III. Practical Experience

The doctoral programs in CEHD will also contain practicums, internships, or embedded field experience that aligns both with their program studies and their career goals. These experiences are to be mentored and may include a number of the following areas: teaching; research, administration or other appropriate arenas.

IV. Scholarship/Research

The emphasis on scholarship would include experience and mentorship in ethics, publications, presentation, grantsmanship, and other forms of creative activity. The research component will be characterized by the development of vertical research teams: Senior faculty, junior faculty, doctoral students, masters’ students, and in some programs, undergraduate students, working together on research projects and research areas. These might be bolstered by partnerships with local school districts, businesses, or community agencies.

The doctoral degree is granted in recognition of scholarly proficiency and distinctive achievement in a specific field/discipline. All candidates for a doctoral degree in the CEHD must successfully complete qualifying exams and a dissertation/ professional portfolio that clearly indicates the candidate has mastered and can exhibit/articulate the content knowledge, skills and dispositions specific to their discipline, and can utilize appropriate research methodologies to contribute to the body of knowledge in their field.

Curriculum

60 Hour Program

Master’s Degree prerequisite + 60 hours minimum: The Student and Committee must develop courses, programs and experiences that clearly identify and address the specific themes of Leadership, Scholarship, Social Justice and Equity. These areas of emphasis must have descriptive competencies that the student should attain and the Committee can assess.

Specialty Components (33 hours minimum), *selected with Program Committee approval* . 30

- ELFH 715 Advanced Organizational Theory 3
- Research Methodology (27 hours minimum), *selected with Program Committee approval*
- Statistics and Methodology I (*Stat 601 or equivalent required*) 3
- Research Course to aid in the completion of the Ed.D. Degree 3
- Research Course to aid in the completion of the Ed.D. Degree 3
- Research Electives: e.g., *Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.*^{a,b} 3
- ELFH 777 Capstone for Education Doctorate Degree 12
- Master’s Degree or Elective Component *Master’s Degree comprises Elective component of program.* (30 hours)
- a. Selected with Program Committee approval within program guidelines/framework.
- b. ELFH 600 may not be used for this course.
- Minimum total hours: 60**

90 Hour Program

The Student and Committee must develop courses, programs and experiences that clearly identify and address the specific themes of Leadership, Scholarship, Social Justice and Equity. These areas of emphasis must have descriptive competencies that the student should attain and the Committee can assess.

- Specialty Components (42 hours minimum), *selected with Program Committee approval* . 39
- ELFH 715 Advanced Organizational Theory 3
- Research Methodology (27 hours minimum), *selected with Program Committee approval*
- Statistics and Methodology I (*Stat 601 or equivalent required*) 3
- Research Course to aid in the completion of the Ed.D. Degree 3
- Research Course to aid in the completion of the Ed.D. Degree 3
- Research Electives: e.g., *Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.*^{a,b} . 3
- ELFH 777 Capstone for Education Doctorate Degree 12

Elective Component *selected with Program Committee approval* 21

- a. Selected with Program Committee approval within program guidelines/framework
- b. ELFH 600 may not be used for this course.

Minimum total hours: **90**

Departmental Faculty

Link to Departmental Faculty and Staff:
louisville.edu/education/faculty-staff

Doctor of Philosophy in Educational Leadership and Organizational Development

Major: ELOD

Degree Awarded: Ph.D.

Unit: GE

Program Webpage: louisville.edu/education/departments/elfh/ed-leadership

Program Information

Distinctive Characteristics of Doctoral Programs in the College of Education and Human Development

I. Social Justice and Equity

Aligned with our mission, our students would build experience and expertise in the issues of social justice and equity. This theme would align with our metropolitan mission and that of student achievement.

II. Leadership

This area could be assisted by the Future Faculty/Future Leaders program. Leadership is a distinct focus in other programs in CEHD and the doctoral program should be no exception. In this component students would gain expertise in supervising and leading others to achieve organizational goals and missions, managing complex systems, addressing administrative issues and procedures, conducting research to enhance leadership and teaching others about the art of organizational leadership.

III. Practical Experience

The doctoral programs in CEHD will also contain practicums, internships, or embedded field experience that aligns both with their program studies and their career goals. These experiences are to be mentored and may include a number of the following areas: teaching; research, administration or other appropriate arenas.

IV. Scholarship/Research

The emphasis on scholarship would include experience and mentorship in ethics, publications, presentation, grantsmanship, and other forms of creative activity. The research component will be characterized by the development of vertical research teams; Senior faculty, junior faculty, doctoral students, masters' students, and in some programs, undergraduate students, working together on research projects and research areas. These might be bolstered by partnerships with local school districts, businesses, or community agencies.

The doctoral degree is granted in recognition of scholarly proficiency and distinctive achievement in a specific field/discipline. All candidates for a doctoral degree in the CEHD must successfully complete qualifying exams and a dissertation/professional portfolio that clearly indicates the candidate has mastered and can exhibit/articulate the content knowledge, skills and dispositions specific to their discipline and can utilize appropriate research methodologies to contribute to the body of knowledge in their field.

Curriculum

60 Hour Program

Master's Degree prerequisite + 60 hours minimum: The Student and Committee must develop courses, programs and experiences that clearly identify and address the specific themes of Leadership, Scholarship, Social Justice and Equity. These areas of emphasis must have descriptive competencies that the student should attain and the Committee can assess.

Specialty Components (33 hours minimum), selected with Program Committee approval . . . 30

- ELFH 715 Advanced Organizational Theory 3

Research Methodology (27 hours minimum),
selected with Program Committee approval

- Statistics and Methodology I (*Stat 601 or equivalent required*) 3
- Research Course to aid in the completion of the Ph.D. Degree 3
- Research Course to aid in the completion of the Ph.D. Degree 3
- Research Electives: e.g., *Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.* ^{a,b} 3
- ELFH 777 Capstone for Education Doctorate Degree 12

Master's Degree or Elective Component *Master's Degree* comprises Elective component of program. (30 hours)

- a. Selected with Program Committee approval within program guidelines/framework.
- b. ELFH 600 may not be used for this course.

Minimum total hours: **60**

90 Hour Program

The Student and Committee must develop courses, programs and experiences that clearly identify and address the specific themes of Leadership, Scholarship, Social Justice and Equity. These areas of emphasis must have descriptive competencies that the student should attain and the Committee can assess

Specialty Components (42 hours minimum),
selected with Program Committee approval . 42

Research Methodology (27 hours minimum),
selected with Program Committee approval

- Statistics and Methodology I (*Stat 601 or equivalent required*) 3
- Statistics and Methodology II ^b (702 – Applied Multiple Regression) 3
- Statistics and Methodology III (703 - multivariate educational statistics) 3
- Research Electives: e.g., *Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.* ^{a,b} 6
- Dissertation/Portfolio Research 12

Elective Component (21 hours Minimum),
selected with Program Committee approval . 21

- a. Selected with Program Committee approval within program guidelines/framework.

- b. ELFH 600 may not be used for this course.

Minimum total hours: **90**

Departmental Faculty

Link to Departmental Faculty and Staff:
louisville.edu/education/faculty-staff

Master of Science in
Exercise Physiology

Major: EXP

Degree Awarded: M.S.

Unit: GE

Program Webpage: louisville.edu/education/degrees/ms-exp.html

Program Information

General program information: Students who complete the Master of Science degree in Exercise Physiology are prepared to pursue a number of career options. Graduates from our program have continued their education by completing the Ph.D. degree in fields such as exercise physiology, physiology, biochemistry, and the M.D. Many students have pursued careers in allied health fields such as nursing and physical therapy as well as in such fields as aviation physiology, cardiac rehabilitation, corporate wellness, and ergonomics. Because many of our students seek to work in the fields of cardiac rehabilitation and corporate wellness, the curriculum is structured to satisfy the preliminary requirements for certification as “exercise technologist” or “exercise specialist” as set by the American College of Sports Medicine. The curriculum provides students the necessary knowledge base and course work to satisfy entrance into the certification process (which is under the control of the American College of Sports Medicine and requires both a written and practical exam).

Program admission procedure: In order to be admitted unconditionally a student must have earned a grade-point average of at least 2.75 on a 4-point scale in their undergraduate program. A variety of undergraduate majors are acceptable, including exercise science, biology, chemistry, physiology, nursing, etc. In addition, the student must complete the application procedure as

required by the graduate school. Students are expected to score a minimum of 800 (Verbal and Quantitative sections combined) on the Graduate Record Exam. Students with a grade point standing below 2.75 may be admitted conditionally. Only under unusual circumstances will students with less than a 2.5 grade-point average be admitted to the program. Individuals who do not meet the 800 requirement on the GRE may still be admitted. Admission in such cases will be based on prior course work (including GPA in science classes), experience, two (2) letters of recommendation and personal interviews with the faculty.

Curriculum

Thesis Option

The M.S. thesis option requires a minimum of 33 hours of course work, which includes six credits devoted to completion of the thesis. Students in this option are required to actively participate in all phases of research within the laboratory. The thesis program requires two full years of study including the summer between the first and second years. To complete the M.S. degree in exercise physiology, a minimum of 23 hours must be at the 600 level or above.

First Year:

Fall

- EXP 501 Applied Exercise Physiology . . . 3
- EXP 601 Lab Methods in Exercise Physiology 3
- EXP 605 Human Physiology 3

Spring

- EXP 502 Principles of Exercise Testing & Prescription 3
- EXP 600 Physiology of Exercise 3
- ELFH 601 Applied Statistics 3

OR

- HSS 604 Research Methods 3

Summer

- EXP 604 Advanced Topics in Exercise Physiology 3
- EXP 699 Thesis 1-6

Second Year:

Fall

- EXP 603 Seminar in Exercise Physiology 3
- EXP 604 Advanced Topics in Exercise Physiology 3
- EXP 699 Thesis 1-6

Spring

- EXP 604 Advanced Topics in Exercise Physiology 3
- EXP 699 Thesis 1-6

Minimum total hours: 33

Non-thesis Option

The M.S. non-thesis option emphasizes the use of exercise as a clinical intervention. This option is heavily slanted toward improved cardiovascular health and cardiovascular rehabilitation through the use of exercise. Students in this option must complete a minimum of 36 hours of course work. The non-thesis program requires two full years of study including the summer between the first and second years.

First Year:

Fall

- EXP 501 Applied Exercise Physiology . . 3
- EXP 601 Lab Methods in Exercise Physiology 3
- EXP 605 Human Physiology 3

Spring

- EXP 502 Principles of Exercise Testing & Prescription 3
- EXP 600 Physiology of Exercise 3
- ELFH 601 Applied Statistics 3

Summer

- HSS 604 Research Methods 3
- EXP 604 Advanced Topics in Exercise Physiology 3
- EXP 611 Principles of Electrocardiography 3

Second Year:

Fall

- EXP 603 Seminar in Exercise Physiology 3
- EXP 604 Advanced Topics in Exercise Physiology 3

Spring

- EXP 604 Advanced Topics in Exercise Physiology (OPTIONAL) 3
- EXP 620 Clinical Internship 6

Minimum total hours:36 hours

Departmental Faculty

Dean Jacks
Ann Swank

Master of Education in Health Education

Major: HPE

Degree Awarded: M.Ed.

Unit: GE

Program Webpage: louisville.edu/education/degrees/med-hpe.html

Program Information

Students generally pursue careers at worksites (plan and implement wellness programs to keep employees healthy and maintain a safe work environment); medical services (develop, implement and evaluate health promotion programs in hospitals, HMO's, acute care clinics and long-term facilities) and communities (assess needs for health promotion programs; and deliver education programs at various sites in the community, including voluntary health agencies and government-based service programs).

The goal of the health education program is the development and preparation of individuals to be future leaders in a variety of urban settings including public and private corporations and government agencies in the area of health and human performance.

Program Admission

All candidates must meet the general requirements for admission to the Graduate School, as well as the requirements for admission to certain specific programs offered by the College of Education and Human Development. All students applying for a master's program in education must take the Graduate Records Examination (GRE) prior to application for admission. A combined score of 800 on the verbal and quantitative

sections of the GRE is required for all master's degree programs in the College of Education and Human Development. Exit Requirements: Minimum of 3.0 GPA, and two of the following: portfolio, internship, exit exam, research project or thesis.

Curriculum

Core Curriculum

- HSS 675 Health Promotion and Disease Prevention at the Individual Level 3
- HSS 676 Community Health Promotion and Disease Prevention 3
- HSS 684 Program Planning in Health Education and Promotion 3
- HSS 655 Current Trends and Issues in Health and Sport Sciences 3
- HSS 631 Leadership in Health Promotion . . 3

Research Methods

- ELFH 600 Introduction to Research Methods and Statistics 3
- HSS 604 Research Methods in Health and Sport Sciences 3

Internship/Practicum – Location approved by advisor.

- HSS 692 Cooperative Internship/Practicum . 6
- Electives – Courses approved by advisor. 9

Exit Requirements: Student must also satisfactorily complete an exit exam and submit a portfolio of all Hallmark Assessments and internship materials.

Minimum total hours: 36

Departmental Faculty

Richard A. Fee
Cheryl Kolander
Bill Weinberg
Barbara Mercer
Carol Stinson

Graduate Certificate in Health Professions Education

Program Information

Program Purpose: To promote effective clinical teaching and student instruction in a variety of Health Science Center settings and to develop skill in designing education research for presentation and publication.

Admission Requirements: This program is unofficial until admitted to Graduate School non-degree status. Requires a minimum of 2.5 GPA.

Curriculum

- ELFH 683 College Teaching 3
 - ELFH 600 Graduate Research and Statistics 3
 - ELFH 661 Adult Learning and Development . 3
 - ELFH 614 Assessment and Evaluation 3
- Minimum total hours: 12**

Master of Arts in Higher Education

Major: HED

Degree Awarded: M.A.

Unit: GE

Program Webpage: louisville.edu/education/degrees/ma-hed.html

Program Information

This program is designed for students who wish to qualify for college administrative positions. It does not qualify graduates for Kentucky administration certification. This degree is also available for distance education through on-line instruction.

Program Admission Procedure

Admission to Graduate School of Education:

- Evidence of a Bachelor's Degree and 2.75 cumulative grade point average (GPA).

- Transcripts of all undergraduate and graduate work.
- General Test score on the Graduate Record Examination of 800 (verbal + quantitative).
- Two letters of recommendation.

Admission to the Program

- Department committee reviews application materials and makes recommendation to Graduate School.

Curriculum

General Requirements

- ELFH 600 Introduction to research Methods and Statistics 3
 - ELFH 678 The American College and University 3
- OR**
- ELFH 681 Philosophy of Higher Education 3

Professional Area

- ELFH 607 Principles of Educational Leadership 3
- ELFH 626 Planning 3
- ELFH 680 Legal Issues in Postsecondary Education 3
- ELFH 682 Organization and Administration of Higher Educational Institutions 3
- ELFH 684 Educational Resource Management in Postsecondary Education 3
- Electives (approved by advisor) 6

Exit Requirements

- ELFH 690 Internship in Postsecondary Education 3
- OR**
- ELFH 699 Thesis or Professional Paper . 4

Minimum total hours: 31-33

Concentration in Sport Administration

Professional Area

- ELFH 607 Principles of Educational Leadership 3
- ELFH 620 Legal Issues in Education . . . 3
- ELFH 682 Organization and Administration of Higher Educational Institutions 3
- ELFH 600 Introduction to Research Methods & Statistics 3

- ELFH 680 The American College and University 3
OR
- ELFH 681 The Philosophy of Higher Education 3
- SPAD 625 Sport Administration 3

Specialization Area

- SPAD 618 Rise of the Sport System in America 3
OR
- SPAD 680 Athletic in Higher Education .. 3
- SPAD 505 Sport Facility Management .. 3
OR
- HSS 575 Administration of P.E. Programs & Athletics 3
- SPAD 684 Current Trends & Issues in Sport Administration 3
- SPAD Elective as approved by the advisor 3

Exit Requirements, 4-6 hours

- ELFH 699 Thesis or Professional Paper . 3
OR
- SPAD 692 Internship in Sport Administration 6

Minimum total hours: 31-33

Departmental Faculty

Paul Winter

Master of Science in Human Resource Education

Major: HRE

Degree Awarded: M.S.

Unit: GE

Program Webpage: louisville.edu/education/degrees/ms-hre.html

Program Information

This program is designed to prepare or enhance individuals for a mid-level training and human resource positions in business, industry, health, military and education organizations. This degree is NOT acceptable for renewing a teach-

ing certification or obtaining a Rank II salary status for Certified Teachers.

Program Admission Procedure

1. Evidence of a Bachelor's degree and 2.75 cumulative grade point average (GPA).
2. General Test score on the Graduate Record Examination of 800 (verbal and quantitative).
3. Two letters of recommendation.

Curriculum

Core Courses

- ELFH 600 Introduction to Research Methods and statistics 3
- ELFH 616 Internship and Portfolio Seminar3-6
- ELFH 605 Leading Training and Performance 3
- ELFH 614 Planning and Evaluation 3
- ELFH 662 Organizational Analysis 3
- ELFH 664 Facilitating Change in Organizations 3
- ELFH 672 Instructional Design and Development 3

Electives: choose 9 hours

- ELFH 661 Adult Development & Learning Principles 3
- ELFH 663 Methods of Facilitation 3
- ELFH 671 Performance Interventions ... 3
- ELFH 675 Web Use and Publishing 3
- ELFH 676 Multimedia Authoring 3
- ELFH 695 Distance Teaching and Learning 3
- ELFH 640 Developing a Philosophy of Education 3
- ELFH 641¹ Seminar 3

Minimum total hours:30-33

¹Yearly semester-long course aimed at advanced master & doctoral students. Topics such as Transformational Leadership, Consulting, Learning Research in Instructional Design, Workplace Learning.

Program Purpose: To prepare or enhance individuals for mid-level training and human resources positions in business, industry, health, military and education organizations. This degree is NOT acceptable for renewing a teaching certification or obtaining Rank II salary status for Certified Teachers.

Portfolio Requirement: This program requires the development of a portfolio. Portfolio projects are required in each course in the program. ELFH 616 Capstone Seminar and Portfolio Presentation includes the requirement to organize and revise the projects and to present them in a professional portfolio. Portfolio projects are organized around the program's professional standards.

Departmental Faculty

Ray Haynes

Organizational Development

Carolyn Rude-Parkins

Instructional Design and Technology

Professional Certificate for Instructional Leadership

Program Information

Instructional Leadership Supervisor of Instruction (Post-master's/Rank I*)

Program Admission Requirements

Admission to Graduate School:

- Evidence of bachelor's and master's degrees.
- Transcripts of all undergraduate and graduate work.
- General Test Section score on the Graduate Record Examination.

Admission to this program:

- Qualification for a Kentucky classroom teaching certificate, except speech & hearing disorders.
- General Test Section score on the Graduate Record Examination of 800 (V + Q).
- A 3.0 grade point average on 4.0 scale for all collegiate preparation.
- Completion of three years (one year equals a minimum of 140 contract days) of successful K-12 teaching experience.

Professional Certificate for Instructional Leadership School Principal (all grades) (Post-master's/Rank I*)

Program Admission Requirements

Admission to Graduate School:

- Evidence of bachelor's and master's degrees.
- Transcripts of all undergraduate and graduate work.
- General Test Section score on the Graduate Record Examination.

Admission to this Program:

- Qualification for a Kentucky classroom teaching certificate.
- General Test Section score on the Graduate Record Examination of 800 (V + Q).
- A 2.75 grade point average on a 4.0 scale on all collegiate preparation.
- Successful completion of the Kentucky Teacher Internship Program, as provided in 704 KAR 20:045, or two years (one year = a minimum of 140 contract days) of successful K-12 teaching experience outside the state of Kentucky.

Professional Certificate for Instructional Leadership - Superintendent (Post-master's/Rank I)

Program Admission Requirements

Admission to Graduate School:

- Evidence of bachelor's and master's degrees.
- Transcripts of all undergraduate and graduate work.
- General Test Section score on the Graduate Record Examination.

Admission to this Program:

- General Test Section score on the Graduate Record Examination of 800 (V + Q).
- A 3.0 grade point average on a 4.0 scale on all collegiate preparation.
- Qualification for a Kentucky classroom teaching certificate.
- Successful completion of three years (one year equals a minimum of 140 contract days) of K-12 teaching experience.

- Completion of Levels I and II for principal or supervisor of instruction certification. (unless completed under pre-1988 regulations).

Curriculum

Professional Certificate for Instructional Leadership Supervisor of Instruction (Post-master's/Rank I*)

Level I

- ELFH 604 Instructional Leadership & Supervision 3
- ELFH 607 Principles of Educational Leadership 3
- ELFH 608 K-12 Leadership 3
- ELFH 603 Administrative Leadership in a Reform Environment 3
- ECPY 540 Evaluation & Measurement in Education 3
- ELFH 609 Internship in Educational Leadership 3

Level II

- ELFH 610 Collaboration & Communication for Effective Leadership 3
- ELFH 720 Adv. Internship in Admin. & Supervision 3
- ELFH 612 Human Resource Management 3
- ELFH 620 Legal Issues in P-12 Education 3
- Advisor-approved curriculum/instruction course 3

Minimum total hours: 33

**Completion of a Rank I program is not required. Completion of a Rank I program requires a minimum of 60 hours in an approved program filed before 45 hours are completed. For Rank I purposes, approved graduate hours at the master's level may be counted to reach 60 hours, though some of those hours may not count for supervisor certification. Students seeking Rank I simultaneously with this certification program must complete the appropriate form with the advisor.*

Program Completion Requirements

1. A grade point average of 3.0 in all courses counting on this program.
2. Successful completion of a portfolio. Information about the portfolio is found in "Guidelines

for Portfolio Completion Requirement," available from your advisor.

Professional Certificate for Instructional Leadership School Principal (all grades) (Post-master's/Rank I*)

Level I

- ELFH 607 Principles of Educational Leadership 3
- ELFH 608 K-12 Leadership 3
- ELFH 609 Internship in Educational Leadership 3
- ELFH 612 Human Resource Management 3
- ELFH 620 Legal Issues in P-12 Education 3
- ELFH 604 Instructional Leadership & Supervision 3

Level II

- ELFH 610 Collaboration & Communication for Effective Leadership 3
- ELFH 622 Education Resource Management in P-12 Education 3
- ELFH 603 Leadership in a Reform Environment 3
- ELFH 720 Adv. Internship in Admin. & Supervision 3

Minimum total hours: 30

**Completion of a Rank I program requires a minimum of 60 hours in an approved program filed before 45 hours are completed. For Rank I purposes, approved graduate hours at the master's level may be counted to reach 60 hours, though some of those hours may not count for principal certification. Students seeking Rank I simultaneously with this certification program must complete the appropriate form with the advisor.*

Program Completion Requirements

1. A grade point average of 3.0 in all courses counting on this program.
2. Successful completion of a portfolio. Information about the portfolio is found in "Guidelines for Portfolio Completion Requirements," available from your advisor.

NOTE: Completion of this program does not result in certification immediately.

Certification Requirements

1. Satisfactory completion of the Kentucky assessment program for principal certification.

Current information about the Kentucky assessment program may be obtained in the Education Advising Center (Room 124). As of October 1, 1999, assessment includes: (1) a minimum score of at least 85% on the Kentucky Specialty Test of Instructional and Administrative Practices (Kentucky Principals Test); and (2) a minimum score of at least 155 on the School Leaders Licensure Assessment.

2. Completion of three (3) years of full-time teaching experience.
3. Successful completion of the Kentucky Principal Internship Program.

Professional Certificate for Instructional Leadership - Superintendent (Post-master's/Rank I)

- ELFH 639 The School Superintendency 3
- ELFH 649 School System Administration . . . 3
- ELFH 659 Planning (formerly ELFH 626) . . . 3
- ELFH 679 The Superintendency Practicum . 3

Minimum total hours: 12

Program and Certification Completion Requirements

1. A grade point average of 3.0 in all courses counting on this program.
2. Successful completion of a portfolio. Information about the portfolio is found in "Guidelines for Portfolio Completion Requirement," available from your advisor.
3. Successful completion of an additional two years of experience in an approved school leadership position (e.g. principal, supervisor, counselor).

Master of Arts in Teaching in Interdisciplinary Early Childhood Education

Major: IECE
Degree Awarded: M.A.T.
Unit: GE
Program Webpage: louisville.edu/education/degrees/mat-iece.html

Program Information

Interdisciplinary Early Childhood Education Birth to Primary Teacher Certification Program

Program Intent: This program is designed for students who hold at least a baccalaureate degree in any academic area and who are interested in receiving birth to primary teacher certification in Kentucky. The program includes a minimum of 36 hours of course work. However, some students admitted to the program may not have general teacher competencies and will need to take pre-requisite courses as identified by their advisor. Due to the differing backgrounds of students who enter the program, completion of the Self Assessment to determine areas of strength and need will be required upon admission.

Prerequisites:

1. Baccalaureate degree from an accredited college in: Child Development, Early Childhood Education, Early Childhood Special Education, or related field, or B.A./B.S. degree in an unrelated field plus 6-9 hours of Early Childhood coursework (based on information from self-assessment).
2. Admission to Teacher Education.
3. Admission to Graduate School.
4. Completion of Self-Assessment.

Interdisciplinary Early Childhood Education without Birth to Primary Teacher Certification

Program Intent: This program is designed for students who hold at least a baccalaureate degree in any academic area and who are interested in a master's degree in Interdisciplinary Early Childhood Education. The program includes a minimum of 33 hours of course work.

Prerequisites:

1. Baccalaureate degree from an accredited college.
2. Admission to Graduate School.
3. Completion of IECE self-assessment.

Curriculum

Interdisciplinary Early Childhood Education Birth to Primary Teacher Certification Program

Required Core Courses:

- ELFH 600 Introduction to Research Methods & Statistics 3
 - EDAP 627 Applied Child Development . . 3
 - EDAP 632 Curriculum Approaches of Early Childhood Education 3
 - EDAP 633 Curriculum and Methods in Early Childhood Special Education 3
 - EDAP 637 Infant/Toddler Development and Care 3
 - EDSP 684 Early Family Intervention for Preschool Children with Disabilities 3
 - EDSP 686 Programs and Services for Preschool Children with Disabilities 3
 - EDAP 604 Special Problems or Field Experience in Curriculum Development 3
- OR**
- EDSP 697 Topical Seminar 3
 - EDSP 687 Practicum/Action Research (Field-Based) * 6

Elective Courses (6 hours; select one course in two of the three strands listed below):

Strand 1 (major focus: typical development)

- ART 507 Art Education for Early Primary 3
- EDAP 636 Theories of Play 3
- PSYC 661 Advanced Developmental Psychology 3

Strand 2 (major focus: atypical development)

- CMDS 564 Preschool Language Development 3
- EDSP 683 Early Childhood/Special Education Screening 3
- HPES 618 Adapted Physical Activities . . 3

Strand 3 (major focus: families and programs)

- EDAP 635 Administration and Consultation: Day Care & Early Childhood Education 3

- SW 625 Children and Families 3

Minimum total hours: 36

**Up to 12 hours of Professional Education units may be counted toward the Rank II Program.*

NOTE: The Kentucky Specialty Examination in Interdisciplinary Early Childhood Education is required for IECE, Birth to Primary teacher certification.

Interdisciplinary Early Childhood Education without Birth to Primary Teacher Certification

Curriculum (18 hours)

- ELFH 600 Introduction to Research Methods & Statistics 3
- EDAP 632 Curriculum Approaches of Early Childhood Education 3
- EDAP 633 Curriculum & Methods in Early Childhood Special Education 3
- EDAP 637 Infant/Toddler Development and Care 3
- EDSP 537 Language Learning for Exceptional Children 3
- CMDS 564 Preschool Language Intervention 3
- HPES 618 Adapted Physical Activity . . . 3
- ART 507 Art Education for Early Primary 3

Development 12 hours (Select 12 hours)

- EDAP 627 Applied Child Development . . 3
- EDAP 630 Theories of Child Development 3
- EDAP 636 Theories of Play 3
- EDSP 683 Programs & Services for Preschool Children with Disabilities 3
- EDSP 687 Practicum/Action Research . . 3
- PSYC 661 Advanced Developmental Psychology 3

Families and Programs (Select 6 hours)

- EDAP 635 Administration & Consultation: Day Care & Early Childhood Education . 3
- EDSP 684 Early Family Intervention for Preschool Children with Disabilities 3
- EDSP 686 Program & Services for Preschool Children with Disabilities 3
- SW 625 Children and Families 3

Minimum total hours: 36

Successful completion of an IECE portfolio is required at the end of the program and serves as the exit requirement. Successful completion of EDSP 687, Practicum/Action Research, is also

an exit requirement. To complete the program, students must have a minimum 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".

Departmental Faculty

Betty Doyle
Victoria Molfese

Master of Education in Instructional Technology

Major: IT
Degree Awarded: M.Ed.
Unit: GE
Program Webpage: louisville.edu/education/degrees/med-it.html

Program Information

Initial Requirements:

1. Teaching certification in B-12 Area.
2. Admission to Graduate School.
3. Admission to M.Ed. in Instructional Technology program (which requires completion of EDAP 585: intro to Educational Technology with B+ or higher or equivalent course/experience).
4. Meeting with faculty advisor to discuss Kentucky Experienced Teacher Standards, U of L Program Themes, Conceptual Framework, and ISTE Technology Facilitation Standards.

Curriculum

Research (3 hours)

- ELFH 600 Introduction to Research Methods and Statistics 3

Leadership (3 hours)

- EDAP 677 Teacher Leadership: Mentoring and Coaching 3

Diversity (3 hours)

- EDAP 642 Literacy Learning and Cultural Differences 3
- OR**
- EDSP 618 Instructional Technology for Students with Special Needs 3

Area of Emphasis (15 hours)

- EDAP 688 Designing Technology Rich Curricula ¹ 3
- EDAP 690 Teaching with Multimedia Tools ¹ 3
- EDAP 587 Teaching and Learning Online ¹ 3
- EDAP 601 Teaching with Emerging Technologies ^{1, 2} 3
- EDAP 680 Capstone Seminar ² 3

Electives (9 hours)

- EDAP 585 Intro to Education Technology: Integrating Technology into Instruction .. 3
- EDAP 624 Curriculum Theory 3
- EDAP 629 Teaching Mathematics with Technology, P-8 3
- EDAP 687 Literacy, Teaching and Technology 3
- EDAP 689 Using the Internet in P-12 Teaching ¹ 3
- Course approved by Advisor 3

Minimum total hours: 33

¹Denotes Courses that are required for the endorsement.

²Denotes course that must be taken in the last 6 hours of program study.

Mid-Point Assessment: Review program on KY Experienced Teacher standards, U of L Program Themes, Conceptual Framework, and ISTE Technology Facilitation Standards (2002) Half of required KETS and ISTE Technology Facilitation standards and indicators met within portfolio work.

Degree Assessment: Minimum GPA of 3.0; no grade lower than "C", acceptable portfolio.

Endorsement Assessment:

1. All Endorsement coursework completed.
2. No lower than 3.0 GPA in endorsement courses, no credit accepted for grade lower than C.
3. Review of Portfolio which includes Post-Program Self Assessment.

Rank I Program in Middle Grades Education

Program Information

Program Admission Procedure

- Holds Certification in a 5-9 area or has an M.Ed. or Rank II Equivalency.
- Admission to Graduate School.
- Completion of Program with advisor is required.

Curriculum

Rank I Program in Middle Grades Education Advanced Practitioner

Leading Change (Select one of the following) . . . 3

- EDAP 606 Orientation and Reading (take in first semester of enrollment)
- ELFH 600 Introduction to Research Methods & Statistics

Leadership and Change (Select one of the following) 3

- EDAP 607 Leadership and change
- ELFH 603 Administrative Leadership in a Reform Environment
- EDAP 624 Curriculum Theory
- EDAP 625 Social and Ethical Development of Teaching

The Multicultural Learning (Select one of the following) 3

- EDAP 624 Literacy Learning & Cultural Differences
- EDAP 626 Affirming Diversity
- EDTP 503/403 Developing Cross-Cultural Competence
- SOC 630 Sociology of Education
- WGST 532 History of American Sexualities
- WGST 556 Feminist Theory
- PAS 529 Teacher Institute on African-American Issues

Area of Emphasis 12

Electives 9

Exit Requirements: Portfolio or National Board Certification

Minimum total hours: 30

Notes

1. Minimum of 18 hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.
3. A maximum of 6 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
4. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".

Rank I in Middle Grades Education Professional Program

Requirements: Admission to Graduate School and Completion of Official Program with advisor.

- EDAP 606 Orientation and Readings (take in first semester of enrollment) 3
- ELFH 600 Introduction to Research Methods & Statistics* 3

Leadership and change: (select one of the following courses) 3

- EDAP 607 Leadership and Change
- ELFH 603 Administrative Leadership in a Reform Environment
- EDAP 624 Curriculum Theory
- EDAP 625 Social and Ethical Development of Teaching

Success for All Learners: (select one of the following courses) 3

- EDAP 642 Literacy Learning & Cultural Differences
- EDAP 626 Affirming Diversity
- EDTP 503 Developing Cross-Cultural Competence

Area of Emphasis 12

EDAP 680 Capstone Course 3

Elective 3

Exit Requirements: Portfolio or Master's Thesis (EDAP 699) 2-5

Minimum total hours: 21

Notes

1. Minimum of 18 hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.
3. A maximum of six hours taken in non-degree status can be applied toward a Rank I -M.Ed. degree (upon approval of advisor).
4. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".
5. You must have a total of 60 graduate credit hours including a Masters degree.

Master of Arts in Teaching in Middle School Education

Major: MSED

Degree Awarded: M.A.T.

Unit: GE

Program Webpage: louisville.edu/education/degrees/mat-msed.html

Program Information

The Department of Teaching and Learning offers two graduate degrees leading to initial certification. The Master of Arts in Teaching (M.A.T.) degree leads to initial certification in Early Elementary Education (P-5); Middle School Education (5-9); and Secondary Education (8-12). The Master of Arts in Teaching (M.A.T.) degree in Middle School Education specifically leads to certification in Science, Social Studies, Mathematics, and English and Communications Education. The Master of Arts in Teaching (M.A.T.) degree in Secondary Education specifically leads to certification in Earth and Space Science, English, Biology, Chemistry, Mathematics, Social Studies, or Physics. There are also programs within Secondary Education leading to 5-12 certification in Business and Marketing Education and P-12 certification in French and Spanish.

The Master of Education degree leads to initial certification in Interdisciplinary Early Childhood Education, Special Education (P-12) in the areas

of Learning and Behavior Disorders (LBD), Moderate and Severe Disabilities (MSD), and Visual Impairment (VI).

Program Admission Procedure

1. Bachelor's degree with a 2.75 grade point average.
2. "C" or better in English 102, Speech Communications.
3. Within 9 credits of content area with a 2.5 or above GPA in content area.
4. Admission to Teacher Education.
5. Praxis in content area has been taken.
6. Admission to the Graduate School.

Curriculum

Single Area Certification

Initial Assessment: Admission to Graduate School & Teacher Education prerequisites met.

- EDTP 602 Exploring Teaching Within the Socio-Cultural Context of P-12 Schools 3
 - ECPY 607 Learning Theory and Human Growth and Development 3
 - EDTP 501 General Methods 3
- (NOTE: The above three courses must be taken prior to either of the next 2 courses)
- EDTP 607 Middle Grades Methods I 3
 - EDSP 545 Exceptional Child in the Regular Classroom 3

Mid-Point Assessment: Prior to Student Teaching- Satisfactory dispositions assessment. No lower than 2.0 GPA in content methods class. Within 3 credits of meeting content requirements. ECPY 607 and EDTP 602, 501, 607 passed. Satisfactory mid-point portfolio and positive recommendation from Middle/Secondary Program Committee.

- EDTP 617 Middle Grades Student Teaching I 3
- EDTP 618 Middle Grades Student Teaching II 3
- EDTP 677 Capstone Seminar: Initial Certification ² 3

Certification Assessment: After Student Teaching- Satisfactory dispositions assessment. All certification course work completed with 2.5 cumulative GPA. 2.5 cumulative GPA in content course requirements. 2.0 GPA or higher in each

student teaching. Satisfactory certification portfolio. Passing scores on PRAXIS content and PLT exams. Positive recommendation from Middle/Secondary Program Committee.

- Academic Support Course¹ 3
- EDTP 503 Developing Cross-Cultural Competence¹ 3
- EDTP 504 Teaching with Technology¹ 2
- EDTP 505 Challenging Advanced Learners² 1
- EDTP 620 Reading and Writing Across the Curriculum/Adolescent Literature¹ 3
- Minimum total hours: 36**

¹Can be taken at any point in the program.

²Must be taken concurrently with student teaching.

Degree Assessment: Satisfactory dispositions assessment. All program course work with 3.0 cumulative GPA. Satisfactory degree portfolio.

Double Area Certification

Program Admission Procedure

1. Bachelor's degree with a 2.75 grade point average.
2. "C" or better in English 102, Speech Communications.
3. Within 9 credits of both content areas with a 2.5 or above GPA in the content areas.
4. Admission to Teacher Education.
5. Praxis content exams have been taken for both areas.
6. Admission to the Graduate School.

Initial Assessment: Admission to Graduate School & Teacher Education.

- EDTP 602 Exploring Teaching Within the Socio-Cultural Context of P-12 Schools 3
 - ECPY 607 Learning Theory and Human Growth and Development 3
 - EDTP 501 General Methods 3
- (NOTE: The above three courses must be taken prior to either of the next 2 courses)
- EDTP 607 Middle Grades Methods I 3
 - EDTP 608 Middle Grades Methods II 3
 - EDSP 545 Exceptional Child in the Regular Classroom 3

Mid-Point Assessment: Prior to Student Teaching- Satisfactory dispositions assessment; No

lower than 2.0 GPA in either content methods class; Within 3 credits of meeting content requirements; ECPY 607 and EDTP 602, 501, 607, 608 passed; Satisfactory mid-point portfolio; Positive recommendation from Middle/Secondary Program Committee.

- EDTP 617 Middle Grades Student Teaching I 3
- EDTP 618 Middle Grades Student Teaching II 3
- EDTP 677 Capstone Seminar: Initial Certification ² 3

Certification Assessment: After Student Teaching- Satisfactory dispositions assessment. All certification course work completed with 2.5 cumulative GPA. 2.5 cumulative GPA in content course requirements. 2.0 GPA or higher in each student teaching. Satisfactory certification portfolio. Passing scores on PRAXIS content and PLT exams. Positive recommendation from Middle/Secondary Program Committee.

- EDTP 503 Developing Cross-Cultural Competence 3
- EDTP 504 Teaching with Technology 2
- EDTP 505 Challenging Advanced Learners ² 1
- EDTP 620 Reading and Writing Across the Curriculum/Adolescent Literature 3

Minimum total hours: 36

Degree Assessment: Satisfactory dispositions assessment. All program course work with 3.0 cumulative GPA. Satisfactory degree portfolio.

Alternative Route to 5-9 Certification

Initial Assessment: Admission to Graduate School & Teacher Education. Passing scores on the content PRAXIS test(s). Current employment as a full-time temporary provisional teacher.

- EDTP 631 Integrated Teaching and Learning I. 3
- EDTP 632 Integrated Teaching and Learning II 3
- EDTP 609 Special Methods in Secondary Education (in teaching field) 3
- EDTP 633 Integrated Teaching and Learning III 3
- EDTP 619 Secondary Student Teaching . . . 3

Mid-Point Assessment: Completion of all courses listed above. Satisfactory dispositions

assessment. 2.5 cumulative GPA. *All content coursework completed with a 2.5 cumulative GPA. 2.0 or higher in student teaching. Satisfactory certification portfolio. Positive recommendation from Middle/Secondary Program Committee.*

- EDTP 620 Reading and Writing Across the Curriculum/Adolescent Literature 3
- EDTP 678 Supporting the Intern Teacher I . . . 3
- EDTP 504 Teaching with Technology 2
- EDTP 505 Challenging Advanced Learners . . 1
- EDTP 679 Supporting the Intern Teacher II . . 3
- EDTP 503 Developing Cross-Cultural Competence 3

Minimum total hours: 30

Certification Assessment: Satisfactory dispositions assessment. All program course work with 2.5 cumulative GPA. Satisfactory certification portfolio. Passing score on 5-12 PLT PRAXIS exam.

Degree Assessment: Satisfactory dispositions assessment. All program course work with 3.0 cumulative GPA. Satisfactory Alternative Certification degree portfolio.

Departmental Faculty

- Betty Doyle
- Barbara Hanger
- Sara Kajder
- Ann Larson
- Marcia Lile
- Maggie McGatha
- Robert Ronau
- Gine Schack
- Shelley Thomas
- Thomas Tretter
- Jane Wolph

Master of Education in Middle School Education

Major: MSED

Degree Awarded: M.Ed.

Unit: GE

Program Webpage: louisville.edu/education/departments/t-l/advanced-programs.html

Program Information

Program Admission Procedure

- Holds certification in a 5-9 area.
- Admission into Graduate School.
- Completion of Official Program with advisor are required.

Curriculum

EDAP 606 Orientation and Readings (take in first semester of enrollment) 3

ELFH 600 Introduction to Research Methods & Statistics 3

Leadership and Change: (select one of the following courses)

- **EDAP 607** Leadership and change 3
- **ELFH 603** Administrative Leadership in a Reform Environment 3
- **EDTP 624** Curriculum Theory 3
- **EDAP 625** Social and Ethical Dev. of Teaching 3

Success for All Learners: (select one of the following courses)

- **EDAP 642** Literacy Learning & Cultural Differences 3
- **EDAP 626** Affirming Diversity 3
- **EDTP 503** Developing Cross-Cultural Competence 3

Area of Emphasis

- **EDAP 680** Capstone Course 3

Elective 3

Exit Requirements

- Portfolio or Master's Thesis (**EDAP 699**) . . 2-5

Minimum total hours: 30

Notes

1. Minimum of 18 hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.
3. A maximum of six hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
4. All courses must be completed within six years of admission to the program.
5. To complete the program, students must have a minimum 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".

Master of Arts in Teaching in Music Education

Major: EDMU

Degree Awarded: M.A.T.

Unit: GE

Program Webpage: louisville.edu/education/degrees/mat-edmu.html

Program Information

In addition to the general degree requirements described in the General Information section of the *Graduate Catalog*, the following degree requirements must be met:

- The student shall obtain permission from the Graduate Division Committee to begin work at the graduate level.
- All students must qualify for non-conditional status no later than the end of the second semester of full-time residence, or before eighteen (18) semester hours have been completed. To qualify for degree candidacy the student must have: (a) an academic record with a minimum of nine (9) hours of graduate credit with a grade point average of 3.0, (b) an inclusive program of studies fulfilling the requirements of a master's curriculum, approved by the major professor and the departmental chairperson.

- As per the Graduate School requirements, at least half of the required credits for the master's degree must be at the 600 level, excluding thesis, internships, or practicums.
- Graduate students must have a 3.0 grade point average in order to receive a master's degree in music.
- No more than six (6) hours with any "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted in a major subject.
- Transfer of more than six hours from a degree program of an accredited institution in which a degree has been previously earned will only be granted on recommendation of the student's division and approval of the Director of Graduate Studies in consultation with the Graduate Committee. The request will be considered provided the additional hours have not been earned by extension and that the University of Louisville minimum residency requirements have been met as stated in the *Graduate Catalog*.
- Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested with the restriction that the minimum residency requirement be maintained in compliance with the *Graduate Catalog*.

Admission Requirements

In addition to the general requirements for admission to the Graduate School, the following specific requirements must be met:

- To be admitted, the applicant should possess a baccalaureate degree in the area (or an equivalent one) to be pursued in advanced studies.
- Applicants must meet the specific entrance requirements established by the major department.
- Graduate applicants must submit GRE scores with the application form.

The School of Music provides each student with a copy of the *Handbook for Graduate Music Students*. Students are expected to read the School of Music handbook and the University *Graduate Catalog* and to follow regulations and procedures regarding their specific degree program at the University of Louisville. In particular, students are advised to observe the request for submitting GRE scores for admission to the Graduate School.

Prerequisites

- Bachelor of Music Education, Pre-certification requirements, or equivalent.
- Admission to Graduate School.
- Admission to Teacher Education as outlined and required by the College of Education and Human Development.
- Completion of Learning Theory and Human Growth and Development (ECPY 607) and Exploring Teaching Within the Socio-Cultural Context of P-12 Schools (EDTL 502/602).
- Successful music audition.
- PRAXIS must be taken prior to admission to the M.A.T. Program.
- ACT of 21 (minimum) or equivalent.
- GRE scores.

Curriculum

	Semester Hours
Either Pre-Student Teaching (MUED 605): Orientation and General Methods (Vocal)* OR Pre-Student Teaching (MUED 606): Orientation and General Methods (Instrumental)*	3
* Note: Students are strongly encouraged to take either MUED 605 (Vocal) or MUED 606 (Instrumental) in accordance with their degree emphasis prior to student teaching.	
Qualitative Research Methods (MUED 618)	2
Foundations of Music Education (MUED 629)	2
Quantitative Research Methods (MUED 630)	2
Learning Theories in Music Education (MUED 639)	2
Applied Music (MUS 611) OR Conducting (MUS 659)	2
Applied Music (MUS 612) OR Conducting (MUS 660)	2

Exit Requirements

Student Teaching Seminar (MUED 607)	2
Student Teaching Seminar (MUED 608)	2
Capstone Seminar (MUED 609)	3
Music Student Teaching: Elementary/Secondary I (MUED 610)	4
Music Student Teaching: Elementary/Secondary II (MUED 611)	4
Minimum Total	30

Other Requirements

PRAXIS Exam must be passed for certification and conferral of the M.A.T. degree in Music Education. Passing all KDE-required PRAXIS sub-tests is necessary for certification.

Departmental Faculty

Robert Amchin

Professor
Division Head, Music Education and Music Therapy
Distinguished Teaching Professor

Jack Ashworth

Professor
Director of Early Music Ensemble
Distinguished Teaching Professor

Jean Christensen

Professor
Division Head-Music History

Anne Marie de Zeeuw

Professor
Director of Undergraduate Studies
Area Coordinator-Music Theory
Distinguished Teaching Professor

Christopher Doane

Professor
Dean

Donn Everette Graham

Professor

Brenda Kee

Professor
Area Coordinator-Keyboards

Herbert Koerselman

Professor

John LaBarbera

Professor

Naomi Oliphant

Professor

Associate Dean

Distinguished Teaching Professor

Steve Rouse

Professor

Division Head-Music Theory and Composition

Marc Satterwhite

Professor

Frederick Speck

Professor

Director of Bands

Edith Davis Tidwell

Professor

Area Coordinator-Voice

Distinguished Teaching Professor

Michael Tracy

Professor

Division Head-Jazz Studies

Michael Tunnell

Professor

Distinguished Teaching Professor

Barbara Wheeler

Professor

Director of Music Therapy

University Scholar

Greg Byrne

Associate Professor

Kent Hatteberg

Associate Professor

Director of Choral Activities

University Scholar

Bruce Heim

Associate Professor

University Scholar

John Jones

Associate Professor

Division Head-Applied Studies

Kimcherie Lloyd

Associate Professor

Division Head-Ensembles and Conducting

Seow-Chin Ong

Associate Professor

J. Patrick Rafferty

Associate Professor

Brett Shuster

Associate Professor

Dallas Tidwell

Associate Professor

Gerald Tolson

Associate Professor

Paul York

Associate Professor

Julia Shinnick

Assistant Professor

Krista Wallace-Boaz

Assistant Professor

Director of Graduate Studies

Daniel Weeks

Assistant Professor

University Scholar

Jerry W. Ball

Professor Emeritus

Doris Owen Bickel

Professor Emeritus

Paul R. Brink

Professor Emeritus

Melvin Dickinson

Professor Emeritus

Francis Fuge

Professor Emeritus

Karl-Werner Guempel

Professor Emeritus

Lee Luvisi

Professor Emeritus

Daniel McAninch

Professor Emeritus

Peter McHugh

Professor Emeritus

Acton Ostling

Professor Emeritus

Richard Spalding

Professor Emeritus

Robert Weaver

Professor Emeritus

Loren Waa

Professor Emeritus

Master of Arts in Teaching in Physical Education

Major: PED
Degree Awarded: M.A.T.
Unit: GE
Program Webpage: louisville.edu/education/departments/hss/pe.html

Program Information

The Master of Arts in Teaching in Physical Education degree provides initial P-12 certification in health and physical education.

Program Admission

- All candidates must meet the general requirements for admission to the Graduate School, as well as the requirements for admission to certain specific programs offered by the College of Education and Human Development.
- All students applying for a master's program in education must take the Graduate Record Examination (GRE) prior to application for admission. A combined score of 800 on the verbal and quantitative sections of the GRE is required for all master degree programs in the College of Education and Human Development.
- Students must take the PRAXIS II Subject Examinations in the area of Physical Education and Health. Please be advised that the PRAXIS II exams are offered only 6 times each year, and results usually take 6 weeks or more to reach the University of Louisville. Plan accordingly if your scores are to be received in time for application deadline.

Curriculum

Prerequisites:

- **ECPY 507/607** Learning Theory and Human Growth and Development
- **EDTP 401/501** General Methods
- **HSS 605** Teaching and Learning for Elementary Physical Education 6
- **HSS 606** Teaching and Learning for Secondary Physical Education 6
- **HSS 609** Methods in Practical Living: Health 6

- **HSS 611** Seminar in Student Teaching in Health and Physical Education 3
 - **HSS 612** Student Teaching in Health Physical Education I * 6
 - **HSS 613** Student Teaching in Health Physical Education II * 6
 - **HSS 614** Action Research Project * 3
- Minimum total hours:** 36

*These courses are the exit requirements for this program. Includes Teacher Certification in P-12 Health and Physical Education.

Certification Requirements

- 2.50 G.P.A. is required in teaching field for admission to student teaching and for certification. Admission to Graduate School requires a minimum cumulative 2.75 G.P.A. Consult *Graduate Catalog* for further details.
- 3.00 G.P.A. is required in 36 hour M.A.T. program in Physical Education.
- Successful completion of the PRAXIS Examination is required for teacher certification. Two Specialty Area Examinations in Physical Education: Content Knowledge and Physical Education, and Movement Forms-Analysis and Design must be taken.
- A portfolio is required for successful admission and completion of this program.

This program is considered tentative unless signed by both the advisor and student.

Master of Education in Reading Education

Major: RE
Degree Awarded: M.Ed.
Unit: GE
Program Webpage: louisville.edu/education/degrees/med-re.html

Program Information

The Teacher Literacy Leadership Program will provide an M.Ed. in Reading Education with a Kentucky Reading and Writing Endorsement, or a Rank I program, that provides a Kentucky Reading and Writing Endorsement (P-12).

Initial Requirements:

- Teaching certification in P-12 Area.
- Admission to Graduate School.
- Admission to M.Ed. in Reading program.
- Meeting with faculty advisor to discuss KYETS, U of L Program Themes, Conceptual Framework, and IRA Standards.

Curriculum

Research (3 hours)

- **ELFH 600** Introduction to Research Methods and Statistics 3

Leadership (3 hours)

- **EDAP 641** Literacy Leadership and School-wide Planning 3

Diversity (3 hours)

- **EDAP 642** Literacy Learning and Cultural Differences 3

Curriculum and Instruction (3 hours)

- **EDAP 639** Advanced Reading Methods P-12 3

Area of Emphasis (21 hours)

- **EDAP 610** Literacy Research and Theory . . 3
- **EDAP 614** Supporting Struggling Readers and Writers 3
- **EDAP 615** Measurement and Diagnosis of Literacy 3
- **EDAP 618** Capstone Practicum in Literacy: Reading Specialist 3
- **EDAP 678** Language Knowledge and Acquisition 3
- **EDAP 679** Capstone Practicum in Literacy: Literacy Coach 3
- **EDAP 693** Teaching Writing P-12 3

Electives (3 hours)

- **EDAP 540** Teaching Adolescent Readers . . 3
- **EDAP 604** Teacher Leadership: Mentoring and Coaching 3
- **EDAP 624** Curriculum Theory 3
- **EDAP 643** Emergent Literacy 3
- **EDAP 644** Reading/Writing Workshop 3
- **EDAP 645** Advanced Studies in Children's Literature 3
- **EDAP 687** Literacy, Teaching, and Technology 3
- **EDAP 694** Special Topics in Writing 3

- Course approved by Advisor 3

Total hours for M.Ed. in Reading (includes six hours supervised practicum) 36

Special Program or Institutes * (These are selective programs.) (See Special Programs note below)

- **EDAP 694** Kentucky Reading Project 3
- **EDAP 612** Louisville Writing Project 6
- **EDAP 694** Reading Recovery 6
- NBPTS: English Language Arts Early & Middle Childhood Literacy: Reading-Language Arts OR
- Early Adolescence Or Adolescence and Young Adult (may count three hours) 6
- EDAP Kentucky Institute for Arts in Education 3

Mid-Point Assessment: Review program on KY Experienced Teacher Standards, U of L Program Themes, Conceptual Framework, and International Reading Association Standards for Reading Professionals (2003). Two of five standards completed for culminating Reading Specialist/Literacy Coach portfolio based on the IRA Standards. One Capstone Practicum completed, EDAP 618.

Exit Assessment: Updated Rank I Self-Report on Kentucky Experienced Teacher Standards, U of L Program Themes, Conceptual Framework, and IRA Standards for Reading Professionals (2003); Academic average of "B"; no grade lower than "C"; completed Reading Specialist/Literacy Coach Portfolio based on IRA Standards; passing score on PRAXIS for Reading Specialist (0300)

* Special Programs note:

1. Some special programs are three graduate credit hours. If the advisor approves, three hours may be substituted for an appropriate required course, or candidates may choose to apply three hours as the elective.
2. Some special programs are six graduate credit hours. If the advisor approves, three hours may be substituted for an appropriate required course, and three hours may be used as the elective. As an alternative, candidates may choose to apply three hours as an elective and apply the additional three hours toward a Rank I or doctoral program

Master of Arts in Teaching in Secondary Education

Major: SE

Degree Awarded: M.A.T.

Unit: GE

Program Webpage: louisville.edu/education/degrees/mat-se.html

Program Information

Program Admission Procedure

1. Bachelor's degree with a 2.75 grade point average.
2. "C" or better in English 102, Speech Communications.
3. Within 9 credits of content area with a 2.5 or above GPA in content area.
4. Admission to Teacher Education.
5. Praxis in content area has been taken.
6. Admission to the Graduate School.

Curriculum

8-12 Certification

Initial Assessment: Admission to Graduate School & Teacher Education prerequisites met.

- EDTP 602 Exploring Teaching Within the Socio-Cultural Context of P-12 Schools 3
- ECPY 607 Learning Theory and Human Growth and Development 3
- EDTP 501 General Methods 3

(NOTE: The above three courses must be taken prior to Methods Course)

- EDTP 609 Special Methods in Secondary Education (in teaching field) 3
- EDSP 545 Exceptional Child in the Regular Classroom 3

Mid-Point Assessment: Prior to Student Teaching: Satisfactory dispositions assessment; No lower than 2.0 in content special methods class; Within three credits of meeting content requirements; ECPY 606 and EDTP 602, 501, 609 passed; Satisfactory mid-point portfolio; Positive recommendation from Middle/Secondary Program Committee.

- EDTP 619 Secondary Student Teaching 6

- EDTP 677 Capstone Seminar: Initial Certification ² 3

Certification Assessment: After Student Teaching: Satisfactory dispositions assessment; All certification course work* completed with 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in student teaching; Satisfactory certification portfolio; Passing scores on PRAXIS content and PLT exams; Positive recommendation from Middle/Secondary Program Committee.

- Academic support course ¹ 3
- EDTP 503 Developing Cross-Cultural Competence ¹ 3
- EDTP 504 Teaching with Technology ¹ 2
- EDTP 505 Challenging Advanced Learners ² 1
- EDTP 620 Reading and Writing Across the Curriculum/Adolescent Literature ¹ 3

Minimum total hours: 36

Degree Assessment: Satisfactory dispositions assessment; All program course work with 3.0 cumulative GPA; Satisfactory degree portfolio.

¹Can be taken at any point in the program.

²Must be taken concurrently with student teaching.

Alternative Route to 8-12 Certification

Initial Assessment: Admission to Graduate School & Teacher Education prerequisites met, passing scores on the content PRAXIS test(s), current employment as a full-time temporary provisional teacher.

- EDTP 631 Integrated Teaching and Learning I 3
- EDTP 632 Integrated Teaching and Learning II 3
- EDTP 609 Special Methods in Secondary Education (in teaching field) 3
- EDTP 633 Integrated Teaching and Learning III 3
- EDTP 619 Secondary Student Teaching 3

Mid-Point Assessment: Completion of all courses listed above; satisfactory dispositions assessment; 2.5 cumulative GPA; all content coursework completed with a 2.5 cumulative GPA; 2.0 or higher in student teaching; satisfac-

tory certification portfolio; positive recommendation from Middle/Secondary Program Committee.

- EDTP 620 Reading and Writing Across the Curriculum/Adolescent Literature 3
- EDTP 678 Supporting the Intern Teacher I . . . 3
- EDTP 504 Teaching with Technology 2
- EDTP 505 Challenging Advanced Learners . . 1
- EDTP 679 Supporting the Intern Teacher II . . 3
- EDTP 503 Developing Cross-Cultural Competence 3

Minimum total hours: 30

Certification Assessment: Satisfactory dispositions assessment; all program course work with 2.5 cumulative GPA; Satisfactory certification portfolio; passing score on 7-12 PLT PRAXIS exam.

Degree Assessment: Satisfactory dispositions assessment; all program course work with 3.0 cumulative GPA; Satisfactory Alternative Certification degree portfolio.

Master of Education in Secondary Education

Major: SE

Degree Awarded: M.Ed.

Unit: GE

Program Webpage: louisville.edu/education/degrees/med-se.html

Program Information

Program Admission Procedure

- Holds certification in an 8-12 area.
- Admission to Graduate School.
- Completion of an official program are required.

Curriculum

Requirements: Admission to Graduate School and Completion of Official Program with advisor.

- **EDAP 606** Orientation and Readings (take in first semester of enrollment) 3
- **ELFH 600** Introduction to Research Methods & Statistics 3

Leadership and Change: (select one of the following courses)

- **EDAP 607** Leadership and change 3
- **ELFH 603** Administrative Leadership in a Reform Environment 3
- **EDAP 624** Curriculum Theory 3
- **EDAP 625** Social and Ethical Dev. of Teaching 3

Success for All Learners: (select one of the following courses)

- **EDAP 642** Literacy Learning & Cultural Differences 3
- **EDAP 626** Affirming Diversity 3
- **EDTP 503** Developing Cross-Cultural Competence 3

Area of Emphasis 12

EDAP 680 Capstone Course 3

Elective 3

Exit Requirements

- Portfolio or Master's Thesis (**EDAP 699**) 2-5

Minimum total hours 30

Notes

1. Minimum of 18 hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of six hours) - final acceptance is dependent upon receipt of official transcripts.
3. A maximum of six hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
4. All courses must be completed within six years of admission to the program.
5. To complete the program, students must have a minimum 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".

Rank I Program in Secondary Education

Program Information

Program Admission Procedure

- Hold Certification in an 8-12 area and a M.A.T. or Rank II Equivalence.
- Admission to Graduate School.
- Completion of Program with advisor is required.

Curriculum

Rank I Program in Secondary Education Advanced Practitioner

Leading Change: (select one of the following) 3

- **EDAP 606** Orientation and Readings (take in first semester of enrollment)
- **ELFH 600** Introduction to Research Methods & Statistics

From Leadership and change category:

- **EDAP 607** Leadership and Change
- **ELFH 603** Administrative Leadership in a Reform Environment
- **EDAP 624** Curriculum Theory
- **EDAP 625** Social and Ethical Development of Teaching

The Multicultural Learner: (select one of the following) 3

- **EDAP 642** Literacy learning & Cultural Differences
- **EDAP 626** Affirming Diversity
- **EDTP 503/403** Developing Cross-Cultural Competence
- **SOC 630** Sociology of Education
- **WMST 532** History of American Sexualities
- **WMST 556** Feminist Theory
- **PAS 529** Teacher Institute on African-American Issues

Area of Emphasis 12

EDAP 680 Capstone Course 3

Electives: 9

Minimum total hours: 30

Exit Requirements: Portfolio or National Board Certification.

Notes:

1. Minimum of 18 hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of six hours) - final acceptance is dependent upon receipt of official transcripts.
3. A maximum of six hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
4. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".

Rank I in Secondary Education Professional Program

- **EDAP 606** Orientation and Readings (take in first semester of enrollment) 3
- **ELFH 600** Introduction to Research Methods & Statistics 3

Leadership and change: (select one of the following) 3

- **EDAP 607** Leadership and Change
- **ELFH 603** Administrative Leadership in a Reform Environment
- **EDAP 624** Curriculum Theory
- **EDAP 625** Social and Ethical Development of Teaching

Success for All Learners: (select one of the following) 3

- **EDAP 642** Literacy Learning & Cultural Differences
- **EDTL 626** Affirming Diversity
- **EDTP 503** Developing Cross-Cultural Competence

Area of Emphasis 12

Elective: 3

Exit Requirements: Portfolio or Master's Thesis (EDAP 699) 2-5

Minimum total hours: 30

Notes

1. Minimum of 18 hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of six hours) - final

acceptance is dependent upon receipt of official transcripts.

3. A maximum of six hours taken in non-degree status can be applied toward a Rank I -M.Ed. degree (upon approval of advisor).
4. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".
5. You must have a total of 60 graduate credit hours including a Masters degree.

Master of Education in Special Education

Major: SPE

Degree Awarded: M.Ed.

Unit: GE

Program Webpage: louisville.edu/education/degrees/med-spe.html

Program Information

This master's degree can be taken to gain expertise in a variety of areas. These include but are not limited to:

- Assistive Technology and Autism - Contacts: Dr. Debra Bauder or Dr. Thomas Simmons
- Orientation & Mobility - Contact: Dr. Bill Penrod
- Visual Impairment - Contact: Dr. Bill Penrod

The goal of the program is to offer a Master's degree that will advance one's knowledge and further their expertise in a specialty area.

Curriculum

Non-Teaching

This degree is designed for master's degree candidates whose professional goals are in areas other than teaching or whose goals are in the area of early childhood/special education, specifically comprehensive-care centers, institutions, clinics, day care centers, preschools, and community programs.

Prerequisites for Admission: Baccalaureate degree from an accredited college and admis-

sion to Graduate School and EDSP 540: Introduction to Special Education.

Degree Requirements: A minimum of 33 semester hours of graduate coursework; at least 18 hours of courses numbered 600 or above; and a culminating course, either EDSP 639 or EDSP 687, to be taken at the end of the program and requiring a major paper.

ELFH 600 Introduction to Research Methods and Statistics 3

Introductory Courses Select three courses from the following:

- **EDSP 537** Language Learning for Exceptional Children 3
- **EDSP 594** Teaching Student with Physical Disabilities 3
- **EDSP 624** Seminar in Psychological & Social Implications of Handicaps 3
- **EDSP 634** Introduction to Mental Retardation 3
- **EDSP 640** Introduction to Learning Disabilities 3
- **EDSP 674** Theories of Behavior Disorders 3
- **EDSP 697** Applied Behavior Analysis . . . 3
- **EDSP 670** Introduction to Autism 3

Mid point assessment: Satisfactory, Unsatisfactory, Needs Improvement

Advanced/Related Courses: Courses will be selected, with advisor's approval, to provide the necessary background to meet the candidate's professional goals

Advanced courses 9
Related Electives 9

Exit Requirement:

- **EDSP 639** Research Analysis in Special Education 3

Minimum total hours: 33

Master of Education in Special Education in Orientation and Mobility Non-Teaching (leading to ACVREP certification)

Admission Requirements: This degree is designed for master's degree candidates whose professional goals are in areas other than teaching and whose goal is to be certified in orientation and mobility.

Prerequisites for Admission: Baccalaureate degree from an accredited college and admission to Graduate School and EDSP 540: Introduction to Special Education and EDSP 619: Orientation and Mobility/daily Living Skills for Teachers and a computer (at least 300 MHZ with 64 RAM, sound card, and speakers, at least 56.6 modem or higher capacity) and be able to send/receive email and access to Internet, with printer. Instructor may require access to additional equipment for some courses.

Degree Requirements: A minimum of 33 semester hours of graduate coursework. Maintain a 3.0 or above grade point average. Students must make at least a B in the following courses: EDSP 624, EDSP 625. Participants whose academic performance falls below the grade point average will be asked to develop a plan for improvement. Failure to meet the objectives of this plan will result in dismissal from the program.

Orientation and Mobility Entry Courses (To be completed the first 9 hours of EDSP coursework)

- **EDSP 624** Characteristics and Needs of Students Who are Visually Impaired or Blind 3
- **EDSP 625** American Braille Codes 3

The following courses may be taken in any sequence/combination upon completion of the "Orientation and Mobility entry courses."

- **EDSP 634** Characteristics and Needs of Students with Moderate and Severe Disabilities 3
- **EDSP 620** Introduction to Orientation and Mobility 3
- **EDSP 623** Orientation and Mobility for Infants, Preschool, and Multiply Impaired . . 3

Mid Point Evaluation

- **EDSP 621** Advanced Methods in Orientation and Mobility I 3
- **EDSP 622** Advanced Methods in Orientation and Mobility II 3

Orientation and Mobility Exit Courses (completed sequentially as the last six hours of the program)

- **EDSP 630** Practicum: Observation and Participation in O&M 3
- **EDSP 631** Internship 3

MASTER OF EDUCATION IN ORIENTATION AND MOBILITY REQUIREMENTS (6 hours)

- **ELFH 600** Introduction to Graduate Studies 3
- **EDSP 639** Research in Special Education . 3

Exit Requirements: Completion of EDSP 630: Practicum in O&M and EDSP 631: Internship and Pass Comprehensive Specialty Exam

Minimum total hours: 33

Concentration in Learning Disabilities

Admission Requirements: Baccalaureate degree from an accredited college, certification in elementary education, and certification in learning disabilities.

- **ELFH 600** Introduction to Research Methods and Statistics 3
- **ELFH** (Historical, sociological, or philosophical foundations of education to be selected from ELFH 620, 625, 630, 640, 681) 3

Learning Disabilities Specialization

- **EDSP 693** Consulting with Parents and Teachers of Exceptional Children 3
- **EDSP 697** Topical Seminar in Special Education 3

Special Education Core

- **EDSP 641** Curriculum Methods: Special Education 3
- EDSP To be selected with advisor 6

Related Electives (may be taken outside Education) 9

Exit Requirement

- **EDSP 639** Research Analysis in Special Education 3

Minimum total hours: 33

Notes

1. Minimum of 18 hours in 600-level courses is required.
2. Maximum of 2 workshops allowed in total program.
3. Final acceptance of transfer credit (a maximum of six hours) is dependent upon receipt of transcript.
4. Program must be approved by advisor and filed at the beginning of the program.
5. A maximum of six hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).

6. All courses must be completed within 6 years of admission of program.
7. This program is considered tentative unless signed by both the advisor and student.
8. A portfolio is required for successful completion of this program.
9. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".
10. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".

Resulting in Learning and Behavioral Disorders (P-12) Certification Stand Alone and Alternate Certification Program in Special Education for Persons with no Teacher Certification

Admission Requirements:

- Bachelor's degree from an accredited college or university
- Admission to Teacher Education
- Admission to Graduate School
- Employed as a teacher in a learning and behavior disorders classroom

Required Courses for Certification

- **EDSP 541** Introduction to Learning and Behavioral Disorders 3
- **EDSP 675** Management of the Behavior Problem Child in the Classroom 3
- **EDSP 537** Language Learning for Exceptional Children 3
- **EDSP 612** Curriculum Methods and Assessment I 3
- **EDSP 613** Curriculum Methods and Assessment: Field Component I 3
- **EDSP 618** Instructional Technology For Students With Special Needs 3
- **EDSP 693** Consulting with Parents and Teachers of Exceptional Children 3
- **EDSP 616** Curriculum Methods and Assessment II 3
- **EDSP 617** Curriculum Methods and Assessment: Field Component II 3
- **EDSP 614** Transition Programs Services for Children and Youth with Disabilities 3

- **EDSP 681** Early Childhood Education of Exceptional Children 3
- **EDSP 594** Problems and Methods of Teaching the Physically Handicapped and Sensory Impaired 3
- **EDEM 610** Literacy Research and Theory 3
- **EDEM 620** Introduction to Teaching Elementary Mathematics Education 3

Additional Coursework For Master of Education Degree

- **ELFH 600** Introduction to Research and Statistics 3
- **ELFH** Elective (*Approved by Advisor*) 3

Minimum total hours: 48

Exit Requirements for Certification and/or Degree:

- Develop successful professional portfolio.
- Successfully complete all coursework with grade of "B" or better.
- Successful completion of the following PRAXIS Exams is required: The Application of Core Principles Across Categories of Disability and Teaching Students with Emotional/Behavior Disorders.

Options

Option A: Jefferson County Public Schools Charter College Program

This option leads to a Master of Education degree and teacher certification in learning and behavior disorders. The program begins in the summer and is completed in five semesters. While in the program you teach (with an emergency certificate) in an LBD classroom for JCPS. In most cases for each "B" or higher you earn in the program, JCPS will reimburse you for a part of your tuition.

Option B: Master of Education Degree or Certification Only

This option can lead to a Master of Education degree with certification in LBD OR certification only in LBD. The program begins in the summer and can be completed in 5 semesters or up to 6 years. While in the program you teach (with an emergency certificate) in an LBD classroom in one of our local school districts. The Teaching and Learning Department's Admissions Committee must approve your school location. Should a student decide to start out in the certification only program and later change to the Master of Edu-

cation program, the student can only transfer six hours to the M.Ed. program.

Option C: Alternate Certification with a Master of Education Degree or Certification Only

This option can lead to a Master of Education degree with certification in LBD or certification only in LBD. The program begins in the summer, and takes two years to complete. As part of this program you will receive a temporary provisional teaching certificate. You must be employed as an LBD teacher. The Teaching and Learning Department's Admissions Committee must approve your school location. In the second year of this program you will participate in the Kentucky Teacher Internship Program (KTIP). Should a student decide to start out in the certification only program and later change to the Master of Education program, *the student can only transfer 6 hours to the Master of Education program.*

Master of Education in Special Education and/or Rank II/Rank I Program Leading to Certification in Learning and Behavior Disorders

Candidates for this program must have a valid regular education teaching certificate. The courses listed below may, with advisor's approval, be applied toward a Rank II or Rank I program. Teachers certified only in Music, Physical Education or Home Economics (at any level) or regular classroom teaching at the 5-8 or 7-12 level(s) must complete the EDTP 610 and EDTP 620 (pending review by the LBD Screening committee) with grades of C or better in each prior to enrolling in the Special Education Entry Courses.

EDAP 610 Literacy: Research and Theory . . . 3

EDAP 620 Introduction to Teaching Elementary Mathematics Education 3

Special Education Entry Courses: (To be completed as the first nine hours of EDSP course work)

- **EDSP 540** Introduction to Exceptional Children 3
- **EDSP 640** Introduction to Learning Disorders 3
- **EDSP 675** Management of the Behavior Problem Child 3

The following six courses may be taken in any sequence/combination upon completion of the "Special Education entry Courses":

- **EDSP 537** Language Learning for Exceptional Children 3
- **EDSP 594** Problems and Methods of Teaching the Physically Handicapped/Sensory Impaired 3
- OR
- **EDSP 638** Educational Management: Physical Disabilities 3
- **EDSP 618** Instructional Technology for Students with Special Needs 3
- **EDSP 681** Early Childhood Education of Exceptional Children 3
- **EDSP 614** Transition Services 3

Mid-point Assessment: Satisfactory, Unsatisfactory, Needs Improvement

Special Education Exit Courses (Completed sequentially as the last nine hours of the program)

- **EDSP 642** Assessment Procedures for LBD 3
- **EDSP 643** Instructional Procedures for LBD 3
- **EDSP 645** Student teaching: Learning and Behavioral Disorders (If waived, another three hour course approved by advisor) . 3

Minimum total hours: 33-39

Master of Education in Learning and Behavior Disorders Requirements

(The M.Ed. includes all courses listed in the Rank II program above and the following requirements of 6 additional hours.)

- **ELFH 600** Introduction to Research Methods and Statistics 3
- **EDSP 639** Research in Special Education . . 3

Minimum total hours: 39-42

NOTE:

1. Students who make a grade of C or below in any Special Education course leading to teacher certification are required to repeat the course before being admitted to Student Teaching (EDSP 645).
2. Successful completion of the following PRAXIS Exams are required for Learning and Behavior Disorders teacher certification: The Application of Core Principles Across Catego-

ries of Disability (either 352 or 353 and Teaching Students with Emotional/Behavior Disorder (either 371 or 542).

3. Successful completion of midpoint evaluation of program and performance.
4. A portfolio is required for completion of this program.
5. The Certification Program requires development of a Professional Portfolio and a Midpoint Performance Review, both of which must be successfully completed before the participant will be recommended for certification by the Kentucky Department of Education.

Concentration in Moderate & Severe Disabilities

Admission Requirements:

- Baccalaureate degree from an accredited college.
- Certification in elementary education.
- Certification in moderate and severe disorders.
- EDSP 540 or introduction/survey course in Special Education.
- Computer (at least 300MHZ with 64SDRAM, sound card and speakers, CD-ROM, at least 56.6 modem or higher capability) able to send/receive email and access to internet, with printer. *Instructor may require additional equipment for some courses.
- **ELFH 600** Introduction to Research Methods and Statistics 3
- **ELFH** (Historical, sociological, or philosophical foundations of education to be selected from ELFH 620, 625, 630, 640, 681) 3

Moderate & Severe Disabilities Specialization

- **EDSP 6XX** Orientation and Mobility for Teachers 3
- **EDSP 600** Assessment of Students with Disabilities 3
- **EDSP 624** Char. & Needs of Blind & Visually Impaired Students 3
- **EDSP 627** Applications of Assistive Technology 3
- **EDSP 634** Char. & Needs of Students w/ Moderate and Severe Disability 3
- **EDSP 637** Transdisciplinary Collaboration for Inclusion 3

- **EDSP 636** Diag. & Prescriptive Teaching of Individuals with Disabilities 3
- **EDSP 670** Introduction to Autism 3
- **EDSP 638** Ed. Manage. of Health, Physical, and Multiple Disabilities 3

Exit Requirement

- **EDSP 635** Moderate and Severe Disabilities Practicum 3

Minimum total hours: 36

Notes:

1. Minimum of 18 hours in 600-level courses is required.
2. Maximum of two workshops allowed in total program.
3. Final acceptance of transfer credit (a maximum of six hours) is dependent upon receipt of transcript.
4. Program must be approved by advisor and filed at the beginning of the program.
5. A maximum of six hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
6. All courses must be completed within six years of admission of program.
7. This program is considered tentative unless signed by both the advisor and student.
8. A portfolio is required for successful completion of this program.

Master of Education in Special Education or Rank I/II Leading to P-12 Certification in Moderate/Severe Disabilities

- Certification in P-5, 5-9, or 8-12.
- B.A./B.S. degree from an accredited university/College of Education and Human Development.
- Admission to Graduate School for Certification or Master of Education program.
- Introduction or Survey Course in Special Education.
- Computer (at least 300MHZ with 64MB SDRAM, sound card and speakers, CD-ROM, at least 56.6 modem or higher capability) able to send and receive email and access to Internet, with printer. *Instructor may require access to additional equipment for some courses.

- **EDSP 627** Applications of Assistive Technology 3
- **EDSP 634** Characteristics and Needs of Students w/Moderate & Severe Disabilities 3
- **EDSP 636** Diagnostic and Prescriptive Teaching of Individuals with Disabilities 3
- **EDSP 614** Transition Programs and services for youth with Disabilities 3
- **EDSP 619** Orientation and Mobility for Teachers 3
- **EDSP 670** Introduction to Autism 3

Mid-point Assessment: Satisfactory, Unsatisfactory, Needs Improvement

- **EDSP 637** Transdisciplinary Collaboration for Inclusion 3
- **EDSP 638** Educational Management of Health, Physical, and Multiple Disabilities 3
- **EDSP 646** Augmentative Communication . . . 3
- **EDSP 635** Moderate and Severe Disabilities Practicum ** 3

**NOTE: This class can be waived with three successful years of teaching in the field of Moderate/Severe Disabilities and a STRONG letter of recommendation from your Principal. If this is done, then the replacement course would be EDSP 644: Applied Behavior Analysis 3

For Masters:

- **ELFH 600** Introduction to Research Methods and Statistics 3
- **EDSP 639** Research in Special Education . . 3

Exit Requirements

- Develop professional portfolio.
- Maintain a 3.0 (B) or above grade point average with no grade lower than a B.
- Successful completion of PRAXIS Exam.
- Successful mid-point, certificate and/or degree assessment.
- Successful completion of the following PRAXIS Exams are required: The Application of Core Principles Across Categories of Disability and Teaching Students with Mental Retardation.

Minimum total hours: **36**

NOTE:

1. Students who earn a grade of C or below in any Special Education course leading to teacher certification are required to repeat the

course before being admitted to Student Teaching (EDSP 635).

2. Successful completion of the following PRAXIS Exams is required for Moderate Severe teacher certification: The Application of Core Principles Across Categories of Disability and Teaching Students with Mental Retardation.
3. Successful completion of midpoint evaluation of program and performance.
4. A portfolio is required for completion of this program.
5. The Certification Program requires development of a Professional Portfolio and a Midpoint Performance Review, both of which must be successfully completed before the participant will be recommended for certification by the Kentucky Department of Education.
6. This program is considered tentative unless signed by both the advisor and student.

Moderate and Severe Disabilities (P-12) Certification and/or Rank II Stand-alone Alternative Certification Program in Special Education for Persons with no prior Teacher Certification

Alternative Certification with a Master of Education Degree or Certification Only

This option can lead to a Master of Education degree with certification in MSD or certification only in MSD. As part of this program you will receive a temporary provisional teaching certificate. You must be employed as an MSD teacher. The Teaching and Learning Department's Admissions Committee must approve your school location. In the second year of this program you will participate in the Kentucky Teacher Internship Program (KTIP). Remember, should you decide to start out in the certification only program and later change to the M.Ed. program, *you can only transfer six hours* to the M.Ed. program.

Admission Requirements:

- Bachelor's degree from an accredited college or university
- Admission to Teacher Education
- Admission to Graduate School
- Employed as a teacher in a moderate and severe disabilities classroom

EDSP 613 Curriculum Methods and Assessment: Field Component I (MSD) 3

EDSP 614 Transition Programs and Services for Youth with Disabilities 3

EDSP 617 Curriculum Methods and Assessment: Field Component II (MSD) 3

EDSP 627 Applications of Assistive Technology 3

EDSP 634 Characteristics and Needs of Students with Moderate & Severe Disabilities 3

EDSP 636 Diagnostic and Prescriptive Teaching of Individuals with Disabilities (prerequisite EDSP 634) 3

Mid-point Assessment: Satisfactory, Unsatisfactory, Needs Improvement (at end of 18 hours)

EDSP 537 Language Learning for Exceptional Children 3

EDSP 594 Educational Management of Health, Physical, & Multiple Disabilities. 3

EDSP 637 Transdisciplinary Collaboration for Inclusion 3

EDSP 644 Applied Behavior Analysis. 3

EDSP 646 Augmentative Communication 3

For Masters

- **ELFH 600** Introduction to Research Methods and Statistic 3
- Elective approved by advisor 2
- EDSP 600 level 2

Exit Requirements:

- Develop successful professional portfolio.
- Successfully complete all coursework with grade of B or better.
- Successful completion of the following PRAXIS Exams are required: The Application of Core Principles Across Categories of Disability and Teaching Students with Mental Retardation.

Minimum total hours: 39

Master of Education in Special Education with Concentration in Vision Impairment

Admission Requirements: Baccalaureate degree from an accredited college, admission to Graduate School, and certification in education.

Prerequisites in Special Education (nine (9) hours)

(Courses required as preparation for graduate work but not counted in 31-hour minimum total for master's degree)

- **EDSP 505** Introduction to Blindness and Visual Impairment 3
- **EDSP 509** Standard English and Nemeth Braille Codes 3
- **EDSP 540** Introduction to Exceptional Children 3

Graduate Core Requirements (6 hours)

ELFH 600 Introduction to Research Methods and Statistics 3

ELFH Historical, sociological, or philosophical foundations of education to be selected from one of the following:

- **ELFH 620, 625, 630, 640, 681** 3

Visual Impairment Specialization (15 hours)

- **EDSP 510** Educational Procedures for Blind Children 3
- **EDSP 512** Orientation, Mobility, and Daily Living Skills for the Visually Impaired . . . 3
- **EDSP 525** Educational Procedures for Low Vision Children 3
- **EDSP 594** Problems and Methods of Teaching Physically Handicapped and Sensory Impaired 3
- **EDSP 628** Seminar: Assessment of the Visually Impaired Students 3

Related Electives (six (6) hours)

- The student will select courses numbered 600 or above with advisor's approval (may be outside Education) 6

Exit Requirement (4 hours)

- **EDSP 629** Practicum n Visual Impairment 4

Minimum total hours: 31

NOTES:

1. Students who make a grade below "C" in any Special Education course leading to teacher certification are required to repeat the course and earn a minimum grade of "C" prior to being admitted into student teaching.
2. This degree requires an exit evaluation. The exit evaluation may consist of a research paper or project in EDSP639 at the end of the program.
3. Successful completion of the PRAXIS Exam is required for teacher certification. The Application of Core Principles Across Categories of Disability and Teaching Students with Behav-

ioral Disorders/Emotional Disturbances must be taken.

Departmental Faculty

Peter Alter
 Debra Bauder
 Latricia Bronger
 Lisa Kemmerer
 Amy Lingo
 Sheri Moore
 Bill Penrod
 Mary Ann Reynolds
 Thomas Simmons

Rank I Program in Special Education

Program Information

Rank I Requirements

1. The candidate for Rank I shall hold a regular teaching certificate and a master's degree or its equivalent based on one of the following:
 - A master's degree leading to a standard teaching certificate;
 - A master's degree in a professional education specialty;
 - A master's degree in an academic subject identified in the teacher certification requirements;
 - A 32-semester hour non-degree fifth year program; and
 - A 32-semester hour non-degree fifth year program, which may include 12 semester hours of credit, earned as continuing education units and/or professional staff development units.
2. The Rank I classification shall require the completion of either:
 - 30 semester hours approved graduate level or equivalent (approved teacher institute) credit in addition to the requirements for a Rank II classification, or

- 60 semester hours approved graduate level credit including a master's degree.

3. The candidate shall plan his Rank I program in consultation with an advisor in the School of Education in advance of completing the first coursework or very early in the program. The program shall be appropriate to the candidate's present or projected role in professional education. A copy of this program shall be filed in the Education Advising Center.
4. Of the total Rank I program, at least 15 semester hours beyond Rank II shall be taken at the University of Louisville. The remaining credit hours may be taken at the same institution or, upon approval of the faculty advisor, at other institutions. There is no stipulation as to recency of completion of Rank I credit.
5. All coursework for Rank I shall carry graduate credit or equivalent (approved teacher institute) credit, and no less than half shall be earned in courses open only to graduate students.
6. An academic average of "B" shall be required on the course hours submitted for Rank I, and no credit shall be accepted for course carrying a grade lower than "C".
7. A portfolio is required for successful completion of this program.

Rank II Requirements

1. Admission to Graduate School in Non-Degree status.
2. Kentucky teacher certification.
3. Successful completion of an introductory or survey course in Special Education.

Basic Professional Courses 3

- ELFH One course in philosophical, historical, or sociological foundations to be selected from ELFH 620, 625, 630, 640, 681

Area of Specialization 12

- In consultation with your graduate advisor, designate a minimum of 12 semester hours of graduate courses which will provide further depth and breadth of preparation in an area of your choice.

Electives 18

- Select 18 hours of courses. For students who have not had previous courses in cul-

tural diversity, electives in this area are strongly recommended.

NOTE: Up to 12 hours of Professional Education units may be counted toward this program.

Total hours: 33

Master of Science in Sport Administration

Major: SPAD

Degree Awarded: M.S.

Unit: GE

Program Webpage: louisville.edu/education/degrees/ms-spad.html

Program Information

The Master of Science in Sport Administration is approved (accredited) by the Sport Management Program Review Council (SMPRC). The SMPRC was created by the National Association for Sport and Physical Education (NASPE), and the North American Society for Sport Management (NASSM), to act as an entity that reviews sport management programs. The SPAD program has a diverse student population representing a variety of geographical, cultural, educational, and professional backgrounds. U of L SPAD graduates find jobs in professional sports, business and marketing, exercise science, physical education, collegiate and high school coaching, collegiate and high school athletic administration, recreation, health and fitness, and other areas in the sport industry.

Program Admission Procedure

The recommendation to admit an applicant is made by an Admissions Committee made up of faculty in the Sport Administration Program. A preliminary decision is based on the following: U of L Graduate Application, all undergraduate and graduate transcripts, goal statement, GRE test scores, and at least two recommendations for Graduate School (Note: Applicants may submit up to three recommendations). Applicants are strongly encouraged to have at least one recommendation from a University faculty member who is familiar with the applicant's work as a student. A formal Statement of Goals should explain in 500 words or less why they want to be admitted

into the program and what they plan to do with a Sport Administration degree. A minimum combined GRE test score of 800 (verbal and quantitative section) and undergraduate GPA of 2.75 is desired.

Curriculum

Core

- **ELFH 600** Introduction to Research Methods and Statistics 3
- **HSS 604** Research Methods in HSS ... 3
- **SPAD 505** Sport Facility Management .. 3
- **SPAD 604** Financial Principles in Sport . 3
- **SPAD 625** Organizational Behavior In Sports Administration 3
- **SPAD 683** Sport Marketing 3
- **SPAD 684** Current Trends and Issues in Sport Administration 3
- **SPAD 689** Legal Aspects in the Sport Industry 3
- **SPAD 692** Internship in Sport Administration 3

Electives (9 Hours)

- **HSS 649** Psychological Aspects of Physical Education & Sport 3
- **SPAD 525** Sport Event Management ... 3
- **SPAD 529** American Women in Sport ... 3
- **SPAD 530** Sport Promotion and Publicity 3
- **SPAD 661** Sport in American Society ... 3
- **SPAD 661** Special Topics in Sport Administration 3
- **SPAD 680** Athletics in Higher Education 3
- College of Business Classes 3
- College of Education and Human Development Classes 3
- Other Classes Approved by an Advisor . 3

Minimum total hours: 36

The Graduate School

Ronald M. Atlas, Dean

The Graduate School offers the following interdisciplinary programs:

- Bioethics and Medical Humanities - M.A. (Interdisciplinary)
- Interdisciplinary Studies - M.A.
- Interdisciplinary Studies - M.S.
- Interdisciplinary Studies - Ph.D.

Interdisciplinary Master of Arts in Bioethics and Medical Humanities

Major: ISBMH

Degree Awarded: MA

Unit: GI

Program Webpage: www.med.louisville.edu/humanism/masters.htm

Program Information

The Master of Arts in Bioethics and Medical Humanities is a special track within the Interdisciplinary M.A. awarded by the Graduate School. As currently practiced, Bioethics is an inherently interdisciplinary field, located principally at the intersection of philosophy, the law, and the health care professions, such as clinical medicine and nursing, but drawing as well from social science disciplines as diverse as sociology, clinical psychology, and social work. The aim of the program is to provide students with the skills necessary to work in clinical and hospital settings from an enriched ethical knowledge base. Students will be exposed to the philosophical underpinnings of health care ethics as well as real-time clinical moral decision-making. This M.A. program will emphasize the need to examine concepts of race, gender, and culture as well as to learn to

incorporate an ethically sound appreciation of difference and diversity.

The Interdisciplinary M.A. in Bioethics and Medical Humanities provides professional enhancement and resources for the following groups of students:

- *Mid-Career Health Care Professionals* - Current M.D.s, J.D.s, R.N.s and other health care professionals who wish to enhance their career prospects with increased expertise in ethics for educational purposes, and current faculty and staff serving on Hospital Ethics Committees.
- *Dual-Degree students* who wish to add an expertise in bioethics for their future professional, educational, and scholarly pursuits in medicine, dentistry, law, nursing, social work, or other professional fields.
- *Post-Baccalaureate students* who are in transition from a B.A. to a later professional degree and desire expertise in bioethics to enhance their admission to a later program and to expand their knowledge of bioethics.

For more information about this program, contact Emily Noonan at 502-852-6501.

Program Admission Procedure

1. Follow the admissions procedure established by the Graduate School. (graduate.louisville.edu/apply)
 - a. Submit a completed application to the University of Louisville Office of Graduate Admissions. (available at graduate.louisville.edu/students/application.html).
 - b. Submit an application fee of \$50.
 - c. Submit an official transcript from each college attended. NOTE: All University of Louisville transcripts will automatically be submitted with completion of an application
 - d. Submit scores from the general section of the Graduate Record Examination (GRE). Applicants who have completed a terminal degree may be exempt from submitting GRE test scores pending review by the program of the applicant's credentials. Information can be obtained from:

University Testing Center, or
Graduate Record Examination
Educational Testing Service
Box 955
Princeton, NJ 08541

- e. Submit two letters of recommendation from persons familiar with your academic or professional work. (Forms available at graduate.louisville.edu/students/application.html)
2. Follow these additional requirements for the Interdisciplinary M.A. in Bioethics and Medical Humanities:
 - a. Submit to the Office of Graduate Admissions, with your "Application for Graduate Admission" your Personal Statement for Admission to the Interdisciplinary M.A. Program in Bioethics and Medical Humanities. This statement of educational and professional purpose describing, in up to four pages total:
 - Why you have decided on a career in bioethics and medical humanities; and,
 - An example of an issue in bioethics or medical humanities that you find compelling and why.

Curriculum

The Interdisciplinary Masters of Arts in Bioethics and Medical Humanities is a 33 credit-hour program, consisting of seven required core courses and four electives. The core courses provide essential grounding in ethical theory and the foundations of bioethics, current controversies in health care ethics, and the social and political context of health care decision-making; participation in hospital rounds emphasizes the practical realities of clinical ethics, and a capstone seminar integrates program courses with each other and with students' experience in the health care professions. Electives from the Schools of Law, Medicine, Public Health, and Social Work, as well as from the Arts and Sciences departments of History, Pan-African Studies, Philosophy, Political Science, Psychological and Brain Sciences, Sociology, and Women's and Gender Studies round out and diversify the content of the program. We anticipate that our initial offerings will soon be broadened into the areas of English, Communication, and Spirituality. Use of the KY-TeleHealth Network will allow interactive (live) audio and visual participation in our program from remote sites throughout the Commonwealth, and nationwide.

Required Core Courses (21 credit-hours)

BETH 621 Ethical Theory: Recent developments in ethical theory, such as examinations of the status of moral facts; moral realism; impartiality and personal attachments; or moral agency.

BETH 680 Foundations of Bioethics: Grounding in the major theories and methods of bioethical decision-making, including contemporary controversies about the role of theory, principles, cases, narrative, and virtues.

BETH 681 Current Controversies in Health Care Ethics: Topics in health care ethics currently attracting the most attention in both professional and public discussions. A variety of viewpoints on these topics will be considered.

BETH 682 Gender, Race, and Culture in Health Care: Examines ways social groupings and systems affect the kind of health care needed and the kind people receive. Addresses both biases and stereotypes, and empirical claims about biologically based differences.

BETH 683 Health Care, Community, and Justice: Examines theories of justice and equality as they apply to issues in health care delivery, considers explanations for why disparities exist, and explores practical ways that communities have addressed inequalities.

BETH 684 Clinical Ethics (includes clinical rounding): Application of ethical principles, virtues, and cases in the context of clinical care, with a practical approach toward ethics consultation and conflict resolution.

BETH 685 Integrative Bioethics: Self and Other in Theory and Practice: Capstone seminar for Bioethics MA program in form of collaborative seminar. Students produce culminating project, whose development and final formal presentation they share with others in seminar format

Elective Courses

(Four courses, 12 credit hours, at 500- or 600-level)

At least one elective must be selected from each list. Other courses may be allowed on a case-by-case basis.

Social Context

- HIST 589/WGST 532: History of American Sexuality

- LAW 978: Disability Law
- PAS 515: Race and Racism
- PHIL 516/616: African-American Philosophy
- PHIL 519/619: Topics in the Philosophy of Race and Racism
- POLS 568/668: Feminist Theory
- SOC 512/612: Gender, Race, Work, and Welfare
- SOC 685: Seminar on Race and Ethnicity
- SW 603: Human Diversity

Health Care Policy, Ethics, and the Law

- LAW 946: Introduction to Health Law
- LAW 947: Psychiatry, Mental Health and the Law
- LAW 959: Genetics and the Law
- LAW 980: Medicine, Bioethics and the Law
- PHCI 632: Ethical Conduct of Health Care Research
- PHIL 522: Virtue Ethics
- PSYC 656: Legal, Professional, and Ethical Issues in Clinical Psychology
- SW 636: Death and Grief

Typical Schedule of Courses for Full-Time Students

Fall Year 1/Spring Year 1

- Foundations of Bioethics
- Ethical Theory
- Gender, Race, & Culture
- Current Controversies
- Elective
- Elective

Fall Year 2/Spring Year 2

- Foundations of Bioethics
- Clinical Ethics
- Health Care, Community, & Justice
- Integrative Bioethics
- Elective
- Elective

Departmental Faculty

Core Program Faculty

David Doukas, M.D., Co-Director
 William Ray Moore Endowed Chair in Family Medicine & Medical Humanism

Professor and Chief, Division of Medical Humanism & Ethics, Family & Geriatric Medicine

Robert Kimball, Ph.D., Co-Director
 Associate Professor of Philosophy;
 Chair of Philosophy

Avery Kolers, Ph.D.
 Associate Professor of Philosophy

Nancy Potter, Ph.D.
 Associate Professor of Philosophy

Mark Rothstein, J.D.
 Herbert F. Boehl Chair of Law & Medicine
 Director, Institute for Bioethics, Health Policy and Law

Paul Simmons, Ph.D.
 Clinical Professor, Department of Family & Geriatric Medicine

Osborne Wiggins, Ph.D.
 Professor of Philosophy

Master of Arts in Interdisciplinary Studies

Major: IS
Degree Awarded: M.A.
Unit: GI
Program Webpage: graduate.louisville.edu

Program Information

The Master of Arts degree in Interdisciplinary Studies provides a mechanism for accommodating the interests of students and faculty in areas in which the faculty expertise is not confined to a department or individual academic unit. It permits students to establish individualized programs and groups of faculty to establish interdisciplinary tracks.

Application and Admission

Applicants for individualized interdisciplinary master's programs must present complete admission credentials in order to be formally admitted by one of their constituent departments. Such formal admission must be recommended by at least one department or program offering degrees through the Graduate School before the student may register for course work. The required credentials are:

1. The application for admission, specifying which departments the student expects to comprise the program;
2. Transcripts showing all undergraduate and graduate course work and all degrees earned;
3. Scores on the Graduate Record Examination General Test;
4. Three letters of recommendation;
5. TOEFL score if the applicant's native language is not English and he/she has not earned a degree from a university or college in the U.S.;
6. A written statement of career objectives and rationale for the interdisciplinary research objective.

All these credentials must be sent to the Office of Graduate Admissions, University of Louisville, for distribution to the appropriate offices.

Only upon receipt of a letter of admission from the Office of Graduate Admissions may the applicant enroll for course work. There is no guarantee, however, that the desired degree program will be approved. Admission will be conditional until the program proposal has been submitted and approved by the Graduate School. During the initial semester, the curricular requirements of the program must be worked out with a supervisory committee of at least three faculty members. The chair, as well as the majority of the committee, must be members of the Graduate Faculty.

All departments or programs in which the student proposes to take more than 3 hours of graduate course work must offer degrees through the Graduate School; and, before submitting a program proposal, the student must have the permission of the department or program to take those courses.

Program Proposal

In addition to the above stipulations regarding constituent departments or programs, each interdisciplinary degree program must meet specific criteria as follows:

1. An overall minimum of 30 semester hours at 500 or 600 level.
2. A thesis (maximum of 6 hours for thesis in a 30-hour program) or six (6) additional hours of 600-level courses for non-thesis. Interdisciplinary students must enroll in GS 699 for thesis credit.

3. At least one-half of the non-thesis, non-practicum, non-internship credit hours must be at the 600 level.
4. A minimum of 6 hours of 600-level course work must be taken in each of at least two departments or programs offering degrees through the Graduate School.
5. No single department or program may offer more than half the total number of credit hours required by the program.
6. Exclusive of thesis credit, no more than 6 hours may be taken in courses of the independent-study or practicum type; such course work may not be counted toward criteria specified in 3 or 4.
7. Courses designated as fulfilling degree requirements must be offered with sufficient frequency to permit the student to complete degree requirements within a reasonable time (two years for a 30-hour program).
8. The proposed curriculum must be submitted on the appropriate form, with approval signatures of at least three graduate faculty members.
9. Requests for approval of substitutions or alternate courses must be submitted in writing to the Assistant Dean for Interdisciplinary Studies in the Graduate School.

Individually-Designed Programs of Study

An individual interested in exploring advanced studies in a field that transcends established academic/institutional boundaries may design a program of study in consultation with faculty and the Assistant Dean for Interdisciplinary Studies. A program for this degree must involve at least two academic departments/units and it must cross traditional disciplinary organizational structures and programmatic lines of study. An individual interested in this program will need to develop a general proposal that can be reviewed by faculty who, in turn, must agree that they will participate in the program if approved. Before agreeing to participate in the supervision of an interdisciplinary M.A. student, faculty must obtain the consent of their departmental chair or dean.

During the initial semester, the specific curricular requirements of the program must be worked out with a supervisory committee consisting of a chair and at least two additional faculty members representing at least two different departments or programs. Before the end of the first semester,

the proposed program of study should be submitted to the Graduate School for review. Students will be admitted to the Graduate School on a conditional basis, allowing them to take courses as a non-degree student, until the proposed program of study receives full approval. Students will be fully admitted to the Graduate School after the interdisciplinary program proposal is approved.

Interdisciplinary Tracks of Study: Interdisciplinary M.A. Concentrations

Faculty may propose interdisciplinary tracks of study that will form the basis for suitable areas of concentration to train students. The track must meet the criteria outlined above in terms of minimum credit hours and the distribution of coursework across disciplinary lines. Proposed areas of concentration and interdisciplinary tracks of study will be subject to approval by the following academic bodies: 1) Unit Curriculum and Budget Committees; 2) Graduate Council; 3) Faculty Senate; 4) Provost. The development of an interdisciplinary track is the responsibility of the faculty, but the Assistant Dean for Interdisciplinary Studies will provide assistance and guidance. Participating faculty must have the consent of their departmental chair or dean to participate in an Interdisciplinary Track.

Requests for further information or assistance should be addressed to:

Assistant Dean for Interdisciplinary Studies
Graduate School
Houchens Building, Suite 105
University of Louisville
Louisville, Kentucky 40292
Phone: (502) 852-6495
Email: graduate@louisville.edu

Curriculum

Curriculum will be determined during the development of each individual student's program proposal for the individually-designed programs. For an Interdisciplinary Track program, a core of faculty may propose a curriculum that will form the basis for an area of concentration.

Departmental Faculty

Faculty will be determined during the development of each individual student's program proposal.

Master of Science in Interdisciplinary Studies

Major: IS

Degree Awarded: M.S.

Unit: GI

Program Webpage: graduate.louisville.edu

Program Information

The Master of Science degree in Interdisciplinary Studies provides a mechanism for accommodating the interests of students and faculty in areas in which the faculty expertise is not confined to a department or individual academic unit. It permits students to establish individualized programs and groups of faculty to establish interdisciplinary tracks.

Application and Admission

Applicants for individualized interdisciplinary master's programs must present complete admission credentials in order to be formally admitted by one of their constituent departments. Such formal admission must be recommended by at least one department or program offering degrees through the Graduate School before the student may register for course work. The required credentials are:

1. The application for admission, specifying which departments the student expects to comprise the program;
2. Transcripts showing all undergraduate and graduate course work and all degrees earned;
3. Scores on the Graduate Record Examination General Test;
4. Three letters of recommendation;
5. TOEFL score if the applicant's native language is not English and he/she has not earned a degree from a university or college in the U.S.;
6. A written statement of career objectives and rationale for the interdisciplinary research objective.

All these credentials must be sent to the Office of Graduate Admissions, University of Louisville, for distribution to the appropriate offices.

Only upon receipt of a letter of admission from the Office of Graduate Admissions may the applicant enroll for course work. There is no guaran-

tee, however, that the desired degree program will be approved. Admission will be conditional until the program proposal has been submitted and approved by the Graduate School. During the initial semester, the curricular requirements of the program must be worked out with a supervisory committee of at least three faculty members. The chair, as well as the majority of the committee, must be members of the Graduate Faculty.

All departments or programs in which the student proposes to take more than 3 hours of graduate course work must offer degrees through the Graduate School; and, before submitting a program proposal, the student must have the permission of the department or program to take those courses.

Program Proposal

In addition to the above stipulations regarding constituent departments or programs, each interdisciplinary degree program must meet specific criteria as follows:

1. An overall minimum of 30 semester hours at 500 or 600 level.
2. A thesis (maximum of 6 hours for thesis in a 30-hour program) or six (6) additional hours of 600-level courses for non-thesis. Interdisciplinary students must enroll in GS 699 for thesis credit.
3. At least one-half of the non-thesis, non-practicum, non-internship credit hours must be at the 600 level.
4. A minimum of 6 hours of 600-level course work must be taken in each of at least two departments or programs offering degrees through the Graduate School.
5. No single department or program may offer more than half the total number of credit hours required by the program.
6. Exclusive of thesis credit, no more than 6 hours may be taken in courses of the independent-study or practicum type; such course work may not be counted toward criteria specified in 3 or 4.
7. Courses designated as fulfilling degree requirements must be offered with sufficient frequency to permit the student to complete degree requirements within a reasonable time (two years for a 30-hour program).
8. The proposed curriculum must be submitted on the appropriate form, with approval signa-

tures of at least three graduate faculty members.

9. Requests for approval of substitutions or alternate courses must be submitted in writing to the Assistant Dean for Interdisciplinary Studies in the Graduate School.

Individually-Designed Programs of Study

An individual interested in exploring advanced studies in a field that transcends established academic/institutional boundaries may design a program of study in consultation with faculty and the Assistant Dean for Interdisciplinary Studies. A program for this degree must involve at least two academic departments/units and it must cross traditional disciplinary organizational structures and programmatic lines of study. An individual interested in this program will need to develop a general proposal that can be reviewed by faculty who, in turn, must agree that they will participate in the program if approved. Before agreeing to participate in the supervision of an interdisciplinary M.S. student, faculty must obtain the consent of their departmental chair or dean.

During the initial semester, the specific curricular requirements of the program must be worked out with a supervisory committee consisting of a chair and at least two additional faculty members representing at least two different departments or programs. Before the end of the first semester, the proposed program of study should be submitted to the Graduate School for review. Students will be admitted to the Graduate School on a conditional basis, allowing them to take courses as a non-degree student, until the proposed program of study receives full approval. Students will be fully admitted to the Graduate School after the interdisciplinary program proposal is approved.

Interdisciplinary Tracks of Study: Interdisciplinary M.S. Concentrations

Faculty may propose interdisciplinary tracks of study that will form the basis for suitable areas of concentration to train students. The track must meet the criteria outlined above in terms of minimum credit hours and the distribution of coursework across disciplinary lines. Proposed areas of concentration and interdisciplinary tracks of study will be subject to approval by the following academic bodies: 1) Unit Curriculum and Budget Committees; 2) Graduate Council; 3) Faculty Senate; 4) Provost. The development of an interdisciplinary track is the responsibility of the fac-

ulty, but the Assistant Dean for Interdisciplinary Studies will provide assistance and guidance. Participating faculty must have the consent of their departmental chair or dean to participate in an Interdisciplinary Track.

Requests for further information or assistance should be addressed to:

Assistant Dean for Interdisciplinary Studies
Graduate School
Houchens Building, Suite 105
University of Louisville
Louisville, Kentucky 40292
Phone: (502) 852-6495
Email: graduate@louisville.edu

Curriculum

Curriculum will be determined during the development of each individual student's program proposal for the individually-designed programs. For an Interdisciplinary Track program, a core of faculty may propose a curriculum that will form the basis for an area of concentration.

Departmental Faculty

Faculty will be determined during the development of each individual student's program proposal.

Doctor of Philosophy in Interdisciplinary Studies

Major: IS

Degree Awarded: Ph.D.

Unit: GI

Program Webpage: graduate.louisville.edu

Program Information

The Interdisciplinary Ph.D. Program provides a mechanism for accommodating the interests of students and faculty in areas in which the faculty expertise is not confined to a department or individual academic unit. It permits students to establish individualized programs and groups of faculty to establish interdisciplinary tracks.

Requirements for Admission

Applicants for interdisciplinary doctoral programs must present complete admission credentials in order to be formally admitted by one of their con-

stituent departments. Students must be recommended by at least one department or program offering degrees through the Graduate School before the student may register for course work. The required credentials are:

1. A 3.25 grade point average.
2. Scores at or above the 60th percentile on the Quantitative, Verbal, Critical Thinking and Analytical portions of the Graduate Record Exam.
3. Proof of a Baccalaureate Degree and official transcripts of all undergraduate and graduate course work.
4. TOEFL score if the applicant's native language is not English and he/she has not earned a degree from a university or college in the U.S.
5. Three letters of recommendation.

All these credentials must be sent to the Office of Graduate Admissions, University of Louisville, for distribution to the appropriate offices.

Design of Interdisciplinary Degrees

In addition to established Graduate School policies and requirements, each Interdisciplinary Ph.D. Program will be required to meet specific criteria as follows:

1. An overall minimum of 36 semester hours at the graduate level that includes coursework representing each of the disciplinary areas in the interdisciplinary degree program.
2. Up to 12 hours of coursework from a Master's program may be applied to the Interdisciplinary Ph.D. with the approval of the Dean of the Graduate School.
3. Each program must be designed so that it is not dominated by a single department's offerings. A minimum of six hours of 600-level course work must be taken in each of at least two different departments or programs offering degrees through the Graduate School.
4. The curriculum plan must include coursework that provides training in research methodology deemed suitable to the interdisciplinary nature of the program.
5. A dissertation involving original research that crosses established disciplinary lines will be required.
6. Faculty serving on committees and as mentors in the Interdisciplinary Ph.D. Program must have a doctorate degree or substantial evidence of relevant experience and must hold membership in the Graduate Faculty.

Individually-Designed Programs of Study

An individual interested in exploring advanced studies in a field that transcends established academic/institutional boundaries may design a program of study in consultation with faculty and the Assistant Dean for Interdisciplinary Studies. A program for this degree must involve multiple academic departments/units and it must cross traditional disciplinary organizational structures and programmatic lines of study. An individual interested in this program will need to develop a general proposal that can be reviewed by faculty who, in turn, must agree that they will participate in the program if approved. Before agreeing to participate in the supervision of an interdisciplinary Ph.D. student, faculty must obtain the consent of their departmental chair or dean.

During the initial semester, the specific curricular requirements of the program must be worked out with a supervisory committee consisting of a chair and at least two additional faculty members representing at least two different departments or programs. Before the end of the first semester, the proposed program of study should be submitted to the Graduate School for review. Students will be admitted to the Graduate School on a conditional basis, allowing them to take courses as a non-degree student, until the proposed program of study receives full approval. Students will be fully admitted to the Graduate School after the interdisciplinary program proposal is approved.

Interdisciplinary Tracks of Study: Interdisciplinary Ph.D. Concentrations

Faculty may propose interdisciplinary tracks of study that will form the basis for suitable areas of concentration to train students. The track must meet the criteria outlined above in terms of minimum credit hours and the distribution of coursework across disciplinary lines. Proposed areas of concentration and interdisciplinary tracks of study will be subject to approval by the following academic bodies: 1) Unit Curriculum and Budget Committees; 2) Graduate Council; 3) Faculty Senate; 4) Provost. The development of an interdisciplinary track is the responsibility of the faculty, but the Assistant Dean for Interdisciplinary Studies will provide assistance and guidance. Participating faculty must have the consent of their departmental chair or dean to participate in an Interdisciplinary Track. Students in a track of study must choose a primary mentor, but may have co-mentors.

Requests for further information or assistance should be addressed to:

Assistant Dean for Interdisciplinary Studies
Graduate School
Houchens Building, Suite 105
University of Louisville
Louisville, Kentucky 40292
Phone: (502) 852-6495
Email: graduate@louisville.edu

Curriculum

Curriculum will be determined during the development of each individual student's program proposal (see details above). For an Interdisciplinary Track program, a core of faculty may propose a curriculum that will form the basis for an area of concentration.

Departmental Faculty

Faculty will be determined during the development of each individual student's program proposal.

Kent School of Social Work

Terry L. Singer, Ph.D., Dean

The Kent School of Social Work offers the following programs through the Graduate School:

- Social Work - M.S.S.W.
- Social Work - Ph.D.
- Marriage and Family Therapy - Post Master's Certificate

Master of Science in Social Work

Major: SW

Degree Awarded: M.S.S.W.

Unit: GK

Program Webpage: louisville.edu/kent

Program Information

Accreditation of the M.S.S.W.

The Master of Science in Social Work program is accredited by the Council on Social Work Education. The Master of Science in Social Work with a Specialization in Marriage and Family Therapy Program and the Post Masters Certificate Family Therapy Program is accredited by the Commission on Accreditation for Marriage and Family Education.

General Information

The Kent School of Social work seeks to prepare well-qualified social workers who practice from a strong professional value- base to serve the metropolitan mission of the university. Our graduates promote social justice through their practices with diverse client systems. In the context of a research institution, the Kent School is committed to knowledge development that informs social work practice, recognizing the importance of interdisciplinary collaboration to solve complex social problems.

Social work is a profession concerned with the prevention and amelioration of social problems and the enhancement of the quality of human life. Social workers achieve these goals through direct practice with individuals, families, groups, and community organizations; advocacy; social planning; social policy analysis and formulation; research; and administration. Social work practice helps people mobilize their resources to deal with present circumstances and to enlarge their prospects for the future. Since problems of the individual cannot be seen in any meaningful way in isolation from the broad social and community context in which they occur, social work also takes a leadership role in bringing about institutional and social change.

Admission Procedure

Persons interested in admission to the Kent School should visit louisville.edu/kent; contact the Coordinator of Admissions/Student Services, Kent School of Social Work, Oppenheimer Hall, University of Louisville, Louisville, Kentucky 40292 (502) 852-0414; or attend a prospective student session. Please consult the Kent School website for a list of scheduled prospective student sessions.

Kent School seeks mature students with a demonstrated ability to work with people, emotional stability, good interpersonal skills, good health, and the ability to perform well academically. To ensure that entering students meet these standards, the faculty has set the following requirements:

- A bachelor's degree from a regionally accredited institution of higher learning;
- A minimum of 27 credit hours in the social sciences, i.e. communications (6), natural sciences (3), humanities (9), and social sciences (9);
- A minimum of three credit hours in each of the following courses: statistics, research methodology, and human biology.

Additionally, an undergraduate GPA of 3.00 is recommended for you to be considered for admission to Kent School. While we consider applicants whose undergraduate GPA does not meet this standard, applicants with GPAs less than 2.75 must take the Miller Analogies Test or the Graduate Record Exam.

The application file is complete when all of the following are received by Graduate Admissions, University of Louisville, Louisville, Kentucky 40292:

1. Completed and signed application form. It is recommended that the application be typed. Application forms are available on-line at graduate.louisville.edu/apply.
2. \$50 non-refundable application processing fee. Attach a personal check, money order or cashier's check (U.S. dollars) payable to the University of Louisville to the front of your completed application. If you apply on-line, you must also pay your application fee on-line with a credit card or electronic check at that time. Note: Paying your application fee on-line with an electronic check will delay the process for 8 days.
3. An official academic transcript is required from each college/university you have attended, including those at which you were enrolled for academic credit as a non-degree student and/or credits which you transferred to another college. All transcripts must bear the official seal and signature of the institution attended. You must request these transcripts directly from the Registrar or appropriate officer of each institution and ask that they send them directly to Graduate Admissions, University of Louisville, Louisville, KY 40292. If you are a University of Louisville graduate, your U of L transcript will be provided automatically, with no request needed from you. Applicants with a cumulative grade point average less than 2.75 are required to submit an acceptable Miller Analogies Test (MAT) score or an acceptable Graduate Record Exam (GRE) score with their application. Dates of M.A.T. tests and test links to the GRE are available at louisville.edu/student/services/testing/index.html.
4. Three recommendations – each submitted on a University of Louisville Recommendation of Graduate School Form in a sealed, signed envelope. Applicants are encouraged to submit at least one academic recommendation. If the applicant has not enrolled in classes within the past 5 years, this requirement may be waived and an additional work reference substituted. Evaluations should be submitted from persons who have been directly responsible for assessing your human service related work/volunteer experience and academic performance. The Kent School requires three recommendation forms, however letters accompanying the forms are welcomed and encouraged. Applicants who wish to be considered for the 30-hour Advanced Standing program must submit their BSW Practicum Evaluation and one of their three letters of recommendation must be from their Director of Field Education. The school reserves the right to request additional supportive material from persons acquainted with the applicant's academic and/or practice capabilities.
5. Personal statement - This statement must be submitted with the application for admission. Submit a carefully written personal statement of approximately 700-1000 words that addresses the following four topics:
 - Describe a social problem or problem strategy that is of greatest interest to you.
 - Describe your commitment to engage in social work roles that involve social welfare institutions and systems most likely to have an effect on major social problems.
 - Describe in detail how you would insure that your work is relevant to the most economically and socially disadvantaged groups in our society.
 - Describe the intellectual and personal qualifications that will enable you to practice social work successfully.
Note: If there are gaps or deficiencies in your academic record, please address these in an addendum to your statement. The personal statement may be emailed to gradadm@louisville.edu as an attachment .
6. Statement of authenticity - Each applicant is required to add the following statement to the beginning of their personal statement accompanied by the applicant's signature and date of signature:

"Academic dishonesty is prohibited at the University of Louisville. In keeping with this policy, I certify the material contained in this application is solely my work and that I have neither cheated nor plagiarized in its creation".
7. If you wish to be considered for the MFT, SSW, Gerontology or ADCS specializations, please check our website louisville.edu/kent/ for any additional admission procedures or documents necessary for consideration for admission to a particular specialization. Admission to these programs follows admission to Kent School but is not automatic.

8. If you wish to be considered for any of the dual degree programs, you must also complete the other unit's application process.
9. For all applicants whose native language is not English, Kent School requires the Test of English as a Foreign Language (TOEFL). A score of 550 on the paper-based TOEFL or a score of 213 on the computer-based TOEFL is required. Scores must be submitted before a decision will be made on an application.
10. International students may be required to have their transcripts evaluated by a credential evaluation service in the U.S. Two possible services include: World Education Services, Inc., at www.wes.org and Educational Credential Evaluators at www.ece.org. Students may be required to participate in a brief telephone interview as part of the admissions process. When completing the I-20, students should note that they will be placed in a practicum as part of their education. Admitted students should visit the International Center when they arrive on campus to obtain the proper immigration documentation necessary to begin the practicum.
11. If you have been convicted of a felony, please include a description of the circumstances and outcomes of the conviction. Please note that prior convictions for criminal offenses may preclude one's ability to be licensed as a social worker in many states. In addition, many practicum sites require background checks and periodic drug screenings. Any negative findings that affect agency placement may also prevent successful completion of the requirements for the degree. Applicants and students should consider these barriers in their educational planning.

All of the above materials must be received in Graduate Admissions by one of the deadlines listed below in the year in which you hope to begin coursework.

M.S.S.W. Entry Date

New 60 hour program students enroll in the fall semester only. New 30 hour program students may enroll in the fall or summer semester only.

M.S.S.W. Admission Application Date

Consideration of applications begins in November. The final deadline varies as explained below, but because entry into the program is highly competitive, applicants are encouraged to submit their applications early to ensure a space. All

admissions materials must be received in Graduate Admissions by the listed date in order for an applicant to be considered for admission by a particular deadline. Earlier applicants have more options and enjoy clear advantages. Kent School deadlines for admission are classified as follows:

- February 15 Early Bird Admission
- May 15 Traditional Admission
- June 11 Extended Admission
- July 30 Late Admission

Options Available

Options No Longer Available

February 15
(early bird admission)

- Students are **eligible** for Field placement (the earlier students apply, the greater the selection available)
- Scholarships
- Federal Work Study/Community Service Program (a Financial Aid program)

N/A

Additionally, students:

- Have the time to complete necessary prerequisites classes before Fall term.
- May register at earliest registration opportunity, with maximum scheduling choices.

May 15
(traditional admission)

Students are **eligible** for:

- Field placement (practicum selections become more limited)
- Scholarships
- Registration continues (scheduling choices more limited)

- No Federal Work Study available unless practicum is set up by May 15.
- Less time to complete prerequisites before Fall term.

June 11
(extended admission)

Students are **eligible** for:

- Field placement (practicum selections become even more limited)
- Registration continues (scheduling choices even more limited)

- No scholarships available.
- No Federal Work Study available.
- Less time to complete prerequisites before Fall Term.

July 30
(late admission)

Students are limited to curriculum plans that do not include practicum placements.

- No field placement options.
- No scholarships available.
- No Federal Work Study available.
- Less time to complete prerequisites before Fall term.

*Complete means all materials are received in Graduate Admissions by deadline date.

M.S.S.W. Admission Status

The graduate curriculum is organized into a four (4) semester, sixty (60) hour sequence of classroom courses and field education over a 16 month period, progressing from a generalist base to advanced practice. Students who are admitted and do not have a Council on Social Work Education accredited Bachelor of Social Work degree enter the REGULAR PROGRAM

[sixty (60) hour program]. Students who have graduated within the previous five years from an undergraduate social work program accredited or in candidacy by CSWE with a cumulative grade point average of 3.00 and who have demonstrated good academic performance in their social work courses may be enrolled in ADVANCED STANDING and complete the thirty (30) hour advanced portion of the program. No academic credit is given for life or work experience.

The Weekend Program offers, particularly for working students or commuters from other geographic areas, an opportunity to earn an M.S.S.W. degree by attending classes on Friday evenings and Saturday. Part-time students must enroll for a minimum of six credit hours each semester. All part-time students enrolled in Kent School must complete the program within four years. For more information about all of the possible curriculum modules, please refer to the Kent School's Catalog online at the future students portion of the Kent School website, louisville.edu/kent.

The Kent School, in an ongoing collaborative effort to bring its M.S.S.W. program to professionals in more remote areas who already have a baccalaureate degree in social work, offers an Alternative M.S.S.W. Weekend Program in conjunction with Brescia University. Please refer to the Kent School's Catalog online at louisville.edu/kent.

M.S.S.W. Dual Degree Programs

The Kent School also offers joint degrees with the Brandeis School of Law at the University of Louisville (M.S.S.W./J.D.), the Louisville Presbyterian Seminary (M.S.S.W./MDIV), the Department of Pan-African Studies at the University of Louisville (M.S.S.W./M.A.) and the Department of Women's and Gender Studies (M.S.S.W./M.A.). Applications must be submitted independently to each academic unit/institution. Additionally, the Kent School offers the opportunity to earn a specialization in Marriage and Family Therapy (MFT), School Social Work, Alcohol and Drug Counseling (ADCS), or Gerontology (GER) while obtaining your M.S.S.W.. In general, all of these programs require the student take electives in a particular concentration and take a targeted advanced practicum. Dual degree programs require additional coursework, while the specializations may or may not require addi-

tional coursework. For more complete descriptions of these programs, please refer to the Kent School website: louisville.edu/kent.

M.S.S.W./Master in Divinity

The joint M.S.S.W./M.Div program recognizes the value of professional education in two interrelated fields and encourages students who have an interest in both ministry and social work to pursue these degrees simultaneously. A student may enter the dual degree program from social work or theology.

M.S.S.W./Juris Doctor

The dual M.S.S.W./J.D. program recognizes the value of interdisciplinary study and encourages students having an interest in both social work and law to pursue these degrees simultaneously. Social workers and lawyers often seek to address identical or related societal concerns, albeit from different perspectives; understanding both disciplines enhances one's effectiveness in both professional capacities. Law courses strengthen the social worker's understanding of legal doctrine and structures that have an impact on social institutions and human conditions; social work courses help lawyers to better understand human behavior, conflict resolution and social welfare institutions.

M.S.S.W./M.A. in Pan-African Studies

The dual M.S.S.W./PAS program recognizes the value of professional education in two interrelated fields and encourages students who have an interest in both Pan-African Studies and Social Work to pursue these degrees simultaneously. Social workers and Pan-African studies scholars often seek to address identical or related societal concerns, albeit from different perspectives; understanding both disciplines enhances one's effectiveness in both the analysis of and engagement with contemporary social and cultural issues. Pan-African Studies courses strengthen the social worker's understanding of the historical foundations for policies and structures that have an impact on social institutions and human conditions; social work courses help Pan-African scholars or activists to better understand human behavior, conflict resolution and social welfare institutions. A Pan African Studies and Social Work combination provides the tools of social change for an historic problem of racial injustice.

M.S.S.W./M.A. in Women's and Gender Studies

The dual M.S.S.W./ WGST program recognizes the value of professional education in two interrelated fields and encourages students who have an interest in both Women's and Gender Studies and Social Work to pursue these degrees simultaneously. Social workers and Women's and Gender Studies scholars often seek to address identical or related societal concerns, albeit from different perspectives; understanding both disciplines enhances one's effectiveness in both the analysis of and engagement with contemporary social and cultural issues. Women's and Gender Studies courses strengthen the social worker's understanding of the historical foundations for policies and structures that have an impact on social institutions and human conditions; social work courses help Women's and Gender Studies scholars or activists to better understand human behavior, conflict resolution and social welfare institutions. A Women's and Gender Studies and Social Work combination provides the tools of social change for an historic problem of gender inequality and injustice.

M.S.S.W. Specializations

For more complete descriptions of the following specializations, please refer to the Kent School website: louisville.edu/kent.

Marriage and Family Therapy

Students may complete the Specialization in Marriage and Family Therapy program as part of the M.S.S.W. degree. The program prepares students for clinical practice with families in the context of their communities, particularly those families who are disadvantaged and/or typically underserved. Completion of the program prepares students for licensure as a marriage and family therapist in Kentucky and for clinical membership in the American Association for Marriage and Family Therapy. The M.S.S.W./MFT specialization requires 14 graduate credit hours in addition to the 60 hours required for the M.S.S.W.. Only a limited amount of students can be admitted to this specialization and it is only available to 60-hour program students.

School Social Work

M.S.S.W. students who want to practice social work in a school setting can earn a school social work specialization within the Kent School master's curriculum. Students who select this spe-

cialization learn how to help children and families overcome barriers to learning through home intervention. Those who complete the specialization meet the Kentucky Council on Teacher Education's requirements for certification as a school social worker.

Alcohol and Drug Counselor Specialization (ADCS)

Substance abuse is widely recognized as one of the top health problems in the USA and is attracting increasing attention and funding. However, there is an identified shortage of qualified addiction counselors—and students who prepare themselves for a career in chemical dependency can hope to gain immediate employment after graduation, and possibly before. In this regard, students should be aware of a professional certification, the Certified Alcohol and Drug Counselor (CADC) certification, that is valued by addiction treatment agencies with comparable respect and compensation as the Licensed Clinical Social Work (LCSW) qualification. For those who are interested in initiating their careers in a clinical substance abuse treatment setting, they can begin to fulfill specialized requirements of the CADC certification while completing normal requirements of the M.S.S.W. program. The Kent School's ADCS program will (1) satisfy many of the requirements of the CADC program; (2) teach specialized knowledge and skills; (3) provide formal recognition of students' specialized knowledge; (4) position students for employment and advancement in a broad array of specialized substance abuse roles; and (5) include specialized faculty mentoring and suggestions on finding employment.

Gerontology Specialization (GER)

The nation's burgeoning aging population is increasing the demand for well-trained and competent social workers to respond to the needs of older adults and their families. The U.S. Department of Labor reports that geriatric social work is one of the most rapidly growing occupations, with the promise of job security. Startup funding for this specialization was provided by the John A. Harford Foundation, the New York Academy of Medicine and Social Work Leadership Institute, through a nationally known Practicum Partnership Program centered on competency-focused leadership education and rotation field practicums with community experts. Kent School was one of a handful of programs nationwide selected to be a part of this exciting initiative.

Program Curriculum Requirements

For a complete description of possible 30 and 60 hour curriculum plans, please refer to the Kent School website: louisville.edu/kent.

Curriculum

Cognitive Flexibility Theory as developed by Spiro (1990) guides the underlying curriculum philosophy. The main premise of the curriculum is to provide students strategies to learn challenging materials, to encourage flexibility in the use of knowledge, and to change the underlying ways of thinking. At the end of their studies students will achieve a deeper, more complex understanding of social work, they will be able to critically evaluate and contemplate the material while experimenting with the flexible application of the knowledge in a variety of contexts. This higher order of thinking that will be developed and promoted with the curriculum is referred to as critical thinking.

This curriculum philosophy responds well to social work as an ever changing and evolving profession which responds to the radically changing needs and demands of society. It is impossible for any curriculum to address each problem or case example social work graduates may face in their practice. Cognitive flexibility theory provides avenues and tools for students to integrate their learning experiences in such a way as to maximize their potential to meet the demands of the profession upon graduation. The curriculum is designed to enhance students' ability to enable the diverse client systems they work with to make decisions that contribute to the quality and health of these clients systems. The focus will also be on decisions that promote social justice. The curriculum is designed to deliver graduate social workers who think critically about what they do, why they do it, and what outcomes they hope will result from the social work practice they do.

Critical thinking is defined as "the intellectual disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief or action" (Scriven & Paul, 2004). Critical thinking includes specific skills such as problem-solving and the ability to integrate knowledge from multiple disciplines and theories of human behavior. Throughout the curriculum, there is an

emphasis on critical reflection, or appraisal of various points of view no matter what the source. The curriculum draws heavily on social science knowledge and integrates this with problem-solving phases such as assessment, intervention, and evaluation. In this respect, the curriculum is designed to teach students to access, integrate, and assess practice and policy related research to solve social problems and to work towards social justice. When critical thinking skills are used effectively, it leads to transparency and promotes social change, particularly with and on behalf of vulnerable and oppressed individuals and groups of people.

Bruner's spiral curriculum format (1991) is used to implement the above mentioned cognitive flexibility philosophy in the development of higher order critical thinking skills. With this format, topics are revisited throughout the curriculum, while increasing the level of difficulty, complexity and depth of the area and linking new knowledge or information to previous levels of learning on the same topic to increase the competency of the students. Students will be introduced in the foundation curriculum to different strategies on how to develop critical thinking. In the advanced curriculum, students will move towards a higher level of complexity in their thinking because they will be required to analyze problems from multiple perspectives, evaluate multiple sources of evidence, and address complex issues and problems incorporating multiple level forces on client systems.

M.S.S.W. Foundation Curriculum

The foundation curriculum promotes a generalist perspective in which the simultaneous impact of many systemic levels (individuals, families, groups, organizations, and communities) on clients' lives is critically analyzed and recognized. The foundation builds upon a liberal arts base that fosters an understanding of society as a complex organization of diverse people and ideas. Social problems are understood as occurring within the nexus of culture, conflict, development, ecology, and systems and as such, efforts to help or intervene must include consideration of these forces. Students will be able to critically identify and assess social problems, specifically attending to 1) how such problems are maintained, 2) how they impact the quality of people's life, 3) cultural sensitivity and appreciation of marginalized people, and 4) how to actively promote social and economic justice. In the founda-

tion year, the focus is on the development of critical thinking skills in all the areas mentioned.

M.S.S.W. Advanced Curriculum - Advanced Social Work Practice

The advanced curriculum seeks to develop the utilization and application of critical thinking on all levels - in reading professional writing and research, in students' practica, in the classroom, and in the students' own thinking. Consistently monitoring practice ethically, evaluating theoretical principles and epistemologies, and utilizing technological advances become basic practice patterns. Specific skill sets developed include: 1) Creating, organizing and integrating ideas and action on engaging diverse client systems effectively in change; 2) Assessing, conceptualizing and analyzing theoretical, practice and research problems from multiple perspectives and utilize critical thinking skills to formulate impressions based upon the data; 3) Analyzing, synthesizing and evaluating the evidence available to guide advanced social work practice; 4) Synthesizing, formulating and implementing a plan of action for social work practice that addresses complex issues and problems, builds consensus and incorporates multiple-level forces on client systems; 5) Analyzing and evaluating data of client progress and outcomes and assess implications and consequences of this progress and outcomes; 6) Synthesizing, creating, and organizing ideas from theory, research and practice for social justice; and 7) Demonstrating the ability to integrate culturally competent skills into all aspects of social work practice.

These skills will be used to actively pursue social change, particularly with and on behalf of vulnerable and oppressed client systems. Students will learn how to become leaders in social change efforts focused primarily on issues of poverty, discrimination, and other forms of social injustice.

To assist graduates in their future professional careers, these skills are organized around three practice foci: 1) children and families, 2) health and mental health, and 3) community and international practice. These domains give opportunity for students to focus on clustered learning within the context of these fields of practice. Recognizing that the employment of students after graduation is often a function of geography and personal circumstance, the school allows students the programmatic option of combining interests among focus areas.

While curricular options do exist for students to develop a certain subject-matter expertise, the recognition of the School that it needs to prepare students more broadly places the principal focus of the concentration work on a high-level critical thinking about social work engagement and also on the translational knowledge and skills that support the graduates' movement from one field of practice to another. Once students learn how to learn and how to think about social work practices, and they understand the components of ethical practice and the responsibility to increase specific field-of-practice expertise, they will be better equipped to practice in a world where knowledge changes and transforms what we do on a rapidly accelerating curve.

M.S.S.W. Practicum Education

For additional information, please go to: louisville.edu/kent/masters/practicum. All students admitted to the 60 credit-hour program are required to complete satisfactorily SW 670, SW 671, SW 672 and SW 673 (900 clock hours) in approved practicum sites. Students admitted to the 30 credit-hour program are required to complete satisfactorily SW 672 and SW 673 (450 clock hours) practicum in an approved site. A growing number of students face the necessity of having to be employed full-time while undertaking their M.S.S.W. degree requirements. The Kent School faculty understands this and tries to address such circumstances through both the evening and weekend classroom course schedules, but it is important to note there are no evening and weekend practicum options. The school's present policies about on-job field placements are explained below and in The Practicum Education Handbook. If employed in a human services agency meeting the school's criteria as a placement site, the student may apply to undertake the practicum at her/his place of employment. This may be accomplished when the agency is willing to shift the student's work role and supervision in such a manner as necessary to meet the school's educational objectives for practicum instruction.

Practicum education is offered in a concurrent format so that students enrolled in a practicum course must simultaneously be enrolled in a practice course, i.e.; SW 670 with SW 604, SW 671 with SW 605, SW 672 with SW 640 (Adv Prac II), and SW 673 with SW 677 (Adv Prac III).

M.S.S.W. Electives

The Kent School of Social Work provides electives as enrichment to the specialized learning in the concentration year. Social work jobs call for skills and knowledge that are broader than any narrowly defined specialization. For example, mental health workers are asked to know psychopathology, substance abuse, managed care, AIDS, and a range of other substantive areas. Many school social workers share the need for the same content. In addition, it is noted that social workers frequently change jobs, often to another field of practice. Social work education seeks to teach students to think critically, analyze systematically, and know where to find information and resources within the context of social work history, development and values. It is this type of education that best prepares students to function in a rapidly changing society.

In this curriculum paradigm, electives are considered enrichment. Some of this enrichment is in the form of very specific course content that aligns with a specific focus area or specialization. For example, a person interested in the health and mental health focus area, may elect to take a course in psychopathology to prepare for work in private practice or a mental health center. In another case, the enrichment may take the form of a complementary course such as a student focused on children and families taking a management course to prepare for career possibilities or the student interested in community and international practice, taking a course in family intervention to understand the complexities of family practice. Or, the enrichment may take the form of exploration as in the case of the student taking an aging or child welfare course to better understand those fields of practice and to prepare for various job prospects. Finally, the enrichment may include a course of general interest such as a women's issues course which crosses numerous focus areas, but may not correspond specifically to the direct focus of the student.

Students are eligible to take electives anytime following completion of the foundation, or at a minimum, after completing 2 human behavior courses, 2 social policy courses and the human diversity course. This coursework forms the basis of understanding social work concepts sufficiently to generate enrichment interest. Students are discouraged from taking practice-focused electives until completing generalist practice courses or at least taking such course-

work concurrently. The program leading to the degree of Master of Science in Social Work focuses on developing professional leaders in social work practice. The program connects an intensive academic component with a practicum, allowing the student to learn and immediately apply theory.

M.S.S.W. 60-hour Regular Program

Students who are admitted and do not have a Council on Social Work Education accredited Bachelor of Social Work degree enter the **60-hour REGULAR PROGRAM**. This program can be completed in different ways of which the shortest period is 2 years and the longest period is 4 years. Specific plans are outlined under Curriculum Plans. The next table provides a basic description of the courses needed to complete this program (all courses are 3 credit hours each):

Foundation Coursework	
Name and Number of Course	Semesters offered
601 Human Behavior in the Social Environment I (HBSE)	Fall
619 Human Behavior in the Social Environment II (HBSE)	Spring
602 Social Welfare Institutions, Policies and Services	Fall
622 Issues in Policy & Service Delivery	Spring
603 Human Diversity	Fall and Summer
604 Social Work Practice I	Fall
605 Social Work Practice II	Spring
670 Practicum I (16 clock hours per week)	Fall
671 Practicum II (16 clock hours per week)	Spring
626 Research Methodology	Spring (only weekdays) and Summer

Advanced Coursework (Pre-requisite: all Foundation Courses)	
Name and Number of Course	Semesters offered
641 Advanced Social Work Practice I (must be taken in the same semester or in the Summer before 640)	Summer and Fall
640 Advanced Social Work Practice II	Fall
677 Advanced Social Work Practice III	Spring
668 Adv Research Practice I	Fall
669 Adv Research Practice II	Spring
672 Adv Practicum I (16 clock hours per week)	Fall
673 Adv Practicum II (16 clock hours per week)	Spring
Electives (3 electives are required - 9 credit hours)	Fall, Summer and Spring

M.S.S.W. 30-hour Advanced Standing Program

Students holding a CSWE accredited Bachelor of Social Work degree with a cumulative grade point average of 3.00 who have demonstrated good academic performance in their social work courses may be enrolled in the **30-hour ADVANCED STANDING** Program. This program equates to completing the 30-hour advanced portion of the 60-hour program. No academic credit is given for life or work experience. Advanced Standing is limited to applicants who have earned BSW degrees within the last 5 years, at the time of enrollment in the Kent School. This program can be completed in different ways of which the shortest period is 1 year and the longest period is 2 years. Specific plans are outlined under Curriculum Plans. The next table provides a basic description of the courses needed to complete this program (all courses are 3 credit hours each);

Advanced Coursework (Pre-requisite: BSW)	
Name and Number of Course	Semesters offered
641 Advanced Social Work Practice I (must be taken in the same semester or in the Summer before 640)	Summer and Fall
640 Advanced Social Work Practice II	Fall
677 Advanced Social Work Practice III	Spring
668 Adv Research Practice I	Fall
669 Adv Research Practice II	Spring
672 Adv Practicum I (16 clock hours per week)	Fall
673 Adv Practicum II (16 clock hours per week)	Spring
Electives (3 electives are required - 9 credit hours)	Fall, Summer and Spring

Departmental Faculty

Dean

Terry L. Singer
Professor

Professors

Riaan Van Zyl
Associate Dean of Research

Anita P. Barbee

Gerald Barber

Joseph H. Brown

Dana N. Christensen

Ruth Huber

Director of Doctoral Program

Thomas R. Lawson

Director of International Program

Sharon Moore

Associate Professors

Anna C. Faul
Associate Dean of Academic Affairs

Pamela Yankeelov
Associate Dean of Student Services

Bibhuti Sar
Director CFL Program

Richard Cloud

Wanda Collins

Andy Frey

Associate Research Professors

Linda K. Bledsoe

Assistant Professors

Becky F. Antle

Seana Golder

Assistant Research Professors

Kevin W. Borders

Noell Rowan

Dana Sullivan

Ramona Stone

Instructors

Lisa Barrett

Martha Fuller

Director of Practicum

Kim Wadlington

Doctor of Philosophy in Social Work

Major: SW

Degree Awarded: Ph.D.

Unit: GK

Program Webpage: louisville.edu/kent/doctoral

Program Information

The Commonwealth's first doctoral program in social work offers the opportunity for academically motivated master's level social workers to continue their studies at the doctoral level.

Application to the Doctoral Program

To apply to the doctoral program in Social Work send the following materials by February 1 to:

Ruth Huber, Ph.D., Director
Ph.D. Program in Social Work
Kent School of Social Work
University of Louisville

Louisville, KY 40292
 Phone: 502-852-0435
 Email: ruth.huber@louisville.edu

- Application for Admission to the UL Ph.D. in Social Work Program
- A current resume
- A sample of scholarly writing

In addition, the following material must be sent directly to the Graduate School:

Office of Graduate Admissions
 University of Louisville
 105 Houchens
 Louisville, Kentucky 40292

- Completed Graduate School Application
- Official transcripts from each college/university attended, and documentation of the receipt of a Master's Degree in Social Work, e.g. M.S.W., M.S.S.W., from a CSWE accredited program or international equivalent
- Official report of GRE scores
- Three recommendations (at least two from academicians)
- Application fee of \$50
- A personal statement of career goals, research interests, and reasons for pursuing doctoral studies (no more than 3 pages).

The admission process involves the following:

- Review of application materials by the doctoral admissions committee
- Admission committee interviews with those recommended
- Recommendation to the Graduate School

Doctoral Admission Requirements

Students are expected to hold master's degrees in Social Work, i.e. MSW, M.S.S.W., from programs accredited by the Council on Social Work Education (CSWE), or international equivalents. Two years of full time post-master's experience is advised.

Academic Policies

Four-year policy: Doctoral students are expected to have taken their qualifying exams by the time they are in the program four years, and complete the program in four additional years.

Data Analysis and Writing Policy: Doctoral students in the Kent School of Social Work may not arrange for anyone to analyze their data or write parts of their dissertations; rather, they

should consult with their committee members if assistance is needed. Students may ask professional editors or others to edit their writing for grammar and other canons of writing.

Curriculum

Core Courses	Sem. Hours	Cum. Total Hours
Advanced Research Design & Analysis I	6	6
Advanced Research Design & Analysis II	6	12
Advanced Research Design & Analysis III	3	15
Professional Seminar I	1	16
Professional Seminar II	1	17
Teaching in Social Work	3	20
Theory I: Change Theories in Social Work	3	23
Ethics, Social Work, and Society	3	26
Theory II: Theory Development	3	29
Theory III: Advanced Analysis of Social Welfare Problems	3	32
Advanced Measurement in Social Work Research	3	35
Advanced Qualitative Research	3	38
Research Practicum	3	41
Individualized Studies and Dissertation Hours		
Individualized Studies	9	50
Dissertation	6	56

Doctoral Qualifying Examination

The purpose of the qualifying examination is to provide a format in which students can demonstrate their abilities to apply and integrate the whole of their educational experiences by adequately addressing complex questions pertinent to social work's current and developing knowledge base, and their individual research areas. A student is eligible to take the qualifying examinations upon successful completion of 50 credits of core and individualized course work. Students are expected to provide answers that integrate knowledge from all required courses. Following the passage of the qualifying examination, students are admitted to candidacy status.

Doctoral Dissertation

After admission to candidacy, students proceed to propose, complete, and defend their dissertations. The dissertation must represent independent research and should be based on original research questions or hypotheses. This process includes (a) a concept paper, (b) a formal proposal, and (c) conducting the research and writing the dissertation. Dissertation committees have at least five members, one of whom is from the University of Kentucky.

Departmental Faculty

Gerard M. (Rod) Barber

Professor

Anna C. Faul, Ph.D.

Associate Professor
Associate Dean, Academic Affairs

Andrew J. Frey, Ph.D.

Associate Professor

Ruth Huber, Ph.D.

Professor
Director, Ph.D. Program in Social Work

Thomas R. Lawson, Ph.D.

Professor

Bibhuti K. Sar, Ph.D.

Associate Professor

Terry L. Singer, Ph.D.

Professor
Dean

Riaan van Zyl, Ph.D.

Professor
Associate Dean for Research

Post Master's Certificate in Marriage and Family Therapy

Program Information

The Family Therapy Program in the Kent School of Social Work in collaboration with the Archdiocese of Louisville Counseling Center offers the Post Master's Certificate in Marriage and Family Therapy (MFT). This certificate program is designed for those who already hold a master's degree from a regionally accredited institution in a human services field to pursue advanced study and supervised practice in marriage and family therapy. The Post Master's Certificate in MFT meets course requirements for Kentucky licensure in MFT and for Clinical Membership in the American Association for Marriage and Family Therapy (AAMFT). Coursework focuses on theoretical foundations, practical applications, ethical responsibilities, integration of research, and supervised clinical practice.

The Certificate Program is comprised of coursework and supervised practice. Courses are offered on Fridays on the Belknap Campus of the University of Louisville during fall and spring semesters. Supervised practice includes (1) a live supervision class that meets one evening per week at The Archdiocese of Louisville Counseling Center, (2) a one-hour individual supervision session each week, and (3) additional time as needed to attain practicum requirements.

The certificate program is structured for the student to complete the requirements in two calendar years, a new cohort of students beginning in the summer semester of each year. Requirements include six (6) courses concurrent with 500 hours of supervised clinical practice and 100 hours of approved supervision.

The Post Master's Certificate in MFT has been accredited since 1990 by COAMFTE.

Tuition for coursework is paid to the University of Louisville. Supervised practice fees are paid directly to The Archdiocese of Louisville Counseling Center. Supervised practice fees are \$2000 per year and may be paid in monthly or semester installments. Students must have

employment or a volunteer placement that provides three-five hours of ongoing clinical contact per week with individuals, couples, or families. Students are expected to join AAMFT (American Association for Marriage and Family Therapy) as student members, to attend one major conference in MFT, and to volunteer service to KAMFT (Kentucky Association for Marriage and Family Therapy) each year. Students must also have liability insurance to begin practicum.

Prerequisites

Prerequisites are required, but will vary depending upon the student's specific master's program.

- One (1) three semester hour course in *clinical practice* (e.g., MFT practice models, family and/or individual mental health assessment, interventions with specific clinical populations/problems).
- Three (3) three semester hour courses in *individual development and family relations* (e.g., sexuality issues, gender, sexual orientation, cultural diversity, human growth and development, personality, human behavior in the social environment).
- One (1) three semester hour course in *research* (e.g., methodology, data analysis, evaluation).
- One (1) three semester hour course in an area of specific professional interest.
- A semester-long practicum.

Admissions

Prospective students must submit the following completed materials:

1. The University of Louisville Graduate School Application; see graduate.louisville.edu/apply;
2. An official copy of transcripts from all colleges or universities attended;
3. *Three (3) (please note difference from graduate school application)* letters of recommendation indicating potential for success in the program;
4. A letter of intent that explains the applicant's
 - interest in applying to this program,
 - knowledge of family therapy,
 - work experience (voluntary or paid) in human services,
 - affiliation with professional organizations (including conference attendance),
 - professional goals and expectations.

5. A current resumé; and
6. A five-page summary of significant family-of-origin experiences that reflects the applicant's exploration of personal growth issues which may be relevant in one's development as a family therapist.

Application materials required by the Graduate School of the University of Louisville (#1, #2, #3 above) should be sent directly to:

Office of Graduate Admissions
University of Louisville
105 Houchens
Louisville, Kentucky 40292

The specific application materials for the Post Masters Certificate in MFT (#4, #5, #6 above) should be **sent electronically** to:

Program Director
Family Therapy Program
Kent School of Social Work
Louisville Kentucky 40292

It is advisable to call the Program Director's Office to check on the status of your application. Each application will be reviewed by the Family Therapy Program Director. Upon satisfactory review of the student's MFT application materials (which includes completion of all prerequisites by the summer start date), an interview will be scheduled with the Family Therapy Program Director. Enrollment is limited.

The Post Master's Certificate Program does not discriminate on the basis of age, gender, race, sexual orientation, disability status, national origin or religion. The Post Master's Certificate in MFT within the Kent School of Social Work at the University of Louisville is accredited by the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE) of the American Association for Marriage and Family Therapy (AAMFT), 112 South Alfred Street, Alexandria, VA 22314, (703) 838-9808.

Curriculum

Please contact the program to learn more about the curriculum requirements.

Departmental Faculty

Tom Robbins, Ph.D.

Director of the Archdiocese of Louisville Counseling Center

School of Medicine

Edward Halperin, M.D., Dean

The School of Medicine offers the following masters and doctoral programs through the Graduate School:

- Anatomical Science and Neurobiology - M.S.
- Anatomical Science and Neurobiology - Ph.D.
- Audiology- Au.D.
- Biochemistry and Molecular Biology - M.S.
- Biochemistry and Molecular Biology - Ph.D.
- Communicative Disorders - M.S.
- Microbiology and Immunology - M.S.
- Microbiology and Immunology - Ph.D.
- Pharmacology and Toxicology - M.S.
- Pharmacology and Toxicology - Ph.D.
- Physiology and Biophysics - M.S.
- Physiology and Biophysics - Ph.D.

Master of Science in Anatomical Science and Neurobiology

Major: ASNB

Degree Awarded: M.S.

Unit: GM

Program Webpage: louisville.edu/medschool/anatomy/

Program Information

The thesis M.S. program is available to qualified individuals possessing a bachelor's degree from an accredited college or university. No specific undergraduate major is required, although a science background is preferred.

The thesis M.S. degree is offered to students who want to continue their education in Anatomy and Neurobiology and offers the student the opportunity to improve his/her background for career development (i.e., to prepare for a career in teaching, or to prepare for further higher education programs such as a Ph.D. program or Medical School).

All degree programs require full-time study and it is expected that while participating in these programs, students will devote full-time effort toward completion of the degree requirements.

Program Admission Procedure

All students wishing to apply must submit an application to the Office of Graduate Admissions with the following documents:

1. A formal application submitted to the University of Louisville Office of Graduate Admissions (see website: graduate.louisville.edu/ apply for forms and directions).
2. Application fee.
3. A minimum of two letters of recommendation.
4. Official transcripts of all college work.
5. Official scores on the Graduate Record Examination (GRE) General Test.
6. A brief statement of purpose describing your interests and career goals.
7. All international applicants whose native language is not English must submit Test of English as a Foreign Language (TOEFL) scores.

Program candidates are admitted in the fall semester (which begins in early August). Review of applications begins December 15 and continues until all positions are filled. Admission into the program is competitive, and applicants are encouraged to submit their applications early.

Curriculum

Requirements for the thesis M.S. Degree

Students should familiarize themselves with the general requirements for the master's degree as stated in the current U of L Graduate School catalog. Briefly, a minimum of 30 semester hours is required for the master's degree, of which 15 semester hours must be in courses of the major subject area. At least one-half of the credits counted toward the degree must be 600 level courses or above. This does not include research credit hours. The department imposes the following additional requirements:

Students will successfully complete at least two of the following courses within the department:

Course Requirements		Credit Hours
Gross Anatomy	ASNB 601	8.5
Microscopic and Developmental Anatomy	ASNB 603	6
Neuroanatomy	ASNB 607	3
Neural Systems	ASNB 608	4
Dental Gross and Neuroanatomy	ASNB 672	3
Head and Neck Anatomy	ASNB 673	4
Dental Microscopic Anatomy	ASNB 671	5

In addition, Anatomy Seminar (ASNB 606, 1 credit hr) will be taken for credit each semester prior to candidacy. Additional courses (electives) within the department or graduate level courses in other departments may be taken to achieve the minimum requirement of 30 credit hours. The student should consult with his/her advisor on the selection of the appropriate electives. The minimum number of hours which must be taken in the fall or spring semester is nine (9) (six (6) for summer). The maximum number of hours that may be taken in the fall or spring semester is 12 (or 15 hours if three or more are research hours). A maximum of 12 credit hours (including research hours) is the maximum for summer sessions.

Research Hours: research credit hours are taken as Original Investigation (ASNB 619).

After completion of all course work and research hours, students who have not completed the writing of their thesis must maintain candidacy by registering for MAST 600. This registration must be maintained year round (Fall, Spring and Summer) until the degree is awarded. Once a student registers for MAST 600, he/she may not register for additional courses. The statute of limitation for obtaining a Master's degree is six years maximum.

Original Research

Students will conduct this required research under the direction of a member or associate member of the departmental faculty (hereafter known as the thesis advisor) who is also a member of the graduate faculty. Faculty reserve the right to decline accepting a student.

During the first year of residence, students are required to visit the laboratories of potential advisors to become acquainted with the faculty and the research opportunities available. Selection of an advisor and the initiation of a research project should be concluded prior to the end of the first year, at which time a letter of agreement, signed by both the student and thesis advisor, will be filed with the graduate program director.

Students must understand that the thesis master of science degree requires more than the completion of a prescribed curriculum of course work. Completion of a thesis based on original research and its successful oral defense is a requirement for the thesis master's degree. By its nature, original research does not always achieve positive results within a specific period of time. Therefore, no specific time can be given for the successful completion of this degree. Note that students are advised to complete the majority of their course work in the first year so that adequate time is allotted in the second year to complete their research and thesis. Specifically, students will be required to engage full-time in research for at least one academic semester in the spring or fall plus two summers.

Thesis Committee

The composition requirements of, and specific deadlines related to, the thesis committee appear in the Graduate School catalog. Briefly, the thesis committee is composed of the student's advisor and two other faculty, one of which is from a different department. All three must be members of the graduate faculty. This committee should be established shortly after the student and her/his advisor agree on a specific research project. To avoid unnecessary delays the student should regularly consult with her/his thesis advisor and committee members concerning the direction and progress of the research project.

Thesis Defense

The M.S. candidate will focus exclusively on completing their research projects and writing a thesis describing the results of their experiments. It is expected that the thesis should contain data

sufficient for approximately one publishable manuscript. Upon completion of the thesis, the student will distribute a copy to each committee member. The committee will have two weeks to read the thesis and give approval to schedule a defense date or recommend changes that must be completed prior to scheduling a defense date. Once the thesis is approved by the committee, the student will schedule a thesis defense which will consist of an oral presentation to the department (approximately 30 minutes in length) of the research completed during the student's graduate training. Non-committee members in the audience will then ask questions. The general audience will then be dismissed and the student will defend his/her thesis before the committee. Completion of the M.S. degree will be determined by majority vote of the committee.

Academic Policies

Satisfactory Progress

All graduate students are expected to make steady and satisfactory progress toward the completion of degree. Unsatisfactory performance may result in immediate dismissal or in academic probation, at the discretion of the Graduate Education Committee of the department.

A student may not remain on academic probation for more than one semester, after which his/her performance must meet or exceed the minimum requirements. If a probationary student does not achieve the minimum performance level, the Education Committee will consider their dismissal from the program. In all cases, students receiving financial aid must maintain satisfactory progress in order to be eligible for continued financial support.

Satisfactory progress is assessed by a number of factors. While taking courses, students are required to maintain a minimum average grade of "B", i.e., a cumulative grade point of 3.0 on a 4.0 value scale. Deficiencies in the cumulative average grade generated through course work cannot be overcome using research credits (i.e. ASNB 616, 619 or 620). Unsatisfactory performance (i.e., GPA < 3.0) may result in immediate dismissal or in academic probation.

For degree candidates, satisfactory progress also involves maintaining steady progress in laboratory research, analysis, or the documentation of research results. The Reading or Thesis Com-

mittees will evaluate the student's progress and unsatisfactory progress will be reported to the Education Committee.

Satisfactory progress also involves maintaining the standards of academic and professional integrity. Plagiarism or other failures to maintain appropriate academic standards will result in immediate dismissal from the program.

Administration

For administrative purposes, an interim advisor will be assigned to each incoming student until he/she has selected a Thesis Advisor.

Guideline Changes

The Department reserves the right to change requirements at any time. When requirements change, the student may have the option of satisfying either the requirements in effect when he/she entered the program or the new requirements, depending on circumstances.

Doctor of Philosophy in Anatomical Science and Neurobiology

Major: ASNB

Degree Awarded: Ph.D.

Unit: GM

Program Webpage: louisville.edu/medschool/anatomy/

Program Information

Our philosophy is to encourage academic excellence in the neurosciences within a framework of structure-function relationships at the molecular, cellular, and systemic levels. We strive to prepare students with sufficient background depth to excel in high tech cutting-edge translational (applied) research environments and the more traditional multidisciplinary academic setting. We provide students with innovative approaches to important issues in neuroscience research including development, organization and plasticity. Our research interests range from sensory and motor systems to stem cell replacement strategies for spinal cord injuries. In all approaches we strive to integrate the latest teaching modalities while maintaining the time-

honored advantages of hands-on, laboratory-based instruction.

The degree program is available to qualified individuals possessing a bachelor's degree from an accredited college or university. No specific undergraduate major is required, although a science background is preferred.

The Ph.D. degree is offered to students who plan to pursue a career in research and/or teaching, in an academic institution or within industry.

All degree programs require full time study, and it is expected that while participating in these programs students will devote full time effort toward completion of the degree requirements.

Program Admission Procedure

All students wishing to apply must submit an application to the Office of Graduate Admissions with the following documents:

- A formal application submitted to the Office of Graduate Admissions (see website: graduate.louisville.edu/app/ for forms and directions).
- Application fee.
- A minimum of two letters of recommendation.
- Official transcripts of all college work.
- Official scores on the Graduate Record Examination (GRE) General Test.
- A brief statement of purpose describing your interests and career goals.
- All international applicants whose native language is not English must submit Test of English as a Foreign Language (TOEFL) scores.

Program candidates are admitted in the fall semester (which begins in early August). Review of applications begins December 15 and continues until all positions are filled. Admission into the program is competitive, and applicants are encouraged to submit their applications early.

Curriculum

Requirements for the Ph.D. Degree

Ph.D. students must first complete the requirements for the non-thesis M.S. degree. After completion of the non-thesis M.S., students will become a Ph.D. candidate and register for doctoral candidacy.

Requirements for the non-thesis M.S. Degree

Students who intend to complete a Ph.D. degree within the Department of Anatomical Sciences and Neurobiology (ASNB) are eligible to participate in the non-thesis M.S. program.

Program Curriculum Requirements

Students are required to meet the requirements for the M.S. degree as described in the current U of L Graduate School catalog. ASNB imposes the following additional requirements: ¹

Course Requirements		Credit Hours
Biochemistry I	BIOCH/ CHE545 or equivalent	3
Cell Biology	MBIO 667 or equivalent	3
Two lab rotations totaling at least 6 credit hours	ASNB 618	6
One methods course		3
Seminar each semester prior to candidacy	ASNB606	1/ semester
At least 6 credits of the following core courses: ²		
Gross Anatomy	ASNB 601	8.5
Microscopic and Developmental Anatomy	ASNB 603	6
Neuroanatomy	ASNB 607	3
Neural Systems	ASNB 608	4
Dental Gross and Neuroanatomy	ASNB 672	3
Head and Neck Anatomy	ASNB 673	4

Dental Microscopic Anatomy	ASNB 671	5
In addition to the core courses, at least 6 non-research hours inside the department	6	
One of the following required electives: ²		
Introductory Immunology	BIO 602	2
Biochemistry II	BIOCH/ CHE547	3
Cellular and Molecular Immunology	MBIO 658	3
Neuroanatomy	ASNB 607	3
Neural Systems	ASNB 608	3
Physiology I	PHY 605	3
Physiology II	PHY 606	3

¹Course substitutions can be made if approved by the ASNB Graduate Education Committee.

²ASNB 607 or 608 fulfill both core and elective requirements.

Laboratory Rotations

Each student will complete at least two rotations in different laboratories prior to start of their third semester. The objectives are to expose the student to different approaches and areas of research, and to assist the student in choosing a laboratory for dissertation research. For each rotation, the student will register for the three (3)-credit course Laboratory Rotation (ASNB 618) which is graded on a pass/fail basis. Once a student has completed a semester rotation in a given laboratory, they obtain credit for further research in that laboratory by registering for Original Investigation (ASNB 619).

Advisory Committee

The purpose of the advisory committee is to guide the student in developing a course of study that will prepare him or her for a successful career. To this end, the committee may specify

one or more of the courses to be taken by the student.

The committee will have five members, with at least one from outside ASNB. The principal advisor will serve as chair. The student, in conjunction with the advisor, should form a committee prior to the start of the third semester. Once the committee is formed, the student will meet with the committee at least twice per year. Following each meeting, the mentor will submit a written brief summary of the meeting to be placed in the student's file.

Masters Candidacy

Following completion of all required coursework, each student is considered a Masters Candidate and will register as such.

Qualifying Exam

The purpose of the qualifying exam is to assure that the student has sufficient knowledge and skills to begin a research project. The exam will be taken within 2 terms (Fall, Spring or Summer terms) after the completion of required coursework. The exam consists of an oral presentation and defense of a research proposal (described below).

Prior to writing the Research Proposal, the student will develop an outline of the proposed experiments in coordination with their advisor and then present this outline to their committee. It is at this point, prior to writing the Research Proposal that the committee should recommend any changes in the research plan, regarding, for example, too many or too few experiments, experiments that are too difficult, or experiments that may be more appropriate for addressing the research question. Once the committee is satisfied with the proposed experiments, the student will write a Research Proposal in the following general format.*

Literature Review

Section 1 will be an extensive literature review (similar to an expanded Background and Significance section of a National Institutes of Health grant proposal). This review should provide evidence that the student understands all background information relevant to the proposed research.

Hypotheses and Experiments

This section will consist of a list of the proposed hypotheses to be tested, and a brief description of the experiments that will be used to test these hypotheses.

Materials and Methods

This section will consist of a detailed description of the materials and methods that will be used to carry out the proposed experiments.

Expected Outcomes

This section will describe the expected results.

Potential Problems

This section will describe any potential problems that could occur, how they might affect interpretation of their research results, and how the student will address any potential problems.

*All students are encouraged to submit (in coordination with their advisor) an application for a National Institutes of Health Predoctoral National Research Service Award (F31) or a National Science Foundation Predoctoral Award. Therefore, the Research Proposal may be submitted in the format of a relevant application with the exception that the background and significance section should be expanded to include a more extensive literature review than permitted by the NIH or NSF page limitations.

Upon completion of the research proposal, the student will distribute a copy to each committee member, who will have two weeks to read the proposal.

The qualifying exam will be chaired by the student's advisor. The exam will begin with an oral presentation, open to all faculty, in which the student will present a short (approximately 20 min) overview of the research plan. The presentation will be followed by an oral defense to assess the student's readiness to conduct the proposed research, and their knowledge of all background information relevant to the proposed research. Non-committee members in the audience will then ask questions. The general audience will then be dismissed and the student will defend his/her proposal before the committee. Passing will be determined by majority vote of the committee. A student who fails the exam will have 2 months to retake the exam. Failure on the second attempt will result in dismissal from the program.

Upon successful completion of the exam, a written report stating the outcome of the exam will be signed by each committee member and will become a permanent part of the student's record. A passing vote indicates that the student has completed the requirements for an M.S. degree, and is a candidate for the Ph.D. degree.

Additional Requirements for the Ph.D. Degree

Annual presentation of research progress

Ph.D. students who have completed their class work (M.S. and Ph.D. candidates) must present their research accomplishments annually. This presentation should be 30-50 minutes in length, and the time and location of the presentation should be formally announced to the department faculty, staff and students at least 1 week prior to the planned presentation.

Teaching requirements

Each Ph.D. student must serve as a teaching assistant (T.A.) in at least one ASNB core course. The specific course will be chosen by the student and his/her advisory committee.

Dissertation Defense

With the exception of their training in teaching, the Ph.D. candidate will focus exclusively on completing their research projects and writing a dissertation describing the results of their experiments. It is expected that the dissertation should contain data sufficient for approximately three publishable manuscripts. Upon completion of the dissertation, the student will distribute a copy to each Dissertation Committee member. The committee will have two weeks to read the dissertation and give approval to schedule a defense date or recommend changes that must be completed prior to scheduling a defense date. Once the dissertation is approved by the committee, the student will schedule a Dissertation Defense which will consist of an oral presentation to the department (approximately 45 minutes in length), of the research completed during the student's graduate training. Non-committee members in the audience will then ask questions. The general audience will then be dismissed and the student will defend his/her dissertation before the committee. Approval by the majority of Dissertation Committee members will signify completion of the Ph.D. degree.

Academic policies

Satisfactory Progress

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Unsatisfactory performance may result in immediate dismissal or in academic probation, at the discretion of the

Graduate Education Committee of the Department.

A student may not remain on academic probation for more than one semester, after which his/her performance must equal or exceed the minimum requirements. If a probationary student does not achieve the minimum performance level, the Education Committee will consider their dismissal from the program. In all cases, students receiving financial aid must maintain satisfactory progress in order to be eligible for continued financial support.

Satisfactory progress is assessed by a number of factors. While taking courses, students are required to maintain a minimum average grade of "B", i.e., a cumulative grade point of 3.0 on a 4.0 value scale. Deficiencies in the cumulative average grade generated through course work cannot be overcome using research credits (i.e. ASNB 616, 619 or 620). Unsatisfactory performance (i.e., GPA < 3.0) may result in immediate dismissal or in academic probation.

For degree candidates, satisfactory progress also involves maintaining steady progress in laboratory research, analysis, or the documentation of research results. The Reading or Dissertation Committees will evaluate the student's progress and unsatisfactory progress will be reported to the Education Committee.

Satisfactory progress also involves maintaining the standards of academic and professional integrity. Plagiarism or other failures to maintain appropriate academic standards will result in immediate dismissal from the program.

Administration

For administrative purposes, an interim Ph.D. Advisor will be assigned to each incoming student until he/she has selected a Dissertation Mentor.

Guideline Changes

The Department reserves the right to change requirements at any time. When requirements change, the student may have the option of satisfying either the requirements in effect when he/she entered the program or the new requirements, depending on circumstances.

Departmental Faculty

Fred J. Roisen
Professor
Chairman, ASNB

Martha E. Bickford
Professor
Director, Graduate Program

Ferrell R. Campbell
Professor
Educational Coordinator
Director, Analytical Microscopy & Histology Lab

Nigel G.F. Cooper
Professor
Vice-Chair for Research
Director, IPIBS
Director, Molecular Neurobiology Core Lab

George D. Mower
Professor
Course Director, Medical Neurosciences

G. Stephen Nettleton
Professor
Vice Chairman for Administration and Academic Affairs, Course Director, Medical Gross

Matthew Qiu
Professor
Director, Neurochemistry Shared Instrumentation Lab

Michael T. Tseng
Professor
Course Director, Dental Hygiene

Rita M. Colella
Associate Professor
Course Director, Medical Microstructure and Development

Raymond Ho
Professor
Course Director
Dental Gross and Neuroanatomy
Head and Neck Anatomy

Charles H. Hubscher
Associate Professor
Director, Graduate Admissions

Robin F. Krimm
Associate Professor
Course Director, Dental Microscopic Anatomy

Nobuyuki Kuwabara
Associate Professor

Guillermo W. Rougier
Associate Professor

Richard Benton
Assistant Professor

William B Carden
Assistant Professor

H. Wayne Lambert

Assistant Professor

Robert F. Lundy, Jr.

Assistant Professor

Joint/Associate Appointments

Robert Acland

Professor

Surgery

Manuel Casanova

Professor

Endowed Chair, Psychiatry

Allan Farman

Professor

Diagnosis & General Dentistry

Irene Litvan

Professor

Endowed Chair, Neurology

C. Patrick McGraw

Professor

Neurological Surgery

Christopher Shields

Professor

Chairman, Dept of Neurological Surgery

Gordon Tobin

Professor

Surgery

Scott Whittemore

Professor

Endowed Chair, Neurological Surgery

Fred L. Wightman

Professor

Psychological & Brain Sciences

Xiao-Ming Xu

Professor

Endowed Chair, Neurological Surgery

John Barker

Associate Professor

Surgery

Rif El-Mallakh

Associate Professor

Psychiatry

John Johnson

Associate Professor

Chairman, Orthopedic Surgery

Marcia Jumblatt

Associate Professor

Ophthalmology and Visual Sciences

David Magnuson

Associate Professor

Neurological Surgery

Michael Voor

Associate Professor

Orthopedic Surgery

J. Patrick Moore

Assistant Professor

Medicine

Gülgün Tezel

Assistant Professor

Ophthalmology and Visual Sciences

Tongalp Tezel

Assistant Professor

Ophthalmology and Visual Sciences

Welby Winstead

Assistant Professor

Surgery, Otolaryngology

Adjunct

Robert Aramant

Professor

Claire Meena-Leist

Assistant Professor

Mark Wiegand

Assistant Professor

Emeritus/Emerita

Kunwar P. Bhatnagar

Professor

James B. Longley

Professor

Kenneth Reid

Professor

Richard Rink

Professor

Frank J. Swartz

Professor

Richard H. Swigart

Professor

Charles E. Wagner

Professor

Kathleen M. Klueber

Associate Professor

Doctor of Audiology

Major: AUDI

Degree Awarded: Au.D.

Unit: GM

Program Webpage: louisville.edu/medschool/surgery/com-disorders/audiology/

Program Information

The Doctor of Audiology Degree (Au.D.) is a four-year post-bachelor's degree program leading to a professional degree conferred by the Graduate School. The program is physically located within the Louisville Medical Center and the University of Louisville Health Sciences Campus and administratively located in the Division of Communicative Disorders in the Department of Surgery. The faculty are committed to the clinical focus of the Au.D. degree and endeavor to bring real-world experiences to bear on the teaching environment. The faculty and staff of the Audiology Section actively participate in the provision of clinical services in both hospital and private practice arenas.

Students benefit by working side by side with the faculty and staff in an active and dynamic medical environment. Students will be able to interact with faculty, residents and medical students from other disciplines such as otolaryngology, speech pathology and pediatrics, not only in the provision of clinical services, but also in teaching and research endeavors.

Program Admission Procedure

Admission to the program will be for Fall term only, and applications must be received by January 1 of the application year. Applicants should submit all undergraduate transcripts, GRE scores and 3 letters of recommendation. Admission to the program is based on a favorable review of application material and an interview with the admissions committee.

Curriculum

The Doctor of Audiology degree program has been designed to meet the content and experience guidelines developed over the past decade by numerous professional organizations and associations. Curricular content areas and competencies are outlined as follows.

The curriculum begins with the student spending a significant amount of time in the classroom with a minimum amount of time in the clinical environment. Over the course of the four years, the ratio of classroom to clinic time reverses, so that the last year consists of virtually full-time clinical experience. During the fourth year, students will be given options for practical experiences in a variety of sites around the country.

Yr	Sem	Crs#	Title - Credits
1	Fall	600	Anatomy & Physiology for Communication Sciences 4
		604	Essential Techniques in Audiometry 3
		606	Acoustics 3
		614	Clinical Methods I 1
		610	Clinical Clerkship I (pass/fail) 1

Total Credits 11

	Spring	PSYC 646	Hearing Science I (cross referenced as AUDI 648) 3
		624	Amplification Technology 3
		622	Electrophysiologic Techniques in Audiology I 3
		615	Clinical Methods II 1
		610	Clinical Clerkship I 1

Total Credits 10

	Summer		
		636	Pediatric Audiology 3

		630	Amplification Selection & Fitting 3
		616	Genetics 2
		608	2nd Anatomy 2
		620	Clinical Clerkship II 2

Total Credits 10

2	Fall	628	Differential Diagnosis in Audiology 3
		629	Cochlear Implants & FM Systems 3
		620	Clinical Clerkship II 2

Total Credits 11

	Spring	650	Research Methods 3
		620	Clinical Clerkship II 2
	Summer	621	Audiologic Rehabilitation 3
		626	Assessment & Management of Vestibular Disorders 2
		632	Professional Issues 2
		635	Internship 4

Total Credits 11

2/3	Fall even-year	612	Pathology of the Auditory & Vestibular Systems 3
2/3	Fall odd-year	646	Medical Audiology 3
2/3	Spring odd-year	652	Prevention of Hearing Loss 2
2/3	Spring even-year	654	Assessment & Management of Auditory Processing Disorders 3

2/3	Spring even-year	638	Communication Evaluation & Training in the Pediatric Population 3
2/3	Spring odd-year	642	Gerontologic Audiology 3
3	Fall	656	Practice Management in Audiology 3
		660	Investigation 1-3
		635	Internship 4
	Spring	660	Investigation 1-3
		635	Internship 4
	Summer	660	Investigation 1-3
			DOCT 600 1
4	Fall		DOCT 600 1
			DOCT 600 1

Departmental Faculty

David R. Cunningham

Professor

Ian M. Windmill

Associate Professor

Jill E. Preminger

Assistant Professor

Master of Science in Biochemistry and Molecular Biology

Major: BIOC

Degree Awarded: M.S.

Unit: GM

Program Webpage: biochemistry.louisville.edu/

Program Information

As teachers and scientists, the faculty of the Department of Biochemistry and Molecular Biology subscribe to the following missions:

- Provide up-to-date and high-quality classroom and laboratory instruction in the discipline of biochemistry and molecular biology to students at the University.
- Conduct and publish research or other scholarship in areas that advance knowledge within the discipline, contribute to improving the human condition, or contribute to teaching.
- Train students and post-doctoral fellows in biochemical research.
- Encourage and enhance the professional development of faculty colleagues, especially junior faculty.
- Serve as a resource for information on biochemistry and molecular biology for the University and the community at large.
- Contribute to the orderly and smooth functioning of the University by serving on committees, and participating in advising, policy-making and administrative activities.
- Serve as role models for students, fellows, staff and colleagues with regard to integrity, fairness, collegiality, and civility.
- Perform service that advances and enhances the discipline of biochemistry and molecular biology.
- Advocate the benefits of science and the scientific method to society.
- Speak out when ideals of honesty and integrity within the academic workplace are violated.

Procedure for Application

To be considered for admission into the Biochemistry and Molecular Biology graduate program, we will need the following completed documents:

1. Completed application form (application fee applies)
2. A copy of your official transcripts
3. Two letters of recommendation
4. Your official GRE and TOEFL scores

These completed documents should be submitted to the Office of Graduate Admissions.

Requirements for the M.S. Degree in Biochemistry and Molecular Biology

The Department of Biochemistry and Molecular Biology offers both a thesis option and non-thesis option for the M.S. degree.

M.S. Degree in Biochemistry and Molecular Biology thesis option

- M.S. students entering the program should have received a grade of “B” or better in 2 semesters of organic chemistry
- Course work will consist of BIOC 611, 645, and 647. In addition, the M.S. student must take six hours of classroom instruction of which at least four be in BIOC courses; and obtain 30 total credits which may include hours in seminar (BIOC 606), Biochemistry lab (BIOC 613), or Research (BIOC 619)
- One semester of BIOC 606 (1 credit - seminar) is required during the second year
- Students are required to attend seminars and research conferences
- Students are expected to maintain a 3.0 average in their course work. Students who do not will be subject to dismissal from the program
- Students must present a 1-2 page research proposal for their thesis committee and orally defend that proposal
- All students will receive mandatory training in ethics as mandated by the NIH and the University of Louisville

Thesis

An M.S. research thesis is required for the thesis option. Students, with the consent of their committee, may choose between a traditional research thesis format or a thesis in which the methods and results sections are replaced by manuscripts ready for submission for publication in a refereed journal. In either case, the thesis must conform to the Graduate School’s Standards for Preparation of Theses and Dissertations. The Thesis Committee will consist of the preceptor, two other faculty of the Department of Biochemistry and Molecular Biology (at least two of the Committee members must be primary faculty in the Department), and one member outside of the Department, and must be approved by the Graduate Executive Committee.

M.S. Degree in Biochemistry and Molecular Biology non-thesis option

- M.S. students entering the program should have received a grade of “B” or better in 2 semesters of organic chemistry
- Course requirements for students interested primarily in a course work M.S. include BIOC

645 and 647, and 22 credit hours of electives, 8 hours of which must be in BIOC courses

- For students interested in a laboratory based M.S. with a non-thesis option, course requirements include BIOC 645 and 647 (or their equivalent), BIOC 611, and the remaining hours (up to 29 credit hours) as BIOC 613 Biochemistry Laboratory (rotations)
- One semester of BIOC 606 (1 credit - seminar) is required
- Students are required to attend seminars and research conferences
- Students are expected to maintain a 3.0 average in their course work. Students who do not will be subject to dismissal from the program
- A professional paper based on laboratory rotations or literature research and a final exam will be accepted in lieu of a traditional research thesis
- All students will receive mandatory training in ethics as mandated by the NIH and the University of Louisville

Spring Semester		
Course #	Title	Hours
603 01	Special Topics	
603 02	Biomolecular Interactions	1 - 2
603 03	Laboratory Ethics	1
606	Biochemistry Seminar	1
613	Biochemistry Lab (Rotation)	2 - 4
619	Research	1 - 15
647	Biochemistry II	4
661 / PHARM 661	Molecular Methods of Toxicology	1.5

Curriculum

Fall Semester		
Course #	Title	Hours
603 03	Gene Networks Modeling	3
603 04	Techniques in Biomolecular Interaction	2
606	Seminar	1
611	Biochemical Molecular Methods	3
613	Biochemistry Lab (Rotation)	2 - 4
619	Research	1 - 15
641	Eukaryotic Genetics	4
645	Biochemistry I	4
668	Molecular Biology	4

Doctor of Philosophy in Biochemistry and Molecular Biology

Major: BIOC

Degree Awarded: Ph.D.

Unit: GM

Program Webpage: biochemistry.louisville.edu/

Program Information

As teachers and scientists, the faculty of the Department of Biochemistry and Molecular Biology subscribe to the following missions:

- Provide up-to-date and high-quality classroom and laboratory instruction in the discipline of biochemistry and molecular biology to students at the University.
- Conduct and publish research or other scholarship in areas that advance knowledge within the discipline, contribute to improving the human condition, or contribute to teaching.
- Train students and post-doctoral fellows in biochemical research.

- Encourage and enhance the professional development of faculty colleagues, especially junior faculty.
- Serve as a resource for information on biochemistry and molecular biology for the University and the community at large.
- Contribute to the orderly and smooth functioning of the University by serving on committees, and participating in advising, policy-making and administrative activities.
- Serve as role models for students, fellows, staff and colleagues with regard to integrity, fairness, collegiality, and civility.
- Perform service that advances and enhances the discipline of biochemistry and molecular biology.
- Advocate the benefits of science and the scientific method to society.
- Speak out when ideals of honesty and integrity within the academic workplace are violated.

Student Support

Every applicant will be considered for IPIBS Fellowship support. Support after the first 23 months is the responsibility of the individual student's dissertation advisor. Students are also encouraged to seek extramural support.

Guidance For The Student

The Director of the Biochemistry and Molecular Biology Graduate Program will serve as the first year advisor to all incoming graduate students until a dissertation advisor is selected. During the first year, all students will meet with all available faculty to discuss research projects. After completion of lab rotations and before beginning the second year, the student will select a preceptor, subject to the approval of the Graduate Executive Committee and the Chairman.

After a preceptor is approved, the preceptor must initial the student's registration form each semester and the Director of the Biochemistry and Molecular Biology Graduate Program must sign it.

Drop/add of courses must be approved by the student's advisor and the Director of the Biochemistry and Molecular Biology Graduate Program in consultation with the instructor.

At the end of the first year, a Dissertation Committee will be formed which will serve as the Reading Committee and Examining Committee. This Committee will consist of the preceptor, three other faculty of the Department of Bio-

chemistry and Molecular Biology (at least three of the Committee members must be primary faculty in the Department), and one member outside of the Department, and must be approved by the Graduate Executive Committee.

Each student must meet regularly with his/her Dissertation Committee. There must be at least one formal meeting per year. This meeting may occur immediately after the student presents his or her annual research conference. After each meeting, the advisor will complete the "Student Meeting Form" and provide copies to the Committee members, the student and the Director of the Biochemistry and Molecular Biology Graduate Program. If deficiencies are identified at the annual meeting, a second meeting of the student and committee will be held that year to determine whether the student has remediated the deficiencies. The first formal meeting of a Ph.D. student with the committee will probably be to present the Preliminary Proposal.

Students who do not have at least one committee meeting per year (every 12 months) will be given an incomplete in Research. This will become an F if the deficiency is not made up within one semester.

Program Admission Procedure

Criteria and Mechanism for Selection

In addition to the Graduate School requirements, the following criteria will be used as the basis for formal acceptance of students to the Ph.D. program in Biochemistry and Molecular Biology. Acceptance of each student requires approval unanimously by the Graduate Executive Committee or by a majority of the Graduate Committee.

1. Transcript of course work. A two-semester course in organic chemistry is required.
2. Grade point average: The Department requires an overall 3.0 grade point average (4.0 system) with an average of 3.0 in science courses.
3. The Graduate Record Examination general test.
4. At least two letters of recommendation, preferably from faculty in biology and/or chemistry.
5. A personal or phone interview with members of the Department of Biochemistry and Molecular Biology is encouraged for all applicants.
6. A personal statement of interest.

Curriculum

Students entering the Ph.D. program should have taken two semesters of organic chemistry and earned satisfactory grades.

The courses required for the Ph.D. in Biochemistry and Molecular Biology, are the core IPIBS requirement, and a minimum of 24 credit hours of classroom instruction (not including research, rotations or seminars), of which 17 credit hours must be in BIOC courses. The Biochemistry and Molecular Biology courses that can be used to satisfy these requirements are listed below.

Fall Semester:

- Biochemistry I 545/645 (3/4) (IPIBS-required course)
- Biochemical & Mol Biol Methods 611 (3) (IPIBS requires a departmental Methods course)
- Molecular Biology 668 (4)
- Advanced Eukaryotic Genetics 641 (4)
- Molecular Endocrinology 660 (2)
- Special Topics in Biochemistry 603 (1-3)

Spring Semester:

- Cell Biology 667 (3) (IPIBS -required course)
- Biochemistry II 547/647 (3/4) (fulfills the IPIBS elective requirement)
- Protein Structure and Function 670 (4)
- Special Topics in Biochemistry 603 (1-3)
- Ethics 603-03 (1)
- Advanced Techniques in Biochemistry and Molecular Biology 603 (2)
- Biomolecular Interactions 603-04 (2)
- Biochemistry of Cancer 675 (4) (offered in alternate years)
- Molecular Toxicology 661 (3)

The selection of courses to complete the credit requirements should be made in consultation with the student's Dissertation Committee and require approval of the Graduate Executive Committee. Course descriptions may be found in the current edition of the Graduate Bulletin.

In addition, Biochemistry 606 (Seminar) is required each year of residence. In the first year, students are required to attend (but not present at) a seminar. After the first year, students will present seminars, with a total of three seminar presentations required. The first two seminars will be graded. *Only one seminar may be on a topic related to the student's research.* Atten-

dance is required at all Biochemistry Seminars and Research Conferences.

All classes should be taken before the end of the student's second year and must be taken before the student enters candidacy. For students with previous graduate training, documented graduate level courses may be accepted to fulfill credit requirements. This requires approval by the Graduate Executive Committee when the student is admitted.

All Ph.D. students are required to assist in teaching 8-10 hours per week for one semester during their 2nd or 3rd years. The 2nd year is preferable. This requirement is normally met by serving as a teaching assistant in Biochemistry I or II.

Students are expected to maintain a B (3.0) average in their course work. A student who fails to maintain a B average will be placed on academic probation and will be subject to dismissal from the program.

Examinations and Proposal

(If a mentor ascertains that the following schedule is not in the best interest of a student, the mentor may petition, in writing, the Graduate Executive Committee for a change in the schedule.)

Ph.D. Qualifying Exam (Exam I). The purpose of this exam is to evaluate the student's ability to interpret literature, independently develop a research plan, integrate material from the graduate curriculum, write clearly, organize a proposal, and orally defend their ideas. It will help the student to develop the tools necessary for preparation and defense of their doctoral dissertations. Successful completion of Exam I will be a strong indicator for successful completion of the Ph.D.

Exam I will usually be taken in May - June of the second year in the Ph.D. program. Students must have completed their core graduate courses, have a cumulative GPA of 3.0 or greater, and selected a mentor approved by the Graduate Executive Committee to be eligible for Exam I. Successful completion of this exam will allow the student to enter Ph.D. candidacy.

Preliminary Dissertation Proposal. The purpose of this preliminary proposal is to allow the Dissertation Committee to assess whether the proposed project is appropriate for Ph.D. research and whether the student is prepared to develop a written proposal for oral examination. The student will meet with his/her Ph.D. Committee to discuss the student's academic progress,

get advice on electives and discuss the research project *during the third quarter of the second year*. The student will provide the Committee with a 1 to 2-page summary of research proposed for the Ph.D. dissertation one week prior to this meeting. The write-up may be in outline format and must include a hypothesis, a list of the specific aims, the general methodology that will be used, and the experiments that will be performed for the next few months in preparation of the formal research proposal. The candidate will give a 15-30 minute oral presentation to the Committee emphasizing the hypothesis, specific aims and feasibility of the proposed project and demonstrating knowledge of the literature. The completed "Student Meeting Form" will indicate whether or not an additional meeting is required.

Written Dissertation Proposal and Oral Examination (Exam II) - The purpose of this written proposal is for the Dissertation Committee to examine the student's ability to develop and defend a research project. A formal written proposal of the student's dissertation work and oral defense should be completed *before December of the student's third year*. The proposal, typed single-spaced, will not exceed one page for hypothesis and specific aims, two pages for background (significance), three pages of preliminary results, and three pages for proposed experimental plans. The proposal will also include a listing of major equipment required, a proposed time frame for the conduct of experiments, and literature citations. See instructions for NIH proposal Guidelines (grants.nih.gov/grants/funding/phs398/section_1.html#b_general). The student is responsible for the literature search, specific experimental design and preparation of the proposal. Students may format the dissertation proposal in the form of a thesis, and submit it to the graduate school for an M.S. degree. In this case the oral presentation and examination will serve as the M.S. thesis defense. Committee members must receive the proposal two weeks prior to the date of the oral examination. During the oral examination, the student will present a formal research conference open to the department. This will be followed by an oral defense with the student's Committee. The dissertation advisor should coordinate the proposal process and officiate at this examination, but should not dominate the questioning. A written report stating the outcome of the examination and signed by each

examiner will become a part of the student's record. Failure to perform at an adequate level will result in the student being placed in Master's degree candidacy and may result in their being dismissed from the graduate program.

Dissertation and Defense

The Department of Biochemistry and Molecular Biology defines a dissertation as a complete and coherent body of work resulting in a significant, substantial, and novel contribution to the field of biochemistry and molecular biology. It is expected that the work will result in first author peer-reviewed publications. At a minimum, one peer-reviewed, first author publication should result from a student's dissertation. The absence of such a publication will require a specific review by the Dissertation Committee addressing why a publication has not resulted from the work and confirming that the dissertation indeed represents a significant advance of the field. This review must be approved by the Chair of the Department in consultation with the Graduate Executive Committee.

Ph.D. students may choose between a traditional dissertation format or one consisting of manuscript(s) ready for submission for publication in a refereed journal. In addition to the manuscript(s), the latter format must contain an introduction that includes a literature review and an overall discussion tying the manuscripts together. The option of a traditional dissertation as opposed to the manuscript form needs the approval of the student's advisor. The number of manuscripts required and their quality will be left to the judgment of the Dissertation Committee. The Dissertation Committee must receive a completed copy of the dissertation at least two weeks prior to the date scheduled for the defense and shall complete the review of the dissertation at least one week before the oral defense. Consult the current "Standards for the Preparation of Theses and Dissertations," published by the Graduate School. A copy is available in the Biochemistry and Molecular Biology Departmental Office.

Change in Guidelines

When requirements change, a student has the option of satisfying either the requirements in effect when he/she entered the program or the current requirements.

Departmental Faculty

Kenneth S. Ramos, Ph.D.

Professor and Chair

Mark D. Brennan, Ph.D.

Professor

Barbara J. Clark, Ph.D.

Associate Professor

William L. Dean, Ph.D.

Professor

Jaydev N. Dholakia, Ph.D.

Associate Professor

Steven R. Ellis, Ph.D.

Professor

Richard C. Feldhoff, Ph.D.

Professor

Pamela W. Feldhoff, Ph.D.

Associate Professor

Thomas E. Geoghegan, Ph.D.

Associate Professor

Robert D. Gray, Ph.D.

Professor Emeritus

Ronald G. Gregg, Ph.D.

Associate Professor

Associate Professor of Ophthalmology & Visual Sciences

Chuan Hu, Ph.D.

Assistant Professor

Carolyn M. Klinge, Ph.D.

Professor

Yong Li, Ph.D.

Assistant Professor

Nancy C. Martin, Ph.D.

Professor

Amy Massey, Ph.D.

Assistant Professor

Shin Murakami, Ph.D.

Assistant Professor

Russell A. Prough, Ph.D.

Professor

Vilius Stribinskis, Ph.D.

Assistant Professor

Eugenia Wang, Ph.D.

Professor

Stephanie J Webb, Ph.D.

Assistant Professor

James L. Wittliff, Ph.D.

Professor

Joint Faculty

Paula J. Bates, Ph.D.

Assistant Professor of Medicine

Assistant Professor of Biochemistry & Molecular Biology

Aruni Bhatnagar, Ph.D.

Professor of Medicine

Douglas Borchman, Ph.D.

Professor of Ophthalmology & Visual Sciences

Associate Professor of Biochemistry & Molecular Biology

Jason Chesney, Ph.D., M.D.

Assistant Professor of Medicine

Assistant Professor of Biochemistry & Molecular Biology

Douglas S. Darling, Ph.D.

Assistant Professor of Biological & Biophysical Sciences

Assistant Professor of Biochemistry & Molecular Biology

H. Leighton Grimes, Ph.D.

Assistant Professor of Surgery

Assistant Professor of Biochemistry & Molecular Biology

Marcia M. Jumblatt, Ph.D.

Associate Professor of Ophthalmology & Visual Sciences

Associate Professor of Biochemistry & Molecular Biology

Sham Kakar, Ph.D.

Associate Professor of Medicine.

Jon B. Klein, Ph.D.

Professor of Medicine

Professor of Biochemistry & Molecular Biology

Andrew N. Lane, Ph.D.

Professor of Medicine

Professor of Biochemistry & Molecular Biology

Endowed Chair in Biochemistry and Structural Biology

Herbert A. Lassiter, Ph.D., M.D.

Professor of Pediatrics

Associate Professor of Biochemistry & Molecular Biology

Mark Linder, Ph.D.

Associate Professor of Pathology
Associate Professor of Biochemistry & Molecular Biology

Kenneth R. McLeish, M.D.

Professor of Medicine
Professor of Biochemistry & Molecular Biology

Donald H. Miller, Ph.D.

Professor of Medicine
Director of James Graham Brown Cancer Center

Robert A. Mitchell, Ph.D.

Professor of Medicine
Professor of Biochemistry & Molecular Biology
James Graham Brown Cancer Center

Madhavi Rane, Ph.D.

Assistant Professor of Medicine and
Biochemistry

C.V. Rao, Ph.D.

Professor of Obstetrics & Gynecology
Professor of Biochemistry & Molecular Biology

Greg Rempala, Ph.D.

Associate Professor of Mathematics
Associate Professor of Biochemistry & Molecular Biology

John O. Trent, Ph.D.

Assistant Professor of Medicine
Assistant Professor of Biochemistry & Molecular Biology

Roland Valdes Jr., Ph.D.

Professor of Pathology
Professor of Biochemistry & Molecular Biology

Brian W. Wattenberg, Ph.D.

Associate Professor of Medicine
Associate Professor of Biochemistry & Molecular Biology
James Graham Brown Cancer Center

Stephen J. Winters, M.D.

Professor of Medicine

William W. Young, Jr., Ph.D.

Professor of Biological & Biophysical Sciences
Professor of Biochemistry & Molecular Biology

Master of Science in Communicative Disorders

Major: CMDS

Degree Awarded: M.S.

Unit: GM

Program Webpage: louisville.edu/medschool/surgery/com-disorders/slp

Program Information

The Graduate School offers a Master of Science in Communicative Disorders for speech-language pathology majors. The program is administered through the Division of Speech-Language Pathology, Department of Surgery, School of Medicine.

The Speech-Language Pathology program offers a unique opportunity to pursue a Master of Science degree to students with and without an undergraduate degree in speech-language pathology. The program includes two phases. Applications from students without a background in speech-language pathology will be submitted automatically to the Preparatory phase of the program. Applications from students who currently hold a Bachelors' degree in speech-language pathology will be submitted automatically to the core phase of the program. The program leading to a Master of Science degree for Speech Pathology undergraduate degree majors is a full time five-semester sequence beginning each year in the fall semester.

The Council on Academic Accreditation (CAA) of the American Speech Language Hearing Association (ASHA) accredits the Speech-Language Pathology Program. Graduating students will be eligible to apply for the Certificate of Clinical Competence by ASHA if all requirements are fulfilled. Students may also be eligible for Kentucky State Teaching Certification in speech-language pathology. The Teacher Certification Program by which speech pathology students prepare for school therapy positions is certified by the National Council for Accreditation for Teacher Education. Additional coursework may be required to be eligible for ASHA or teaching certification.

The program operates its own teaching clinics, the University of Louisville Speech-Language

Pathology Center and faculty practice locations. In addition, the program has cooperative arrangements with more than thirty schools, agencies, hospitals, and practice groups in the Kentuckiana region.

Admission Procedures

Speech Pathology: Applicants should have a cumulative undergraduate grade point average of at least 3.0 on a 4.0 scale and combined Verbal and Quantitative scores on the Graduate Record Examination of at least 900. At least three letters of recommendation should accompany the application. A formal interview may be required. The applicant should read and meet the general requirements for admission to the Graduate School.

Degree Requirements

Candidates for the Master of Science degree in speech pathology must complete at least 54 credit hours at the graduate level, exclusive of credits related to the completion of a (optional) master's thesis, courses required to complete ASHA certification requirements, and/or course work related to Kentucky State Teacher Certification.

Please refer to the section on Academic Standing in this catalog entitled "academic probation" concerning dismissal/retention in the program.

Pass/Fail Option

In general, students in Speech Pathology may not choose the pass/fail option. Certain courses may be offered with this option at the discretion of the faculty.

Comprehensive Examinations

Students in Speech-Language Pathology will take an eight-hour written comprehensive examination followed by a forty-five minute oral comprehensive examination during their last semester of study. The completion of a master's thesis is encouraged, but is optional. Thesis students will take at least one statistics course above the introductory level. Thesis students will take a comprehensive oral examination that will focus primarily, but not exclusively, on the thesis work itself.

These examinations must be completed at least five weeks prior to the completion of the student's graduate program. The student is responsible for becoming familiar with the consequences of failure on the written or oral

examinations. This information is available in the student academic policy manual.

Clinical Practicum

The American Speech Language Hearing Association requires a minimum of 400 clock hours of supervised clinical practicum in speech pathology to be eligible for certification. Twenty clock hours must be in the student's minor area and 325 of the 400 hours must be at the graduate level. All students must have had 25 hours of observation. If they were obtained at the undergraduate level, they are not repeated. The student may spend the last 8 weeks of the program at a clinical site outside the Louisville area.

Certain prerequisites and standards apply to the clinical practicum component of the program, including minimum course work requirements, mandatory readings, observations, case report formats, and grading criteria. This information is available in the program office and it is the student's responsibility to become acquainted with these requirements prior to enrolling in clinical practicum.

Falling below a 3.0 average in practicum for two consecutive semesters will result in dismissal from the program. Practicum assignments are made at the faculty's discretion and with the service needs of the clinic in mind. All practicum work done outside of the main program must be given prior approval by the clinical director.

For more detailed information regarding the graduate program in Communicative Disorders, please write: Program Chair, Division of Speech-Language Pathology, Myers Hall, University of Louisville, Louisville, Kentucky 40292 or telephone (502) 852-5274.

Curriculum

Preparatory Phase

Fall Semester

- CMDS 545: Survey of Communication Disorders (3)
- CMDS 564: Normal Speech and Language Development (3)
- CMDS 565: Language Acquisition Laboratory (1)
- CMDS 573: Anatomy & Physiology for Communicative Sciences (4) *

- AUDI 604: Essential Techniques in Audiometry (3)

Spring Semester

- CMDS 563: Clinical Phonetics (4)
- AUDI 621: Audiologic Rehabilitation (3) (odd years), or,
- AUDI 638: Communication Evaluation and Training in the Pediatric Population (3) (even years)
- CMDS 570: Clinical Observation (1)
- EDSP 540: Introduction to Exceptional Children (3) (teacher certification)
- LING 522 : Structure of Modern American English (3)

Summer Semester (Optional)

- ELFH 600: Introductions to Research Methods and Statistics (3) (graduate credit will be granted for an approved undergraduate course)
- EDSP 637: Collaborative Transdisciplinary Collaboration for Inclusion (3) (teacher certification)

Core Phase

Fall I

- CMDS 572: Anatomy & Physiology for Communicative Sciences (4)
- CMDS 661: Assessment of Childhood Language Disorders (3)
- CMDS 620: Neurological Disorders of Speech Production (3)
- CMDS 602: Articulation and Phonology (3)
- CMDS 570: Clinical Observation in Speech Pathology (1)
- CMDS 611: Practicum: Speech Pathology (1)
- CMDS 671: Clinical Methods in Speech Language Pathology (1)

Spring I

- CMDS 667: Aphasia and Cognitive Disorders (4)
- CMDS 663: Voice Disorders (4)
- CMDS 612: Preschool Language Intervention (3)
- CMDS 652: School Age Language and Phonology Intervention (3)
- CMD S 611: Practicum: Speech Pathology (1)

Summer I

- CMDS 696: Augmentative & Alternative Communication (3)
- CMDS 690: Dysphagia (3)
- CMDS 611: Practicum: Speech Pathology (2)
- ELFH 600: Introduction to Research Methods and Statistics (3)(graduate credit will be granted for an approved undergraduate course)
- EDSP 637: Transdisciplinary Collaboration for Inclusion (3)(teacher certification)

Fall II

- CMDS 611: Practicum: Speech Pathology (3)
- AUDI 604: Essential Techniques in Audiometry (3)
- CMDS 699: Thesis (thesis option)
- ELFH 600: Introduction to Research Methods and Statistics (3) (graduate credit will be granted for an approved undergraduate course)
- OBIO 501: Biomedical Data Analysis: Experimental Design and Statistics or an approved advanced statistics course (3) (thesis option)
- CMDS 665: Fluency Disorders (3)
- CMDS 695: Special Topics in Speech and Language Disorders (3)

Spring II

- CMDS 668: Professional Issues in Audiology and Speech Pathology (1)
- CMDS 611: Practicum: Speech Pathology (4)
- CMDS 680: Medical Speech Pathology (2)
- CMDS 699: Thesis (1-3) (thesis option)
- CMDS 610: Practicum: Audiology (1)
- ELFH 600: Introduction to Research Methods and Statistics (3) (thesis option)
- AUDI 621: Audiologic Rehabilitation (3) (odd years), or,
- AUDI 638: Communication Evaluation and Training in the Pediatric Population (3) (even years)
- EDSP 540: Introduction to Exceptional Children (3) (teacher certification)

Departmental Faculty

David R. Cunningham
Professor

Barbara M. Baker
Professor

Ian M. Windmill
Associate Professor

Jill Preminger
Associate Professor

Pat B. Blackwell
Assistant Professor

M. Gay Masters
Assistant Professor

Master of Science in Microbiology and Immunology

Major: MBIO

Degree Awarded: M.S.

Unit: GM

Program Webpage: louisville.edu/medschool/microbiology/

Program Information

The Department of Microbiology and Immunology, in the School of Medicine, offers programs of study leading to the degrees of Doctor of Philosophy and Master of Science. For admission to the Ph.D. or M.S. program, the applicant must have attained the B.S or B.A. degree with a minimum grade-point average of 3.0 (on a 4.0 point scale). In addition to the completed application form and \$50 application fee, the scores of the General Test Section of the Graduate Record Examination and the TOEFL (when applicable), official transcripts of all undergraduate and graduate course work, two letters of recommendation, and a short biographical sketch are required. The applicant must meet the other general requirements of the Graduate School as outlined in the General Information section of this catalog. Applicants are encouraged to apply early as space is limited. Applications are reviewed on a rolling basis beginning February 1st.

The applicant is expected to have completed the following: One year of introductory biology, one year of organic chemistry, one year of physics,

one semester (or equivalent) of introductory calculus, and one semester of biochemistry.

Prospective students may be invited for a personal interview with members of the department.

Curriculum

Required Courses:

BIOC 645, Graduate Biochemistry I
(4 credit hours)

either

--**MBIO 601**, Molecular Microbiology
(2 credit hours)

--or

-- **MBIO 602**, Introductory Immunology
(2 credit hours)

MBIO 606, Seminar/Journal Club
(2 credit hours)

MBIO 690, Research Methods in Microbiology and Immunology (3 credit hours)

MBIO 619, Research
(1-12 credit hours)

MBIO 620, Thesis (optional)(1-6 credit hours)

Select two from the following list of suggested electives:

MBIO 658, Cellular and Molecular Immunology
(3 credit hours)

MBIO 667, Cell Biology (3 credit hours)

MBIO 670, Molecular Virology (3 credit hours)

MBIO 680, Genetics of Infectious Disease
(2 credit hours)

MBIO 685, Microbial Physiology (3 credit hours)

MBIO 687, Microbial Pathogenesis
(2 credit hours)

MBIO 671-01, Epidemiology and Pathogenesis of Human Viruses (1 credit hour)

MBIO 672-01, Recombinant viruses and viral vectors (1 credit hour)(must take both 1 hour courses to equal one elective)

Minimum Total: 30 credit hours

If the student has satisfactorily completed the required courses and total credit hour requirements with an overall and program GPA of 3.0, then the student may register as an M.S. candidate.

Program of Study

Students admitted to the M.S. Degree Program should select a research advisor, from a thesis committee, and decide upon an area of research in the first semester. The student and advisor should form a committee of three (3), composed

of the advisor, one other graduate faculty member of the department, and a third member with graduate faculty status in another department. The second committee member will serve as co-advisor if the advisor does not have primary appointment in the Department of Microbiology and Immunology. The department chair may serve as an ex-officio member of the thesis committees.

Students in the M.S. program are required to submit and defend a thesis. The thesis must conform to the Graduate School's guidelines. Students, with the consent of the departmental graduate faculty committee, may elect to substitute a written research proposal instead of a traditional thesis, based on laboratory research performed by the student, describing successive research to be pursued. The final oral defense will be preceded by a research seminar open to everyone. The oral examination will be administered by the thesis committee, and will be open to any other interested graduate faculty members. Evaluation of student competence and thesis acceptability, together with departmental recommendations for graduation, will be forwarded to the Dean of the Graduate School.

Doctor of Philosophy in Microbiology and Immunology

Major: MBIO

Degree Awarded: Ph.D.

Unit: GM

Program Webpage: louisville.edu/medschool/microbiology/

Program Information

The Department of Microbiology and Immunology, in the School of Medicine, offers programs of study leading to the degrees of Doctor of Philosophy and Master of Science. For admission to the Ph.D. or M.S. program, the applicant must have attained the B.S or B.A. degree with a minimum grade-point average of 3.0 (on a 4.0 point scale). In addition to the completed application form and \$50 application fee, the scores of the General Test Section of the Graduate Record Examination and the TOEFL

(when applicable), official transcripts of all undergraduate and graduate course work, two letters of recommendation, and a short biographical sketch are required. The applicant must meet the other general requirements of the Graduate School as outlined in the General Information section of this catalog. Applicants are encouraged to apply early as space is limited. Applications are reviewed on a rolling basis beginning February 1st.

The applicant is expected to have completed the following: One year of introductory biology, one year of organic chemistry, one year of physics, one semester (or equivalent) of introductory calculus, and one semester of biochemistry.

Prospective students may be invited for a personal interview with members of the department.

Curriculum

Required Courses:

MBIO 601, Molecular Microbiology
(2 credit hours)

MBIO 602, Introductory Immunology
(2 credit hours)

MBIO 667, Cell Biology(3 credit hours)

BIOC 645, Biochemistry I (4 credit hours)

MBIO 606, Seminar/Journal Club (2 credit hours)

MBIO 600, Laboratory Rotations in Microbiology and Immunology (1-2 credit hours)

MBIO 690, Research Methods in Microbiology and Immunology (3 credit hours)

MBIO 619, Research (1-12 credit hours)

Select three courses from the list of suggested electives

(at least 1 elective must be offered in the Department MBIO):

MBIO 658, Cellular and Molecular Immunology
(3 credit hours)

MBIO 670, Molecular Virology (3 credit hours)

MBIO 680, Genetics of Infectious Disease
(2 credit hours)

MBIO 685, Microbial Physiology (3 credit hours)

MBIO 687, Microbial Pathogenesis
(2 credit hours)

BIOC 668, Molecular Biology (4 credit hours)

BIOC 675, Biochemistry of Cancer
(2 credit hours)

BIOC 647, Biochemistry II (4 credit hours)

BIOL 617, Advanced Molecular Biology
(4 credit hours)

MBIO 671-01, Epidemiology and Pathogenesis of Human Viruses (1 credit hour)

MBIO 672-01, Recombinant viruses and viral vectors (1 credit hour)(must take both 1 hour courses to equal one elective)

Note:

** Students enrolled in the M.D./Ph.D. Joint Degree Program, who have completed step I of NBME, will have satisfied all of the required course requirements except seminar, Research Ethics, Research Methods and research. Three electives will be required. They will be required to satisfactorily complete the Qualifying Exam and successfully defend a dissertation research project, in addition to attending all journal club sessions and seminars.

Program of Study

Upon successful completion of the first two semesters of required course work, maintaining a minimum 3.0 GPA, and upon the recommendation of the advisor or chair, the student may take the Ph.D. Qualifying Examination. The Qualifying Examination will consist of a written research proposal outside of his/her area of primary research and oral defense of the project. Three to five faculty with expertise in the area of the proposal will be selected by the chair to serve as the Examining Committee. The student may enter degree candidacy upon receipt of satisfactory judgment from the Examining Committee and successful completion of the final semester of coursework.

Selection of a Research Advisor, Dissertation Committee and Research Proposal

Selection of the Research Advisor and specific research area is one of the most important decisions of the student's entire graduate training program, and is a joint decision by the student and faculty member. Students must select a Research Advisor for their dissertation research by Dec. 20th of their second semester. Selection of the Research Advisor and formation of the Dissertation Committee must be approved by the Graduate School Dean. If the potential advisor has a primary appointment in another department, the potential advisor must agree, in writing, to provide stipend and tuition from his/her research funds. Upon approval of the Research Advisor, the student will formally decide upon a dissertation research project. The student, Research Advisor, and Departmental Chairperson will form a Dissertation Committee with five (5) graduate faculty members. The committee will be composed of the advisor, three faculty

members of the Department of Microbiology and Immunology, and one additional graduate faculty member from another department. If the advisor does not have a primary appointment in the Department of Microbiology and Immunology, one of the three other departmental members with a primary appointment in the department must serve as Co-Advisor. The Chairman of the Department may serve as an ex-officio member of the committee. The student will submit a written proposal co-signed by the Dissertation Advisor to the Dissertation Committee on the planned Ph.D. dissertation topic by April 1st, at the end of the first year in the program. The proposal should be 5-10 pages long, single-spaced, 12 point type, with no more than 1.25 inch margins. Approval of this dissertation proposal by the Dissertation Committee is the first step toward candidacy status.

The committee will meet regularly to evaluate progress of the research. The student will also be required to present a research seminar to the department annually on this progress. When the dissertation research is completed, the committee will conduct the final oral examination in accordance with the guidelines in the General Information section of this catalog.

For more information go to the department website at: louisville.edu/medschool/microbiology/

Departmental Faculty

Robert D. Stout

Professor
Department Chair

Haval Shirwan

Professor
Director, Molecular Immunomodulation Program,
Institute for Cellular Therapeutics

Uldis N. Streips

Professor

Jill Suttles

Professor

Yousef Abu Kwaik

Professor
Bumgardner Endowed Professor

Haribabu Bodduluri

Professor

Lawrence A. Hunt

Associate Professor

Richard D. Miller
Associate Professor

Michele Kosiewicz
Associate Professor

Pascale Alard
Assistant Professor

Reynaldo Carabeo
Assistant Professor

James E. Graham
Assistant Professor

Venkatakrishna Rao Jala
Assistant Professor

Menq-Jer Lee
Assistant Professor

Thomas C. Mitchell
Associate Professor
Institute of Cellular Therapeutics
Barnstable-Brown Professor in Diabetes
Research

Shailesh Singh
Assistant Professor

Esma Yolcu
Assistant Professor
Institute of Cellular Therapeutics

Donald R. Demuth
Joint Faculty Professor
Periodontal, Endodontal & Dental Hygiene
School of Dentistry

G. Rafael Fernandez-Botran
Joint Faculty Associate Professor Of Pathology
and Laboratory Medicine

Adwesh Kalia
Joint Faculty Assistant Professor
Department of Biology

Henry Kaplan
Joint Faculty Professor
Chairman Ophthalmology & Visual Sciences
KY Lions Eye Center

Denis Kinane
Joint Faculty Professor
Delta Endowed Chair Of Periodontology
Associate Dean for Research
School of Dentistry

Mariusz Ratajczak
Joint Faculty Professor
Department of Medicine
Director Of Stem Cell Biology Program

Hui Shao
Joint Faculty Assistant Professor
Department of Ophthalmology and Visual
Sciences
KY Lions Eye Center

Robert H. Staat
Joint Faculty Professor of Biological and
Biophysical Sciences
School of Dentistry

Deming Sun
Joint Faculty Professor
Ophthalmology & Visual Sciences
KY Lions Eye Center

William G. Cheadle
Associate Faculty Professor
Department of Surgery

Paul W. Ewald
Associate Faculty
Department of Biology

Suzanne Ildstad
Associate Faculty Professor of Surgery
Jewish Hospital Distinguished Professor of
Transplantation
Director, Institute of Cellular Therapeutics

Jon B. Klein
Associate Faculty Professor
Kidney Disease Program
Department of Medicine

Gary S. Marshall
Associate Faculty Professor
Department of Pediatrics
Kosair Charities Pediatric Center

Kenneth McLeisch
Associate Faculty Professor
Department of Medicine
Kidney Disease Program

James W. Snyder
Associate Faculty Professor
Clinical Services, Department of Pathology

James T. Summersgill
Associate Faculty Professor
Division of Infectious Diseases, Department of
Medicine

Jun Yan
Associate Faculty
Assistant Professor, Department of Medicine
James Graham Brown Cancer Center

Heshan Sam Zhou

Associate Faculty Assistant Professor
Department of Medicine
James Graham Brown Cancer Center

Karen Cost

Adjunct Faculty
Adjunct Assistant Professor of Microbiology and Immunology
Director, Clinical Immunology Laboratory

Anthony J. Janckila

Adjunct Faculty
Adjunct Associate Professor of Microbiology and Immunology
Technical Director, Special Hematology Laboratory
Department of Veteran's Affairs Medical Center

Diane J. Pidwell-Brown

Adjunct Faculty
Adjunct Assistant Professor of Microbiology and Immunology
Transplant Immunologist, Department of Pathology

Gerald Sonnenfeld

Adjunct Faculty
Adjunct Assistant Professor of Microbiology and Immunology
Vice President for Research, Binghamton University

Robert D. Higginbotham

Emeritus Professor

Pinghui Liu

Emeritus Professor

Master of Science in Pharmacology and Toxicology

Major: PHTX

Degree Awarded: M.S.

Unit: GM

Program Webpage: louisville.edu/medschool/pharmacology

Program Information

The Department of Pharmacology & Toxicology is committed to academic excellence and to the

attainment of regional, national, and international recognition for the quality of its educational, research, and service activities. Guided by the University of Louisville Challenge for Excellence to become a preeminent metropolitan research university, the Department Strategic Plan will focus on accomplishment of five broad objectives:

- Provide instruction in pharmacology and toxicology of the highest quality for the education and preparation of medical, dental, nursing, and other health care professional students. Emphasis will be placed on the fundamental principles necessary for life-long learning and the essential knowledge required for rational, effective, and safe use of drug therapy.
- Advance biomedical knowledge through active contribution to high quality research and other scholarly activities, particularly in pharmacology and toxicology and other areas of focus within the University of Louisville Challenge for Excellence.
- Provide high quality research and educational experiences in pharmacology and toxicology for the education and training of future biomedical scientists who can provide and advance biomedical education, research, and service.
- Provide instruction of the highest quality in pharmacology and toxicology that is appropriate for students at the undergraduate, graduate, and postgraduate levels.
- Provide high quality service to the School of Medicine, the Health Sciences Center, the University, the people of Louisville and the surrounding region, the Commonwealth of Kentucky, professional organizations, the nation, and the world.

Goals of the Program

The Department of Pharmacology and Toxicology is dedicated to advancing biomedical knowledge through active contribution to high quality research in pharmacology and toxicology and to providing high quality research and educational experiences for the education and training of future biomedical scientists who advance biomedical education, research, and service.

Program Admission Procedure

For the Department of Pharmacology and Toxicology complete guidelines are given below.

Web links can be found at louisville.edu/med-school/pharmacology)

1. Application forms. All candidates for admission to graduate programs at the University of Louisville must complete the application form found at graduate.louisville.edu/apply. This may be completed online or may be submitted via mail to:

**Office of Graduate Admissions
Suite 105, Houchens Bldg
University of Louisville
Louisville, KY 40292
United States of America**

Applications are received at any time for starting dates of approximately August 1. All credentials and/or communications should be submitted to the Office of Graduate Admissions and should contain the student's full name and Social Security Number or UofL-issued Student ID. Lack of Social Security Number may cause processing to be delayed. Applications received by January 1 are assured of full consideration for that year. Admission on a conditional basis is a possibility in rare, special cases, even though application materials are incomplete. Please contact the department for additional information.

2. Application Fee. A \$50.00 US currency non-refundable application fee is required with the application form. An application will not be forwarded to the department until this fee is paid. A check or money order should be made payable to "The University of Louisville."

3. Transcripts. Applicants for admission to a degree program must submit an official transcript from each college attended. All University of Louisville transcripts will automatically be submitted with completion of an application. All applications are considered on an individual basis. Normally, a successful applicant will have an undergraduate GPA of 3.00 or higher and will have successfully completed sufficient coursework in basic biology, chemistry and mathematics.

4. Test Scores. Applicants normally must take the general section of the Graduate Record Examination (GRE). There is no absolute cutoff score for acceptance. Each case is decided on the totality of its merits. At the discretion of the department, MCAT or other entrance examinations scores may be accepted in place of the GRE. Information can be obtained from:

- University of Louisville Testing Center, or

- Graduate Record Examination Educational Testing Service Box 955 Princeton, NJ 08541, or
- www.gre.org/

The GRE Advanced Test in a discipline is not required, but if available will be used in admissions and placement decisions.

NOTE: GRE Institution Code is R1838-University of Louisville. The GRE major codes are 0216 – Pharmacology or 0219 – Toxicology.

5. Statement of Experience and Professional Goals. At the time of application, a two-three page typed statement should be sent directly to the Department of Pharmacology and Toxicology. This statement should be used to introduce the student to the faculty of the Department, describing past educational, laboratory and relevant life experiences, as well as outlining professional goals after the degree program. This statement can be sent electronically to jcstat01@gwise.louisville.edu or via mail to:

**J. Christopher States, PhD
Director for Program Admissions and Recruitment
Department of Pharmacology and Toxicology
School of Medicine
University of Louisville
Louisville, KY 40292
United States of America**

6. English Proficiency. All applicants *for whom English is a second language* must also submit official TOEFL scores of 213 or higher on the computer-based test or 550 or higher on the paper-based test for verification of English proficiency. Students holding a bachelor's or advanced degree from an accredited institution in the United States are exempt from this requirement. Information concerning the TOEFL exam can be obtained from: University Testing Center, or Test of English as a Foreign Language PO Box 6151 Princeton, NJ 08541 USA or www.toefl.org The institutional code of UofL for TOEFL is 1838. The TOEFL department code is 30 (other biological sciences.)

7. Personal Interview. Whenever possible, a personal interview, either in person or via telephone will be held before final offer and acceptance of a position in the M.S. program.

8. Letters of Recommendation. Two letters of recommendation from persons familiar with the applicant's academic work are required. This can

be in the form of a letter or may be done using the recommendation form found at graduate.louisville.edu/students/grad-rec.pdf.

9. International Student Applicants. In addition to satisfying the appropriate credential requirements, applicants may be required to provide the following documents.

- Applicants who attended college outside the US must submit verbatim notarized English translations of all academic records and credentials.
- If on a Visa that requires an I-20 or IAP-66, the applicant is required to complete an Application Supplement/Financial Declaration form (graduate.louisville.edu/students/international-financial-declaration.html/) and submit appropriate financial documentation.
- A cost estimate is available at: louisville.edu/student/services/admissions/aid/cost-intl.html.

10. Financial Aid. The Department normally provides no funds for such support of Masters' students.

11. Residency Policy. Residency status for students is determined in the Office of Graduate Admissions. The status is determined according to the policy on classification of students for fee assessment purposes at state-supported institutions of higher education. Except as provided in the guidelines, it is presumed that a resident has remained in the state in a non-student status for the twelve months immediately preceding the last date for enrollment in the institution.

The domicile of an unemancipated person, as defined in the guidelines, is that of his/her parent. The domicile of a married person is determined by the provisions of the guidelines independent of the residence of the spouse. Copies of the guidelines and appropriate forms for requesting change of residence classification may be obtained from the Office of Student Services.

Indiana Tuition Reciprocity: The University of Louisville is participating in an Indiana Tuition Reciprocity Program for residents of Clark, Crawford, Floyd, Harrison or Scott Counties who have been admitted directly into an approved graduate program. Eligible participants are required to notify the Admissions Office prior to their first enrollment and the Registrar's Office after their first enrollment of any changes in residency status. [e.g. if they no longer live in one of the eligible counties, or are no longer in an eligible

program.] The University reserves the right to further investigate and require documentation of eligibility for tuition reciprocity.

For Military Personnel: If an applicant, spouse or parent (if dependent) is currently stationed in Kentucky on military active duty for one or more years, please attach a copy of the military orders, a lease or mortgage showing Kentucky address and a military dependent identification card if appropriate. If the applicant is a Kentucky resident but has been in the military and has been recently discharged, please send a copy of the military discharge papers (DD-214).

International Students on Immigrant/ Permanent Resident Status: If currently on an immigrant/ permanent resident status, it will be necessary to submit a copy of an immigration/ permanent resident card, both sides, for review of possible residency classification for tuition purposes.

The University of Louisville reserves the right to change programs of study, academic requirements, fees, schedules of courses, the announced academic calendar and deadlines without prior notice.

Curriculum

Research M.S. Curriculum

The Research Master's Degree is a two (2)+ year course of study which includes the Pharmacology Foundation series, a research project and a research Thesis. This course of study is designed for students desiring training in pharmacological and toxicological research.

AY1 - Fall			
Course	Hrs	Title	Co-Curricular Requirements
BIOC 645	4	Biochemistry I	Diagnostic Exam
PHTX 660	4	Principles of Drug and Chemical Action	Receive research descriptions from mentors. Meet to discuss.

PHTX 672/673	1+1	Research Methods in Pharmacology and Toxicology I & II	Rotation selection by August 15
PHTX 619	2	Research in Pharmacology [grade assigned by Grad Cmte]	Rotation 1 – Report and lab book Rotation 2 – Report and lab book

Semester Total: 12

Mentor Selection by end of semester is ideal

AY1 - Spring

PHTX 655	2	Neuropharmacology	
BIOC 647	4	Biochemistry II	
MBIO 667	3	Cell Biology	
PHTX 674/675	1+1	Research Methods in Pharmacology and Toxicology III & IV	
PHTX 619	1	Research in Pharmacology* [grade assigned by Grad Committee]	With mentor, develop Thesis topic
PHTX 606	1	Pharmacology and Toxicology Seminar	
BIOC 603	1	Ethics	With mentor, create Thesis Committee, have approved

Semester Total: 14

AY2 - Fall

PHTX 625	2	Scientific Writing	
----------	---	--------------------	--

PHTX 658	1	Selective Toxicity and Chemotherapeutics	
PHTX 656	2	Cardiovascular and Renal Pharmacology	
PHTX 657	2	Endocrine and Metabolic Pharmacology	
PHTX 619	1	Research in Pharmacology* [grade assigned by Grad Committee]	Submission of outline/draft of research plan as research report
PHTX 606	1	Pharmacology and Toxicology Seminar	

Semester Total: 9

Promotion to Candidacy

TOTAL HOURS: 35 hrs

*AY2-AY3 Research followed by Presentation and Defense of Masters Thesis.

Each year, candidates will present research finding and progress report to department. Dissertation committee will report concerning progress. Expectation of annual national / international presentation.

Electives

If appropriate, candidates may take elective courses for enrichment.

Academic M.S. Curriculum

The Academic Master's degree is a 1.5+ year course of study with a less in-depth foundation, more breadth of experience in the classroom (electives) and a capstone experience of a "dry" thesis – literature review or the like. It is proposed as ideal:

- As a stand alone M.S. for individuals in professions that draw upon a pharmacological or toxicological foundation but do not require research expertise (e.g. pharmaceutical representatives, medical insurance providers, medico-legal professionals)

- For pairing with other programs to form hybrid or dual science/business degrees, such as an M.S./M.B.A. program for individuals interested in progressing through management ranks in Pharma or biotech businesses
- When coupled with extensive scientific writing experience or electives, as the basis for a scientific writing career
- When combined with theoretical and practical training in laboratory analysis, as the basis for a career in biotechnology

AY1 - Fall			
Course	Hrs	Title	Co-Curricular Requirements
BIOC 645	4	Biochemistry I	Diagnostic Exam
PHTX 660	4	Principles of Drug and Chemical Action	Select mentor
PHTX 672/ 673	1+ 1	Research Methods in Pharmacology and Toxicology I & II	Develop thesis topic

Semester Total: 10

AY2 - Spring			
PHTX 655	2	Neuropharmacology	With mentor, finalize Thesis topic
BIOC 647	4	Biochemistry II	
MBIO 667	3	Cell Biology	
PHTX 674/ 675	1+ 1	Research Methods in Pharmacology and Toxicology III & IV	Produce topic and Thesis Outline for approval
BIOC 603	1	Ethics	Selection of Committee

Semester Total: 12

AY2 - Fall			
PHTX 625	2	Scientific Writing	
PHTX 658	1	Selective Toxicity and Chemotherapeutics	
PHTX 656	2	Cardiovascular and Renal Pharmacology	
PHTX 657	2	Endocrine and Metabolic Pharmacology	
PHTX 620	3	Masters Thesis	

Semester Total 10

Promotion to Candidacy
PRESENTATION AND DEFENSE of the Masters' Thesis
TOTAL HOURS: 32 hrs

Doctor of Philosophy in Pharmacology and Toxicology

Major: PHTX

Degree Awarded: Ph.D.

Unit: GM

Program Webpage: louisville.edu/medschool/pharmacology

Program Information

The Department of Pharmacology & Toxicology is committed to academic excellence and to the attainment of regional, national, and international recognition for the quality of its educational, research, and service activities. Guided by the

University of Louisville Challenge for Excellence to become a preeminent metropolitan research university, the Department Strategic Plan will focus on accomplishment of five broad objectives:

- Provide instruction in pharmacology and toxicology of the highest quality for the education and preparation of medical, dental, nursing, and other health care professional students. Emphasis will be placed on the fundamental principles necessary for life-long learning and the essential knowledge required for rational, effective, and safe use of drug therapy.
- Advance biomedical knowledge through active contribution to high quality research and other scholarly activities, particularly in pharmacology and toxicology and other areas of focus within the University of Louisville Challenge for Excellence.
- Provide high quality research and educational experiences in pharmacology and toxicology for the education and training of future biomedical scientists who can provide and advance biomedical education, research, and service.
- Provide instruction of the highest quality in pharmacology and toxicology that is appropriate for students at the undergraduate, graduate, and postgraduate levels.
- Provide high quality service to the School of Medicine, the Health Sciences Center, the University, the people of Louisville and the surrounding region, the Commonwealth of Kentucky, professional organizations, the nation, and the world.

Goals of the Program

The Department of Pharmacology and Toxicology is dedicated to advancing biomedical knowledge through active contribution to high quality research in pharmacology and toxicology and to providing high quality research and educational experiences for the education and training of future biomedical scientists who advance biomedical education, research, and service.

Student Financial Support

Students accepted into the Ph.D. program will be considered for financial aid. This aid would include tuition remission, and student health insurance. The Department houses a NIEHS Predoctoral Training Program in Environmental

Health Sciences which provides stipend support for selected students. Since all Ph.D. students and candidates are considered to be full-time students, they generally are not permitted to seek outside employment while enrolled in the doctoral program. In cases where financial aid is limited and additional support is essential, students needing outside employment must apply in writing for departmental faculty approval. The faculty must also approve any change in employment, as well as approving continued outside employment on an annual basis.

Program Admission Procedure

For the Department of Pharmacology and Toxicology complete guidelines are given below. Web links can be found at: louisville.edu/med-school/pharmacology.

1. Application forms. All candidates for admission to graduate programs at the University of Louisville must complete the application form found at admissions.louisville.edu/gapp/gapp.html. This may be completed online or may be submitted via mail to:

**Office of Graduate Admissions
Suite 105, Houchens Bldg
University of Louisville
Louisville, KY 40292
United States of America**

Applications are received at any time for starting dates of approximately August 1. All credentials and/or communications should be submitted to the Office of Graduate Admissions and should contain the student's full name and Social Security Number or UofL-issued Student ID. Lack of Social Security Number may cause processing to be delayed. Applications received by January 1 are assured of full consideration for that year. Admission on a conditional basis is a possibility in rare, special cases, even though application materials are incomplete. Please contact the department for additional information.

2. Application Fee. A \$50.00 US currency non-refundable application fee is required with the application form. An application will not be forwarded to the department until this fee is paid. A check or money order should be made payable to the "University of Louisville."

3. Transcripts. Applicants for admission to a degree program must submit an official transcript from each college attended. All University of Louisville transcripts will automatically be submitted with completion of an application. All applications

are considered on an individual basis. Normally, a successful applicant will have an undergraduate GPA of 3.00 or higher and will have successfully completed sufficient coursework in basic biology, chemistry and mathematics.

4. Test Scores. Applicants normally must take the general section of the Graduate Record Examination (GRE). There is no absolute cutoff score for acceptance. Each case is decided on the totality of its merits. At the discretion of the department, MCAT or other entrance examinations scores may be accepted in place of the GRE. Information can be obtained from:

- University of Louisville Testing Center, or
- Graduate Record Examination Educational Testing Service Box 955 Princeton, NJ 08541, or
- www.gre.org/

The GRE Advanced Test in a discipline is not required, but if available will be used in admissions and placement decisions. NOTE: GRE Institution Code is R1838-University of Louisville. The GRE major codes are 0216 – Pharmacology or 0219 – Toxicology.

5. Statement of Experience and Professional Goals. At the time of application, a two-three page typed statement should be sent directly to the Department of Pharmacology and Toxicology. This statement should be used to introduce the student to the faculty of the Department, describing past educational, laboratory and relevant life experiences, as well as outlining professional goals after the degree program. This statement can be sent electronically to jcstat01@gwise.louisville.edu or via mail to:

J. Christopher States, PhD
Director for Program Admissions and Recruitment
Department of Pharmacology and Toxicology
School of Medicine
University of Louisville
Louisville, KY 40292
United States of America

6. English Proficiency. All applicants *for whom English is a second language* must also submit official TOEFL scores of 213 or higher on the computer-based test or 550 or higher on the paper-based test for verification of English proficiency. Students holding a bachelor's or advanced degree from an accredited institution in the United States are exempt from this require-

ment. Information concerning the TOEFL exam can be obtained from: University Testing Center, or Test of English as a Foreign Language PO Box 6151 Princeton, NJ 08541 USA or www.toefl.org The institutional code of UofL for TOEFL is 1838. The TOEFL department code is 30 (other biological sciences).

7. Personal Interview. Whenever possible, a personal interview, either in person or via telephone will be held before final offer and acceptance of a position in the Ph.D. program.

8. Letters of Recommendation. Two letters of recommendation from persons familiar with the applicant's academic work are required. This can be in the form of a letter or may be done using the recommendation form found at graduate.louisville.edu/students/grad-rec.pdf.

9. International Student Applicants. In addition to satisfying the appropriate credential requirements, applicants may be required to provide the following documents.

- Applicants who attended college outside the US must submit verbatim notarized English translations of all academic records and credentials.
- If on a Visa that requires an I-20 or IAP-66, the applicant is required to complete an Application Supplement/Financial Declaration form (graduate.louisville.edu/students/international-financial-declaration.html) and submit appropriate financial documentation.
- A cost estimate is available.

10. Financial Aid. All applicants to the Ph.D. program of the Department of Pharmacology and Toxicology are automatically considered for financial aid upon admission. Typically, such aid consists of a stipend, tuition remission and a health insurance benefit.

11. Residency Policy. Residency status for students is determined in the Office of Graduate Admissions. The status is determined according to the policy on classification of students for fee assessment purposes at state-supported institutions of higher education. Except as provided in the guidelines, it is presumed that a resident has remained in the state in a non-student status for the twelve months immediately preceding the last date for enrollment in the institution.

The domicile of an unemancipated person, as defined in the guidelines, is that of his/her parent.

The domicile of a married person is determined by the provisions of the guidelines independent of the residence of the spouse. Copies of the guidelines and appropriate forms for requesting change of residence classification may be obtained from the Office of Student Services.

Indiana Tuition Reciprocity: The University of Louisville is participating in an Indiana Tuition Reciprocity Program for residents of Clark, Crawford, Floyd, Harrison or Scott Counties who have been admitted directly into an approved graduate program. Eligible participants are required to notify the Admissions Office prior to their first enrollment and the Registrar's Office after their first enrollment of any changes in residency status. [e.g. if they no longer live in one of the eligible counties, or are no longer in an eligible program.] The University reserves the right to further investigate and require documentation of eligibility for tuition reciprocity.

For Military Personnel: If an applicant, spouse or parent (if dependent) is currently stationed in Kentucky on military active duty for one or more years, please attach a copy of the military orders, a lease or mortgage showing Kentucky address and a military dependent identification card if appropriate. If the applicant is a Kentucky resident but has been in the military and has been recently discharged, please send a copy of the military discharge papers (DD-214).

International Students on Immigrant/ Permanent Resident Status: If currently on an immigrant/ permanent resident status, it will be necessary to submit a copy of an immigration/ permanent resident card, both sides, for review of possible residency classification for tuition purposes.

The University of Louisville reserves the right to change programs of study, academic requirements, fees, schedules of courses, the announced academic calendar and deadlines without prior notice.

Curriculum

AY1 - Fall			
Crse	Hrs	Title	Co-Curricular Requirements
BIOC 645	4	Biochemistry I	Diagnostic Exam

PHTX 660	4	Principles of Drug and Chemical Action	Receive research descriptions from mentors Meet to discuss
PHTX 672/ PHTX 673	1 + 1	Research Methods in Pharmacology and Toxicology I & II	Rotation selection by August 15
PHTX 619	2	Research in Pharmacology [grade assigned by Grad Committee]	Rotation 1 – Report and lab book Rotation 2 – Report and lab book
Semester Total: 12			Qualifying Exam I.A
Mentor Selection by end of semester is ideal			
AY1 - Spring			
PHTX 655	2	Neuropharmacology	Expectation of full time laboratory participation when not in classroom
BIOC 647	4	Biochemistry II	
MBIO 667	3	Cell Biology	
PHTX 674/ PHTX 675	1 + 1	Research Methods in Pharmacology and Toxicology III & IV	
PHTX 619	1	Research in Pharmacology [grade assigned by Grad Committee]	

PHTX 606	1	Pharmacology & Toxicology Seminar	
BIOC 603	1	Ethics	Qualifying Exam I.B
Semester Total: 14			With mentor, develop and submit individual curriculum for approval
AY1 - Summer			
PHTX 619	6	Research in Pharmacology [grade assigned by Grad Committee]	Research – semester report and lab book
Semester Total: 6			
AY2 - Fall			
PHTX 625	2	Scientific Writing	With mentor, create Dissertation Committee, have approved
PHTX 658	1	Selective Toxicity and Chemotherapeutics	Expectation of participation in regional forum (e.g. Research! Louisville, SOT)
PHTX 656	2	Cardiovascular and Renal Pharmacology	
PHTX 657	2	Endocrine and Metabolic Pharmacology	
PHTX 619	1	Research in Pharmacology [grade assigned by Grad Committee]	Submission of outline/draft of research plan as research report

PHTX 606	1	Pharmacology & Toxicology Seminar	
	3	Approved Elective	Qualifying Exam I.C
Semester Total: 12			
AY2 - Spring			
PHTX 619	5	Research in Pharmacology [grade assigned by Grad Committee]	Qualifying Exam II – Research Plan as Grant Proposal (Due April 1)
PHTX 606	1	Pharmacology & Toxicology Seminar	
	6	Approved Electives*	
Semester Total: 12			Defense of Proposal
Promotion to Candidacy			Expectation of submission of abstract to national or international meeting by end of AY2
AY3-AY5 Research followed by Presentation and Defense of Doctoral Dissertation			
TOTAL HOURS: 54 hrs [38 classroom + 16 research/seminar/tutorial/lab]			

Each year, candidates will present research finding and progress report to department. Dissertation committee will report concerning progress. Expectation of annual national / international presentation.

Electives

If appropriate, candidates may take elective courses for enrichment.

Example Electives:

- Immunology (from Med Core)
- Pathology (from Med Core)
- Adv Eukaryotic Genetics
- Molecular Biology

- Molecular Toxicology
- Protein Structure & Function
- Intro Immunology
- Molecular Microbiology
- Integrated Syst. Physiology
- Molecular Neuroscience

Departmental Faculty

George R. Aronoff

Professor
Professor of Medicine

Gavin E. Arteel

Associate Professor

Shirish Barve

Professor
Professor of Medicine

Frederick W. Benz

Professor

Aruni Bhatnagar

Professor
Professor of Medicine

Haribabu Bodduluri

Professor
Professor of Microbiology & Immunology

Jian Cai

Assistant Professor

Theresa S. Chen

Professor

Jason A. Chesney

Assistant Professor
Assistant Professor of Medicine

Keith R. Davis

Professor

John W. Eaton

Professor
Professor of Medicine

Paul N. Epstein

Professor
Professor of Pediatrics

Teresa Whei-Mei Fan

Associate Professor
Associate Professor of Chemistry

Richard E. Goldstein

Professor
Professor of Surgery

David Gozal

Professor
Professor of Pediatrics

Evelyne Gozal

Associate Professor
Associate Professor of Pediatrics

Ramesh C. Gupta

Professor

Theo Hagg

Professor
Professor of Neurological Surgery

David W. Hein

Professor
Chair

Michal Hetman

Assistant Professor
Assistant Professor of Neurological Surgery

Harrell. E. Hurst

Professor

Y. James Kang

Professor
Professor of Medicine

Mary J. Kennedy

Assistant Professor
Assistant Professor of Pediatrics

LaCreis R. Kidd

Assistant Professor

Chi Li

Assistant Professor
Assistant Professor of Medicine

Irene Litvan

Professor
Raymond Lee Leiby Professor in Parkinson's
Disease Research

Manuel Martinez

Professor
Professor of Medicine
Executive Vice President for Research

Craig J. McClain

Professor
Professor of Medicine

W. Glenn McGregor

Professor

Kelly M. McMasters

Professor
Professor of Surgery

Donald M. Miller

Professor
Professor of Medicine

Steven R. Myers

Associate Professor

Donald E. Nerland

Professor

Chin Ng

Associate Professor
Associate Professor of Radiology

Kenneth E. Palmer

Associate Professor

William M. Pierce, Jr.

Professor
Vice Chair for Graduate Education

M. Michele Pisano

Professor
Professor, Birth Defects Center

George C. Rodgers

Professor
Professor of Pediatrics

Peter P. Rowell

Professor

Uma Sankar

Assistant Professor

Zhao-Hui Song

Associate Professor

J. Christopher States

Professor

Janice E. Sullivan

Professor
Professor of Pediatrics

David J. Tollerud

Professor
Professor of Environmental & Occupational
Health

Leonard C. Waite

Professor

Yang Wang

Associate Professor
Associate Professor of Pediatrics

Brian (Binks) Wattenberg

Associate Professor
Associate Professor of Medicine

Walter M. Williams

Professor

Hong Ye

Assistant Professor
Assistant Professor of Medicine

Wolfgang Zacharias

Professor
Professor of Medicine

Wayne S. Zundel

Assistant Professor
Assistant Professor of Radiation Oncology

Michael E. Brier

Professor
Professor of Medicine

Lu Cai

Assistant Professor
Assistant Professor of Medicine

Daniel J. Conklin

Assistant Professor
Assistant Professor of Medicine

David A. Scott

Associate Professor
Associate Professor of Periodontics,
Endodontics and Dental Hygiene

John L. Wong

Professor
Professor of Chemistry

William W. Young

Professor
Professor, Birth Defects Center

Master of Science in Physiology and Biophysics

Major: PHZB

Degree Awarded: M.S.

Unit: GM

Program Webpage: louisville.edu/medschool/physiology/

Program Information

The Department of Physiology and Biophysics offers advanced training which leads to the degree of Masters of Science in Physiology and Biophysics. The department provides each student with a wide selection of possible research and graduate education opportunities to give

broad-based knowledge and experience in Physiology.

Successful completion of our departmental Masters of Science graduate program can provide several career options:

- to develop competence in directed research and to develop a good general knowledge of physiology.
- to prepare for advanced technical positions in industry, government and university research laboratories.
- to explore the possibility of a future career as an independent scientist in medically-related research.

Admission Requirements

The requirements for admission are :

1. B.A., B.S. or an equivalent degree.
2. An overall grade point average of 2.8 or higher on a scale of 4.0 (A=4, B=3, etc.).
3. Graduate Record Examination (GRE) scores which average at the 50th percentile or higher in verbal, quantitative and analytical sections. Acceptance may be granted on the basis of the Medical College Admissions Test (MCAT) scores or equivalent.
4. In the case of a foreign applicant from a non-English speaking country, the applicant must achieve a TOEFL examination score of 550 (paper) or 213 (computerized).

Applications are requested to be completed by July 1st (of each calendar year).

Submit all components directly to:

**Office of Graduate Admissions
University of Louisville
Houchens Building, Suite 105
Louisville, KY 40292**

Courses

The Department offers a variety of graduate courses including two semesters of systemic human physiology as well as an exciting seminar series and special topics courses.

Tuition

Tuition information is provided by the Bursar and is found at: louisville.edu/vpf/bursar/student/tuition.htm.

Financial Aid

No departmental financial aid is available for M.S. students.

Financial Aid information in the form of loans provided by the University can be found within the financial aid website located at: louisville.edu/student/services/fin-aid/.

Research Facilities

All faculty members have excellent research facilities equipped with state-of-the-art equipment. Major items of available research equipment include intravital and fluorescent microscopes, computer data acquisition systems, image enhancement systems, cellular and molecular core facilities and a state-of-the-art instrumentation laboratory. In addition, within the Health Science Center complex, the department has access to cold rooms, constant temperature rooms, liquid scintillation counters, a photography laboratory, a machine shop, and a state-of-the-art laboratory animal research facility that is AALAC approved. The Kornhauser Library located on the Health Science Center campus contains the most current physiology and medical journals as well as an extensive collection of current books and monographs.

The University of Louisville dates back to 1798 and the Medical School is one of the oldest in the United States. The Health Sciences Center includes Schools of Medicine, Dentistry, Nursing and Public Health, the University Hospital, Regional Cancer Center, the Ambulatory Care Center and the Eye Research Institute. A number of nearby hospitals are also affiliated with the Health Sciences Center.

The Department of Physiology and Biophysics is located in a 14-story high-rise building which is devoted to basic science research and teaching. The Department has modern, well equipped laboratories specifically designed for physiological research. There are currently 21 faculty in the Department. In addition, the department has many joint, associate and adjunct faculty who regularly contribute in the research and teaching endeavors of the department.

Curriculum

At least 30 semester hours beyond the baccalaureate degree are required for the degree of Masters of Science and at least 24 credit hours must have been earned at the University of Louisville. A maximum of 12 semester hours of this requirement may be credited from post-baccalaureate work in other professional or graduate degree programs by a special request.

Minimum course requirements include:

- Systemic Physiology I and II (PHZB 605 and 606) or equivalent
- Graduate Biochemistry (BIOC 645 and 647) or equivalent
- Physiological Methods (PHZB 625)
- Seminars in Physiology (PHZB 617)
- Research (PHZB 619)

A typical Master's Program would be:

First Semester (Fall)

- Systemic Physiology I (PHZB 605, 4 cr)
- Graduate Biochemistry I (BIOC 645, 4 cr)
- Seminars in Physiology (PHZB 617.01, 2 cr)
- Physiological Methods (PHZB 625, 3 cr)
- Research (PHZB 619, 1 cr)

Second Semester (Spring)

- Systemic Physiology II (PHZB 606, 4 cr)
- Graduate Biochemistry II (BIOC 647, 4 cr)
- Seminars in Physiology (PHZB 617.01, 1 cr)
- Research (PHZB 619, 1 cr)

Third Semester (2nd Fall)

- Research (7 cr)

Fourth Semester (2nd Spring)

- Research (MAST)
- Degree Completion
- M.S. Final Exam (Formal Presentation)

Doctor of Philosophy in Physiology and Biophysics

Major: PHZB

Degree Awarded: Ph.D.

Unit: GM

Program Webpage: louisville.edu/medschool/physiology/

Program Information

The Department of Physiology and Biophysics is a member of the Graduate School of the University of Louisville. As such, one of the goals of the Department is to provide students with advanced training that leads to the Ph.D. Degree in Physiology and Biophysics. The research interests of

the department are quite broad to provide each student with a wide selection of possible research and graduate education opportunities. Our doctoral graduate program is designed primarily to prepare students for a research career in basic and applied physiology.

The Ph.D. degree is designed for the student pursuing a professional life that involves original, independent research and who desires knowledge that will permit competent advanced teaching in a physiology area. The Ph.D. degree requires that the student reaches a high level of creativity and expertise and therefore, mere completion of a prescribed number of courses is not adequate for receipt of the doctoral degree.

Typically, a student with a bachelor's degree will require about four years to complete the Ph.D. program. However, the program does not have a fixed time for the awarding of the Ph.D. degree and completion would obviously depend on the progress of the individual student.

Admission Requirements

The requirements for admission are:

1. A genuine interest in graduate work and the desire for a significant research career in the Biomedical Sciences.
2. B.A., B.S. or an equivalent degree.
3. A cumulative undergraduate grade point average of 3.0 or higher on a scale of 4.0 (A=4, B=3, etc.).
4. Graduate Record Examination (GRE) scores which average at the 50th percentile or higher in verbal, quantitative and analytical sections. Conditional acceptance may be granted on the basis of the Medical College Admissions Test (MCAT) scores or equivalent until the GRE is completed.
5. In the case of a foreign applicant from a non-English speaking country, the applicant must achieve a TOEFL examination score of 550 (paper) or 213 (computerized), with the exam taken in the United States.
6. Specific course prerequisites include: Biology (2 sem), Chemistry (2 sem), Organic Chemistry (2 sem) and Physics.
7. Under special circumstances, deficiencies and prerequisites may be waived or removed during the first year of training.

Application Procedures

Applications will be reviewed beginning January 5th (of each calendar year). Stipend support is awarded based on each application's merit once the application is completed. Therefore, stipends are awarded on an approved and accepted, first-come, first-served basis. It behooves the applicant to have all materials submitted by the above date of January 10th of each calendar year.

Submit all components directly to:

**Office of Graduate Admission
University of Louisville
Houchens Building , Suite 105
Louisville KY 40292**

Courses

The Department offers a variety of graduate courses including an introductory human physiology, advanced cardiovascular and integrated systemic physiology as well as an exciting seminar series and special topics courses.

Financial Aid

Students admitted to the Department of Physiology and Biophysics Ph.D. program are supported by financial aid with a fellowship or an assistantship. These students are given a stipend, full tuition remission, and health insurance for up to five years.

Research Facilities

All faculty members have excellent research facilities equipped with state-of-the-art equipment. Major items of available research equipment include intravital and fluorescent microscopes, computer data acquisition systems, image enhancement systems, cellular and molecular core facilities and a state-of-the-art instrumentation laboratory. In addition, within the Health Science Center complex, the department has access to cold rooms, constant temperature rooms, liquid scintillation counters, a photography laboratory, a machine shop, and a state-of-the-art laboratory animal research facility that is AALAC approved. The Kornhauser Library located on the Health Science Center campus contains the most current physiology and medical journals as well as an extensive collection of current books and monographs.

The University of Louisville dates back to 1798 and the Medical School is one of the oldest in the United States. The Health Sciences Center includes the Schools of Medicine, Dentistry, Nursing, and Public Health, the University Hospi-

tal, Regional Cancer Center, the Ambulatory Care Center, and the Eye Research Institute. A number of nearby hospitals are also affiliated with the Health Sciences Center.

The Department of Physiology and Biophysics is located in a 14-story high-rise building which is devoted to basic science research and teaching. The department has modern, well-equipped laboratories specifically designed for physiological research. There are currently 21 faculty in the Department . In addition, the department has many joint, associate and adjunct faculty who regularly contribute in the research and teaching endeavors of the department.

Curriculum

The Ph.D. degree is designed for a student who is pursuing a professional life that involves original independent research and desires knowledge that will permit competent advanced teaching in a physiology area. The Ph.D. degree requires that the student reaches a high level of creativity and expertise, therefore completion of a prescribed number of courses is not adequate for receipt of the doctoral degree.

At least three years of contiguous enrollment in approved courses beyond the baccalaureate degree is required for the Ph.D. degree. A maximum of 6 semester hours of this requirement may be credited for post-baccalaureate work in other professional or graduate degree programs. A minimum of two contiguous semesters in which the student is registered full-time shall be taken in residency at the University of Louisville. By the end of the program, the student must demonstrate the ability to conduct independent research.

The required program of academic study must include (if not completed with a grade of B or better prior to admission to the Department) the following courses:

- Systemic Physiology I and II (PHZB 605 and 606) or equivalent
- Graduate Biochemistry (BIOC 645 and 647) or equivalent
- Advanced Physiology (PHZB 611)
- Cell Biology (MBIO 667) or equivalent
- Experimental Physiology Methods (PHZB 625)
- Integrated Systemic Physiology (PHZB 609)
- Seminar in Physiology (PHZB 617.01, 617.02) four semesters

- Statistics of Physiology (616.02)

A typical Doctoral Program for the Traditional Student would be:

First Semester (1st Fall)

- Systemic Physiology I (PHZB 605, 4 cr)
- Graduate Biochemistry I (BIOC 645, 4 cr)
- Seminars in Physiology (PHZB 617.01, 1 cr)
- Physiological Methods (PHZB 625, 3 cr)

Second Semester (1st Spring)

- Systemic Physiology II (PHZB 606, 4 cr)
- Graduate Biochemistry II (BIOC 647, 4 cr)
- Cell Biology (MBIO 667, 3 cr)
- Seminars in Physiology (PHZB 617.01, 1 cr)

Third Semester (1st Summer)

- Research (PHZB 619, 6 cr)

Fourth Semester (2nd Fall)

- Advanced Human Physiology (PHZB 611, 4 cr)
- Research (PHZB 619, 5 cr)
- Seminar (PHZB 617.02, 1 cr)

Fifth Semester (2nd Spring)

- Research (PHY 619, 3 cr)
- Integrated Systemic Physiology (PHZB 609, 3 cr)
- Statistics (PHZB 616.02, 3 cr)
- M.S. Final Exam (Ph.D. Qualifying Exam)

Sixth Semester (2nd Summer)

- Research (DOCT)

Seventh Semester (3rd Fall)

- Research (DOCT)

Eighth Semester (3rd Spring)

- Research (DOCT)

Ninth Semester (3rd Summer)

- Research (DOCT)

Tenth Semester (4th Fall)

- Research (DOCT)

Eleventh Semester (4th Spring)

- Research (DOCT)
- Dissertation / Defense

The program requires that a student, upon completion of the minimum course requirements (usually at the end of the second year), must take and pass the Ph.D. Qualifying Examination. Graduation requirements are that the student maintain at least a B average and produce an

acceptable dissertation based on original research.

Departmental Faculty

Irving G. Joshua

Professor

Chair

William B. Wead

Associate Professor

Vice-Chair

Gary L. Anderson

Professor

Stanley D' Souza

Professor

Patrick D. Harris

Professor

Frederick N. Miller

Professor

John C. Passmore

Professor

Dale A. Schuschke

Professor

Richard W. Stremel

Professor

Associate Dean of the Graduate School

Suresh C. Tyagi

Professor

David L. Wiegman

Professor

Ayotunde S. O. Adeagbo

Associate Professor

William D. Ehringer

Associate Professor

Jeff C. Falcone

Associate Professor

John T. Fleming

Associate Professor

David Lominadze

Associate Professor

Claudio Maldonado

Associate Professor

Gustavio Perez-Abadia

Assistant Professor

El Rasheid Zakaria

Assistant Professor

James C. Moore

Emeritus/Emerita

X. J. Musacchia
Emeritus/Emerita

Joint Faculty

Roberto Bolli, M.D.
Professor, Medicine, Cardiology

Richard Neal Garrison, M.D.
Professor, Surgery

Sham Kakar, Ph.D.
Professor, Medicine, Cardiology

Sumanth Prabhu, M.D.
Professor, Medicine, Cardiology

Associate Faculty

Robert Acland, M.D.
Professor, Surgery, Plastic & Reconstructive

Michael J. Edwards, M.D.
Associate Professor, Surgery, Surgical Oncology

Paul Epstein, Ph.D.
Pediatrics

Ronald Fell, Ph.D.
Professor and Chair, Biology

Susan Galandiuk, M.D.
Professor, Surgery

Andrea Gobin, Ph.D.
Assistant Professor, Bioengineering

Evelyne, Gozal, Ph.D.
Associate Professor, Pediatrics

Suzanne Ildstadt, M.D.
Professor, Surgery, Director Institute of Cellular Therapeutics

Steven P. Jones, Ph.D.
Assistant Professor, Medicine, Institute of Molecular Cardiology

Y. James Kang, M.D.
Professor, Medicine

Eleanor D. Lederer, M.D.
Associate Professor, Kidney Disease Program

Kenneth N. Litwak Ph.D., D.V.M.
Assistant Professor, Surgery

Nicholas Mellen, Ph.D.
Assistant Professor, Pediatrics

Dennis, Molfese, Ph.D.
Professor, Molecular, Cellular & Craniofacial Biology

Jennifer Olive, Ph.D.
Assistant Professor, Health and Sport Sciences

D. Gregg Rokosh, Ph.D.
Assistant Professor, Medicine, Cardiology

Jerry Yu, Ph.D.
Associate Professor, Pulmonary Medicine

Adjunct

Zixi (Jack) Cheng, Ph.D.
Assistant Professor, Biomolecular Science Center
University of Central Florida

Patricia Gillette, Ph.D.
Associate Professor, Physical Therapy
Bellarmine University

Alex Lentsch, Ph.D.
Associate Professor, Surgery
University of Cincinnati

Andreas S. Luebbe, M.D., Ph.D.
Associate Professor, Palliative Care and Symptom
Bad Lisspring, Germany

Peipei Ping, Ph.D.
Associate Professor, Cardiology
UCLA

Dirk Slaaf, Ph.D.
Professor and Chair
Biophysics, Maastricht, Netherlands

Nancy Urbscheit, Ph.D.
Professor, Physical Therapy
Bellarmine University

School of Music

Christopher P. Doane, Ph.D., Dean

The School of Music offers the following masters programs through the Graduate School::

- Music Composition - M.M.
- Music Education - M.M.Ed.
- Music History and Literature - M.M.
- Music Performance - M.M.
- Music Theory - M.M.

Master of Music in Music Composition

Major: COMP

Degree Awarded: M.M.

Unit: GU

Program Webpage: louisville.edu/music/

Program Information

The School of Music offers training toward two specific master's degrees: Master of Music and Master of Music Education. Major subjects in the Master of Music curriculum are music performance, music history, or theory/composition. The Master of Music Education program allows an applied music minor in an instrument, voice, or conducting. The music history and theory divisions offer basic instruction for all students at the undergraduate level as well as advanced study for those wishing to pursue graduate work in these fields.

Admission Requirements

In addition to the general requirements for admission to the Graduate School, the following specific requirements must be met:

- To be admitted to the Graduate Division of the School of Music, the applicant should possess a baccalaureate degree in the area (or an equivalent one) to be pursued in advanced studies.

- Applicants must meet the specific entrance requirements established by the major department.
- Applicants are required to take entrance examinations in music history, literature, and theory. Students may be required to take, without credit, courses in which they are deficient as indicated by the examination results.
- All full-time students are required to enroll in Bibliography and Research Methods (MUS 607), within their first two semesters of graduate work. Part-time students must enroll in MUS 607 before registering for more than ten (10) hours of graduate work.
- Graduate applicants to the School of Music must submit GRE scores with the application form.

The School of Music provides each student with guidelines to assist in preparation for the entrance exams and a copy of the *Handbook for Graduate Music Students*. Students are expected to read the School of Music handbook and the University *Graduate Catalog* and to follow regulations and procedures regarding their specific degree program at the University of Louisville. In particular, students are advised to observe the request for submitting GRE scores for admission to the Graduate School. Graduate study in music begins with the preparation for the entrance examinations in Music History and Music Theory and concludes with the graduate oral exam that is taken when all requirements have been met.

General Information

In addition to the general degree requirements described in the General Information section of the *Graduate Catalog*, the following degree requirements must be met:

- The student shall obtain permission from the Graduate Division Committee to begin work at the graduate level.
- All students must qualify for non-conditional status no later than the end of the second semester of full-time residence, or before eighteen (18) semester hours have been completed.

To qualify for degree candidacy the student must have:

- Proof that all deficiencies in music history, literature and theory have been removed,

- An academic record with a minimum of nine (9) hours of graduate credit with a grade point average of 3.0,
- An inclusive program of studies fulfilling the requirements of a master's curriculum, approved by the major professor and the departmental chairperson,
- In the case of a program requiring a master's thesis or professional paper, a proposed topic for the thesis or paper and a proposed membership for a reading committee to provide guidance during the writing of the thesis or paper. [See details below]
- As per the Graduate School requirements, at least half of the required credits for the master's degree must be at the 600 level, excluding thesis, internships, or practicums.
- In order to be in good standing, graduate students must have a cumulative 3.0 grade point average. A student must be in good standing in order to graduate. No more than six (6) hours with any "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted in a major subject. A student whose cumulative GPA falls below 3.0 will be placed on probation by the Graduate School. Students are ordinarily not permitted to continue on probation for more than one semester.
- The School of Music does not accept transfer grades below a "B". No credit is transferred for applied music. Advanced standing for applied music may be awarded at a jury. Music history and theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Ensemble credits appropriate to the new degree program may be considered for transfer, but not to exceed one per semester.
- Degree candidates in performance are required to give a public recital, normally during the candidate's final semester of study. Preparation and presentation of the recital shall follow the guidelines in the *Handbook for Graduate Music Students*.
- Degree candidates in music history or theory and composition are required to submit a thesis or major composition for evaluation by the reading committee. The M.M. Thesis in music composition takes the form of a musical score. Apart from considerations such as page size and layout, composition theses conform to the guidelines issued by the Graduate School. The deadline for formal approval of M.M. composition theses is the last day of classes in the semester in which the degree is expected to be conferred. Approval signatures of all members of the thesis committee are required prior to the final graduate oral examination.
- All students are required to pass an oral examination given by the Graduate Committee before the end of the semester in which the degree is to be granted. It may cover all areas of endeavor undertaken by the student in his graduate program or believed essential to the student's background.
- A candidate who fails the oral examination at the end of a semester may not be given a second one before the regular time for such an examination at the end of the next semester or summer session. A candidate who fails in the second oral examination shall not be granted the degree of M.M. or M.M.Ed. from this university.
- In comparing degree programs, please note that among universities, many times ensembles are required, but without credit. Our required ensembles are included in the number of required degree hours.
- Part-time students (with the exception of those in M.M.Ed. degree programs) must participate in one ensemble for each 18 hours of course work completed. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.
- Transfer of more than 6 hours from a degree program of an accredited institution in which a degree has been previously earned will only be granted on recommendation of the student's division and approval of the Director of Graduate Studies in consultation with the Graduate Committee. The request will be considered providing the additional hours have not been earned by extension and that the University of Louisville minimum residency requirements have been met as stated in the *Graduate Catalog*.
- Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested with the restriction that the minimum residency requirement be maintained in compliance with the *Graduate Catalog*.
- Hours earned beyond the minimum in any one curricular area apply only to that area and can-

not be divided in order to satisfy a requirement in another area.

Curriculum

Prerequisites

1. Bachelor of Music degree or equivalent.
2. Demonstration, by examination, of skills and capacities in the following fields:
 - written, aural, and keyboard harmony;
 - melodic, harmonic, and rhythmic dictation;
 - elementary counterpoint; and
 - history and literature of music, and analytic understanding of musical forms and genres.
3. Evidence of preparation for advanced work in the area, as follows:
 - Applicants for the track in Music Composition must submit original works to indicate ability and technical facility in the field of composition. Students should also have a thorough and practical knowledge of piano as well as a thorough knowledge in the areas of string, brass, woodwind, and percussion instruments.
4. GRE scores.

Core Curriculum

• Music History Review (MUS 500)*	0
• Music Theory Review (MUS 400)*	0
• Bibliography and Research Methods (MUS 607)	3
• Music History Seminar (600 level)	3
• Music Theory**	4
• Additional Music Theory or Music History Seminar (500 or 600 level)	3
• Analysis (MUS 647, 648, 651, or 653)	3
• Ensemble (3 semesters of major ensemble)	3
• Thesis	4
Total	23

Other Requirements

All students must pass an oral examination after all course work is completed.

Music Composition Track

• Advanced Composition (MUS 643, 644, 645)***	9
---	---

• Graduate Composition Seminar (MUS 669 - Co-requisite for MUS 643-645)	0
• Applied Music (minimum of 2 semesters; may include Conducting, but excludes additional semesters of Applied Composition)	4
Total	13

Minimum Total **36**

Notes:

* These courses may be satisfied by passing the entrance examinations in these areas.

** Students should take Digital Techniques I & II (MUS 667-668).

***Graduate composition majors are required to present public performances of their works within at least two semesters of their enrollment, for a total of at least 20 minutes of music. The graduate thesis will not be granted final approval until this requirement is met.

Master of Music Education

Major: MUED

Degree Awarded: M.M.Ed.

Unit: GU

Program Webpage: louisville.edu/music/

Program Information

The School of Music offers training toward two specific master's degrees: Master of Music and Master of Music Education. Major subjects in the Master of Music curriculum are music performance, music history, or theory/composition. The Master of Music Education program allows an applied music minor in an instrument, voice, or conducting. The music history and theory divisions offer basic instruction of all students at the undergraduate level as well as advanced study for those wishing to pursue graduate work in these fields.

Admission Requirements

In addition to the general requirements for admission to the Graduate School, the following specific requirements must be met:

- To be admitted to the Graduate Division of the School of Music, the applicant should possess a baccalaureate degree in the area (or an

equivalent one) to be pursued in advanced studies.

- Applicants must meet the specific entrance requirements established by the major department.
- Applicants are required to take entrance examinations in music history, literature, and theory. Students may be required to take, without credit, courses in which they are deficient as indicated by the examination results.
- All full-time students are required to enroll in Bibliography and Research Methods (MUS 607), within their first two semesters of graduate work. Part-time students must enroll in MUS 607 before registering for more than ten (10) hours of graduate work.
- Graduate applicants to the School of Music must submit GRE scores with the application form.

The School of Music provides each student with guidelines to assist in preparation for the entrance exams and a copy of the *Handbook for Graduate Music Students*. Students are expected to read the School of Music handbook and the University *Graduate Catalog* and to follow regulations and procedures regarding their specific degree program at the University of Louisville. In particular, students are advised to observe the request for submitting GRE scores for admission to the Graduate School. Graduate study in music begins with the preparation for the entrance examinations in Music History and Music Theory and concludes with the graduate oral exam that is taken when all requirements have been met.

General Information

In addition to the general degree requirements described in the General Information section of the *Graduate Catalog*, the following degree requirements must be met:

- The student shall obtain permission from the Graduate Division Committee to begin work at the graduate level.
- All students must qualify for non-conditional status no later than the end of the second semester of full-time residence, or before eighteen (18) semester hours have been completed.

To qualify for degree candidacy the student must have:

- Proof that all deficiencies in music history, literature and theory have been removed,
- An academic record with a minimum of nine (9) hours of graduate credit with a grade point average of 3.0,
- An inclusive program of studies fulfilling the requirements of a master's curriculum, approved by the major professor and the departmental chairperson;
- In the case of a program requiring a master's thesis or professional paper, a proposed topic for the thesis or paper and a proposed membership for a reading committee to provide guidance during the writing of the thesis or paper. [See details below]
- As per the Graduate School requirements, at least half of the required credits for the master's degree must be at the 600 level, excluding thesis, internships, or practicums.
- In order to be in good standing, graduate students must have a cumulative 3.0 grade point average. A student must be in good standing in order to graduate. No more than six (6) hours with any "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted in a major subject. A student whose cumulative GPA falls below 3.0 will be placed on probation by the Graduate School. Students are ordinarily not permitted to continue on probation for more than one semester.
- The School of Music does not accept transfer grades below a "B". No credit is transferred for applied music. Advanced standing for applied music may be awarded at a jury. Music history and theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Ensemble credits appropriate to the new degree program may be considered for transfer, but not to exceed one per semester.
- Degree candidates in performance are required to give a public recital, normally during the candidate's final semester of study. Preparation and presentation of the recital shall follow the guidelines in the *Handbook for Graduate Music Students*.
- Degree candidates in music history or theory and composition are required to submit a thesis or major composition for evaluation by the reading committee. The M.M. Thesis in music composition takes the form of a musical score. Apart from considerations such as page size

and layout, composition theses conform to the guidelines issued by the Graduate School. The deadline for formal approval of M.M. composition theses is the last day of classes in the semester in which the degree is expected to be conferred. Approval signatures of all members of the thesis committee are required prior to the final graduate oral examination.

- All students are required to pass an oral examination given by the Graduate Committee before the end of the semester in which the degree is to be granted. It may cover all areas of endeavor undertaken by the student in his graduate program or believed essential to the student's background.
- A candidate who fails the oral examination at the end of a semester may not be given a second one before the regular time for such an examination at the end of the next semester or summer session. A candidate who fails in the second oral examination shall not be granted the degree of M.M. or M.M.Ed. from this university.
- In comparing degree programs, please note that among universities, many times ensembles are required, but without credit. Our required ensembles are included in the number of required degree hours.
- Part-time students (with the exception of those in M.M.Ed. degree programs) must participate in one ensemble for each 18 hours of course work completed. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.
- Transfer of more than 6 hours from a degree program of an accredited institution in which a degree has been previously earned will only be granted on recommendation of the student's division and approval of the Director of Graduate Studies in consultation with the Graduate Committee. The request will be considered provided that the additional hours have not been earned by extension and that the University of Louisville minimum residency requirements have been met as stated in the *Graduate Catalog*.
- Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested with the restriction that the minimum residency requirement be maintained in compliance with the *Graduate Catalog*.

- Hours earned beyond the minimum in any one curricular area apply only to that area and cannot be divided in order to satisfy a requirement in another area.

Curriculum

Prerequisites

1. Bachelor of Music degree or equivalent.
2. Classroom teaching experience (exclusive of practice teaching and prior to, or concurrent with, graduate study),
3. Demonstration, by examination, of skills and capacities in the following fields:
 - written, aural, and keyboard harmony;
 - melodic, harmonic, and rhythmic dictation;
 - elementary counterpoint; and
 - history and literature of music, and analytic understanding of musical forms and genres.
4. GRE scores.

Core Curriculum

• Music History Review (MUS 500)*	0
• Music Theory Review (MUS 400)*	0
• Bibliography and Research Methods (MUS 607)	3
• Qualitative Research Methods (MUED 628)	2
• Foundations of Music Education (MUED 629)	2
• Quantitative Research Methods (MUED 630)	2
• Learning Theories in Music Education (MUED 639)	2
• Music Education and Related Courses	5-6
• Applied Music (chosen from major or minor performance fields, including Conducting)	4
• Music History (500 or 600 level)	3
• Music Theory (500 or 600 level)	2-3
• Thesis**	4
Minimum Total	30

Other Requirements

It is recommended that full-time M.M.Ed. students enroll in ensembles during their degree program. All students must pass an oral examination after all course work is completed.

Notes:

* These course may be satisfied by passing the entrance examinations in these areas.

** Students are required to prepare either a thesis (4 semester hours of credit) or a professional paper (without credit). In the latter case, 4 hours of coursework will be determined by the student and graduate advisor in order to achieve the 30-hour minimum requirement.

Master of Music in Music History and Literature

Major: MUHM

Degree Awarded: M.M.

Unit: GU

Program Webpage: louisville.edu/music/

Program Information

The School of Music offers training toward two specific master's degrees: Master of Music and Master of Music Education. Major subjects in the Master of Music curriculum are music performance, music history, or theory/composition. The Master of Music Education program allows an applied music minor in an instrument, voice, or conducting. The music history and theory divisions offer basic instruction for all students at the undergraduate level as well as advanced study for those wishing to pursue graduate work in these fields .

Admission Requirements

In addition to the general requirements for admission to the Graduate School, the following specific requirements must be met:

- To be admitted to the Graduate Division of the School of Music, the applicant should possess a baccalaureate degree in the area (or an equivalent one) to be pursued in advanced studies.
- Applicants must meet the specific entrance requirements established by the major department.
- Applicants are required to take entrance examinations in music history, literature, and theory. Students may be required to take, without credit, courses in which they are deficient as indicated by the examination results.
- All full-time students are required to enroll in Bibliography and Research Methods (MUS

607), within their first two semesters of graduate work. Part-time students must enroll in MUS 607 before registering for more than ten (10) hours of graduate work.

- Graduate applicants to the School of Music must submit GRE scores with the application form.

The School of Music provides each student with guidelines to assist in preparation for the entrance exams and a copy of the *Handbook for Graduate Music Students*. Students are expected to read the School of Music handbook and the *University Graduate Catalog* and to follow regulations and procedures regarding their specific degree program at the University of Louisville. In particular, students are advised to observe the request for submitting GRE scores for admission to the Graduate School. Graduate study in music begins with the preparation for the entrance examinations in Music History and Music Theory and concludes with the graduate oral exam that is taken when all requirements have been met.

General Information

In addition to the general degree requirements described in the General Information section of the *Graduate Catalog*, the following degree requirements must be met:

- The student shall obtain permission from the Graduate Division Committee to begin work at the graduate level.
- All students must qualify for non-conditional status no later than the end of the second semester of full-time residence, or before eighteen (18) semester hours have been completed.

To qualify for degree candidacy the student must have:

- Proof that all deficiencies in music history, literature and theory have been removed.
- An academic record with a minimum of nine (9) hours of graduate credit with a grade point average of 3.0.
- An inclusive program of studies fulfilling the requirements of a master's curriculum, approved by the major professor and the departmental chairperson.
- In the case of a program requiring a master's thesis or professional paper, a proposed topic for the thesis or paper and a proposed membership for a reading committee to provide

guidance during the writing of the thesis or paper. [See details below]

- As per the Graduate School requirements, at least half of the required credits for the master's degree must be at the 600 level, excluding thesis, internships, or practicums.
- In order to be in good standing, graduate students must have a cumulative 3.0 grade point average. A student must be in good standing in order to graduate. No more than six (6) hours with any "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted in a major subject. A student whose cumulative GPA falls below 3.0 will be placed on probation by the Graduate School. Students are ordinarily not permitted to continue on probation for more than one semester.
- The School of Music does not accept transfer grades below a "B". No credit is transferred for applied music. Advanced standing for applied music may be awarded at a jury. Music history and theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Ensemble credits appropriate to the new degree program may be considered for transfer, but not to exceed one per semester.
- Degree candidates in performance are required to give a public recital, normally during the candidate's final semester of study. Preparation and presentation of the recital shall follow the guidelines in the *Handbook for Graduate Music Students*.
- Degree candidates in music history or theory and composition are required to submit a thesis or major composition for evaluation by the reading committee. The M.M. Thesis in music composition takes the form of a musical score. Apart from considerations such as page size and layout, composition theses conform to the guidelines issued by the Graduate School. The deadline for formal approval of M.M. composition theses is the last day of classes in the semester in which the degree is expected to be conferred. Approval signatures of all members of the thesis committee are required prior to the final graduate oral examination.
- All students are required to pass an oral examination given by the Graduate Committee before the end of the semester in which the degree is to be granted. It may cover all areas of endeavor undertaken by the student in his graduate program or believed essential to the student's background.
- A candidate who fails the oral examination at the end of a semester may not be given a second one before the regular time for such an examination at the end of the next semester or summer session. A candidate who fails in the second oral examination shall not be granted the degree of M.M. or M.M.Ed. from this university.
- In comparing degree programs, please note that among universities, many times ensembles are required, but without credit. Our required ensembles are included in the number of required degree hours.
- Part-time students (with the exception of those in M.M.Ed. degree programs) must participate in one ensemble for each 18 hours of course work completed. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.
- Transfer of more than 6 hours from a degree program of an accredited institution in which a degree has been previously earned will only be granted on recommendation of the student's division and approval of the Director of Graduate Studies in consultation with the Graduate Committee. The request will be considered provided that the additional hours have not been earned by extension and that the University of Louisville minimum residency requirements have been met as stated in the *Graduate Catalog*.
- Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested with the restriction that the minimum residency requirement be maintained in compliance with the *Graduate Catalog*.
- Hours earned beyond the minimum in any one curricular area apply only to that area and cannot be divided in order to satisfy a requirement in another area.

Curriculum

Prerequisites

1. Bachelor of Music degree or equivalent.
2. Demonstration, by examination, of skills and capacities in the following fields:
 - written, aural, and keyboard harmony;
 - melodic, harmonic, and rhythmic dictation;

- elementary counterpoint; and
 - history and literature of music, and analytic understanding of musical forms and genres.
3. Evidence of preparation for advanced work in the area, as follows:
- Applicants for the track in Music History must submit a paper to the Music History faculty demonstrating ability to write efficiently and to do elementary research. In addition, applicants must complete the entrance examination in Music History with an average score of no less than seventy (70) for admission to the Music History curriculum. Before admission to candidacy, students in Music History are required to have a reading ability in one foreign language (preferably German, French, or Italian) demonstrated by examination administered in cooperation with the Department of Classical & Modern Languages (fee \$20.00). The examination must be passed before the student is admitted to candidacy.
4. GRE scores.

Core Curriculum

• Music History Review (MUS 500)*	0
• Music Theory Review (MUS 400)*	0
• Bibliography and Research Methods (MUS 607)	3
• Music History Seminar (600 level)	3
• Music Theory	4
• Additional Music Theory or Music History Seminar (500 or 600 level)	3
• Analysis (MUS 647, 648, 651, or 653)	3
• Ensemble (3 semesters of major ensemble)**	3
• Thesis	4
Total	23

Other Requirements

All students must pass an oral examination after all course work is completed.

Music History and Literature Track

• Music History Seminars (600 level)	6
• Additional Music Theory or Analysis	2
• Music Electives	5
Total.	13
Minimum Total	36

Notes:

* These courses may be satisfied by passing the entrance examinations in these areas.

**The recommended ensembles for the Music History Track include Early Music Ensemble and New Music Ensemble.

Master of Music in Music Performance

Major: MUSP

Degree Awarded: M.M.

Unit: GU

Program Webpage: louisville.edu/music/

Program Information

The School of Music offers training toward two specific master's degrees: Master of Music and Master of Music Education. Major subjects in the Master of Music curriculum are music performance, music history, or theory/composition. The Master of Music Education program allows an applied music minor in an instrument, voice, or conducting. The music history and theory divisions offer basic instruction of all students at the undergraduate level as well as advanced study for those wishing to pursue graduate work in these fields.

Admission Requirements

In addition to the general requirements for admission to the Graduate School, the following specific requirements must be met:

- To be admitted to the Graduate Division of the School of Music, the applicant should possess a baccalaureate degree in the area (or an equivalent one) to be pursued in advanced studies.
- Applicants must meet the specific entrance requirements established by the major department.
- Applicants are required to take entrance examinations in music history, literature, and theory. Students may be required to take, without credit, courses in which they are deficient as indicated by the examination results.
- All full-time students are required to enroll in Bibliography and Research Methods (MUS

607), within their first two semesters of graduate work. Part-time students must enroll in MUS 607 before registering for more than ten (10) hours of graduate work.

- Graduate applicants to the School of Music must submit GRE scores with the application form.

The School of Music provides each student with guidelines to assist in preparation for the entrance exams and a copy of the *Handbook for Graduate Music Students*. Students are expected to read the School of Music handbook and the University *Graduate Catalog* and to follow regulations and procedures regarding their specific degree program at the University of Louisville. In particular, students are advised to observe the request for submitting GRE scores for admission to the Graduate School. Graduate study in music begins with the preparation for the entrance examinations in Music History and Music Theory and concludes with the graduate oral exam that is taken when all requirements have been met.

General Information

In addition to the general degree requirements described in the General Information section of the *Graduate Catalog*, the following degree requirements must be met:

- The student shall obtain permission from the Graduate Division Committee to begin work at the graduate level.
- All students must qualify for non-conditional status no later than the end of the second semester of full-time residence, or before eighteen (18) semester hours have been completed.

To qualify for degree candidacy the student must have:

- Proof that all deficiencies in music history, literature and theory have been removed,
- An academic record with a minimum of nine (9) hours of graduate credit with a grade point average of 3.0,
- An inclusive program of studies fulfilling the requirements of a master's curriculum, approved by the major professor and the departmental chairperson;
- In the case of a program requiring a master's thesis or professional paper, a proposed topic for the thesis or paper and a proposed membership for a reading committee to provide

guidance during the writing of the thesis or paper. [See details below]

- As per the Graduate School requirements, at least half of the required credits for the master's degree must be at the 600 level, excluding thesis, internships, or practicums.
- In order to be in good standing, graduate students must have a cumulative 3.0 grade point average. A student must be in good standing in order to graduate. No more than six (6) hours with any "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted in a major subject. A student whose cumulative GPA falls below 3.0 will be placed on probation by the Graduate School. Students are ordinarily not permitted to continue on probation for more than one semester.
- The School of Music does not accept transfer grades below a "B". No credit is transferred for applied music. Advanced standing for applied music may be awarded at a jury. Music history and theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Ensemble credits appropriate to the new degree program may be considered for transfer, but not to exceed one per semester.
- Degree candidates in performance are required to give a public recital, normally during the candidate's final semester of study. Preparation and presentation of the recital shall follow the guidelines in the *Handbook for Graduate Music Students*.
- Degree candidates in music history or theory and composition are required to submit a thesis or major composition for evaluation by the reading committee. The M.M. Thesis in music composition takes the form of a musical score. Apart from considerations such as page size and layout, composition theses conform to the guidelines issued by the Graduate School. The deadline for formal approval of M.M. composition theses is the last day of classes in the semester in which the degree is expected to be conferred. Approval signatures of all members of the thesis committee are required prior to the final graduate oral examination.
- All students are required to pass an oral examination given by the Graduate Committee before the end of the semester in which the degree is to be granted. It may cover all areas of endeavor undertaken by the student in his

graduate program or believed essential to the student's background.

- A candidate who fails the oral examination at the end of a semester may not be given a second one before the regular time for such an examination at the end of the next semester or summer session. A candidate who fails in the second oral examination shall not be granted the degree of M.M. or M.M.Ed. from this university.
- In comparing degree programs, please note that among universities, many times ensembles are required, but without credit. Our required ensembles are included in the number of required degree hours.
- Part-time students (with the exception of those in M.M.Ed. degree programs) must participate in one ensemble for each 18 hours of course work completed. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.
- Transfer of more than 6 hours from a degree program of an accredited institution in which a degree has been previously earned will only be granted on recommendation of the student's division and approval of the Director of Graduate Studies in consultation with the Graduate Committee. The request will be considered provided that the additional hours have not been earned by extension and that the University of Louisville minimum residency requirements have been met as stated in the *Graduate Catalog*.
- Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested with the restriction that the minimum residency requirement be maintained in compliance with the *Graduate Catalog*.
- Hours earned beyond the minimum in any one curricular area apply only to that area and cannot be divided in order to satisfy a requirement in another area.

Curriculum

Prerequisites

1. Bachelor of Music degree or equivalent.
2. Demonstration, by examination, of skills and capacities in the following fields:
 - written, aural, and keyboard harmony;
 - melodic, harmonic, and rhythmic dictation;

- elementary counterpoint; and
- history and literature of music, and analytic understanding of musical forms and genres.

3. Audition in major field, demonstrating a level equivalent to the completion of a Bachelor of Music in Performance degree. Students intending to major in voice must have a reading knowledge of one foreign language and satisfactory diction in two others.
4. Students in the Concentration in Jazz must demonstrate a level of competency in improvisation, jazz keyboard, jazz theory, and jazz history. Remedial courses are in place to assist students who do not meet these requirements.
5. GRE scores.

Core Curriculum

• Music History Review (MUS 500) *	0
• Music Theory Review (MUS 400) *	0
• Bibliography and Research Methods (MUS 607)	3
• Music History Seminar (500 or 600 level)	3
• Music Theory (500 or 600 level)**	4
• Applied Study (600 level)***	8
• Graduate Recital (MUS 697)****	0
Total	18

Other Requirements

All students must pass an oral examination after all course work is completed.

Notes:

* These courses may be satisfied by passing the entrance examinations in these areas.

** For students in the Concentration in Jazz, Jazz Theory (MUS 539-02) is recommended.

*** The applied course numbers for the degree concentrations are as follows: Choral Conducting: MUS 601, 602, 659, 660 (Students may substitute additional semesters of MUS 659, 660 for MUS 601, 602 at the discretion of the Director of Choral Activities.) Orchestral/Wind Conducting/Piano Pedagogy: MUS 601, 602, 611, 612. Jazz Performance: MUS 605, 606, 615, 616 (Students whose focus is jazz composition/arranging may substitute 4 hours of jazz arranging.) Instrumental/Organ/ Piano/Vocal Performance: MUS 603, 604.

**** Taken concurrently with final semester of applied study.

Concentration in Choral Conducting

- Additional Applied Study (MUS 611)* 2
- Choral Literature I & II (MUS 530, 531) 4
- Instrumental Conducting and Score Reading (MUS 559) 2
- Ensemble (one per semester) 4
- Music Electives** 6
- Concentration Total 18
- Minimum Total 36**

Notes:

* Must be taken in the semester of the graduate degree recital.

** May include such courses as pedagogy, literature, the student’s principal applied instrument, instrumental conducting, or a maximum of 2 additional ensemble credits.

Concentration in Orchestral Conducting

- Seminar in Conducting-Instrumental (MUS 659, 660) 4
- Seminar in Conducting-Choral (MUS 659, 660) 4
- Orchestral Literature I & II (MUS 686, 687) 4
- Ensemble (two semesters of major ensemble) 2
- Music Electives * 4
- Concentration Total 18
- Minimum Total 36**

Note:

* To be chosen from courses in music theory, literature, the student’s principal applied instrument, or a maximum of 2 additional ensemble credits.

Concentration in Wind Conducting

- Seminar in Conducting-Instrumental (MUS 659, 660) 4
- Instrumental Conducting and Score Reading (MUS 559) 2
- Band Literature (MUS 561) 2
- Ensemble (one per semester) 4
- Music Electives * 6
- Concentration Total 18
- Minimum Total 36**

Note:

* To be chosen from pedagogy, literature, the student’s principal applied instrument, a maximum of 2 semesters of functional applied study, or a maximum of 2 additional ensemble credits.

Concentration in Instrumental Music

- Additional Applied Study (MUS 613, 614) 8
- Ensemble* 4
- Music Electives** 6
- Concentration Total 18
- Minimum Total 36**

Note:

* In comparing degree programs, please note that among universities, many times ensembles are required, but without credit. Our required ensembles are included in the number of required degree hours.

** Students are encouraged to choose courses in literature or pedagogy; up to 2 additional ensemble credits are acceptable.

Other Requirements

Students are expected to present a public recital that comprises no less than sixty (60) minutes of music and follows the guidelines governing public recitals.

Concentration in Jazz Performance

- Advanced Jazz Improvisation (MUS 655) 2
- Standard Jazz Repertoire (MUS 539-03) 2
- Jazz Style and Analysis (MUS 539-01) 2
- Jazz Combo (one per semester) 2
- Jazz Ensemble (one per semester)* 4
- Concentration Electives to be selected from: 4
 - Music Industry I & II (MUS 535, 536)
 - Computers and Music I & II (MUS 553, 554)
 - Advanced Jazz Arranging (MUS 656)
 - Film/TV Scoring (MUS 657)
 - Independent Study (MUS 690)
 - Special Topics: Summer Jazz Workshop (MUS 691)
- Music Electives** 2
- Concentration Total 18
- Minimum Total 36**

Note:

* A student may substitute two additional Jazz Combo courses for one of the Jazz Ensemble courses.

** Students are encouraged to choose courses in pedagogy or literature; additional Applied Jazz or Ensemble will not meet this requirement; applied study in a secondary area is acceptable.

Concentration in Organ Performance

- Additional Applied Study (MUS 613-614) . . . 8
 - Ensemble 2
 - Major Subject and Music Electives* 8
- Concentration Total 18

Minimum Total 36

Note:

*Must include Organ Literature and Church Music Literature; additional Applied Organ or Ensemble will not meet this requirement. Applied study in a secondary area is acceptable.

Other Requirements

Students are expected to present a public recital that comprises no less than sixty (60) minutes of music and follows the guidelines governing public recitals.

Concentration in Piano Pedagogy

- Piano Pedagogy (MUS 571, 572, 671, 672) 8
 - Piano Literature (MUS 561, 562) 4
 - Ensemble * 2
 - Music Electives** 4
- Concentration Total 18

Minimum Total 36

Notes:

* At least three semesters of ensemble to be chosen from Piano Ensemble or New Music Ensemble.

** Additional Applied Piano or Ensemble will not meet this requirement; applied study in a secondary area is acceptable.

Other Requirements

Students are expected to present a public recital that comprises no less than sixty (60) minutes of music and follows the guidelines governing public recitals.

Concentration in Piano Performance

- Additional Applied Study (MUS 613, 614) . . . 8

- Piano Literature (MUS 561, 562) 4
 - Piano Pedagogy (500 or 600 level) 2
 - Ensemble * 2
 - Music Electives ** 2
- Concentration Total 18

Minimum Total 36

Notes:

* At least three semesters of ensemble to be chosen from Piano Ensemble or New Music Ensemble.

** Additional Applied Piano or Ensemble will not meet this requirement; applied study in a secondary area is acceptable.

Other Requirements

Students are expected to present a public recital that comprises no less than sixty (60) minutes of music and follows the guidelines governing public recitals.

Concentration in Vocal Performance

- Additional Applied Study (MUS 613, 614) . . 8
- Vocal Literature (MUS 561, 562) 4
- Vocal Pedagogy (MUS 571) 2
- Ensemble * 2
- Music Electives** 2

Concentration Total 18

Minimum Total 36

Notes:

* Suggested ensembles include Opera Theatre and New Music Ensemble.

** Additional Applied Voice or Ensemble will not meet this requirement; applied study in a secondary area is acceptable.

Other Requirements

Students are expected to present a public recital that comprises no less than sixty (60) minutes of music and follows the guidelines governing public recitals.

Master of Music in Music Theory

Major: MUST

Degree Awarded: M.M.

Unit: GU

Program Webpage: louisville.edu/music/

Program Information

The School of Music offers training toward two specific master's degrees: Master of Music and Master of Music Education. Major subjects in the Master of Music curriculum are music performance, music history, or theory/composition. The Master of Music Education program allows an applied music minor in an instrument, voice, or conducting. The music history and theory divisions offer basic instruction for all students at the undergraduate level as well as advanced study for those wishing to pursue graduate work in these fields .

Admission Requirements

In addition to the general requirements for admission to the Graduate School, the following specific requirements must be met:

- To be admitted to the Graduate Division of the School of Music, the applicant should possess a baccalaureate degree in the area (or an equivalent one) to be pursued in advanced studies.
- Applicants must meet the specific entrance requirements established by the major department.
- Applicants are required to take entrance examinations in music history, literature, and theory. Students may be required to take, without credit, courses in which they are deficient as indicated by the examination results.
- All full-time students are required to enroll in Bibliography and Research Methods (MUS 607) within their first two semesters of graduate work. Part-time students must enroll in MUS 607 before registering for more than ten (10) hours of graduate work.
- Graduate applicants to the School of Music must submit GRE scores with the application form.

The School of Music provides each student with guidelines to assist in preparation for the entrance exams and a copy of the *Handbook for Graduate Music Students*. Students are expected to read the School of Music handbook and the *University Graduate Catalog* and to follow regulations and procedures regarding their specific degree program at the University of Louisville. In particular, students are advised to observe the request for submitting GRE scores for admission to the Graduate School. Graduate study in music begins with the preparation for the entrance examinations in Music History and Music Theory and concludes with the graduate oral exam that is taken when all requirements have been met.

General Information

In addition to the general degree requirements described in the General Information section of the *Graduate Catalog*, the following degree requirements must be met:

- The student shall obtain permission from the Graduate Division Committee to begin work at the graduate level.
- All students must qualify for non-conditional status no later than the end of the second semester of full-time residence, or before eighteen (18) semester hours have been completed.

To qualify for degree candidacy the student must have:

- Proof that all deficiencies in music history, literature and theory have been removed;
- An academic record with a minimum of nine (9) hours of graduate credit with a grade point average of 3.0;
- An inclusive program of studies fulfilling the requirements of a master's curriculum, approved by the major professor and the departmental chairperson;
- In the case of a program requiring a master's thesis or professional paper, a proposed topic for the thesis or paper and a proposed membership for a reading committee to provide guidance during the writing of the thesis or paper. [See details below]
- As per the Graduate School requirements, at least half of the required credits for the master's degree must be at the 600 level, excluding thesis, internships, or practicums.

- In order to be in good standing, graduate students must have a cumulative 3.0 grade point average. A student must be in good standing in order to graduate. No more than six (6) hours with a "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted in a major subject. A student whose cumulative GPA falls below 3.0 will be placed on probation by the Graduate School. Students are ordinarily not permitted to continue on probation for more than one semester.
- The School of Music does not accept transfer grades below a "B". No credit is transferred for applied music. Advanced standing for applied music may be awarded at a jury. Music history and theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Ensemble credits appropriate to the new degree program may be considered for transfer, but not to exceed one per semester.
- Degree candidates in performance are required to give a public recital, normally during the candidate's final semester of study. Preparation and presentation of the recital shall follow the guidelines in the *Handbook for Graduate Music Students*.
- Degree candidates in music history or theory and composition are required to submit a thesis or major composition for evaluation by the reading committee. The M.M. Thesis in music composition takes the form of a musical score. Apart from considerations such as page size and layout, composition theses conform to the guidelines issued by the Graduate School. The deadline for formal approval of M.M. composition theses is the last day of classes in the semester in which the degree is expected to be conferred. Approval signatures of all members of the thesis committee are required prior to the final graduate oral examination.
- All students are required to pass an oral examination given by the Graduate Committee before the end of the semester in which the degree is to be granted. It may cover all areas of endeavor undertaken by the student in his graduate program or believed essential to the student's background.
- A candidate who fails the oral examination at the end of a semester may not be given a second one before the regular time for such an examination at the end of the next semester or summer session. A candidate who fails in the second oral examination shall not be granted the degree of M.M. or M.M.Ed. from this university.
- In comparing degree programs, please note that among universities, many times ensembles are required, but without credit. Our required ensembles are included in the number of required degree hours.
- Part-time students (with the exception of those in M.M.Ed. degree programs) must participate in one ensemble for each 18 hours of course work completed. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.
- Transfer of more than 6 hours from a degree program of an accredited institution in which a degree has been previously earned will only be granted on recommendation of the student's division and approval of the Director of Graduate Studies in consultation with the Graduate Committee. The request will be considered provided that the additional hours have not been earned by extension and that the University of Louisville minimum residency requirements have been met as stated in the *Graduate Catalog*.
- Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested with the restriction that the minimum residency requirement be maintained in compliance with the *Graduate Catalog*.
- Hours earned beyond the minimum in any one curricular area apply only to that area and cannot be divided in order to satisfy a requirement in another area

Curriculum

Prerequisites

1. Bachelor of Music degree or equivalent.
2. Demonstration, by examination, of skills and capacities in the following fields:
 - written, aural, and keyboard harmony;
 - melodic, harmonic, and rhythmic dictation;
 - elementary counterpoint; and
 - history and literature of music, and analytic understanding of musical forms and genres.

3. Evidence of preparation for advanced work in the area, as follows:

- Applicants to the track in Music Theory must submit a portfolio that incorporates a theoretical or analytical component. In addition, compositions should be submitted if available.

4. GRE scores.

Core Curriculum

• Music History Review (MUS 500)*	0
• Music Theory Review (MUS 400)*	0
• Bibliography and Research Methods (MUS 607)	3
• Music History Seminar (600 level)**	3
• Music Theory	4
• Additional Music Theory or Music History Seminar (500 or 600 level)	3
• Analysis (MUS 647, 648, 651, or 653)	3
• Ensemble (3 semesters of major ensemble)	3
• Thesis	4
Total	23

Other Requirements

All students must pass an oral examination after all course work is completed.

Music Theory Track

• Pedagogy of Theory (MUS 641)	2
• Additional Music Theory	1
• Advanced Composition***	6
• Graduate Composition Seminar (MUS 669 - Co-requisite for Advanced Composition)	0
• Digital Techniques I (MUS 667)	2
• Music Electives	2
Total	13
Minimum Total	36

Notes:

* These courses may be satisfied by passing the entrance examinations in these areas.

** Students in the Theory Track should take Foundations of Music Theory (MUS 652).

***To be chosen from MUS 543, 544, 643, 644 as determined by the composition faculty. Students enrolled in 500 level Advanced Composition are required to present public performances of their original works totaling at least 8 minutes of music; students enrolled in 600 level Advanced Composition present public performances of at least 8 minutes of music per semester.

Departmental Faculty

Robert Amchin

Professor
Division Head-Music Education and Music Therapy
Distinguished Teaching Professor

Jack Ashworth

Professor
Director of Early Music Ensemble
Distinguished Teaching Professor

Jean Christensen

Professor
Division Head-Music History

Anne Marie de Zeeuw

Professor
Director of Undergraduate Studies
Area Coordinator-Music Theory
Distinguished Teaching Professor

Christopher Doane

Professor
Dean

Donn Everette Graham

Professor

Brenda Kee

Professor
Area Coordinator-Keyboards

Herbert Koerselman

Professor

John LaBarbera

Professor

Naomi Oliphant

Professor
Associate Dean
Distinguished Teaching Professor

Steve Rouse

Professor
Division Head-Music Theory and Composition

Marc Satterwhite

Professor

Frederick Speck

Professor
Director of Bands

Edith Davis Tidwell

Professor
Area Coordinator-Voice
Distinguished Teaching Professor

Michael Tracy
Professor
Division Head-Jazz Studies

Michael Tunnell
Professor
Distinguished Teaching Professor

Barbara Wheeler
Professor
Director of Music Therapy
University Scholar

Greg Byrne
Associate Professor

Kent Hatteberg
Associate Professor
Director of Choral Activities
University Scholar

Bruce Heim
Associate Professor
University Scholar

John Jones
Associate Professor
Division Head-Applied Studies

Kimcherie Lloyd
Associate Professor
Division Head-Ensembles and Conducting

Seow-Chin Ong
Associate Professor

J. Patrick Rafferty
Associate Professor

Brett Shuster
Associate Professor

Dallas Tidwell
Associate Professor

Gerald Tolson
Associate Professor

Paul York
Associate Professor

Julia Shinnick
Assistant Professor

Krista Wallace-Boaz
Assistant Professor
Director of Graduate Studies

Daniel Weeks
Assistant Professor
University Scholar

Jerry W. Ball
Professor Emeritus

Doris Owen Bickel
Professor Emeritus

Paul R. Brink
Professor Emeritus

Melvin Dickinson
Professor Emeritus

Francis Fuge
Professor Emeritus

Karl-Werner Guempel
Professor Emeritus

Lee Luvisi
Professor Emeritus

Daniel McAninch
Professor Emeritus

Peter McHugh
Professor Emeritus

Acton Ostling
Professor Emeritus

Richard Spalding
Professor Emeritus

Robert Weaver
Professor Emeritus

Loren Waa
Professor Emeritus

School of Nursing

Cynthia McCurren, Ph.D., R.N., Acting Dean

The School of Nursing offers the following programs through the Graduate School:

- Nursing - M.S.N.
- Nursing - Ph.D.

Master of Science in Nursing

Major: NURS

Degree Awarded: M.S.N.

Unit: GN

Program Webpage: louisville.edu/nursing

Vision

The University of Louisville School of Nursing will enrich lives through the improvement of health and healthcare, and be recognized as a nursing program of national prominence. This will be accomplished through knowledge development; integration of teaching, research, practice, and service; and collaboration with community partners. The School of Nursing is guided by the mission of its metropolitan research university in serving the diverse needs of students, clients, and community.

Mission

The University of Louisville School of Nursing is an essential partner of a research intensive academic health science center in a nationally recognized University serving a metropolitan community.

The School of Nursing is a community in which faculty, staff and students collaborate to promote excellence in the profession of nursing. This is accomplished through research and scholarship that inform undergraduate and graduate education, support evidence-based practice and foster advances in nursing science.

Students are prepared to demonstrate excellence in nursing science, practice and leadership in a variety of settings for the benefit of clients across the lifespan and to meet the evolving health care needs of society.

As a citizen of the larger community, the emphasis of the School of Nursing is to address the complex health needs of diverse and dynamic populations through nursing education, research, scholarship and service.

M.S.N. Admissions Policies - School of Nursing

Students may be admitted to the program for the fall or spring semester. Applications for each term will be reviewed and students will be contacted regarding their admission status within 4-6 weeks after the deadline.

Application deadlines:

- Fall Semester: May 1
- Spring Semester: October 1

In the case of late applications, application materials received after the deadline may only be considered for Non-Degree status and such applicants will be limited to enrolling in six credit hours on a space available basis. Therefore, all applicants are strongly encouraged to apply **before** the deadline. Absolute deadlines for admissions in Non-Degree status are July 1 for Fall Semester and November 1 for Spring Semester.

Health Services Fee

Every HSC student will be assessed the Health Services Fee each semester.

Services provided under the fee:

- a. All pathogen exposure (e.g., TB, needle stick, etc.) to include outside labs, x-ray, and medications.
- b. All visits to the Student Health Services (Belknap and HSC).*
- c. Mental Health Services*

*Medications, lab, or x-ray costs that might be associated with these visits are not covered by the fee.

Clinical Laboratory Fee

Effective Summer 2006 all graduate students enrolled in clinical programs in the School of Nursing will be charged a clinical fee of \$300. The fee will be assessed at two points during the program:

\$100 at the time of enrollment in NURS 656 Advanced Clinical or NURS 629 Assessment.
 \$200 at the time of enrollment in the first course of the clinical sequence for their specialty (see course list below).

This fee covers costs associated with clinical laboratory instruction, including clinical laboratory supplies, clinical equipment, support of simulation equipment, preceptor placement coordination and clinical visitations.

Courses Where Clinical Fee Will Be Assessed:

- **Women's Health Nurse Practitioner**
NURS 615 Women's Health NP I
- **Adult Nurse Practitioner**
NURS 624 Advanced Clinical Practice Adult NP I
- **Neonatal Nurse Practitioner**
NURS 633 Advanced Clinical Practice NNP I
- **Psychiatric Mental Health Clinical Nurse Specialist & Nurse Practitioner**
NURS 645 Advanced Clinical Practice I: Psych/Mental Health
- **Family Nurse Practitioner**
NURS 661 Advanced Clinical Practice: Family Nurse Practitioners Clinical I
- **Gerontological Nurse Practitioner**
NURS 665 Primary Care of the Aged
- **Adult Clinical Nurse Specialist**
NURS 622 Advanced Clinical Practice Adult CNS I
- **Oncology Clinical Nurse Specialist**
NURS 672 Advanced Clinical Practice I: Oncology CNS

Course Offerings

Classes are taught on a single week day. These courses may be taught during the day or in the evening. Some courses are offered only once per year, or every two years based on demand and/or resources. Course offerings are subject to cancellation due to insufficient enrollment. Preceptorship/clinical experiences are scheduled any day based on availability of clinical sites and preceptors. Limited evening and weekend preceptorship experiences may be available. Preceptorship experiences throughout the state are also possible but not guaranteed. The office of the Associate Dean for Academic Affairs is responsible for student placement with preceptors, in collaboration with the Clinical Placement Coordinator and course faculty.

Criteria for Admission to the Master in Nursing Degree Program:

To be considered for admission to Degree Status, the following items must be submitted:

To the Office of Graduate Admissions:

- Completed U of L Graduate School Application, including \$50 application fee (application available online at: graduate.louisville.edu/apply).
- Official transcripts of all college coursework with a cumulative grade point average of at least 3.0 on a 4.0 scale. Completion of an accredited (by NLN or CCNE) baccalaureate program in nursing must be verified.
- Official transcript verifying enrollment in or completion of a three credit-hour graduate level statistics course (applied descriptive and inferential statistics). Successful completion of this course with a grade of B or better is a requirement for admission. (Students may contact School of Nursing Office of Student Services at 852-1196 for information on graduate statistics course offerings.)
- Graduate Record Examination (GRE) scores (successful applicants usually score at 425 or above on each of the verbal and quantitative scores; and 4 on the analytic score). Revisions of the GRE test format and scoring are under consideration. Recommended score may change based on revisions.
- Two references from individuals who can speak of academic and/or professional capabilities and potential are required. References should be chosen from among: former faculty members, current or immediate past employer, or other nursing/health professionals. One reference should be from a nurse. Each person providing a reference for you must complete the UofL Graduate School recommendation form (available online at: graduate.louisville.edu/students/apply.html/).
- A copy of valid Kentucky registered nurse license (without restrictions) or proof of eligibility for that licensure.

To the School of Nursing, Office of Student Services:

- Completed Graduate Applicant Data Sheet (available online at: louisville.edu/nursing).

A personal interview with faculty may be required.

Students who do not meet admission requirements may contact the U of L School of Nursing Office of Student Services at 502-852-1196 for an advising appointment.

Conditional Admission to M.S.N. Degree Program:

Students who do not meet these admission requirements **may** be considered for admission in **conditional** status. An example might be a student with low GRE scores.

Students admitted conditionally will be reevaluated for full degree status based on criteria identified by the committee.

Applications will not be considered for Full or Conditional Degree status unless all application materials are available to the review committee by the application deadline date (May 1 or October 1).

Provisional Admission to M.S.N. Degree Program:

Graduating B.S. N. students: Students completing the final semester of their B.S.N. program with a 3.0 or better grade point average may apply for provisional degree or non-degree status (refer to admission statuses in the General Information Section of this catalog.)

Criteria for Non-Degree Admission to the Graduate Nursing Program:

Students may be admitted in non-degree status to take the pre-requisite graduate level statistics course if they meet the admission requirement. Students must submit to Graduate Admissions:

- Graduate School Application including the \$50 fee.
- Official undergraduate transcripts of all college coursework including one verifying the completion of the baccalaureate program in nursing (or a transcript indicating that the student is in the final semester of a B.S.N. degree program. Student must request a final transcript verifying completion of the B.S.N. degree prior to registration).

Students Meeting Required Admissions Grade Point Average:

Students needing the statistics course are admitted in non-degree status and it is the only course they may take. Students admitted in non-degree status to take the statistics course with a minimum cumulative undergraduate GPA of 3.0 may continue in non-degree status for an additional 6 degree applicable credit hours upon completion

of the statistics course with at least a letter grade of B.

Students Not Meeting Minimum Admissions Grade Point Average:

Students needing the statistics course are admitted in non-degree status and it is the only course they may take. A minimum letter grade of B is required. Students admitted in non-degree status to take the statistics course with an undergraduate cumulative GPA of 2.75-2.99 must reapply for degree status and take the Graduate Record Exam (GRE). A successful GRE score must be met to offset the GPA requirement for admissions consideration.

Students who have satisfactorily completed the graduate level statistics course and do not meet the minimum admission standards for degree status may petition for non-degree status. Petitions must be submitted by the appropriate deadline to the School of Nursing, Office of Student Services.

Admission in non-degree status does not guarantee admission to the M.S.N. degree program. Students may contact the School of Nursing, Office of Students Services at 502-852-1196 for assistance.

Visiting students from other schools may apply each semester for non-degree status by submitting the following:

To Office of Graduate Admissions:

- Graduate School Application including the \$50 fee.
- A letter of good standing from student's home school or transcripts from graduate school in which the student is currently enrolled verifying a grade point average of 3.0 or higher.

Important Notes:

- Priority enrollment in courses is given to graduate nursing students in Degree status.
- Non-degree students are strongly encouraged to verify financial aid requirements as non-degree status may NOT meet eligibility requirements of some financial aid sources.
- To move from Non-degree to Degree status, students must submit a NEW U of L application to the Office of Graduate Admissions indicating that they are applying for M.S.N. degree admission by the application deadline for the semester they wish to be admitted as degree-seeking (October 1 or May 1). Application fee

is waived for non-degree students who are re-applying for degree admission.

- All application materials listed above in "Criteria for Admission to the Master of Science in Nursing Program" must be received by the appropriate University offices on or before the application deadline for the semester in which the student wishes to be admitted as degree-seeking.
- All applicants, regardless of their application status, are required to submit official transcripts for all college work completed. An application fee of \$50.00 is required of all **M.S.N. applicants regardless of where the B.S.N. was earned.**

Academic Policies

Academic Progress in the Graduate Program

Satisfactory academic progress in a program involves maintaining the academic and professional standards expected in a particular discipline or program and may include demonstration of the ability to function as a professional practitioner. Failure to maintain these standards or demonstrate such abilities may result in the termination of the student's admission to the program.

Removal From Clinical

A student who is unsafe in the clinical area may be asked to withdraw from the program.

Transfer of Credit

Students who desire to transfer graduate credit from other academic institutions shall discuss this with the faculty advisor. Earned graduate credit may be transferred from institutions that offer advanced degrees. The maximum number of semester hours transferable, upon request, is six (6) hours. Up to six additional hours may be requested in a master's program, provided that these additional hours are not credit earned by extension and provided that the residency requirement of 24 semester hours is maintained by the addition of U or L credits to the total program. Credit earned more than six years prior to the student's application to the Graduate School will not normally be considered for transfer.

In all cases, transfer of credit is NOT automatic. Students who want courses taken at other institutions evaluated should submit the course outline (syllabus) for the course in question to the Office of Student Services. Courses cannot be evalu-

ated without course outlines. Course equivalency should be determined before enrollment in the course to ensure the credits will transfer. Only courses in which the student earned grades of B (3.0 on a 4.0 scale) or better will be considered for transfer. Credits which have been applied to a baccalaureate degree may not be applied to a subsequent master's degree. Six hours may be transferred from previously earned master's degree toward a second master's degree subject to the approval of the Associate Dean for Academic Affairs. Hours earned toward a project or thesis shall not be transferable to the second master's degree. If the faculty advisor agrees that the course work contributes to the Program of Study, the student may request a Transfer of Credit form from the Office of Student Services. Graduate nursing courses may be transferred as a required nursing course only if judged by the current faculty of record as equivalent to the course taught at the University of Louisville. The decision of equivalency made by the faculty of record is final.

Drop/Add Procedures

Students wishing to alter their schedule of courses in any way must make the changes with the University's Office of the Registrar. Failure to officially withdraw from a course may result in a grade of F and tuition charges for that course.

Students may drop/add at any time during the early registration period after their first scheduled time for registration. The touch-tone or online ULink systems may be used for drop/add. See the online Schedule of Courses for current instructions for Drop/Add after classes begin.

Late Complete Withdrawal after the Deadline

Upon proper documentation of extreme circumstances, decision for approval of late complete withdrawals may be made by the Associate Dean for Academic Affairs. Late complete withdrawals are those requested after the deadline has passed and before the instructor has assigned a grade.

Students may not withdraw from any course after the published deadline in the online Schedule of Courses without the approval of the Associate Dean for Academic Affairs. This is granted only because of sickness or conditions beyond the student's control. The grade report would reflect a grade of W.

Student Health Services Requirements

Each student must comply with the current student health policy of the Health Sciences Center. All costs associated with compliance are the responsibility of the student. Because of contractual agreements with agencies and the changing needs of society, this policy is updated periodically. The current health policies are listed below. It is the responsibility of the student to maintain his/her health in order to insure safety for other students and clients. If faculty or the agency deems that any student creates a health risk, the student may be excluded from the clinical experience and/or the program.

Individual health care facilities, used as clinical sites by the School of Nursing, may have additional requirements. In this event, the student is required to comply with any additional requirements of that facility.

Note: Health policies are constantly under review by faculty based on CDC changing requirements and community expectations. Students will be notified of any policy changes, and compliance will be required.

Clinical Requirements

Before beginning the first clinical course of the M.S.N. program, students must be in compliance with the following clinical requirements:

- submit a copy of a valid Kentucky RN license with no restrictions
- submit documentation of CPR certification (Adult, Child and Infant)
- submit proof of successful completion of UofL HIPAA Training
- submit a health screening questionnaire
- submit proof of student nurse practitioner liability insurance coverage
- submit required immunization records and proof of health insurance coverage to the Student Health Services (call 852-6446 for additional current information on requirements).

Additional information on clinical requirements is published in the Graduate Students Handbook.

Background Check

Due to Kentucky Legislature House Bill 136, hospitals and clinical sites across the area are now requiring that we conduct background checks on students. The School of Nursing also requires this of faculty. As of August 2007, the SON requires all students to have a background check

through CertifiedBackground.com which will be at the federal level. You will deal directly with the company to have this performed. Instructions for accessing the CertifiedBackground.com system are available through the Office of Student Services. The results will then be sent to the SON to keep on file as required by our affiliation agreements with the hospitals and community agencies. The cost is \$40.00 which you will submit to the company directly. In the future, this background check will be part of the application process to the SON; we are trying to come into compliance for all currently enrolled students through this mechanism. If you have questions about the background check, please contact Trish Hart, Director of Student Services, 852-8298.

Health Insurance

Students are responsible for submitting proof of health insurance. On April 26, 1999, the University of Louisville Board of Trustees approved a requirement for proof of insurance for all Health Sciences Center (HSC) students. Every HSC student will be assessed the University sponsored health insurance plan, the comprehensive plan. Students who already have health insurance that includes hospitalization coverage can waive the fee.

Repeating Nursing Courses

Students who receive a grade of C+ or below in a course must repeat the course. Students in the Graduate Nursing Program are allowed to repeat one required nursing curriculum course only one time. A student who receives a grade of C+ or below in a second course required in the nursing curriculum will be dismissed from the program. A Permit to Repeat Course form should be submitted to the Office of Student Services (OSS), School of Nursing, to ensure that only the last grade attempted will be included in the student's grade point average. Repeating a course is not an automatic privilege, and in most cases the student must petition to the Associate Dean and/or the Academic Affairs Committee for permission to repeat a nursing course. Once permission is granted, the student will be allowed to repeat the course on a space available basis.

Satisfactory Standing

Satisfactory standing in the nursing program is a cumulative program grade point average of at least 3.0.

Probation and Dismissal

If the cumulative grade point average falls below 3.0, the student will be placed on academic probation for the next regular semester. If the cumulative grade point average is not raised to a minimum of 3.0 by the end of the probation semester, the student will be dismissed from the program. The dismissal will be reflected on the student's transcript. If a student wishes to continue at the University, he/she must apply and be accepted to another unit in order to continue to enroll in classes.

Permission for Visiting Student Status

Students may apply for visiting student status should they wish to enroll in a nursing course at another institution while a student at U of L. If the course is being taken to apply toward the U of L degree requirements, it is the student's responsibility to check OSS to confirm the equivalency of the course before they enroll. Students must provide OSS with the most recent copy of the course syllabus so that U of L faculty can evaluate the course for equivalency. Once the equivalency status of the course has been determined, the applying student will be sent a letter of permission for visiting student status. Students are responsible for requesting that an official transcript be sent to the University's Registrar's Office upon completion of any transfer work.

Curriculum

Pre-Requisite Course

CONTENT	EQUIVALENT UofL COURSES
Statistics: Applied descriptive and inferential statistics using computer software	NURS 652 or ELFH 601 or equivalent

Graduate Nursing: Core Courses

Graduate Nursing Core Courses are required in addition to the specialization courses for each track.

CONTENT	EQUIVALENT UofL COURSES
---------	-------------------------

Genetics: This course will integrate clinical applications of genomics, including current ethical, legal, and social issues and emphasize the responsibility of the advanced practice nurse. Fall	NURS 600
Family Health: This course provides a foundation in family health concepts and family assessments for advanced practice nurses. Fall	NURS 603
Transition to Practice: This course will assist completing students to make an easier transition to practice as advanced practice nurses. Students will focus on portfolio development, preparation for certification, and legislative/practice issues. Spring	NURS 604
Foundations for Advanced Practice: This web based course has a focus on the analysis and application of selected nursing and family theories for advanced practice. Fall	NURS 605

<p>Health Care Systems: The U.S. healthcare system evolution, services, policy, and delivery are examined and compared politically, ethically, technologically, environmentally, and socioeconomically. Availability, access, regulation, and accountability are considered using systems theory. Spring</p>	NURS 606
<p>Advanced Nursing Pharmacology: Provides the basic pharmacological foundation for the nurse practitioner and clinical specialist in advanced practice. Fall</p>	PHTX 650
<p>Evidence Based Nursing: Analysis of the value of research in advanced nursing practice. Focus is on research theory and process, ethics, critique of the literature, and dissemination of findings. Fall</p>	NURS 651
<p>Advanced Practice Roles: This course focuses on the advanced practice roles of educator, consultant, researcher, leader, and expert practitioner. Scope of practice, credentialing, reimbursement and future issues are also addressed. Fall</p>	NURS 653

<p>Introduction Health Informatics: Exploration and analysis of the foundation principles used in studying information utilization in health-related activities through case studies of selected problems and applications. Spring</p>	PHPB 610
<p>Pathophysiology: Clinical Decision Making: This course provides the student an opportunity to synthesize pathophysiological concepts essential for critical thinking and clinical decision-making by the nurse in an advanced practice role. Spring</p>	NURS 655
<p>Advanced Clinical Assessment: This course builds upon the basic critical thinking and psychomotor skills that professional nurses use in client care. Emphasis is on the physical, psychosocial, and cultural assessment of individuals and families. Summer</p>	NURS 656

<p>Health Promotion and Illness Prevention Across the Lifespan: Theoretical and research foundation of health promotion and illness prevention (HPIP). Multi-level HPIP evidence-based interventions related to competencies of advanced practice nurse in various settings will be discussed. Spring</p>	NURS 657
<p>Research Project: Provides the student an opportunity to develop, implement, and present results of a research study of limited scope.</p>	NURS 698

SpecialtyTrack Course Requirements

Advanced Nursing Practice Component: Women's Health NP (includes 630 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	
PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	
PHPB 610 Introduction Health Informatics	3	

NURS 655 Pathophysiology in Clinical Decision Making*	4	
NURS 656 Advanced Clinical Assessment*	4	
NURS 657 Health Promotion and Illness Prevention Across the Lifespan	3	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
WHNP core total hours = 33		33
Advanced Nursing Practice Component: Offered every 2 years: 2007-2008; 2009-2010.		
NURS 601 Primary Care I	2	
NURS 603 Family Health	1	
NURS 615 Women's Health NP I	4	
NURS 616 Women's Health NP II	7	
NURS 617 Women's Health NP III	3	
Total Credit Hours		50

Advanced Nursing Practice Component: Advanced Clinical Practice Adult NP (includes 630 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	

PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	
PHPB 610 Introduction Health Informatics	3	
NURS 655 Pathophysiology in Clinical Decision Making*	4	
NURS 656 Advanced Clinical Assessment*	4	
NURS 657 Health Promotion and Illness Prevention Across the Lifespan	3	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
ANP core total hours = 33		33
Advanced Nursing Practice Component		
NURS 601 Primary Care I	2	
NURS 602 Primary Care II	3	
NURS 603 Family Health	1	
NURS 624 Advanced Clinical Practice Adult NP I	3.5	
NURS 625 Advanced Clinical Practice Adult NP II	3.5	
NURS 626 Advanced Clinical Practice Adult NP III	3	
Total Credit Hours		49

Advanced Nursing Practice Component: Neonatal NP (includes 630 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	
PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	
PHPB 610 Introduction Health Informatics	3	
NURS 698 Research Project	2	
NURS 603 Family Health	1	
NURS 604 Transition to Practice	1	
NNP core total hours = 23		23
Advanced Nursing Practice Component: Next clinical cohort begins Spring 2008; subsequent cohorts To Be Determined.		
NURS 629 Advanced Health Assessment of the Neonate	3	
NURS 633 Adv. Clinical Practice: NNP I	4	
NURS 634 Adv. Clinical Practice: NNP II	3	

NURS 635 Adv. Clinical Practice: NNP III	3	
NURS 636 High Risk Clinical: NNP	4	
NURS 637 Adv. High Risk Clinical: NNP	4	
Neonatal Pharmacology (PHTX) - 1 credit hour to be offered in Spring 08 as part of this track		
Total Credit Hours		44

Advanced Nursing Practice Component: Psychiatric Mental Health CNS (includes 504 clinical hours; graduates eligible for CNS or NP PMH Certification exam)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	
PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	
PHPB 610 Introduction Health Informatics	3	
NURS 647 Clinical Decision Making: Psychopathology	3	
NURS 649 Clinical Psychopharmacology	1	

NURS 656 Advanced Clinical Assessment*	4	
NURS 657 Health Promotion and Illness Prevention Across the Lifespan	3	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
Adult CNS core total hours = 33		33
Advanced Nursing Practice Component: Offered every 2 years: 2007-2008; 2009-2010.		
NURS 645 Advanced Clinical Practice I: Psych/Mental Health	6	
NURS 646 Advanced Clinical Practice II: Psych/Mental Health	7	
Total Credit Hours		46

Advanced Clinical Practice: Family Nurse Practitioner (includes 770 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	
PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	

PHPB 610 Introduction Health Informatics	3	
NURS 655 Pathophysiology in Clinical Decision Making*	4	
NURS 656 Advanced Clinical Assessment*	4	
NURS 657 Health Promotion and Illness Prevention Across the Lifespan	3	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
FNP core total hours =33		33
Advanced Nursing Practice Component:		
NURS 601 Primary Care I	2	
NURS 602 Primary Care II	3	
NURS 603 Family Health	1	
NURS 660 Advanced Clinical Practice: Family Nurse Practitioner Seminar I	2	
NURS 661 Advanced Clinical Practice: Family Nurse Practitioner Clinical I	3	
NURS 662 Advanced Clinical Practice: Family Nurse Practitioner Clinical II	4	
NURS 663 Advanced Clinical Practice: Family Nurse Practitioner Internship	4	
NURS 664 Common Health Problems of the Pediatric Client	1	
Total Credit Hours		53

Advanced Nursing Practice Component: Adult CNS (includes 500 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	
PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
NURS 600 Genetics	2	
NURS 653 Advanced Practice Roles	2	
PHPB 610 Introduction Health Informatics	3	
NURS 655 Pathophysiology in Clinical Decision Making*	4	
NURS 656 Advanced Clinical Assessment*	4	
NURS 657 Health Promotion and Illness Prevention Across the Lifespan	3	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
Adult CNS core total hours = 33		33
Advanced Nursing Practice Component: Offered every 2 years: 2006-2007; 2008-2009; 2010-2011.		
NURS 603 Family Health	1	

NURS 622 Advanced Clinical Practice Adult CNS I	6	
NURS 623 Advanced Clinical Practice Adult CNS II	7	
Total Credit Hours		47

Oncology Clinical Nurse Specialist (includes 500 clinical hours)

Pre-requisite Course: NURS 652 Statistics (3 credit hours)		
Core Courses	Semester Hours	Total
NURS 605 Foundations for Advanced Practice	3	
NURS 606 Health Care Systems	3	
NURS 600 Genetics	2	
PHTX 650 Advanced Nursing Pharmacology	3	
NURS 651 Evidence Based Nursing	3	
PHPB 610 Introduction to Health Informatics	3	
NURS 653 Advanced Practice Roles	2	
NURS 655 Pathophysiology for Clinical Decision Making*	4	
NURS 656 Advanced Clinical Assessment*	4	
NURS 698 Research Project	2	
NURS 604 Transition to Practice	1	
NURS 603 Family Health	1	
ONC CNS core total hours = 31		31

Advanced Nursing Practice Component Offered every 2 years as follows: NURS 671 Spring 2008 & Spring 2010; NURS 672 Fall 2008 & Fall 2010; NURS 673 Spring 2009 & Spring 2011.		
NURS 671 Evidenced-based Cancer Treatment	3	
NURS 672 Advanced Oncology Clinical Practice I	6	
NURS 673 Advanced Oncology Clinical Practice II	7	
Total Credit Hours		47

* Basic pathophysiology knowledge and physical/health assessment skills are necessary for successful progression in Advanced Pathophysiology and Health Assessment courses. The faculty strongly recommends formal basic courses or continuing education programs in pathophysiology and physical/health assessment as pre or co-requisites to these advanced courses.

Doctor of Philosophy in Nursing

Major: NURS
Degree Awarded: Ph.D.
Unit: GN
Program Webpage: louisville.edu/nursing

Program Information

Vision

The University of Louisville School of Nursing will enrich lives through the improvement of health and healthcare, and be recognized as a nursing program of national prominence. This will be accomplished through knowledge development; integration of teaching, research, practice, and service; and collaboration with community partners. The School of Nursing is guided by the mission of its metropolitan research university in

servicing the diverse needs of students, clients, and community.

Mission

The University of Louisville School of Nursing is an essential partner of a research intensive academic health science center in a nationally recognized University serving a metropolitan community.

The School of Nursing is a community in which faculty, staff and students collaborate to promote excellence in the profession of nursing. This is accomplished through research and scholarship that inform undergraduate and graduate education, support evidence-based practice and foster advances in nursing science. Students are prepared to demonstrate excellence in nursing science, practice and leadership in a variety of settings for the benefit of clients across the lifespan, and to meet the evolving health care needs of society. As a citizen of the larger community, the emphasis of the School of Nursing is to address the complex health needs of diverse and dynamic populations through nursing education, research, scholarship and service.

Program Description

The Doctor of Philosophy in Nursing is designed to prepare nurse scientists who will assume a variety of roles in education, research, leadership and health policy. The goal of the program is to prepare nurse scientists to: a) generate knowledge, test interventions and evaluate outcomes to reduce risks of illness/disability and promote quality of life, b) collaborate with other disciplines to improve the delivery of health care, c) assume research, leadership, executive, public policy and/or teaching roles, and d) affect health policy through the application of scientific knowledge.

Two progression tracks will be offered in the programs: (1) B.S.N. to Ph.D. and (2) M.S.N. to Ph.D. The B.S.N. to Ph.D. track is an innovative approach to recruit students into graduate study at an early point in their nursing career. These students will complete the first year of coursework at the master's level and then continue on to the doctoral level work without earning a master's degree. The M.S.N. to Ph.D. students will enter directly into the doctoral coursework.

The Ph.D. in Nursing consists of at least 63 credit hours of coursework beyond the baccalaureate degree or 45 credit hours beyond a master's degree plus two credit hours for the qualifying examination and 10 dissertation credit

hours. Full or part-time programs of study are available; however, full-time study is highly recommended to allow students to devote themselves entirely to the program and immerse themselves in the life of a scholar.

Admissions Criteria

Submit the following items to:

*Office of Graduate Admissions
University of Louisville
Louisville, KY 40292*

1. U of L Graduate Application and application fee (**Online submission is preferred**. Complete online at graduate.louisville.edu/apply) the online version of the Graduate Application lists codes for the Nursing Ph.D. program. If you are submitting a hard copy application form, please use the following codes:

NURSPHDMSN- for students who have completed Master's of Nursing degrees

NURSPHDMSN- for students who have completed only Bachelor of Science in Nursing Degrees.

2. Transcripts

- *If B.S.N. applicant:* Official transcripts representing all college course work with a cumulative grade point average of at least 3.0 on a 4.0 scale. Must verify completion of an accredited baccalaureate program in nursing.

- *If M.S.N. applicant:* Official transcripts representing all college course work with a cumulative grade point average of at least 3.0 on a 4.0 scale. Must verify completion of an accredited master's program in nursing.

- If a B.S.N. applicant, B.S.N. program must have been accredited by CCNE or NLN.

- If a M.S.N. applicant, M.S.N. program must have been accredited by CCNE or NLN.

3. Graduate Record Examination (GRE) scores
Successful candidates generally have a combined Verbal and Quantitative score of 1100 or higher; and an Analytical score of 4.0 or higher. GRE scores earned within the last ten years will be accepted. (Revisions of the GRE test format and scoring are under consideration. Recommended score may change based on revisions.)

4. TOEFL Examination

Foreign student applicants must review the *Graduate Catalog* TOEFL requirement guide-

lines. TOEFL scores required in the School of Nursing are:

- Computer-based test minimum score of 220; Written Essay score of 4.0
- Paper-based test minimum score of 560; Written Essay score of 4.0

5. Letters of Recommendation

- Submit at least three recommendations from individuals who can speak of academic and/or professional capabilities and potential. Recommendations should be chosen from among: former faculty members, current or immediate past employers, or other nursing/health professionals. Each person providing a reference for you must complete the U of L Graduate School recommendation form (available online at: . . . graduate.louisville.edu/students/apply.html/)
- Recommendation forms must have been completed within the last year.
- At least two recommendations should be from nurses.

6. Registered Nurse License

Applicants must be licensed as a registered nurse and submit a copy of a valid Kentucky registered nurse license (without restrictions). If applicant is not currently licensed as a registered nurse in Kentucky, the applicant must be eligible to apply for licensure and submit a valid license within one year of admission.

Submit the following items to:

*Office of Student Services
School of Nursing
University of Louisville
Louisville, KY 40292*

1. School of Nursing Ph.D. Applicant Data Sheet (**Online submission preferred**. Applicant Data Sheet is available at louisville.edu/nursing).
2. A current curriculum vitae or resume.
3. A sample of scholarly or professional writing completed within the past 5 years.
4. A written statement of career goals, area(s) of expertise, research interests, and reasons for pursuing doctoral studies (no more than three pages).
5. Personal interviews with School of Nursing faculty will be required.
6. Application deadline for fall admission is February 15th. Completed applications received

after February 15th may be considered if space is available.

Please note:

Applicants accepted into the M.S.N.-Ph.D. program are strongly advised to have completed a three-credit masters-level statistics course (applied descriptive and inferential statistics) with a grade of B (3.0) or higher within five years before the date of enrollment. Applicants who do not meet this requirement will be advised of available statistics courses to take in the summer prior to beginning fall Ph.D. coursework in statistics.

In order to do a self-assessment of knowledge in statistics, the following represents anticipated basic competencies from previous statistics coursework:

Design of Research

- Frequency distributions
- Central tendency and variability
- Probability theory
- Normal distributions
- Correlation
- Simple linear regression
- Statistical inference
- Decision, error, and power
- T-tests
- One and two-way ANOVAs
- Nonparametric tests

Assistantships

A Ph.D. Graduate Student Assistantship is a financial award to a full-time Ph.D. student for the period of one year. To be eligible for the award the student must be admitted to the Ph.D. degree program and/or be a continuing Ph.D. student. For the full year, the award includes tuition, health insurance, and a stipend of \$20,000. The student is required to maintain full-time study during the award period and participate for 20 hours/week in Research Assistant or Teaching Assistant activities in the School of Nursing. These activities serve to augment and enrich the student's academic program. The student will be assigned to either the Associate Dean for Academic Affairs or the Associate Dean for Research to coordinate and schedule their experiences. Descriptions of activities are available for each type of assistantship. Assistant-

ships are awarded on a competitive basis. Applications are due by February 15th

Academic Policies

Academic Progress in the Graduate Program

Satisfactory academic progress in a program also involves maintaining the academic and professional standards expected in a particular discipline or program and may include demonstration of the ability to function as a professional. Failure to maintain these standards or demonstrate such abilities may result in the termination of the student's admission to the program.

Removal from a Clinical Research Area

A student who is deemed at risk for patient safety may be asked to withdraw from the program.

Transfer of Credit

Earned graduate credit may be transferred from accredited institutions that offer advanced degrees. The maximum number of semester hours transferable, upon request, is six. Credits which have been applied toward an earned degree may not be applied toward the doctoral nursing degree. Course work being considered for transfer must have been taken while the student was enrolled in an accredited graduate or professional school and must be evaluated for equivalency by the Associate Dean for Academic Affairs. Credit earned more than six years prior to the student's application to the Graduate School will not normally be considered for transfer. At least two years of full-time study must be spent at the University of Louisville.

Drop/Add Procedures

Students wishing to alter their schedule of courses in any way must make the changes with the University's Office of Registration. Failure to officially withdraw from a course may result in a grade of F and tuition charges for that course.

Students may drop/add at any time during the Early Registration period after their first scheduled time for registration. The touch-tone or online ULink systems may be used for drop/add. See the online Schedule of Courses for current instructions for Drop/Add after classes begin.

Late Complete Withdrawal after the Deadline

Upon proper documentation of extreme circumstances, decision for approval of late complete withdrawals may be made by the Associate

Dean for Academic Affairs. Late complete withdrawals are those requested after the deadline has passed and before the instructor has assigned a grade.

Students may not withdraw from any course after the published deadline in the online Schedule of Courses without the approval of the Associate Dean for Academic Affairs. This is granted only because of sickness or conditions beyond the student's control. The grade report would reflect a grade of 'W'.

Student Health Services Requirements

Each student must comply with the current student health policy of the Health Sciences Center. All costs associated with compliance are the responsibility of the student. Because of contractual agreements with agencies and the changing needs of society, this policy is updated periodically. It is the responsibility of the student to maintain his/her health in order to insure safety for other students and clients. If faculty or the agency deems that any student creates a health risk, the student may be excluded from the research or clinical area and/or the program.

Individual health care facilities, used as research or clinical sites by the School of Nursing, may have additional requirements. In this event, the student is required to comply with any additional requirements of that facility.

Note: Health policies are constantly under review by faculty based on CDC changing requirements and community expectations. Students will be notified of any policy changes, and compliance will be required.

Immunization Requirements

Immunization requirements have been established by the Schools of Medicine, Dentistry, Nursing and Allied Health in recognition of a responsibility to provide for your safety, both in the classroom and in clinical settings, and for the safety of patients you will encounter in your training. These requirements also reflect the standards required by the various institutions in which you will be working during your education. Compliance is administered through the U of L Student Health Services. More detail is available in the student handbooks or on the Student Health Services website: www.med.louisville.edu/clinical/studenthealth/HSOHome.htm

Background Check

Due to Kentucky Legislature House Bill 136, hospitals and clinical sites across the area are now requiring that we conduct background checks on students. The School of Nursing also requires this of faculty. As of August 2007, the SON requires all students to have a background check through CertifiedBackground.com which will be at the federal level. You will deal directly with the company to have this performed. Instructions for accessing the CertifiedBackground.com system are available through the Office of Student Services. The results will then be sent to the SON to keep on file as required by our affiliation agreements with the hospitals and community agencies. The cost is \$40.00 which you will submit to the company directly. In the future, this background check will be part of the application process to the SON; we are trying to come into compliance for all currently enrolled students through this mechanism. If you have questions about the background check, please contact Trish Hart, Director of Student Services, 852-8298.

Health Insurance

Students are responsible for submitting proof of health insurance. On April 26, 1999, the University of Louisville Board of Trustees approved a requirement for proof of insurance for all Health Sciences Center (HSC) students. Every HSC student will be assessed the University sponsored health insurance plan, the comprehensive plan. Students who already have health insurance that includes hospitalization coverage can waive the fee.

Health Services Fee

On April 26, 1999, the University of Louisville Board of Trustees approved a Health Services Fee. Every HSC student will be assessed the Health Services Fee each semester. Thirty-five dollars of this fee will be bundled in tuition beginning Fall 2007.

For more information about what the fee covers, please see the Student Health Services website: www.med.louisville.edu/clinical/studenthealth/faq.htm#14

Repeating Nursing Courses

Students who receive a grade of C+ or below in a course must repeat the course. Students in the Graduate Nursing Program are allowed to repeat a required nursing curriculum course only one time. A student who receives a grade of C+ or

below in a second course required in the nursing curriculum will be dismissed from the program. A Permit to Repeat Course form should be submitted to the Office of Student Services, School of Nursing, to ensure that only the last grade attempted will be included in the student's grade point average. Repeating a course is not an automatic privilege, and in most cases the student must petition to the Associate Dean and/or the Academic Affairs Committee for permission to repeat a nursing course. Once permission is granted, the student will be allowed to repeat the course on a space available basis.

Satisfactory Standing

Satisfactory standing in the nursing program is a cumulative program grade point average of at least 3.0.

Probation and Dismissal

If the cumulative grade point average falls below 3.0, the student will be placed on academic probation for the next regular semester. If the cumulative grade point average is not raised to a minimum of 3.0 by the end of the probation semester, the student will be dismissed from the program. The dismissal will be reflected on the student's transcript. If a student wishes to continue at the University, he/she must apply and be accepted to another unit in order to continue to enroll in classes.

Curriculum

Ph.D. in Nursing: Required Courses

B.S.N. Students will complete 18 hours of required master's level courses.

- NURS 605: Foundations for Advanced Practice (3 credit hours)
- NURS 606: Health Care Systems (3 credit hours)
- NURS 651: Evidence Based Nursing for Advanced Practice (3 credit hours)
- NURS 652: Statistics (3 credit hours) OR ELFH 601: Applied Statistics (3 credit hours)
- NURS 657: Health Promotion and Illness Prevention Across the Lifespan (3 credit hours)
- PHPB 610: Introduction to Health Informatics (3 credit hours)

B.S.N. and M.S.N. Students will complete the following required doctoral level courses, qualifying exam and dissertation:

- Advanced Statistics (9 credit hours)
- Philosophy of Science (3 credit hours)
- Theoretical Basis of Nursing (3 credit hours)
- Research Methodology I: Qualitative Research Methods (3 credit hours)
- Research Methodology II: Quantitative Design (3 credit hours)
- Research Methodology III: Nursing Measurement (3 credit hours)
- Health Policy: An Evidence-Based Approach (3 credit hours)
- Seminar in Advanced Nursing Leadership (3 credit hours)
- Electives (9 credit hours)
- Research Methods Practicum (2 credit hours)
- Leadership Practicum (1 credit hour)
- Health Policy Practicum (1 credit hour)
- Doctoral Seminars (2 credit hours)
- Qualifying Examination (2 credit hours)
- Dissertation (10 Credit hours)

Departmental Faculty

Cynthia McCurren, Ph.D., R.N.

Professor

Dean

Paulette Adams, Ed.D., RN

Professor, Emerita

Ruth B. Craddock, DNS, RN

Professor, Emerita

Linda Freeman, DNS, RN

Professor

Marianne Hutti, DNS, ARNP

Professor

M. Cynthia Logsdon, DNS, ARNP

Professor

Kay Roberts, Ed.D., FAAN, FNP

Professor

Karen Robinson, DNS, APRN, BC, FAAN

Professor

Robert Topp, Ph.D., RN

Professor

Deborah Armstrong, Ph.D., RN

Associate Professor

Cathy Bays, Ph.D., RN

Associate Professor

Carla Hermann, Ph.D., RN

Associate Professor

Vicki Hines-Martin, Ph.D., RN, CS

Associate Professor

Ermalyn Kiehl, Ph.D., ARNP

Associate Professor

Acting Associate Dean for Undergraduate Programs

Rosalie O. Mainous, Ph.D., ARNP

Associate Professor

Acting Associate Dean for Graduate Programs

Barbara Speck, Ph.D., RN

Associate Professor

Acting Associate Dean for Research

Said Abusalem, Ph.D., RN

Assistant Professor

C. Elizabeth Bonham, Ph.D., ARNP, BC

Assistant Professor

Vicki Burns, Ph.D., RN, ARNP, BC

Assistant Professor

Diane Chlebowy, Ph.D., RN

Assistant Professor

Mary Beth Coty, Ph.D., APRN, BC

Assistant Professor

Peggy El-Mallahk, Ph.D., RN

Assistant Professor

S. Lee Ridner, Ph.D., ARNP

Assistant Professor

Celeste Shawler, Ph.D., RN, CS

Assistant Professor

Mary Patricia Wall, Ph.D., RN, BC

Assistant Professor

School of Public Health and Information Sciences

Richard D. Clover, M.D., Dean

The School of Public Health and Information Sciences offers the following programs through the Graduate School:

- Biostatistics: Decision Science - M.S.
- Biostatistics: Decision Science - Ph.D.
- Clinical Investigation Sciences - M.Sc.
- Clinical Investigation Sciences - Certificate
- Epidemiology - M.S.
- Public Health Sciences - Ph.D.
- Public Health - M.P.H.

Master of Science in Biostatistics-Decision Science

Major: PHDA

Degree Awarded: M.S.

Unit: GH

Program Webpage: louisville.edu/sphis/bb/academics

Program Information

The Department of Bioinformatics and Biostatistics offers the Master of Science Program in Biostatistics-Decision Science with concentrations in Biostatistics and in Decision Science. The program prepares graduates for positions in academic settings, pharmaceutical companies, government agencies, and healthcare organizations.

Admission Requirements

Applicants are required to submit the following:

- Graduate application.
- Non-refundable application fee.
- At least two letters of recommendation written within past twelve months.
- GRE Quantitative section score.
- All postsecondary transcripts (may require foreign credential evaluation if not from accredited US institution).
- Statement of goals and desired concentration.
- TOEFL score may be required if English is not native language and no degree from accredited US institution.

Curriculum

Year One Fall

- PHEP 601 Introduction to Epidemiology 3
- PHST 661 Probability 3
- PHST 680 Biostatistical Methods I 3

Year One Spring

- XXX XXX Elective (see below) 3
- PHST 662 Mathematical Statistics 3
- PHST 681 Biostatistical Methods II 3

Year Two Fall

- PHST 602 Biostatistics-Decision Science Seminar 1
- PHCI 624 Clinical Trials I 2

Biostatistics concentration:

- PHST 683 Survival Analysis 3
- PHDA 666 Master's Thesis Research 3

Decision Science concentration:

- PHDA 666 Master's Thesis Research 3
- PHDA 663 Analysis for Decision Making (cross-listed with IE 643) 3

Year Two Spring

- PHST 602 Biostatistics-Decision Science Seminar 1
- PHDA 603 Public Health Practicum I 2

Biostatistics concentration:

- PHST 684 Categorical Data Analysis 3
- PHDA 666 Master's Thesis Research 3

Decision Science concentration:

- PHDA 666 Master's Thesis Research 6

Total credit hours: 36

Elective must be chosen from the following list or as approved by student's assigned advisor:

- MATH 566 Nonparametric statistics
- PHCI 605 Survey research methods
- PHCI 622 Case-control Studies
- PHCI 623 Cohort Studies
- PHBI 750 Statistical Methods for Bioinformatics
- PHEH 600 Introduction to Environmental Health

Doctor of Philosophy in Biostatistics-Decision Science

Major: PHST

Degree Awarded: Ph.D.

Unit: GH

Program Webpage: louisville.edu/sphis/bb/academics

Program Information

The Department of Bioinformatics and Biostatistics offers the Doctor of Philosophy Program in Biostatistics-Decision Science with concentrations in Biostatistics and in Decision Science. The program prepares graduates for positions in academic settings, pharmaceutical companies, government agencies, and healthcare organizations.

Program of Study

Upon admission to the Ph.D. program, a Program of Study will be developed for each student by the Graduate Coordinator and approved by the Department Chair. Decisions regarding additional coursework will be made by the student's assigned faculty dissertation advisor and such courses will become part of the Program of Study. This approach will give maximum flexibility for addressing differing student qualifications and interests and for ensuring that pertinent courses are taken.

Qualifying Exams and Dissertation

Upon completion of the required coursework for the Ph.D., the student will be eligible to sit for the

Doctoral Qualifying Exam. Successful completion of the exam will admit the student to doctoral candidacy. A doctoral candidate then must successfully develop and defend a Dissertation Proposal that describes an original, independent research project. Upon successfully completing the Doctoral Qualifying Exam and Dissertation Proposal, the student may proceed with dissertation research under the mentorship of a member of the Senior Faculty. Students who are in the process of completing a dissertation will be required to successfully defend their dissertation to the satisfaction of the members of their dissertation committee, which is chaired by a senior member of the Graduate Faculty and approved by the Graduate School Dean. Upon successful defense of the Dissertation, the student will be awarded the Ph.D. degree.

Admission Requirements

Applicants are required to submit the following:

- Graduate application;
- Non-refundable application fee;
- At least two letters of recommendation written within past twelve months;
- GRE Quantitative section score;
- All postsecondary transcripts (may require foreign credential evaluation if not from accredited US institution);
- Statement of goals and desired concentration;
- TOEFL score may be required if English is not native language and no degree from accredited US institution.

Curriculum

Minimum Requirements

33 Total Credit Hours (beyond a master's degree in Biostatistics, Statistics, or a related discipline):

- 24 credit hours of required coursework
- 9 credit hours of dissertation research

Coursework for Concentration in Biostatistics

Required Courses - Biostatistics

Course	Course Title	Credit Hours
Fall		
PHST 710	Advanced Statistical Computing I	3
PHST 762	Advanced Statistical Inference	3
PHST 781	Advanced Linear Models	3
Spring		
PHST 724	Advanced Clinical Trials	3
PHST 782	Generalized Linear Models	3
PHST 783	Advanced Survival Analysis	3

In addition to the above required courses, at least six (6) credit hours of electives must be taken from the following list. The student's Program of Study will specify the courses to be taken.

Elective Courses

Course	Course Title	Credit Hours
PHBI 750	Statistical Methods for Bioinformatics	3
PHBI 751	High-throughput Data Analysis	3
PHST 682	Multivariate Analysis	3
PHST 691	Bayesian Statistics	3
PHST 711	Advanced Statistical Computing II	3
PHST 725	Design of Experiments	3
PHST 785	Nonlinear Regression	3

Coursework for Concentration in Decision Science

Required Courses - Decision Science

Course	Course Title	Credit Hours
Fall		
PHDA 673	Biostatistics-Decision Science Research	3
PHDA 690	Utility Theory and Assessment	3
Spring		
PHDA 691	Bayesian Statistics	3
PHDA 701	Advanced Medical Decision Making	3

Elective Courses

In addition to the above required courses, at least 12 credit hours of electives must be taken from the above electives list. The student's Program of Study will specify the courses to be taken.

Dissertation

Dissertation work may be started upon successful completion of Doctoral Qualifying Examinations. Dissertation research may be credited at no more than nine (9) hours per semester (six (6) hours during summer semester) as PHDA 777.

Departmental Faculty

Chair and Professor

Rudolph S. Parrish, Ph.D.

Professor

Somnath Datta, Ph.D.

Associate Professors

Susmita Datta, Ph.D.

L. Jane Goldsmith, Ph.D.

Shesh Rai, Ph.D.

Dongfeng Wu, Ph.D.

Assistant Professors

Guy Brock, Ph.D.

Maiying Kong, Ph.D.

Steven J. McCabe, M.D., M.Sc.

John A. Myers, Ph.D.

Jae Keun (Peter) Yoo, Ph.D.

Master of Science in Clinical Investigation Sciences

Major: CISCMSC
Degree Awarded: M.Sc.
Unit: GH
Program Webpage: sphs.louisville.edu/academics.cfm

Program Information

The mission of the program is to equip students with the skills needed for independent clinical research.

Objectives

Objectives of the program are to identify a research question, operationalize a hypothesis, formulate a study protocol, determine the necessary sample size for acceptable statistical power, select the appropriate statistical analysis techniques and be sufficiently familiar with SPSS and/or SAS to perform the statistical analysis (in consultation with a biostatistician), write their results for presentation and publication and prepare a grant application.

Admission Procedures

Students seeking the M.Sc. degree must have a professional degree (e.g., D.M.D., D.O., M.D. or Ph.D.), a terminal degree in a health field, or a graduate degree with appropriate experience in health care or clinical research.

Applicants must complete all forms for admission to the University of Louisville Office of Graduate Admissions and must meet the Graduate School's requirements for admission which are:

- Formal application.
- Application fee.
- At least 2 letters of recommendation.
- Official transcripts of all college work.

NOTE- The GRE is not required if a terminal degree has already been completed.

These items are required no later than thirty days before the first day of classes of the semester in which the applicant plans to enroll.

Prospective students are also required to submit the following items with their application:

- Resume/CV.
- A statement describing the applicant's qualifications, including prior experience in clinical research or health care, proposed (general) area of research and career plans.

Curriculum

The 25 credit-hours of required course work provide students with a broad base of knowledge in epidemiologic research methods, biostatistics, bioethics and the methodologies of health services and outcomes research. Early in their first semester M.Sc. students are required to identify a faculty member who will serve as a mentor. The M.Sc. in Clinical Investigation Sciences can be completed in two years. However, a three-year option is also available.

Year I

Summer Semester

- PHCI 501 – From Bench to Bedside:
Introduction to Clinical Research 1

Fall Semester

- PHCI 611 - Introduction to Clinical Epidemiology 2
- PHST 600 - Introduction to Biostatistics 3
- PHCI 631 – Social and Behavioral Science in Health Care 2
- PHCI 610 – New Drug and Device Development 2
- PHCI 699 – Mentored Research

Spring Semester

- PHEP 602 -Epidemiological Methods 3
- PHCI 629 - Special Topics: Epidemiological Methods 1
- PHCI 624 – Clinical Trials I 2
- PHCI 632 – Ethical Conduct of Health Care Research 2
- PHCI 699 – Mentored Research

Year 2

Summer Semester

- PHCI 601 - Evaluating the Health Care Literature 1
- PHCI 699 - Mentored Research

Fall Semester

- PHCI 625 – Clinical Trials II 2
- PHCI 650 – Medical Decision Analysis 2

- PHCI 602 – Health Services and Outcomes Research 2
- PHCI 699 – Mentored Research

Spring Semester*

- PHCI 699 – Mentored Research

Graduate Certificate in Clinical Investigation Sciences

Program Information

The Graduate Certificate in Clinical Investigation Sciences includes 16 credit-hours of didactic instruction with required courses in epidemiology, biostatistics, the responsible conduct of research, evaluating the health care literature and an elective in behavioral and social science, health economics or health services and outcomes research plus a one credit hour research paper. The Certificate Program can be completed in one year and is designed for those who want a career in a clinical research setting as well as those who want to upgrade their research skills. Courses taken in the certificate program can be applied toward the M.Sc. degree.

Mission Statement of Program

The mission of the program is to cover the core material for personnel in the clinical research infrastructure.

Objectives

The objective of the program is to train research associates, study coordinators, and research coordinators, for residency and fellowship programs. In addition, to assist faculty, fellows and residents with the design of a research project, insuring human subject protection, and basic quantitative analysis of data. The Certificate is also a mechanism for experienced clinical researchers and mid to senior level faculty to upgrade their skills in the clinical investigation sciences.

Admission Procedures

Students seeking the Certificate should have a degree in a health field, or a graduate degree

with appropriate experience in health care or clinical research.

Applicants must complete all forms for admission to the University of Louisville Graduate School and must meet the Graduate School's requirements for admission which are:

- Formal application.
- Application fee.
- At least 2 letters of recommendation.
- Official transcripts of all college work.

NOTE- The GRE is not required.

These items are required no later than thirty days before the first day of classes of the semester in which the applicant plans to enroll.

Prospective students are also required to submit the following items with their application:

- Resume/CV.
- A statement describing the applicant's qualifications, including prior experience in clinical research or health care, proposed (general) area of research and career plans.

Foundation Course Content

Not applicable.

Curriculum

Certificate in Epidemiology and Clinical Investigation Sciences Course Requirements

Fall Semester

- PHCI 611- Introduction to Clinical Epidemiology 2
- PHST 600 - Introduction to Biostatistics 3

Elective Courses (Select One)

- PHCI 631 - Behavioral and Social Science in Health Care 2
- PHCI 650 - Medical Decision Analysis 2
- PHCI 602 - Health Services and Outcomes Research 2

Spring Semester

- PHEP602 - Epidemiological Methods 3
- PHCI 629 - Special Topics: Epidemiological Methods 1
- PHCI 624 - Clinical Trials I 2
- PHCI 632 - Ethical Conduct of Health Research 2

Summer Semester

- PHCI 601 - Evaluating Health Care Literature 1
- PHCI 699 – Mentored Research Paper 1

Program Faculty

W. Paul McKinney, M.D.

Professor

Richard Baumgartner, Ph.D.

Professor

Carlton A. Hornung, Ph.D., M.P.H.

Professor

Rob Steiner, M.D., Ph.D., M.P.H.

Professor

Osborne P. Wiggins, Ph.D.

Professor

L. Jane Goldsmith, Ph.D.

Associate Professor

Ruth Carrico, Ph.D., R.N.

Assistant Professor

Frank Groves, MD

Assistant Professor

Steven McCabe, M.D., M.Sc.

Assistant Professor

Susan B. Muldoon, M.P.H., Ph.D.

Assistant Professor

Chenxi Wang, MD, M.Sc., Ph.D.

Assistant Professor

Cathy R. Whalen, Pharm D.

Assistant Professor

Master of Science in Epidemiology

Major: PHEP

Degree Awarded: M.S.

Unit: GH

Program Webpage: louisville.edu/sphis/deph

Program Information

The M.S. program in Epidemiology is designed to prepare students for the Ph.D. program in Public Health Sciences with a concentration in Epidemiology.

Program of Study

Upon admission to the M.S. program, each student will be assigned a faculty advisor who will work with the student to develop a program of study. The program of study recognizes core elements of modern epidemiology as well as its breadth and multidisciplinary nature.

Eligibility for the M.S. program in Epidemiology

Students with a prior baccalaureate or more advanced degree in an appropriate field of study, from a regionally accredited university or college will be eligible for the M.S. program in Epidemiology. Previous coursework in mathematics and/or statistics and biological or health sciences (for example, biology, biochemistry, anatomy, physiology, microbiology) is strongly recommended. Applicants who are judged to not have sufficient prior coursework or experience in these areas may be required to take additional coursework.

The following are additionally required for admission:

- Undergraduate GPA at least 3.0 on 4.0 scale
- Minimum GRE at least 500 Verbal and 600 Quantitative.
- If applicable, Test of English as a Foreign Language (TOEFL) score in at least 60th percentile.

Thesis Requirement

The M.S. thesis will follow formal Graduate School thesis guidelines and will be on one or more of the following:

1. a critical review of the contemporary epidemiologic literature on a specific disease, risk factor, or health related condition;
2. a meta-analysis of results from several epidemiologic studies of a specific disease;
3. a research report on analysis of collected data;
4. an evaluation of epidemiologic statistical methodology.

It is expected that the thesis will be original, professional quality, and be the basis for one or more potentially publishable papers.

In summary, the M.S. in Epidemiology is explicitly designed to prepare students for a career in research.

Competencies

1. To graduate, students in the M.S. program in Epidemiology must demonstrate the following competencies:
 - a. Mastery of the principles of epidemiologic, observational study design, including:
 - b. The merits and limitations of cross-sectional, retrospective and prospective designs;
 - c. Methods of disease surveillance and case ascertainment;
 - d. Methods of population-based sampling;
 - e. Sample size and statistical power calculation;
 - f. Issues in the measurement of exposure and disease transmission;
 - g. Identification and correct interpretation of potential biases in study design.
2. Knowledge of the socioeconomic and geographic distribution, risk factors, and etiology of major acute, infectious and chronic morbidity and mortality.
3. Mastery of basic methods of analysis of epidemiologic data, including:
 - a. Measures of disease frequency, prevalence and incidence;
 - b. Methods for adjusting rates for age, gender, etc.;
 - c. Measures of association, odds ratio, relative risk;
 - d. Control of confounding and effect modification through stratification and statistical control;
 - e. Modeling in multiple logistic regression;
 - f. Principles of survival analysis;
 - g. Correct interpretation of results with regard to issues of error, bias and criteria for causality.

Curriculum

Minimum Requirements

- 36 Total Credit Hours including:
- Six (6) credit hours in Biostatistics
- Three (3) to (6) credit hours in another Public Health discipline
- Six (6) credit hours of thesis research

Required Coursework

Fall I

PHEP 602 Epidemiologic Methods	3
PHEP 619 Biology of Disease in Populations .	3
*PHST xxx	3

Spring I

PHEP 618 Epidemiologic Methods II	3
PHEP 604 Epidemiology of Acute and Infectious Diseases	3
*PHST xxx	3

Fall II

PHEP 607 Epidemiology of Cancer	3
PHEP 609 Epidemiology of Chronic Diseases .	3
**PHxx elective	3

Spring II

**PHxx elective OR	
PHEP 650 Advanced Topics in Epidemiology .	3
PHEP 666 Thesis Research in Epidemiology 1-6	
<i>* To be determined in conjunction with Department Bioinformatics and Biostatistics</i>	
<i>** To be selected from course offerings of another SPHIS department.</i>	

*List of Acceptable Biostatistics (PHST) Courses

- PHST 624 Clinical Trials I
- PHST 650 Advanced Topics in Biostatistics
- PHST 680 Biostatistical Methods I
- PHST 681 Biostatistical Methods II
- PHST 661 Probability
- PHST 662 Mathematical Statistics
- PHST 683 Survival Analysis
- PHST 684 Categorical Data Analysis
- PHST 682 Multivariate Analysis

**List of Acceptable Elective Courses in Public Health Sciences (PHxx)

- PHEP 606 Genetic and Molecular Epidemiology
- PHEP 611 Nutritional Epidemiology
- PHEP 612 Epidemiology and Bioterrorism
- PHEP 613 Epidemiology of Aging
- PHEP 615 Epidemiology of Maternal/Child Health
- PHCI 671 Preventive Medicine I
- PHCI 672 Preventive Medicine II

- PHCI 605 Survey Research Methods
- PHCI 611 Introduction to Clinical Epidemiology
- PHEH 650 Advanced Topics in Environmental and Occupational Health
- PHPB 650 Advanced Topics in Health Knowledge and Cognitive Sciences
- PHMS 650 Advanced Topics in Health Management and Systems Science

Additional courses may be added pending their development by other departments in the School of Public Health and Information Sciences.

Departmental Faculty

Chair and Professor

Richard N. Baumgartner, Ph.D.

Professor

Carlton A. Hornung, Ph.D.

Associate Professors

Kathy B. Baumgartner, Ph.D.

Assistant Professors

Frank Groves, M.D.

Susan B. Muldoon, Ph.D.

Chenxi Wang, Ph.D.

Kristina Zierold, Ph.D.

Doctor of Philosophy in Public Health Sciences

Major: M.P.H.

Degree Awarded: Ph.D.

Unit: GH

Program Webpage: louisville.edu/sphis/

Program Information

The School of Public Health and Information Sciences offers a doctor of philosophy degree in Public Health Sciences with concentrations in the following areas:

- Environmental Health
- Epidemiology
- Health Management
- Health Promotion

Concentration in Environmental Health

The concentration in Environmental Health for the Ph.D. in Public Health Sciences is designed to provide scholars with the tools to conduct in-depth research and provide advanced instruction in the discipline of Environmental Health at the college and university level. It will also prepare researchers for governmental, private, and voluntary organizations involved in environmental protection and the prevention of disease and injury. In addition to understanding advanced concepts of environmental health, industrial hygiene, and toxicology, graduates of this concentration are expected to develop skills that will enable them to identify and define questions of environmental and occupational health importance, design research studies to address these questions, and to complete a program of research that demonstrates abilities as an independent investigator.

The Ph.D. concentration in Environmental Health is in the Department of Environmental and Occupational Health ("Department") and is part of the Ph.D. program in Public Health Sciences in the School of Public Health and Information Sciences.

Program of Study

Upon admission to the Ph.D. concentration, each student will be assigned a faculty advisor who will work with the student to develop a Program of Study. The Program of Study recognizes core elements of Environmental Health as well as its breadth and multidisciplinary nature. At the Ph.D. level, this will require the selection of courses directly relevant to environmental health, such as biostatistics, epidemiology, molecular genetics, behavioral science, health policy/management, systems sciences, or other relevant areas of study.

Eligibility for the Ph.D. Concentration in Environmental Health

An applicant who has satisfactorily completed an appropriate M.S. degree or M.P.H. with a concentration in Environmental Health will be eligible for admission to the Ph.D. concentration in Environmental Health. An applicant with an advanced degree (M.D., Ph.D., D.O.) may also be accepted pending evaluation of appropriate training, experience, or coursework. The previous graduate work by such an applicant is reviewed on a case-by-case basis, and the applicant, if

admitted, may be required to take additional course work prior to completing the minimum 43 credit hours required for post master's doctoral work.

The following are additionally required for admission:

- Undergraduate and Graduate GPA > 3.0 on 4.0 scale
- Minimum GRE > 500 Verbal; > 600 Quantitative
- If applicable, Test of English as a Foreign Language (TOEFL) score > 60th percentile

Competencies

To graduate, a student in the Ph.D. concentration in Environmental Health must demonstrate the following competencies:

1. In depth knowledge of the history of environmental health.
2. Mastery of experimental study designs and the ability to identify optimal designs for specific hypotheses.
3. Ability to critically evaluate published environmental health research.
4. Expertise in one or more environmental health specialty such as risk assessment, environmental management, environmental and occupational toxicology.
5. Practical knowledge of issues in research management including:
 - Formation and leadership of multidisciplinary teams.
 - Staffing, budgeting, tracking.
 - Subject recruitment and retention.
 - Data quality control and data safety management.
 - Funding mechanisms and grantsmanship.
 - Research ethics and regulations.
6. Professional quality peer-review, oral and poster presentation, report, grant, and manuscript writing.
7. Mentoring of junior peers.

Demonstration of Competency 1 is achieved by passing the Doctoral Qualifying Examination and by successful completion and defense of the dissertation. Demonstration of Competencies 2 through 6, inclusive, is achieved by successful development, conduct, completion, and defense of the dissertation. Demonstration of Competency 7 is achieved by successful completion of

assignments to work with master's students on the latter's research, theses, presentations, and posters.

Concentration in Epidemiology

The concentration in Epidemiology in the Ph.D. program in Public Health Sciences is designed to develop academic researchers in population-based epidemiology.

Program of Study

Upon admission to the concentration, each student will be assigned a faculty advisor who will work with the student to develop a program of study. The program of study recognizes core elements of modern epidemiology as well as its breadth and multidisciplinary nature. This will require the selection of a minor field of concentration, such as biostatistics, environmental science, molecular genetics, behavioral science, health management and systems sciences, or another relevant area of study, and the completion of at least six (6) hours of coursework in this field.

Eligibility for Ph.D. Concentration in Epidemiology

Students who have satisfactorily completed the M.S. degree in Epidemiology will be eligible for the Ph.D. concentration in Epidemiology. Students with a Master's degree in a related discipline or an advanced degree (M.D., Ph.D., D.O.) may be accepted also pending evaluation of appropriate training, experience, and coursework. Previous coursework in mathematics and/or statistics and biological or health sciences (for example, biology, biochemistry, anatomy, physiology, microbiology) is strongly recommended. Students completing the M.Sc. in Clinical Investigation Sciences or M.P.H. with an Epidemiology concentration may be required to complete additional coursework to be accepted into the Epidemiology Ph.D. concentration.

Competencies

To graduate, students in the Ph.D. concentration in Epidemiology must demonstrate the following competencies in addition to those for the M.S. degree:

1. In depth knowledge of the history and philosophy of epidemiology
2. Mastery of experimental and observational study designs and the ability to identify optimal designs for specific hypotheses

3. Ability to develop and apply
 - Questionnaires
 - Biomarkers for health status, exposure and susceptibility
4. Mastery of multivariate analytic methods for evaluating risk and prognosis
5. Ability to critically evaluate the published epidemiologic research
6. Expertise in one or more epidemiologic specialty such as nutritional, molecular, genetic, cancer, or chronic disease epidemiology
7. Practical knowledge of issues in research management including:
 - Formation and leadership of multidisciplinary teams
 - Staffing, budgeting, tracking
 - Subject recruitment and retention
 - Data quality control and data safety management
 - Funding mechanisms and grantsmanship
 - Research ethics and regulations
8. Professional quality peer-review, oral and poster presentation, report, grant, and manuscript writing
9. Mentoring of junior-peers
10. Development, conduct, completion and defense of a dissertation on an original research project that provides evidence of all of the above

Concentration in Health Management

The Ph.D. concentration in Health Management in the Department of Health Management and Systems Sciences ("Department") is in the Ph.D. program in Public Health Sciences in the University of Louisville's School of Public Health and Information Sciences.

The concentration in Health Management is designed to prepare graduates for careers as researchers, teachers and practitioners, involved in the efforts to protect and promote the health and well-being of communities and populations. It will provide graduates with the knowledge and skills necessary to attain academic positions involving scholarly research and instruction in the disciplines of Public Health Management and key policy and management positions in governmental as well as private and voluntary organizations. In addition to an in depth understanding of

the infrastructure and context of public health management, graduates of this concentration are expected to be able to identify issues and questions of importance with regard to the management of the resources of public health and to design and carry out a program of research designed to address these issues and questions. Graduates should be able to demonstrate abilities as an independent investigator as well as a team collaborator.

Program of Study

Upon admission to the Ph.D. concentration, each student will be assigned a faculty advisor who will work with the student to develop a Program of Study. The Program of Study will incorporate a foundation of core courses intricate to Health Management as well as address its multidisciplinary nature. At the Ph.D. level, this will require the selection of courses directly relevant to health management, such as organizational theory, management and administrative processes, health policy, leadership, systems/network sciences, and another area of study related to providing in depth knowledge related to effectively managing the resources necessary to carrying out the mission of protecting and improving public health. The importance of understanding the contributions of the emerging field of Complexity and Network Sciences, as it relates to public health management, will be a focal point of emphasis within the Ph.D. concentration.

Eligibility for the Ph.D. Concentration in Health Management

An applicant who has satisfactorily completed a Master of Public Health degree, or another relevant master degree or a health professional degree will be considered for admission to the Health Management concentration. Applicants already holding an advanced degree will be evaluated on the basis of appropriateness of previous coursework, training and experience. The graduate work by such applicants will be reviewed on a case-by-case basis, and the applicant, if admitted, may be required to take additional course work prior to completing the minimum 48 credit hours required for post master's doctoral work.

Admission Criteria and Required Documentation

The minimum required documentation for full admission must include:

- Official transcript for each degree

- Official GRE score
 - If applicant has no degree from accredited US institution, then only the GRE is acceptable.
 - Requirement is waived if applicant has doctoral degree.
- Three (3) letters of recommendation from individuals who have direct knowledge and experience with the applicant's academic and/or professional work experience
- Official TOEFL score if applicant's native language is not English and applicant has no degree from accredited US institution
- Foreign credential evaluation for each degree not from an accredited US institution
- Resume of curriculum vitae
- Personal statement, not to exceed two pages, including prior experience, proposed area of research, and career plans

Recommended Criteria for Admission

The following are recommended criteria for admission:

- Undergraduate and Graduate GPA each 3.0 or higher on a 4.0 scale
- GRE performance in 50th percentile or above for Verbal and Quantitative scores*
- If applicable, Test of English as a Foreign Language (TOEFL) score in 60th percentile or above

*Comparable scores on the MCAT or DAT will be considered.

Competencies

To graduate, a student in the Ph.D. concentration in Health Management must demonstrate the following competencies:

1. In depth knowledge of the history of Public Health Management.
2. Mastery of experimental research study designs, including qualitative as well as quantitative, and the ability to identify optimal designs for specific hypotheses.
3. Ability to critically evaluate published research related to health management.
4. Expertise in one or more health management specialties such as information systems, planning and evaluation, human resource management, health policy analysis, development and implementation, budgeting and financial management, health economics,

system dynamics, network science and social network analysis.

5. Practical knowledge of issues in research management including:
 - Formation and leadership of multidisciplinary teams.
 - Staffing, budgeting, tracking.
 - Data quality control and data safety management.
 - Funding mechanisms and grantsmanship.
 - Research ethics and regulations.
6. Professional quality peer-review, oral and poster presentation, report, grant, and manuscript writing.
7. Mentoring of junior peers.

Demonstration of Competency 1 is achieved by passing the Doctoral Qualifying Examination and by successful completion and defense of the dissertation. Demonstration of Competencies 2 through 6, inclusive, is achieved by successful development, conduct, completion, and defense of the dissertation. Demonstration of Competency 7 is achieved by successful completion of assignments to work with master's students on the latter's research, theses, presentations, and posters.

Concentration in Health Promotion

The Ph.D. concentration in Health Promotion in the Department of Health Promotion and Behavioral Sciences is in the Ph.D. in Public Health Sciences degree program in the University of Louisville's School of Public Health and Information Sciences. The concentration is designed to prepare students for careers in higher education, upper level management positions in government and private nonprofit health agencies, and research positions with universities, government agencies and in the private sector. In addition to gaining a solid foundation in the theories and concepts of the discipline, students will also achieve competency as independent researchers.

Competencies

The successful student will be able to demonstrate:

- Advanced knowledge of behavioral and cognitive sciences related to public health education and promotion.

- Expertise in planning, implementing, and evaluating theory-driven health promotion interventions in a variety of community and clinical settings.
- Research, evaluation, scholarship and leadership skills that may be applied in higher education, government, and community health agencies.

It is expected that prior to graduation, students in the program will have demonstrated these competencies by completing the curriculum, passing the qualifying exam, successfully defending the dissertation, participating in collaborative research and service projects with public health agencies, and serving as an instructor and mentor for master's level and beginning doctoral students.

Competency in the basic principles and application of epidemiology is a requirement for all students in the School. If a student has not had sufficient exposure to epidemiology prior to matriculation, he or she will be required to take a course in epidemiology as part of the program of study.

Admission

Applicants should have a minimum of 3.0 on a 4.0 scale and, in most cases, should have completed a master's or other graduate degree related to the theme of the doctoral program. Applicants who have a master's degree in a different discipline may be admitted with the stipulation that they complete foundation course work during their enrollment for the doctoral degree. This coursework will be in addition to the outlined curriculum, and will be negotiated with the student's academic advisor on a case-by-case basis.

The formal application, curriculum vitae, personal statement, application fee, at least two letters of recommendation, official transcripts of all college work, and official scores on the Graduate Record Examination (GRE) General Test must be submitted to the Graduate School Office of Admissions. The personal statement should be a one-two page essay that discusses the student's background in health promotion, why the student is attracted to the field, and how the degree will help the student reach his or her career goals. Students should score above the 50th percentile on the GRE. In addition, prior work experience relevant to the health promotion discipline will also be considered as a factor in acceptance into

the program. International students will also be required to submit TOEFL scores and a foreign credential evaluation of their transcripts. These are required no later than thirty days before the first day of classes of the semester in which the applicant plans to enroll.

For specific information about the degree concentration or the application process, students should contact Dr. Richard W. Wilson, Chair, Department of Health Promotion and Behavioral Sciences, 502-852-8040.

Faculty Advisor

The Department of Health Promotion and Behavioral Sciences will appoint a Director of the Ph.D. concentration program each year. The Director will assign advisors for each doctoral student. The appointment process will be negotiated with the student who will have the option of requesting a specific advisor. The student's choice is contingent on the availability of the desired advisor and the overall resources of the Department.

Curriculum

Concentration in Environmental Health

Each doctoral student will, in consultation with his or her academic advisor and the Department Chair, plan a course of study that uniquely fits the student's career goals. The design of a doctoral program of study that reflects each student's professional skills and research interest is the primary organizing principle of the proposed program.

The emphasis in doctoral training goes beyond accumulating course credit. Completion of the coursework is the prelude to sitting for the Comprehensive Doctoral Exam. Successful passage of these comprehensive examinations allows the student to enter Doctoral Candidacy. A doctoral candidate must then successfully develop and defend a dissertation proposal that describes an original and independent research project. Upon successful defense of the proposal, a student may then proceed to dissertation research. Upon successful completion of the research, defense of the dissertation, and demonstration of the required competencies, a student is awarded the Ph.D. degree.

The Ph.D. concentration in Environmental Health is designed as a 43 credit hour program (mini-

mum beyond a master's degree) including the Dissertation. Additional hours may be needed for completion of the concentration program.

Minimum Course Requirements for the Ph.D. concentration in Environment Health:

43 Total Credit Hours including:

- 31 credit hours of required course work
- 3 credit hours of environmental health seminars
- 9 credit hours of dissertation research

Curriculum for Ph.D. Concentration in Environmental Health

Fall I

- PHST 620 Introduction to Statistical Computing 3
- PHEP 602 Epidemiological Methods 3
- BIOC 668 Molecular Biology 4

Total Credit Hours: 10

Spring I

- PHEP 620 Environmental and Occupational Epidemiology 3
- MBIO 658 Cellular and Molecular Immunology 3
- Elective* 3
- PHEH 750 Seminar 1 in Environmental and Occupational Health 1

Total Credit Hours: 10

Summer I

- PHEH 751 Seminar 2 in Environmental and Occupational Health 1
- Elective* 3
- Elective* 3
- PHEH 777 Dissertation Research 2

Total Credit Hours: 9

Fall II

- PHTX 661 Molecular Mechanisms in Toxicology 3
- PHEH 601 Environmental Risk Assessment 3
- PHEH 752 Seminar 3 in Environmental and Occupational Health 1
- PHEH 777 Dissertation Research 2
- Qualifying Exam
- Proposal Development and Defense

Total Credit Hours: 9

Candidacy

- PHEH 777 Dissertation Research 5

Total Credit Hours: 5

Total for Doctoral Degree: 43

Seminars in Environmental and Occupational Health

A student in the Ph.D. concentration in Environmental Health is required to complete the three Seminars in Environmental and Occupational Health (PHEH 750, 751, and 752) for a total of 3 credit hours. These group courses will be jointly taught by the faculty of the Department and are designed to provide a collegial experience that provides an opportunity to integrate learning from other courses, discuss hot topics, brainstorm about research ideas, and acquire professional skills in scientific manuscript and grant writing, oral and poster presentations, grantsmanship, and peer review.

Elective Options*

As a part of the approved Program of Study, a student will have the option to select nine (9) hours of elective coursework. Courses directly relevant to Environmental Health are preferred including, but not limited to, biostatistics, bioinformatics, epidemiology, medical geography, molecular or population genetics, toxicology, microbiology, health services research, outcomes research, health knowledge and behavior. Courses may be selected from those offered within the School of Public Health and Information Sciences, other departments within the University, or from sources outside the University with permission and acceptance of credit by the Graduate School.

Because the needs vary by research topic for which specific research methods and statistics skills, requirements in these area are difficult to define explicitly for all students. The student's Program of Study will utilize electives to provide the student with the courses needed in his or her particular case.

***List of Acceptable Courses for Ph.D. Minor Elective**

- PHST 650 Advanced Topics in Biostatistics
- PHST 680 Biostatistical Methods I
- PHST 681 Biostatistical Methods II
- PHPB 650 Advanced Topics in Health Promotion and Behavioral Sciences

- PHMS 650 Advanced Topics in Health Management and Systems Sciences
- GEOG 657 Geographic Information Systems
- GEOG 656 Spatial Statistics
- PHTX 601 Principles of Medical Pharmacology
- PHTX 630 Toxicology: Principles and Application
- PHTX 618 Topics in Pharmacology & Toxicology
- PHTX 607 Seminar in Genetics and Molecular Medicine
- BIOC 611 Biochemical and Molecular Methods
- BIOC 640 Principles of Biochemistry
- BIOC 670 Protein Structure and Function
- BIOC 660 Molecular Endocrinology
- BIOC 641 Advanced Eukaryotic Genetics
- BIOC 668 Molecular Biology
- BIOC 675 Cancer Biology
- BIOL 522 Aquatic Ecology
- BIOL 563 Population and Community Ecology
- BIOL 562 Ecosystem Ecology
- BIOL 584 Interdisciplinary Frameworks in Environmental Science and Technology
- BIOL 608 Ecological Instrumentation
- BIOL 660 Advanced Ecology of Urban and Suburban Landscapes
- BIOL 657 Advanced Industrial and Food Microbiology
- CEE 509 Environmental Processes and Systems
- CEE 534 Industrial Waste Management
- CEE 535 Solid Waste Management
- CEE 574 Water and Wastewater Treatment
- CEE 581 Environmental Impact Analysis
- CEE 674 Water Resources Systems
- CEE 675 Surface Water Quality Modeling
- CHE 509 Environmental Processes and Systems
- CHE 533 Chemical Engineering Safety and Health
- CHE 534 Industrial Waste Management
- CHE 535 Pollution Prevention
- EXP 600 Physiology of Exercise
- EXP 605 Human Physiology
- GEOG 522 GIS and Public Health
- GEOG 531 GIS and Urban Demographic Analysis
- GEOG 561 Urban Environmental Quality
- GEOS 564 Hydrology
- GEOS 565 Natural Hazards
- MBIO 601 Molecular Microbiology (Introductory to Infectious Diseases)
- MBIO 602 Introduction to Immunology
- MBIO 670 Molecular Virology
- MBIO 685 Microbial Physiology
- MBIO 687 Microbial Pathogenesis
- MBIO 618 Topics in Advanced Microbiology
- MBIO 680 Genetics of Infectious Diseases
- MBIO 667 Cell Biology
- PHZB 605 Systemic Physiology I
- PHZB 611 Advanced Human Physiology
- IE 530 Industrial Safety Engineering
- UPA 678 Land Use and Planning Law
- UPA 679 Environmental Policy
- UPA 687 Environmental Policy and Natural Hazards

A student may petition to take courses not on this list with approval of the instructor and the Chair of the Department. The student must provide a written rationale for the choices of elective coursework in his or her Program of Study.

Qualifying Exams

Upon completion of the majority of the required coursework for the Ph.D., the student will be eligible to sit for the Doctoral Qualifying Examination. The timing and eligibility for the qualifying exams will be determined by the student's faculty advisor and Department Chair. Successful completion of the exam will admit the student to doctoral candidacy. A student who does not successfully complete the exam may be required to take additional or remedial coursework and will be allowed one opportunity to retake the exam.

Research Proposal Defense

A student who successfully completes the qualifying exam must submit a written dissertation proposal to all members of the dissertation committee. The student will then be orally examined on the dissertation proposal.

Dissertation

A dissertation is required of a candidate for the degree of Doctor of Philosophy in Public Health Sciences with a concentration in Environmental Health. It is to be a scholarly achievement in research, and should demonstrate a thorough understanding of research techniques in environmental health and the ability to conduct independent research.

The dissertation is to be submitted in completed form to the Chair of the Department at least thirty days before the end of the term in which the candidate expects to be graduated, and the candidate is not eligible for final examination until the dissertation has been approved.

The dissertation shall be read by a reading committee, chaired by the student's faculty advisor, and appointed by the Dean of the Graduate School upon the advice of the Chair of the Department. This committee shall consist of five members, and must include one representative of an allied department. The dissertation must be approved by the committee and the Chair of the Department.

One unbound copy of the dissertation, signed by dissertation committee, must be deposited with the Office of the Graduate School before graduation.

Dissertation research may be credited at no more than nine (9) credit hours per semester as PHEH 777. No more than nine (9) credit hours of PHEH 777 may be taken.

Concentration in Epidemiology

Minimum Requirements

48 Total Credit Hours (beyond admission requirements)

39 credit hours of required coursework, including:

- 9 credit hours of required seminars
- 6 credit hours in minor area of concentration
- 9 credit hours of dissertation research

Required Coursework for Concentration in Epidemiology

Fall III

- PHEP 701 Advanced Epidemiologic Methods 3
- PHEP 702 Epidemiologic Research Management 3
- PHEP 613 Epidemiology of Aging 3

- Minor Elective* 3

Spring III

- PHEP 611 Nutritional Epidemiology 3
- PHEP 615 Epidemiology of Maternal/Child Health 3
- PHEP 750 Seminars in Epidemiology 3
- Minor Elective* 3
- Qualifying Exam

Summer IV

- PHEP 777 Dissertation Research (optional) . 3

Fall IV

- PHEP 606 Molecular/Genetic Epidemiology . 3
- PHEP 612 Epidemiology and Bioterrorism . . 3
- PHEP 750 Seminars in Epidemiology . . . 3 - 6
- PHEP 777 Dissertation Research (optional) . 3

Spring IV

- PHEP 750 Seminars in Epidemiology . . . 3 - 6
- PHEP 777 Dissertation Research 3 - 9

Seminars in Epidemiology

Students in the Ph.D. concentration in Epidemiology will be required to complete at least nine (9) credit hours of PHEP 750 Seminars in Epidemiology. This group course will be jointly taught by the faculty of the department and designed to provide a collegial experience that provides an opportunity to integrate learning from other courses, discuss hot topics, brainstorm about research ideas, and acquire professional skills in scientific manuscript and grant writing, oral and poster presentations, grantsmanship and peer-review.

Minor Requirement

As a part of their approved program of study, students will be required to complete 6 hours of coursework in a minor field of concentration. Areas directly relevant to the science of epidemiology are preferred including, but not limited to, biostatistics, bioinformatics, medical geography, molecular or population genetics, environmental health, toxicology, microbiology, health services research, outcomes research, health knowledge and behavior. These courses may be selected from ones offered within the School of Public Health and Information Sciences, other departments within the University, or from sources outside the University with permission and acceptance of credit by the Graduate School.

***List of Acceptable Courses for Ph.D. Minor Elective**

- PHST 624 Clinical Trials I
- PHST 650 Advanced Topics in Biostatistics
- PHST 680 Biostatistical Methods I
- PHST 681 Biostatistical Methods II
- PHST 661 Probability
- PHST 662 Mathematical Statistics
- PHST 683 Survival Analysis
- PHST 682 Multivariate Analysis
- PHST 684 Categorical Data Analysis
- PHST 710 Advanced Statistical Computing
- PHST 711 Advanced Statistical Computing II
- PHST 724 Advanced Clinical Trials
- PHST 782 Generalized Linear Models
- PHST 783 Advanced Survival Analysis
- PHST 785 Nonlinear Regression
- PHBI 750 Statistical Methods for Bioinformatics
- PHBI 751 High-throughput Data Analysis
- PHEH 650 Advanced Topics in Environmental and Occupational Health
- PHPB 650 Advanced Topics in Health Knowledge and Cognitive Sciences
- PHMS 650 Advanced Topics in Health Management and Systems Science
- GEOG 657 Geographic Information Systems
- GEOG 656 Spatial Statistics
- PHTX 630 Toxicology: Principles and Application
- PHTX 618 Topics in Pharmacology & Toxicology
- PHTX 607 Seminar in Genetics and Molecular Medicine
- PHTX 661/BIOC 661 Molecular Mechanisms of Toxicology
- BIOC 660 Molecular Endocrinology
- BIOC 641 Advanced Eukaryotic Genetics
- BIOC 667/668 Molecular Biology
- BIOC 675 Cancer Biology
- EXP 600 - Physiology of Exercise
- EXP 605 - Human Physiology
- MBIO 601 Molecular Microbiology (Introductory to Infectious Diseases)
- MBIO 602 Introduction to Immunology
- MBIO 658 Cellular and Molecular Immunology

- MBIO 670 Molecular Virology
- MBIO 685 Microbial Physiology
- MBIO 687 Microbial Pathogenesis
- MBIO 618 Topics in Advanced Microbiology
- MBIO 680 Genetics of Infectious Diseases
- PHZB 605 Systemic Physiology I
- PHZB 611 Advanced Human Physiology
- NURS 670 Cancer Epidemiology and Pathophysiology

Students may petition to take courses not on this list with approval of the instructor and the Chair of the Department of Epidemiology and Population Health. All students must provide a written rationale for their choice of minor coursework in a program of study.

Qualifying Exams

Upon completion of the required coursework for the first year of study (minimum of 24 credit hours), the student will be eligible to sit for the doctoral qualifying examination. Successful completion of the exam will admit the student to doctoral candidacy. Students who do not successfully complete the exam may be required to take additional or remedial coursework and will be allowed one opportunity to retake the exam.

Dissertation

Dissertation work is generally started upon successful completion of the doctoral qualifying exam. Exceptions may be granted upon appeal to the department faculty. Dissertation research may be credited at no more than nine (9) hours per semester as PHEP 777.

Concentration in Health Management

Each doctoral student will, in consultation with his or her academic advisor and the Department Chair, plan a course of study that uniquely fits the student's career goals. The design of a doctoral program of study that reflects each student's professional skills and research interest is the primary organizing principle of the proposed program.

The emphasis in doctoral training goes beyond accumulating course credit. Completion of the coursework is the prelude to sitting for the qualifying examination. Successful passage of this comprehensive examination allows the student to enter candidacy. A doctoral candidate must then successfully develop and defend a disserta-

tion proposal that describes an original and independent research project. Upon successful defense of the proposal, a student then proceeds to dissertation research. Upon successful completion of the research, defense of the dissertation, and demonstration of the required competencies listed below, a student is awarded the Ph.D. degree.

The Ph.D. concentration in Health Management is designed as a 48 credit-hour program (minimum beyond a master's degree) including the dissertation. Depending on the student's previous educational experience, additional hours may be needed for completion of the concentration program.

Minimum Course Requirements for the Ph.D. concentration in Health Management

48 Total Credit-Hours (minimum) including:

- 36 credit-hours of course work (including required and elective courses)
- 3 credit-hours of public health management seminars
- 9 credit-hours of dissertation research

Curriculum for Ph.D. Public Health Science - Health Management Concentration

Fall I

- PHMS 606 Complexity in Health Care Organization and Leadership 3
- UPA 621 Policy Analysis and Program Evaluation 3
- UPA 661 Public Administration and Organizational Theory 3
- PHMS 751 Seminar 1 in Public Health Management 1

Total Credit Hours: 10

Spring I

- PHMS 616 Complexity and Health Systems . 3
- PHMS 608 Managing Community Health with Policy Development 3
- PHEP 602 Epidemiology Methods 3
- PHMS 752 Seminar 2 in Public Health Management 1

Total Credit Hours: 10

Summer I

- PHMS 777 Dissertation Research 9

Total Credit Hours: 9

Fall II

- ECON 644 Health Economics 3

- PHMS 604 Advanced Topics of Legal, Ethical, and Policy Aspects of the Health System . . . 3
- Elective 3
- PHMS 753 Seminar 3 in Public Health Management 1

Total Credit Hours: 10

Spring II

- PADM 602 Applied Research Methods
OR
 PHPB 655 Systems Thinking and Dynamic Modeling in Public Health 3
- MBA 610 Organizational Behavior and Human Resource Management 3
- Elective 3
- Qualifying Exam
- Research Proposal Development and Defense

Total Credit Hours: 9

Minimum Total for Doctoral Degree: 48

Elective Options*

As a part of the approved Program of Study, a student will be able to select six (6) credit hours of elective coursework. Courses directly relevant to Health Management are preferred including, but not limited to, biostatistics, bioinformatics, epidemiology, medical geography, molecular or population genetics, toxicology, microbiology, health services research, outcomes research, health knowledge and behavior. Courses may be selected from those offered within the School of Public Health and Information Sciences, other schools or colleges within the University, or from sources outside the University with permission and acceptance of credit by the Graduate School.

List of Acceptable Courses for Ph.D. Concentration Electives**

School of Public Health and Information Sciences

Epidemiology

- PHEP 601 Introduction to Epidemiology (3)
- PHEP 602 Epidemiology Methods (3)
- PHEP 604 Epidemiology Infectious Disease (2) + PHEP 605
- PHEP 605 Research in Infectious Disease (1) (Laboratory for PHEP 604)
- PHEP 606 Genetic and Molecular Epidemiology (3)
- PHEP 611 Nutritional Epidemiology (3)

- PHEP 612 Epidemiology and Bioterrorism (3)
- PHEP 613 Epidemiology of Aging (3)
- PHEP 615 Epidemiology of Maternal and Child Health (3)
- PHEP 616 Disease Surveillance (3)
- PHEP 617 Field Epidemiology (3)
- PHEP 618 Epidemiologic Methods II (3)
- PHEP 619 Biology of Disease in Populations (3)

Biostatistics

- PHST 600 Introduction to biostatistics for Public Health (3)
- PHST 610 Statistical Computing and Data Management for Public Health (3)
- PHST 620 Introduction to Statistical Computing (3)
- PHST 640 Statistical Methods for Research Design in Health Sciences (3)

Decision Science

- PHDA 601 Introduction to Medical Decision Analysis (3)
- PHDA 663 Decision Analysis (3)
- PHDA 690 Utility Theory and Assessment (3)
- PHDA 701 Advanced Medical Decision Making (3)

Environmental and Occupational Health

- PHEH 600 Introduction to Environmental and Occupational Health (3)
- PHEH 610 Occupational Health and Safety (3)
- PHEH 620 Global Issues of Environmental and Occupational Health (3)

Health Promotion and Behavioral Sciences

- PHPB 601 Introduction to Health Behavior (3)
- PHPB 604 Health Decision and Risk Analysis (3)
- PHPB 607 Population Health Management (3)
- PHPB 608 Public Health Program Evaluation (3)
- PHPB 610 Introduction to Informatics (3)
- PHPB 612 Health Communications Campaigns (3)
- PHPB 614 Critical Thinking and Program Evaluation (3)

College of Business

- MBA 625 Managerial Accounting (3)
- MBA 635 Managerial Finance (3)

- MBA 645 Leadership and Ethics (3)
- MBA 655 Strategic Management (3)
- ACCT 615 Advanced Financial and Governmental Accounting (3)

School of Urban and Public Affairs

- PADM 601 Statistics for Public Affairs (3)
- PADM 604 Public Budgeting and Finance (3)
- PADM 605 Strategic Management and Planning (3)
- PADM 606 Public Policy (3)
- PADM 607 Planning Theory (3)
- PADM 608 e-Government (3)
- PADM 610 Administrative Law and Process (3)
- PADM 611 Financial Management for Public Administration (3)
- PADM 620 Intergovernmental Relations (3)
- PADM 630 Environmental Policy and Natural Hazards
- PLAN 611 Human Resources Management (3)
- PLAN 612 Mediation and Dispute Resolutions (3)

**A student may petition to take courses not on this list with approval of the course instructor, the student's advisor, and the Chair of the HMSS Department. The student must provide a written rationale for the choices of elective coursework in his or her Program of Study.

Seminars in Public Health Management

A student in the Ph.D. concentration in Health Management is required to complete at least three (3) credit hours of seminars in Public Health Management (PHMS 751-753). This group course will be jointly taught by the faculty of the Department and is designed to provide a collegial experience that provides an opportunity to integrate learning from other courses, discuss hot topics, brainstorm about research ideas, and acquire professional skills in scientific manuscript and grant writing, oral and poster presentations, grantsmanship, and peer review.

Qualifying Exam

Upon completion of the majority of the required coursework for the Ph.D., the student will be eligible to sit for the Doctoral Qualifying Examination. The components of the qualifying exam will focus on the subject matter drawn from foundation courses, the student selected minor area of study as well as research methods and problem

analysis. The timing and eligibility for the qualifying exams will be determined by the student's faculty advisor and Department Chair. Successful completion of the exam will admit the student to doctoral candidacy. A student who does not successfully complete the exam may be required to take additional or remedial coursework and will be allowed one opportunity to retake the exam.

Research Proposal Defense

A student who successfully completes the qualifying exam must submit a written dissertation proposal to all members of the dissertation committee. The student will then be orally examined on the dissertation proposal.

Dissertation

A dissertation, based on original research conducted by the student, is required of a candidate for the degree of Doctor of Philosophy in Public Health Sciences with a concentration in Health Management. The dissertation is to be a scholarly achievement that demonstrates the student's thorough understanding of research techniques in health management and the ability to conduct independent research.

The student's dissertation research will be guided by, and the final product approved by, a dissertation committee, chaired by the student's faculty advisor, and appointed by the Dean of the Graduate School upon the advice of the Chair of the Department. The dissertation committee shall consist of five members, and must include one representative outside the Department. Once the student has completed work on the dissertation, the dissertation committee will schedule a date for the student's Final Examination during which time the student will be asked to defend the dissertation and the supporting research. The dissertation must be approved by the committee and signed off by the Chair of the Department.

The dissertation is to be submitted in completed form to the Chair of the Department at least thirty days before the end of the semester in which the candidate expects to graduate. One unbound copy of the dissertation, signed by dissertation committee, must be deposited with the Office of the Graduate School before graduation.

Concentration in Health Promotion

The typical progression through the Health Promotion curriculum is:

- Program of Study (Year 1)
- Required and elective coursework of 48 credit-hours (Years 1 and 2)
- Qualifying examination (Year 2)
- Candidacy
- Dissertation research and preparation
- Oral examination

Upon matriculation in the program, each student will meet with his or her assigned advisor and develop a program of study, which will include courses in research design and statistics as well as selected cognate courses. The program of study may be modified as the student's needs change or course availability is altered.

If a student has not had sufficient exposure to epidemiology prior to matriculation, he or she will be required to take a course in epidemiology as part of the program of study. In addition, the program of study will include development of competencies in other areas of public health knowledge that are relevant to the student's area of interest.

Degree Requirements

The Health Promotion concentration of the Ph.D. in Public Health Sciences consists of a minimum of 48 credit hours, including the following requirements:

- Health promotion theory and principles 12 credit hours
- Research design and statistics 12 credit hours
- Cognate courses 12 credit hours
- Dissertation research 9 credit hours
- ELFH 683 College Teaching 3 credit hours

Coursework

Fall I

- PHPB 701 Theoretical Basis of Health Promotion 3
- PHPB 704 Psycho-Social Foundations of Health Decision Making 3
- Research design and statistics elective (with approval) 3

Semester Total: 9

Spring I

- PHPB 705 Community Organization and Health Policy Advocacy 3
- PHPB 710 Community-Based Participatory Research 3

- Cognate elective (with approval) 3
- Semester Total:** **9**

Summer I

- PHPB 777 Dissertation research 3
- Semester Total:** **3**

Fall II

- PHPB 722 Health Risk Communication 3
- Research design and statistics elective (with approval) 3
- Cognate elective (with approval) 3
- PHPB 724 Dissertation Methods Seminar . . 3
- Semester Total:** **12**

Spring II

- Research design and statistics elective (with approval) 3
- Cognate elective (with approval) 3
- ELFH 683 College Teaching 3
- Semester Total:** **9**

Summer II

- PHPB 777 Dissertation research 6
- Semester Total:** **6**
- Degree Total:** **48**

Research Design and Statistics Electives

Students will work with their advisors to select appropriate courses to complete the 12 credit hours required in this category. Selections will be based on the research and statistics background of students and the anticipated research and statistics needs of the dissertation research projects.

The following is the list of approved electives for this category. Other courses may be considered with permission of the faculty advisor and the Program Director.

- PHEP 602 Epidemiological Methods
- PHEP 710 Community-based Participatory Research
- PHPB 711 Qualitative Research Methods in Public Health
- PHPB 724 Dissertation Methods Seminar
- PHST 630 Applied Statistical Methods
- PHST 640 Statistical Methods for Research Design in Human Studies
- PHST 680 Biostatistical Methods I
- PHST 681 Biostatistical Methods II
- PHST 682 Multivariate Statistical Analysis

- PHST 684 Categorical Data Analysis
- PHST 725 Design of Experiments
- PSYC 610 Advanced Statistics I
- PSYC 611 Advanced Statistics II
- PSYC 612 Advanced Statistics III
- ECPY 793 Reviewing Scientific Literature [course in meta-analysis]

Cognate Electives

Students will work with their advisor to select appropriate courses to complete the 12 credit hours required in this category. Selections will be based on the research and professional interests of students and the career paths anticipated.

The following is the list of approved electives for this category. Other courses may be considered with permission of the faculty advisor and the Program Director.

- PHMS 603 Legal and Bioethical Aspects of Public Health
- PHPB 604 Health Decision and Risk Analysis
- GEOG 657 Geographic Information Systems
- PHEH 620 Global Issues
- PHPB 610 Introduction to Health Informatics
- PHPB 721 Health Promotion and Healthcare-Associated Infection
- PHPB 655 Systems Thinking and Dynamic Modeling in Public Health
- PHCI 631 Social and Behavioral Sciences in Health Care
- PHPB 650 Advanced Topics in Health Promotion and Behavioral Sciences
- PHPB 727 Culture and Public Health
- COMM 590 Health Communications
- HSS 669 Administering Health Promotion and Disease Prevention Programs
- PSYC 581 Introduction to Health Psychology
- HSS 675 Health Promotion and Disease Prevention at the Individual Level
- HSS 676 Community Health Promotion and Disease Prevention
- HSS 684 Program Planning in Health Education and Promotion

Qualifying Examination

Upon completion of all formal course work, typically at the end of the second year, students will take a written qualifying exam to demonstrate their ability to synthesize and apply concepts

from those courses. The exam will be evaluated on a pass/fail basis; students who don't pass the exam at the first administration will be given time to prepare to sit for the exam one additional time. Once the qualifying exam is successfully completed, students will be admitted to candidacy for the doctoral degree.

Dissertation

A dissertation, based on original research conducted by the student, is required of a candidate for the degree of Doctor of Philosophy in Public Health Sciences with a concentration in Health Promotion. The dissertation is to be a scholarly achievement that demonstrates the student's thorough understanding of research techniques in health promotion and the ability to conduct independent research.

The student's dissertation research will be guided by, and the final product approved by, a dissertation committee, chaired by the student's faculty advisor, and appointed by the Dean of the Graduate School upon the advice of the Chair of the Department. The dissertation committee shall consist of five members, and must include one representative outside the Department. Once the student has completed work on the dissertation, the dissertation committee will schedule a date for the student's final examination during which the student will be asked to defend the dissertation and the supporting research. The dissertation must be approved by the committee and by the Chair of the Department.

The dissertation is to be submitted in completed form to the Chair of the Department at least thirty days before the end of the semester in which the candidate expects to graduate. One unbound copy of the dissertation, signed by the dissertation committee, must be deposited with the Graduate School before graduation.

Departmental Faculty

Faculty of the School of Public Health and Information Sciences

Master of Public Health

Major: MPH

Degree Awarded: M.P.H.

Unit: GH

Program Webpage: louisville.edu/sphis/

Program Information

Introduction

The Master of Public Health (MPH) degree program is a School-based program designed to graduate students each with core competencies in public health and specialized competencies in one of the following concentrations: biostatistics, environmental and occupational health, epidemiology, health behavior and cognition, and health management.

Graduates of the MPH program are prepared for positions in the public health work force, in health-related industries, and in academic organizations and for further professional or academic education.

Competencies

The MPH program has adopted the competencies published by the Association of Schools of Public Health. (ASPH Education Committee. "Master's Degree in Public Health Core Competency Development Project, Version 2.3." www.asph.org/userfiles/version2.3.pdf.)

The learning objectives for each course in the MPH curriculum are mapped to these ASPH competencies.

Admission

The ideal candidate for admission to the MPH program has received the equivalent of a bachelor's degree or higher, has education or training in one or more health-related fields, has worked or studied in a public health-related situation, can comprehend and communicate effectively in English, has the recommendations of at least three persons in a health-related or advanced education field, has performed satisfactorily in one or more standardized test, and is very interested in pursuing a career in public health or a related field.

The requirements for admission to the MPH program are:

- Bachelor's degree from an accredited institution or its equivalent.
- Recommended minimum GPA of 3.0 on a 4.0 scale.
- If applicable, Test of English as a Foreign Language (TOEFL) exam with a minimum score of 250 on the computer-based version or a minimum score of 600 on the paper-based version.

An application is considered once all of the following requirements have been received:

- Application to the Graduate School and payment of application fee.
- Three letters of recommendation written within the last twelve months.
- Official transcripts of all degrees.
- Resume or curriculum vitae.
- One-page personal statement written by the applicant that is a clear, substantive description of his or her goals in public health, noting any professional or research experience.
- Official score from any of the following standardized tests: GRE, MCAT, DAT, GMAT, or LSAT.
- International applicants: Foreign credential evaluation of all degrees from non-US institutions. Please contact the MPH program prior to completing this requirement.

For information on the application process, please contact:

MPH Program
 School of Public Health and Information Sciences
 University of Louisville
 555 South Floyd Street, Suite 4026
 Louisville, KY 40202
 sphismph@louisville.edu
 Phone: 502-852-3299
 Fax: 502-852-3294

Concentrations

Concentrations are offered in each of the five basic areas of public health by the department that focuses on the area. Each concentration is designed to develop the competencies needed by a public health worker in the corresponding area.

- *Biostatistics*: Department of Bioinformatics and Biostatistics, John A. Myers, PhD, Coordinator
- *Environmental and Occupational Health*: Department of Environmental and Occupa-

tional Health Sciences, Irma N. Ramos, MD, Coordinator

- *Epidemiology*: Department of Epidemiology and Population Health, Frank Groves, MD, MPH, Coordinator
- *Health Behavior and Cognition*: Department of Health Promotion and Behavioral Sciences, Ruth L. Carrico, RN, PhD, Coordinator
- *Health Management*: Department of Health Management and Systems Sciences, Raymond E. Austin, PhD, Coordinator

Requirements for acceptance to the concentrations in the MPH program are:

All concentrations:

- Student in good standing in MPH program
- Successful completion of core courses

Biostatistics:

- Grade from PHST-600 Biostatistics I
- Current grade from PHST 610 Biostatistics II
- Other evidence of analytic ability, for example:
- Quantitative score from at least one of these exams: GRE, GMAT or DAT
- Transcripts showing other college-level mathematics or statistics course
- Instructor recommendation
- Participation in or successful completion of a research project with analytical component
- Exceptions may be granted.

Environmental and occupational health:

- No additional requirements.

Epidemiology:

- Grade from PHEH-601 Introduction to Epidemiology
- Grade from PHST-600 Biostatistics I
- Exceptions may be granted.

Health behavior and cognition:

- No additional requirements.

Health management:

- No additional requirements

Curriculum

The curriculum consists of courses in four areas: core (6 courses), concentration (5), practicum experience (2), and integrating experience (3). Core courses and two integrating experience courses are completed prior to taking courses in other areas. Toward the end of taking these

courses, each student identifies his or her area of concentration and seeks admission to the department offering the concentration. Once admitted into the concentration, the student takes concentration course, completes the practicum experience, and takes the remaining integrating experience course, which includes a comprehensive written examination focused on the School's core MPH competencies.

Full-time students are expected to complete the program and graduate in two years. Part-time students are required to complete the program and graduate within six years.

Faculty Advisor

On matriculation, each student is assigned a faculty advisor and is required to meet at least twice each semester with his or her advisor. The pool of faculty advisors includes the concentration coordinators and the core course instructors. Advisors are available to address general academic and public health questions and to assist the student in declaration of his or her area of concentration for the MPH degree.

After admission into a concentration, each student is assigned a faculty advisor from the concentration department who serves as academic practicum advisor and counselor on career and employment opportunities, professional development, and opportunities beyond graduate school.

Program of Study

The program of study is predetermined for courses in core, practicum experience, and integrating experience areas and the majority of the concentration area. Concentrations have one or two elective courses.

Degree Requirements

Requirements for the MPH degree are:

- Successful completion of core, concentration, practicum experience, and integrating experience coursework
- Completion of all deliverables for the practicum experience
- Comprehensive written examination on the core MPH competencies

Coursework

47 total credit-hours:

- 18 credit-hours of core coursework
- 6 credit hours of practicum experience
- 8 credit-hours of integrating experience

- 15 credit-hours of concentration coursework

Required Coursework - Fall I

- PHEP-601 Introduction to Epidemiology (core) 3
- PHST-600 Introduction to Biostatistics I (core) 3
- PHMS-601 Introduction to Public Health Practice and Administration (core) 3
- PHPB-696 Issues in Public Health. 2
- Semester Total 11

Required Coursework - Spring I

- PHEH-600 Introduction to Environmental Health Sciences (core) 3
- PHPB-601 Introduction to Health Behavior (core) 3
- PHST-610 Statistical Computing and Data Management for Public Health (core) 3
- PHPB-614 Critical Thinking and Program Evaluation 3
- Semester Total 12

Required Coursework - Fall II

- Concentration course 3
- Concentration course 3
- Concentration course 3
- PHxx-679 Practicum Experience. 3
- Semester Total 12

Required Coursework Spring II

- Concentration course 3
- Concentration course 3
- PHxx-679 Practicum Experience. 3
- PHMS-697 Integrating Learning and Experience in Public Health 3
- Semester Total 12

Degree Total 47

PHPB-696 Issues in Public Health

The Issues in Public Health course is part of the integrating experience and is a trans-disciplinary course designed to integrate what students learned in other coursework and experiences and the application of these lessons to the broader scope of public health. Working in teams and on selected public health projects or initiatives are the focus of the course.

PHPB-614 Critical Thinking and Program Evaluation

The Critical Thinking and Program Evaluation course is an integrating experience course and focuses on the identification of public health problems and planning appropriate responses and evaluations. Planning and evaluation skills are considered pivotal learning concepts for the MPH degree and for successful public health practice.

PHxx-679 Practicum Experience

The Practicum Experience places the student in a non-academic organization providing services in or closely related to the public health concentration selected by the student. The Practicum Experience and its required deliverables must be completed to fulfill degree program requirements.

PHMS-697 Integrating Learning and Experience in Public Health

The Integrating Learning and Experience in Public Health course is the capstone of the integrating experience and is designed to synthesize and integrate knowledge acquired in course work and other learning experiences and to apply theory and principles in a situation that approximates some aspect of professional practice. Through the presentation and analysis of actual cases presented by public health practitioners, student evaluation of existing cases, and the development of a new case from current and emerging areas of public health, students working in multi-disciplinary groups demonstrate their ability to apply the general and specific public health knowledge they have learned through their courses of study and effectively apply that knowledge across disciplines to the effective resolution of a public health problem.

Biostatistics Concentration Coursework

Fall II

- PHCI-624 Clinical Trials I 2
- PHST-726 Clinical Trials Statistics Laboratory 1
- PHST-620 Introduction to Statistical Computing 3
- Concentration elective course 3
- PHST-679 Practicum Experience: Biostatistics 3
- Semester Total 12

Spring II

- PHST-640 Statistical Methods for Research Design in Health Studies 3
- PHST-681 Biostatistical Methods II 3
- PHST-679 Practicum Experience: Biostatistics 3
- PHMS-697 Integrating Learning and Experience in Public Health 3
- Semester Total 12
- Concentration Total 24**

Electives

The elective course in the biostatistics concentration may be selected from any 3 credit-hour, graduate-level course in the University with approval of the student's faculty advisor and the concentration coordinator.

Environmental and Occupational Health Concentration Coursework

Fall II

- PHEH-610 Occupational Health and Safety . 3
- PHEH-650 Advanced Topics in Environmental Health 3
- Concentration elective course 3
- PHEH-679 Practicum Experience: Environmental and Occupational Health 3
- Semester Total 12

Spring II

- PHEH-620 Global Issues on Environmental and Occupational Health 3
- Concentration elective course 3
- PHEH-679 Practicum Experience: Environmental and Occupational Health 3
- PHMS-697 Integrating Learning and Experience in Public Health 3
- Semester Total 12
- Concentration Total 24**

Electives

The elective courses in the environmental and occupational health concentration may be selected from any 3 credit-hour, graduate-level course in the University with approval of the student's faculty advisor and the concentration coordinator.

Epidemiology Concentration Coursework

Fall II

- PHEP-602 Epidemiologic Methods 3
- PHEP-616 Disease Surveillance 3
- Concentration elective course 3
- PHEP-679 Practicum Experience: Epidemiology 3
- Semester Total. 12

Spring II

- PHEP-617 Field Epidemiology. 3
- PHEP-650 Advanced Topics in Epidemiology 3
- PHEP-679 Practicum Experience: Epidemiology 3
- PHMS-697 Integrating Learning and Experience in Public Health 3
- Semester Total. 12

Concentration Total 24

Electives

The elective courses in the epidemiology concentration may be selected from any 3 credit-hour, graduate-level course in the University with approval of the student’s faculty advisor and the concentration coordinator.

Health Behavior and Cognition Concentration Coursework

Fall II

- PHPB-604 Health Decision and Risk Analysis 3
- PHPB-615 Public Health Program Evaluation 3
- Concentration elective course 3
- PHPB-679 Practicum Experience: Health Behavior and Cognition 3
- Semester Total. 12

Spring II

- PHMS-607 Managing Healthy Communities . 3
- PHPB-612 Health Communication Campaigns 3
- PHPB-679 Practicum Experience: Health Behavior and Cognition 3
- PHMS-697 Integrating Learning and Experience in Public Health 3
- Semester Total. 12

Concentration Total 24

Electives

The elective course in the health behavior and cognition concentration may be selected from any 3 credit-hour, graduate-level course in the University with approval of the student’s faculty advisor and the concentration coordinator.

Health Management Concentration Coursework

Fall II

- PHMS-603 Legal and Bioethical Aspects of Public Health 3
- PHMS-615 Introduction to Health Systems . . 3
- Concentration elective course 3
- PHMS-679 Practicum Experience: Health Management 3
- Semester Total 12

Spring II

- PHMS-605 Governance and Management of Healthcare Organizations. 3
- PHMS-607 Managing Healthy Communities . 3
- PHMS-679 Practicum Experience: Health Management 3
- PHMS-697 Integrating Learning and Experience in Public Health 3
- Semester Total 12

Concentration Total 24

Electives

The elective course in the health management concentration may be selected from any 3 credit-hour, graduate-level course in the University with approval of the student’s faculty advisor and the concentration coordinator.

Program Faculty

- Robert R. Jacobs, Ph.D.**
Director
- Faculty of Department of Bioinformatics and Biostatistics
- Faculty of Department of Environmental and Occupational Health Sciences
- Faculty of Department of Epidemiology and Population Health
- Faculty of Department of Health Management and Systems Sciences
- Faculty of Department of Health Promotion and Behavioral Sciences

J. B. Speed School of Engineering

Mickey R. Wilhelm, Ph.D., Dean

The J.B. Speed School of Engineering offers the following masters of engineering programs and the following masters of science, doctoral, and certificate programs through the Graduate School:

- Bioengineering - M.Eng.
- Chemical Engineering - M.Eng.
- Chemical Engineering - M.S.
- Chemical Engineering - Ph.D.
- Civil Engineering - M.Eng.
- Civil Engineering - M.S.
- Civil Engineering - Ph.D.
- Computer Engineering Computer Science - M.Eng.
- Computer Science - M.S.
- Computer Science and Engineering - Ph.D.
 - Data Mining - Certificate
- Electrical Engineering - M.Eng.
- Electrical Engineering - M.S.
- Electrical Engineering - Ph.D.
- Engineering Management - M.Eng.
 - Environmental Engineering - Certificate
- Industrial Engineering - M.Eng.
- Industrial Engineering - M.S.
- Industrial Engineering - Ph.D.
 - Logistics and Distribution - Certificate
- Mechanical Engineering - M.Eng.
- Mechanical Engineering - M.S.
- Mechanical Engineering - Ph.D.

Master of Engineering in Bioengineering

Major: BE

Degree Awarded: M.Eng.

Unit: SP

Program Webpage: louisville.edu/speed/bioengineering/

Program Information

The Master of Engineering with specialization in Bioengineering (M.Eng. BE) is an integrated five-year degree program that includes a year of cooperative education experience. The first four (4) years of the program leads to a Bachelor of Science degree in Bioengineering which is described in the University's Undergraduate Catalog.

Admission Requirements

Requirements for admission or readmission include:

- Completion of a program of studies equivalent to that obtained through the Division of Pre-Engineering and Basic Studies for the field of Bioengineering; this includes one calendar year of cooperative education, or the equivalent in full-time employment, within the biomedical or bioengineering device or process industries.
- Recommendations by the faculty and chair of the Department of Bioengineering for admission or readmission to the Division of Higher Studies.
- A cumulative baccalaureate program grade-point average of 3.00/4.00 for unconditional acceptance. However, those students with cumulative baccalaureate GPAs of 2.5-3.0 may be admitted on a provisional basis by submitting a formal petition to the faculty of the Bioengineering Department.
- Applications for admission to the M.Eng. BE degree program should be submitted directly to the Admissions Office of the JB Speed School of Engineering rather than the Graduate School.

Prerequisite Requirements

Since the M.Eng. BE is part of a five-year program, the requirements stipulated in item (1)

above in the Admission Requirements section must be completely and precisely satisfied. Typically, this is very difficult for students who have not matriculated through the preceding four years at the Speed School, but each student will be evaluated on a case-by-case basis.

Curriculum

Upon entering the Professional School, the student chooses an area of concentration for the master's thesis and selects a sequence of program elective courses for the thesis concentration (list of courses available in the Department of Bioengineering). The Master of Engineering in Bioengineering degree requires the following over and above the Bachelor of Science in Bioengineering Degree:

	Semester Hours	Total
Higher Studies Division BE 621, 691; ME 637; PHCI 621; XXX ¹ , XXX ¹ , XXX ¹ , XXX ¹ , XXX ¹	27	
Thesis ²	6	
Minimum Total		33³

¹ A student specializing in BE is required to select five approved electives (500 or 600 Level) totaling at least 15 semester hours. By proper choice of these electives, a student may develop specific strengths in areas such as bioelectronics, biomedical devices, bioinformatics, bioimaging, biomechanics, rehabilitation engineering, molecular engineering, cellular engineering or tissue engineering. However, depending on faculty availability and other departmental needs, sufficient courses may not be offered in any one or two year period to allow a student to specialize in some of these areas. Therefore, these electives need not necessarily be BE courses, but the student's research advisor and academic advisor must approve non-Bioengineering courses from a list of appropriate engineering design and engineering science courses available in the BE Department.

² A full-time student is required to have selected both an approved M.Eng. thesis topic and the director and members of the thesis committee during the first term of the graduate/professional year. Six (6) semester hours of BE 697 are required to satisfy the minimum M.Eng. thesis requirements.

³ The five-year total for the M.Eng. degree in Bioengineering is 171 semester hours.

Departmental Faculty

Robert S. Keynton
Professor
Chair

Steven C. Koenig
Associate Professor

Andrea S. Gobin
Assistant Professor

Ayman El-Baz
Assistant Professor

Palaniappan Sethu
Assistant Professor

Guruprasad A. Giridharan
Assistant Professor (Term)

Joint Faculty

George Pantalos
Professor
Joint Appointment with Department of Surgery

Adjunct Faculty

Aoy Tomita-Mitchell
Assistant Professor
Department of Surgery
Medical College of Wisconsin

Master of Engineering in Chemical Engineering

Major: CHE
Degree Awarded: M.Eng.
Unit: SP
Program Webpage: louisville.edu/speed/chemical

Program Information

The Master of Engineering with specialization in Chemical Engineering (M.Eng.Ch.E.) is a degree offered by the Speed School of Engineering. It is accredited at the advanced level by ABET, Inc.

Admission Requirements

Requirements for admission or readmission include:

1. Completion of a program of studies equivalent to that obtained through the Division of Pre-Engineering and Basic Studies for the field of Chemical Engineering; this includes one calendar year of cooperative education, or the equivalent in **full-time** employment, within the Chemical Process Industries.
2. Recommendation by the faculty and chair of the Department of Chemical Engineering.
3. A cumulative baccalaureate program grade-point average of 2.50/4.00 for unconditional acceptance.
4. Applications for admission to the M.Eng.Ch.E. degree program should be submitted directly to the Admissions Office of the JB Speed School of Engineering rather than to the Graduate School.

Prerequisite Requirements

Since the M.Eng.Ch.E. is accredited as part of a five year program, the requirements of item (1) above in the section of Admissions must be satisfied exactly. This is very difficult for students who have not matriculated through the preceding four years at the Speed School. Therefore, almost all students who earn an ABET, Inc. accredited undergraduate degree pursue the M.S.ChE or Ph.D. degrees.

Curriculum

The M.Eng.Ch.E. degree requires the following over and above the Bachelor of Chemical Engineering Degree.

	Semester Hours	Total
Higher Studies Division ¹ ChE 595, 610, 620, 641, 686, XXX ² , XXX ² , XXX ² , XXX ²	25	
Thesis Alternative - ChE 697 ³ OR Course Work And Project Alternative - ChE 698, 699 ⁵	6	
Minimum Total		31⁴

¹A student entering the Division of Higher Studies will be required to select either the thesis alternative path or the course work and project alternative path for the degree program.

²A student specializing in ChE is required to select four approved electives (500 or 600 level) totaling at least 12 semester hours. By proper choice of these electives, a student may develop specific strengths in areas such as materials, process control, mass transfer and separations, pollution prevention, or biochemical engineering. However, depending on faculty availability and other departmental needs, sufficient courses may not be offered in any one or two year period to allow a student to specialize in some of these areas. These electives need not necessarily be Chemical Engineering courses, but the student's research advisor and academic advisor must approve non-Chemical Engineering courses.

³A regularly enrolled student selecting the thesis alternative is required to select both an approved M.Eng. thesis topic and the members of the thesis committee during the first term of the graduate/professional year. Six (6) semester hours of ChE 697 are required to satisfy the minimum M.Eng. thesis requirements.

⁴The five-year total for the M.Eng. degree is 170 semester hours.

⁵A student selecting the course work alternative will substitute ChE 698 and ChE 699 for 6 hours of M.Eng. thesis.

Master of Science in Chemical Engineering

Major: CHE

Degree Awarded: M.S.

Unit: GS

Program Webpage: louisville.edu/speed/chemical

Program Information

This degree program is intended for persons having an accredited baccalaureate degree in chemical engineering, but is available to those with other backgrounds. Applicants with other backgrounds should plan on taking some undergraduate background course work. Students interested in the M.S. degree program should consult the Graduate Student Advisor in the Department of Chemical Engineering.

Non-Thesis Option

In general, the non-thesis alternative makes graduate study more attractive to students who wish to receive advanced training in chemical engineering but do not qualify for or wish to pursue the Ph.D. degree and to students pursuing a Ph.D. who wish to receive a Master's degree "in-passing."

Program Admission Procedure

The admission requirements for the M.S. program are essentially the same as those of the Graduate School. For unconditional admission, a minimum combined score of 1100 (Verbal and Quantitative) on the GRE and a minimum 3.0 on a 4.0 scale undergraduate GPA is expected. Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background in chemical engineering, e.g., B.S. Chemists, Biologists (approximately one year of undergraduate courses may be required).

International applicants are required to take the TOEFL examination if English is not the native language. Applicants who have not scored 550 or higher on the TOEFL may choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the advanced level of IESL will be considered adequate proof of the English proficiency required for course work in the M.S. program. Acceptance to the Intensive English Program does not constitute acceptance to the M.S. program. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

Curriculum

M.S. in Chemical Engineering with thesis

Curriculum Requirements

The general requirements of the M.S. with thesis program are the same as those of the Graduate School. Other specific guidelines for the M.S. degree in chemical engineering with thesis are these:

Minimum course hours beyond baccalaureate degree in Chemical Engineering – 24 Semester Hrs

	Hours	Total
ChE 610, Advanced Thermodynamics	3	
ChE 620, Transport Phenomena	3	
ChE 641, Advanced Reactor Design	3	
ChE 686, Chemical Engineering Analysis	3	
ChE 695, Chemical Engineering Seminar	2	
Other 500-600 level courses (at least one course outside ChE) (not all may be 500 level)	12	
ChE 690, Research in Chemical Engineering	6	
Total Credit Hours		32

M.S. in Chemical Engineering with non-thesis alternative

Curriculum Requirements

The general requirements of the M.S. (non-thesis alternative) program are the same as those of the Graduate School. Other specific guidelines for the M.S. (non-thesis alternative) degree in chemical engineering are these:

Minimum course hours beyond baccalaureate degree in Chemical Engineering – 30 Semester Hrs

	Hours	Total
ChE 610, Advanced Thermodynamics	3	
ChE 620, Transport Phenomena	3	
ChE 641, Advanced Reactor Design	3	
ChE 686, Chemical Engineering Analysis	3	
ChE 695, Chemical Engineering Seminar	2	
Other 500-600 level courses (at least one course outside ChE, not all may be 500 level)	18	
Total Credit Hours		32

Doctor of Philosophy in Chemical Engineering

Major: CHE

Degree Awarded: Ph.D.

Unit: GS

Program Webpage: louisville.edu/speed/
chemical

Program Information

The mission of the Ph.D. program in chemical engineering is to develop graduates, who are academically prepared for the broad profession of Chemical Engineering, which is increasingly complex, diverse and changing. This is to be accomplished through educational programs and the pursuit of scholarship and research. The department is committed to fulfilling its role in the urban mission of the University of Louisville.

Program Information

This degree program is intended for persons having an accredited masters and/or baccalaureate degree in chemical engineering, but is available to those with other backgrounds. Applicants with other backgrounds should plan on taking some undergraduate background course work. Students interested in the Ph.D. degree program should consult the Graduate Student Advisor in the Department of Chemical Engineering.

Program Admission Procedure

The admission requirements for the Ph.D. program are essentially the same as those of the Graduate School. For unconditional admission, a minimum score of 1100 (Verbal and Quantitative) on the GRE and a minimum 3.0 on a 4.0 scale undergraduate GPA is expected. Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background in chemical engineering, e.g., B.S. Chemists, Biologists (approximately one year of undergraduate courses may be required).

International applicants are required to take the TOEFL examination if English is not the native language. Applicants who have not scored 550 or higher on the TOEFL may choose to apply to the Intensive English as a Second Language (IESL) Program. Successful completion of this program or passing the Exit Examination in the

advanced level of IESL will be considered adequate proof of the English proficiency required for course work in the Ph.D. program. Acceptance to the Intensive English Program does not constitute acceptance to the Ph.D. program. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

Curriculum

The general requirements of the Doctor of Philosophy program are the same as those of the Graduate School. Other specific guidelines for the Ph.D. degree in chemical engineering are these:

Minimum course hours beyond baccalaureate degree in Chemical Engineering – 30 Semester Hrs

	Hours	Total
ChE 610, Advanced Thermodynamics	3	
ChE 620, Transport Phenomena	3	
ChE 641, Advanced Reactor Design	3	
ChE 686, Chemical Engineering Analysis	3	
ChE 695, Chemical Engineering Seminar	4	
Other 500-600 level courses (at least one course outside ChE)	18	
ChE 693, Research in Chemical Engineering	36	
Total Credit Hours		70

Departmental Faculty

Kyung A. Kang

Professor

Graduate Program Director

Walden L.S. Laukhuf

Professor

Associate Chair

Thomas L. Starr

Professor

Associate Dean for Research and Facilities

Mahendra Sunkara

Professor

James C. Watters

*Professor
Chair
Undergraduate Student Advisor*

R. Eric Berson

Assistant Professor

Moises Carreon

Assistant Professor

Gerold A. Willing

Assistant Professor

Richard P. Baldwin

*Associate
Professor of Chemistry*

Lawrence Gettleman

*Associate
Professor of Prosthodontics and Biomaterials*

Patricia A. Ralston

*Associate
Professor of Engineering Fundamentals*

Richard A. Ward

*Associate
Professor of Medicine, Division of Nephrology*

Duane F. Bruley

Adjunct Professor

Garrett Cawthon

Adjunct Professor

Britton Chance

Adjunct Professor

David W. Wheatley

Adjunct Professor

Joseph A. Zimlich

Adjunct Assistant Professor

Dermot J. Collins

Emeritus Professor

Pradeep B. Deshpande

Emeritus Professor

Marvin Fleischman

Emeritus Professor

Earl R. Gerhard

Emeritus Dean and Professor

Dean O. Harper

Emeritus Professor

Hugh T. Spencer

Emeritus Professor

Master of Engineering in Civil Engineering

Major: CE

Degree Awarded: M.Eng.

Unit: SP

Program Webpage: speed.louisville.edu/civil/

Program Information

The Department of Civil and Environmental Engineering of the Speed School of Engineering, the school of engineering and applied science of the University of Louisville, offers programs of study leading to the degrees of Master of Science and Doctor of Philosophy in Civil Engineering. It also offers an integrated five-year program of cooperative education leading to the professional degree of Master of Engineering.

Curriculum

Higher Studies Division

CEE 680, 697 ¹(9)

In addition, at least 21 semester hours of course work must be completed in one of the following specialty areas ²:

Facilities Engineering (including courses in geotechnical/structural)

CEE 520, 522, 550, 552, 604, 620, 621, 625, 652, 653, 654 (21 hours)

Public Works Engineering (includes courses in geotechnical/transportation/water resources)

CEE 550, 552, 560, 570, 571, 572, 604, 652, 653, 654, 660, 662, 665, 670, 673, 674 (21 hours)

At the discretion of the student's advisor, the following Environmental courses may be selected to fulfill program elective requirements for either Facilities Engineering or Public Works Engineering.

CEE 509, 534, 535, 561, 573, 675, 694

Minimum Total **30** ³

Notes:

1. A regularly enrolled full-time student is required to select an approved M.Eng. thesis topic and the members of the thesis committee

- during the first term of the graduate/professional year.
- Both specialty areas meet the engineering topics criteria of the EAC/ABET, Inc..
 - The five-year total for the M.Eng. degree is 165 semester hours.

Master of Science in Civil Engineering

Major: CE
Degree Awarded: M.S.
Unit: GS
Program Webpage: speed.louisville.edu/civil/

Program Information

The Department of Civil and Environmental Engineering of the Speed School of Engineering, the school of engineering and applied science of the University of Louisville, offers programs of study leading to the degrees of Master of Science and Doctor of Philosophy in Civil Engineering. It also offers an integrated five-year program of cooperative education leading to the professional degree of Master of Engineering. General requirements of the Master of Science Program are the same as those of the Graduate School.

Admission Requirements

The admission requirements for the M.S. and Ph.D. programs are essentially the same as the general requirements of the Graduate School. Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background in civil engineering.

Curriculum

	Semester Hours	Total
Civil Engineering Courses (at least 9 hours at the 600 level)	12	

Other 500-600 level courses (at least two courses outside civil engineering)	12	
Thesis for M.S.	6	
Minimum Total		30

A minimum of 12 hours must be at the 600-level, exclusive of thesis hours.

Master of Science in Civil Engineering--NON-THESIS OPTION

Requirements: The non-thesis option will be open to any student enrolled in the Civil Engineering Master of Science degree program with no restrictions. The program utilizes existing courses and administrative infrastructure while the overseas degree program will be self-supporting from program fees and tuition.

The program will require a minimum of 30 credit hours of graduate courses, with a minimum of 15 credits at the 600-level. The specific courses will be selected in consultation with the student's academic advisor.

Doctor of Philosophy in Civil Engineering

Major: CE
Degree Awarded: Ph.D.
Unit: GS
Program Webpage: speed.louisville.edu/civil/

Program Information

The Department of Civil and Environmental Engineering of the Speed School of Engineering, the school of engineering and applied science of the University of Louisville, offers programs of study leading to the degrees of Master of Science and Doctor of Philosophy in Civil Engineering. It also offers an integrated five-year program of cooperative education leading to the professional degree of Master of Engineering. The general requirements for the Doctor of Philosophy program are the same as those of the Graduate School.

Admission Requirements

The admission requirements for the M.S. and Ph.D. programs are essentially the same as the general requirements of the Graduate School. Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background in civil engineering.

Curriculum

	Semester Hours	Total
CEE 699, CE Ph.D. Research	18	
CEE 698, CE Ph.D. Seminar	3	
In-Discipline Program Courses and Electives*	27	
Total		48

*May include up to 6 hours credit in approved mathematics

Departmental Faculty

Chair

J. P. Mohsen , Professor

Professors

- N. R. Bhaskar
- Louis F. Cohn
- Mark French
- D. Joseph Hagerty
- R. A. Harris
- Mark McGinley
- Arthur C. Parola
- Mario Paz
- Charles R. Ullrich
- Terence A. Weigel

Assistant Professors

- Tom Rockaway
- Zihui Sun

Professors Emeritus

- Michael A. Cassaro
- C. Eugene Miller
- Harry Saxe

Master of Engineering in Computer Engineering Computer Science

Major: CECS

Degree Awarded: M.Eng.

Unit: SP

Program Webpage: louisville.edu/speed/cecs/

Program Information

The Department of Computer Engineering and Computer Science at the Speed School of Engineering, offers an integrated five-year program of cooperative education leading to the professional degree of Master of Engineering with a specialization in Computer Engineering and Computer Science. The first four (4) years are described in the University's Undergraduate catalog.

The Department also offers a program of study leading to the degree of Master of Science in Computer Science and a doctoral program in cooperation with the Department of Electrical and Computer Engineering. For more information on the doctoral program refer to the program section of this link: louisville.edu/speed/cecs/

Curriculum

On entering the Professional School, the student chooses an area of concentration for the master's thesis and selects a sequence of program elective courses for the thesis concentration. The Master of Engineering degree is accredited by EAC/ABET, Inc. under the criteria for Computer Engineering. Students with ABET, Inc. accredited Bachelors degrees in Engineering will also be considered for this degree.

	Semester Hours	Total
Higher Studies Division ^{1,3}		
CECS 502, 510, 530	7	
CECS 619, 622, 630, 697 ³	17	

Approved CECS Electives ^{2,4}	6	
CECS 511	1	
Minimum Total		31*

¹CECS students are required to take the "C++" and "JAVA" programming language course. "C++" and "JAVA" programming is used in several CECS courses.

²The CECS elective may be chosen from the following approved list: CECS 522, 530, 542, 545, and 5463

³A full-time student is required to have selected both an approved M.Eng. thesis topic and the director of the thesis committee during the first term of the graduate/professional year.

⁴Required CECS program elective courses may be chosen from CECS 600-level courses to provide concentration at the Master of Engineering level in the areas of research focus in the department. Lists of appropriate engineering design courses and engineering science courses are available in the CECS Department.

*The five-year total for the M.Eng degree is 164 semester hours.

Master of Science in Computer Science

Major: CS

Degree Awarded: M.S.

Unit: GS

Program Webpage: louisville.edu/speed/cecs/

Program Information

This program is available for interested individuals who have an adequate background, but do not necessarily have a baccalaureate degree in engineering. This program is governed by the general regulations of the University of Louisville Graduate School and is accredited by the Southern Associations of Colleges and Schools. Interested students should contact the Department of Computer Engineering and Computer Science office for further information about the Master of Science Program.

Admission Requirements

Please check application deadlines for prospective semesters. The admission requirements for the M.S. programs are essentially the same as the general requirements of the Graduate School.

Prerequisites: (not included in degree program)

- A bachelor's degree.
- Successful completion of CECS 121, 230, 302, 303, 310, 325, 335, 420, and 440 or their equivalents and IE 360.

Curriculum

Required Courses	Semester Hours	Total
CECS 504 , Automata Theory or CECS 530 , Design of Compilers	3	
CECS 550 , Software Engineering or CECS 630 , Data Base Design	3	
CECS 619 , Design and Analysis of Computer Algorithms or CECS 545 , Artificial Intelligence	3	
CECS 622 , Simulation & Modeling of Discrete Systems or CECS 522 , Performance Evaluation of Computer Systems	3	
CECS 516 , Fundamentals of Computer Communications and Networks or CECS 629 , Distributed System Design	3	
CECS 563 Experimental Design in Engineering or CECS 508 , Numerical Analysis	3	

CECS 690, M.S. Thesis in Computer Science or 2 CECS 600-level graduate courses for non-thesis options*	6	24
Elective Courses		
Computer Science	3	
Technical electives (may be from areas other than computer science)	3	6
Minimum Total		30

NOTES:

- A minimum of 15 semester hours (including computer science thesis credit) must be in courses numbered 600 or above.
- Electives require approval of student's graduate committee or graduate program advisor.
- Languages such as C, C++, and JAVA might be needed. These are offered at the undergraduate level; not for graduate credit.
- *Two CECS graduate faculty with the student's advisor must devise a plan of study with the student during the first semester outlining the requirements for successful completion of the non-thesis option. The study plan will be forwarded to the Graduate School for further approval and documentation.

Doctor of Philosophy in Computer Science and Engineering

Major: CSE

Degree Awarded: Ph.D.

Unit: GS

Program Webpage: louisville.edu/speed/cecs/

Program Information

The Computer Engineering and Computer Science Department (CECS) and the Electrical and Computer Engineering Department (ECE) jointly offer the Ph.D. degree in Computer Science and Engineering (CSE) through the Graduate School.

Admission

Typically, students who apply to the Ph.D. program will have completed a master's degree. Applicants may be granted unconditional admission if they have a Verbal and Quantitative section score on the Graduate Record Examination General Test of 1200; who have a master's degree in Computer Engineering, Computer Science and Engineering, Electrical Engineering, or Engineering Mathematics and Computer Science from an accredited program; and whose grade point average is at least 3.25/4.0 .

Applicants with master's degrees in other branches of engineering, computer science, chemistry, physics, or mathematics may be admitted conditionally and may be required to complete up to 30 hours of undergraduate courses before being admitted to degree status. Applicants with degrees in fields other than those enumerated in this paragraph will be directed to enroll as postbaccalaureate students and complete up to 30 hours in computer hardware and software courses and may be required to complete up to 24 hours of mathematics courses in order to provide a background adequate for admission to the Ph.D. program.

After the completion of nine (9) hours of post-baccalaureate courses, a student is reviewed by the program faculty to assess the student's capacity for doctoral-level work and to assist in developing an appropriate course of study. The review is based on an evaluation of the performance of the student in courses taken for credit

in the CSE program. Upon recommendation of the program faculty, a student who fails this review may repeat it at the next offering; however, the repeat may not be taken more than twice.

Computer Science and Engineering provides a broad base in both hardware and software and in the application of computer concepts to other disciplines. The core curriculum covers essential mathematics, provides a background in computer software and hardware, and includes an introduction to computationally intensive applications.

Curriculum

Doctoral students must complete at least two courses (six (6) hours) in each of two core areas and must complete one course in each of the remaining two core areas. They must complete a sufficient number of additional approved electives to ensure a depth of preparation in the field of Computer Science and Engineering. The four core areas are: Computer Software Engineering, Computer Hardware Engineering, Computationally Intensive Applications, and Advanced Mathematics. Each student must also complete three (3) hours of Seminar (CSE 695), but no more than three hours of CSE 695 may be credited toward the degree.

- Computer Software Engineering core courses include: CSE 504, 530, 545, 550, 608, 619, 630.
- Computer Hardware Engineering core courses include: CSE 510, 515, 611, 632, and ECE 516/CECS 525.
- Computationally Intensive Applications core courses include: ECE 520, 545, 550, 560, 614, 620, 650, 661, 662, 670; CECS 522, 542, 622, 628; ECE 618/CECS 627, ECE 619/CECS 633.
- Advanced Mathematics core courses include: CECS 508, 563, 615; MATH 501, 511, 581, 660, 662, 681.

A student must consult with the dissertation advisor before registering for courses. A minimum of 72 semester hours of post-baccalaureate credit (including up to 24 semester hours for the dissertation), plus three hours of CSE Seminar (CSE 695) are required for the degree.

Upon the completion of the formal course work required for the Ph.D., a student must pass a

written preliminary examination for admission to candidacy. The student shall prepare a formal plan of study for review by the dissertation committee soon after the formulation of the committee. This plan must be approved by the CSE Coordinator.

Each student is also required to prepare a written dissertation proposal and present it to the dissertation committee for approval. The dissertation proposal should be a sufficiently complete statement of the proposed research so that the committee can judge the originality, significance and likely success of the research. It should contain a detailed review of the previous contributions of others in the proposed area, with supporting reference citations. It should contain a clear statement of the proposed contributions, emphasizing the facets that will make this work unique, and it should include enough supporting detail and preliminary results so that an assessment of likelihood of success can be made. Appearance, format and citations should be in conformance with the requirements of the Graduate School.

After the committee has approved the dissertation proposal, the committee shall prepare a written examination pertaining to the proposal as well as background areas. This examination is called the preliminary examination. Upon successful completion of this examination, the student is admitted to candidacy status by the Graduate School.

Departmental Faculty

Adel S. Elmaghraby

Chairman
Professor

James H. Graham

Professor

Anup Kumar

Professor

Melvin J. Maron

EM-Core Coordinator
Professor

Rammohan K. Ragade

CSE, Ph.D. Coordinator
Professor

Peter B. Aronhime

Professor

Darrel L. Chenoweth

Professor

Thomas G. Cleaver

Professor

Robert W. Cohn

Professor

Joseph D. Cole

Professor

Aly A. Farag

Professor

Barry R. Horowitz

Professor

Jacek M. Zurada

Professor

Dar-jen Chang

Associate Professor

Ahmed H. Desoky

M.Eng. Coordinator

Associate Professor

Ibrahim N. Imam

Associate Professor

Mehmed M. Kantardzic

Associate Professor

Antonio Badia

Assistant Professor

Khaled A. Kamel

Emeritus

Arthur M. Riehl

Emeritus

Master of Engineering in Electrical Engineering

Major: EE

Degree Awarded: M.Eng.

Unit: SP

Program Webpage: www.ece.louisville.edu/

Program Information

The mission of the electrical engineering program is to educate students in a professional school context, with the students completing a five-year program including cooperative education assignments and a major design experience.

The Department of Electrical and Computer Engineering offers an integrated five-year program of cooperative education leading to the professional degree Master of Engineering.

The department also offers programs leading to Master of Science and Ph.D. degrees in electrical engineering and participates in the Ph.D. program in Computer Science and Engineering, offered jointly with the Computer Engineering and Computer Science Department.

Curriculum

Thesis or Paper Alternative

Minimum Curricular Requirements of the Program--Semester Hours

Higher Studies Division¹

ECE 500-level Program Electives² 9

ECE 600-level Program Electives² 9

XXX 500-level Technical Elective² 3

XXX600-level Technical Elective³ 3

ECE 697 or ECE 698 8

Minimum Total⁴ 32

Course Only Option

Minimum Curricular Requirements of the Program--Semester Hours

Higher Studies Division¹

ECE 500-level Program Electives² 13

ECE 600-level Program Electives^{2,5} 13

XXX 500-level Technical Elective² 3

XXX600-level Technical Elective³ 3

Minimum Total⁴ 32

Notes:

1. A total of nine semester hours of design electives is required in the Higher Studies Division. A list of approved Design Electives is available in the Department.
2. Courses selected to meet the 500 and 600 level Program Electives require the approval of the student's thesis director. Note that 600 level courses may be substituted for 500 level courses.
3. Courses selected to meet the 500 and 600 level Technical Electives require the approval of the student's thesis advisor. Note that 600 level courses may be substituted for 500 level courses.
4. The five-year total for the M.Eng. degree is 168 semester hours.
5. Must include ECE 699 or a course from a list of approved research/project courses, maintained by the Department, and ECE 696.

ECE Graduate Students are allowed to take only six (6) hours of Independent Study (ECE 593 or 693) and/or Projects (ECE 505 or 605). These courses may be taken in any combination, but the total number of hours is NOT to exceed six (6) hours.

Program electives are selected from ECE courses. Technical electives are selected, with the advisor's approval, from courses in related fields, such as other engineering disciplines, computer science, mathematics, and physical and biological sciences.

Master of Science in Electrical Engineering

Major: EE

Degree Awarded: M.S.

Unit: GS

Program Webpage: www.ece.louisville.edu/

Program Information

General Information

The Department of Electrical and Computer Engineering, offers a program of graduate study leading to the degree of Master of Science. It also offers an integrated five-year program of cooperative education leading to the professional degree Master of Engineering (described in the University's Undergraduate catalog).

The Department of Electrical and Computer Engineering offers a Ph.D. degree in Electrical Engineering and, also participates in the Ph.D. program in Computer Science and Engineering, offered jointly with the Computer Engineering and Computer Science Department.

Program Admission Procedure

Applicants for admission to the M.S. program in Electrical Engineering should have a baccalaureate degree in Electrical Engineering or Electrical and Computer Engineering with a GPA of 3.0/4.0 or better. A baccalaureate degree in another branch of engineering or in chemistry, computer science, life sciences, mathematics, or physics may be acceptable, but the student may be required to take undergraduate courses in ECE to attain adequate preparation for graduate work. While no fixed minimum score on the Graduate

Record Examination is required for admission, experience has shown that a combined score of 1170 (verbal + quantitative) is a good indicator of success in a graduate program in Electrical Engineering. In addition, to be successful, applicants should have received at least a 4 on the AAW portion of the GRE Exam. For students whose native language is not English or who received an undergraduate degree from a non-English speaking university, the TOEFL test is required. It is highly recommended that an applicant have a TOEFL score of either 550 on the paper-based test, at least 213 on the computer-based test, or at least 79 on the new internet-based test (IBT). An applicant who does not meet some requirements, but whose credentials are otherwise acceptable, may be admitted on a conditional basis. New students will not normally be considered for financial aid until after they have taken at least one semester of graduate courses at the University of Louisville.

A complete application packet should contain an application form (paper or on-line), official transcripts of all college credit, official copies of all earned university diplomas, GRE and TOEFL scores (if applicable) and two letters of recommendation.

Curriculum

Thesis or Paper Option

The Graduate Program Director will serve as the temporary advisor for new graduate students. During the second semester of graduate work, a permanent advisor, who will serve as the student's thesis/paper director, should be selected by the student, in consultation with the Graduate Program Director. By the end of the second semester, the student, in consultation with the thesis/paper director, should select the remaining members of the thesis/paper committee, and submit a plan of study and thesis/paper proposal, approved by the committee, to the Graduate Program Director. The thesis/paper committee must include, at minimum, the thesis/paper director and two other graduate faculty members, one of whom must be from outside the Electrical and Computer Engineering Department.

Program Electives ECE 6XX (1)	12
Program Electives ECE 5XX or ECE 6XX (1)	3
Program or Technical Electives 5XX or 6XX (2)	9

M.S. Thesis ECE 690 or Paper ECE 691 6
Minimum Total (4) **30**

Course Only Option

The Graduate Program Director will serve as the temporary advisor for new graduate students. During the second semester of graduate work, a permanent advisor should be selected by the student, in consultation with the Graduate Program Director. By the end of the second semester, the student, in consultation with the permanent advisor, should submit a plan of study, approved by the permanent advisor, to the Graduate Program Director.

COURSE-ONLY OPTION --Semester Hours
 Program Electives ECE 6XX ^{1,3} 15
 Program Electives ECE 5XX or ECE 6XX¹ 6
 Program or Technical Electives 5XX or 6XX ² 9
Minimum Total ⁴ **30**

Advanced Project Option

The Graduate Program Director will serve as the temporary advisor for new graduate students. During the second semester of graduate work, a permanent advisor should be selected by the student, in consultation with the Graduate Program Director. By the end of the second semester, the student, in consultation with the permanent advisor, should submit a plan of study including the project proposal, approved by the permanent advisor, to the Graduate Program Director.

Program Electives ECE 6XX^{1,3} 12
 Program Electives ECE 5XX or ECE 6XX¹ 6
 Program or Technical Electives 5XX or 6XX² 9
 Project Hours ECE 692 3-4

¹Courses selected to meet the 500 and 600 level Program Electives require the approval of the student's advisor. Note that 600 level courses may be substituted for 500 level courses.

²Courses selected to meet the 500 and 600 level Technical Electives require the approval of the student's advisor and may be selected from areas outside ECE. Note that 600 level courses may be substituted for 500 level courses.

³Must include ECE 692 or a course from a list of approved research/project courses (maintained by the Department) and ECE 696.

⁴At least half of the hours must be at the 600 level or above.

Program electives are selected from ECE courses. Technical electives are selected, with the advisor's approval, from courses in related fields, such as other engineering disciplines, computer science, mathematics, and the physical and biological sciences.

At least two ECE core courses must be selected from the following three groups of core courses, and the two courses must be from different groups.

- Group 1: ECE 510/511, ECE 516
- Group 2: ECE 515/514, ECE 533/534, ECE 542, ECE 540/541, ECE 569
- Group 3: ECE 520/521, ECE 530, ECE 550/551, ECE 560/561, ECE 625

ECE Graduate Students are allowed to take only six (6) hours of Independent Study and Project courses (ECE 505, 593, 605, 692, 693, 699). These courses may be taken in any combinations, but the total number of hours is not to exceed six (6).

Once a thesis or paper student has registered for course and thesis or paper hours, that student must register for MAST 600 (Masters Candidacy) in order to stay active in the EE M.S. program. International students must do this as well in order to stay in compliance with INS regulations.

Doctor of Philosophy in Electrical Engineering

Major: EE
Degree Awarded: Ph.D.
Unit: GS
Program Webpage: www.ece.louisville.edu/

Program Information

The objective of this program is to prepare the student for practice, research and/or teaching of electrical engineering at the advanced level. Upon the completion of the program, the student should be able to analyze a broad range of

advanced problems in his or her field of specialization and determine the appropriate analysis technique or solution. It is expected that the student will publish his or her dissertation research in at least one refereed publication in a national or international journal.

General Information

The Department of Electrical and Computer Engineering, offers a program of graduate study leading to the degree of Master of Science. It also offers an integrated five-year program of cooperative education leading to the professional degree Master of Engineering.

The Department of Electrical and Computer Engineering offers a Ph.D. degree in Electrical Engineering and also participates in the Ph.D. program in Computer Science and Engineering, offered jointly with the Computer Engineering and Computer Science Department.

Admission Requirements

For admission into the EE Ph.D. Program, it is highly recommended that students have an undergraduate GPA of at least 3.5 on a 4.0 scale. Also recommended are a combined score of 1200 on the verbal and quantitative portions of the GRE and at least a 4 on the AAW portion of the GRE test. GRE subject tests are not required. For students whose native language is not English or who received an undergraduate degree from a non-English speaking country, the TOEFL test is required. An applicant should score at least 550 or higher on the paper-based test, at least a 213 on the computer-based test, or at least 79 on the new internet-based test (IBT). An applicant who does not meet some requirements, but whose credentials are otherwise acceptable, may be admitted on a conditional basis. Normally, it is expected that the student will complete a Master's degree before being admitted to the Ph.D. Program. Admission to the Ph.D. Program without a Master's degree will be permitted only in very exceptional circumstances.

A complete application packet should contain an application form, official copies of all college transcripts, official copies of all earned university diplomas, GRE and TOEFL (if required) scores, and two letters of recommendation.

Curriculum

The Ph.D. in Electrical Engineering is structured to be in strict conformity with the curricular

requirements of the University of Louisville Graduate School. Completion of the program requires a minimum of 48 semester hours beyond a Master's degree in electrical engineering. The curriculum includes coursework in advanced mathematics, in-discipline technical electives, and additional program electives.

Minimum Curricular Requirements of the Program

Requirement	Semester Hours
Mathematics	6
In-Discipline Electives	15
Program Electives	9
Dissertation	18
Total (minimum)	48

The mathematics requirement of six hours provides the analytical background necessary to complete the demanding program of study and research in advanced engineering topics. Approved mathematics electives are drawn from both the Computer Engineering and Computer Science Department in the J. B. Speed School of Engineering and the Mathematics Department in the College of Arts and Sciences.

Candidates must take 15 graduate level semester hours of in-discipline (electrical engineering) electives and 9 graduate level semester hours of program electives chosen from other departments in the J. B. Speed School of Engineering and/or from other departments in the University as determined in consultation with the dissertation advisor. Together, the in-discipline electives and program electives must support the candidate's research effort and constitute an integrated program of study. The student's advisor and the Director of Graduate Studies must approve individual course plans.

NOTE: At least one half of the required 30 hours of coursework must be completed at the 600-level.

ECE Graduate Students are allowed to take only six (6) hours of Independent Study (ECE 593 or 693) and/or Projects (ECE 505 or 605). These courses may be taken in any combination, but

the total number of hours is NOT to exceed six (6).

Once a student has completed course and dissertation hours (in EE Ph.D.), that student must register for DOCT 600 (Doctoral Candidacy) in order to stay active in the EE Program. International students must do this as well in order to stay in compliance with INS requirements.

Departmental Faculty

James H. Graham

Acting Chairman

Professor

Amir A. Amini

Professor

Bruce W. Alphenaar

Professor

Robert W. Cohn

Professor

Joseph D. Cole

Professor

Aly A. Farag

Professor

Barry R. Horowitz

Professor

John H. Lilly

Professor

Kevin M. Walsh

Professor

Jacek M. Zurada

Professor

Hollace L. Cox

Associate Professor

John F. Naber

Associate Professor

Cindy K. Harnett

Assistant Professor

Tamer Inanc

Assistant Professor

Xiangqian Liu

Assistant Professor

Shamus McNamara

Assistant Professor

M. Kerem Muezzinoglu

Assistant Professor

Peter B. Aronhime

Emeritus

Samuel V. Bell, Jr

Emeritus

Kiron C. Bordoloi

Emeritus

Darrel L. Chenoweth

Emeritus

Thomas G. Cleaver

Emeritus

J. Carroll Hill

Emeritus

Leo B. Jenkins, Jr.

Emeritus

Donald J. Scheer

Emeritus

Master of Engineering in Engineering Management

Major: EM

Degree Awarded: M.Eng.

Unit: SP

Program Webpage: louisville.edu/speed/industrial/

Program Information

The Master of Engineering with specialization in Engineering Management (M.Eng.EM) is a professional degree offered by the Speed School of Engineering. It is a part-time, evening degree program open only to those students who have graduated from an ABET, Inc. accredited engineering degree program.

Admission

A requirement for admission to the program is that the applicant possess a bachelor's degree in engineering from a college or university offering programs which are accredited by the Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology. In addition, it is expected that the student be actively engaged in full-time professional employment during the period of enrollment in the degree program.

Prerequisite Requirements

The assumption is made that entering students are reasonably competent in a computer pro-

programming language such as Visual Basic, C, C++ or Java.

Curriculum

Degree Requirements

The following core of graduate course credits are required for the M.Eng.EM:

Required Courses

- EM 513- Operations Management 3
- EM 525- Project Management 3
- EM 561- Engineering Statistics I¹ 3
- EM 582- Management of Human Systems .. 3
- EM 628- Engineering Management 3
- EM 670- Engineering Financial Management 3
- EM xxx- Engineering Management electives² 6

Thesis Options

- EM 697- Engineering Management Thesis .. 6
or
- EM 699- Engineering Management Project . 3
and
EM xxx, Engineering Management electives² 3

Total credit hours: 30

Advising

Entering M.Eng.EM candidates will be advised by the M.Eng.EM Program Coordinator, Dr. William E. Biles. The candidate should select a thesis/project advisor prior to registering for his or her third semester.

¹If a student has previously taken a Probability and Statistics course comparable to EM 561, he or she is required to take EM 661 – Engineering Statistics II

²Electives may be selected from Engineering Management, Industrial Engineering, or any of the engineering disciplines offered in the Speed School of Engineering. Six credits of courses in one of the programs in Business Administration may also be selected.

Departmental Faculty

John S. Usher
Professor
Chair

William E. Biles
Professor
Clark Professor of Computer-Aided Engineering

Sunderesh S. Heragu
Professor
Duthie Chair in Engineering Logistics

Suraj M. Alexander
Professor

Gail W. DePuy
Professor

Gerald W. Evans
Professor

Herman R. Leep
Professor

Scherrill G. Russman
Professor and Assistant Dean

Mickey Wilhelm
Professor and Dean

Naira Campbell-Kyureghyan
Assistant Professor

Lijian Chen
Assistant Professor

Graduate Certificate in Environmental Engineering

Program Information

Certificate Program only. Not a degree program. Awarded only with completion of a graduate degree program (M. Eng., M.S., Ph.D.) at Speed School of Engineering.

Admission Requirements:

Admission to the Speed School of Engineering Division of Higher Studies (M.Eng.) or the Graduate School (M.S. or Ph.D) in Engineering.

Approval of an Application for the Environmental Engineering Certificate Program, link louisville.edu/speed/civil/academic/EnvironEngCertApp.pdf

Curriculum

	Semester Hours	Total
Environmental Engineering Electives (500-level)	0-6	
Environmental Engineering Electives (600-level)	6-12	12

Courses are to be selected from the following:

- CEE 509 Environmental Process Systems
- CEE 534 Industrial Waste Management
- CEE 535 Solid Waste Management
- CEE 561 Environmental Analysis of Transportation Systems I
- CEE 570 Applied Hydraulics
- CEE 571 Applied Hydrology
- CEE 572 Open Channel Hydraulics
- CEE 573 Groundwater Hydrology
- CEE 670 Advanced Hydraulics
- CEE 673 Advanced Hydrology
- CEE 674 Water Resource Systems
- CEE 675 Surface Water Quality
- CHE 509 Environmental Process Systems
- CHE 620 Transport Phenomena I
- CHE 637 Advanced Stagewise Processes
- CHE 638 Advanced Absorption
- CHE 650 Membrane Separations
- CHE 662 Advanced Process Control
- CHE 533 Chemical Engineering Safety and Health
- CHE 534 Industrial Waste Management
- CHE 535 Pollution Prevention (Waste Reduction Treatment and Disposal)
- CHE 572 Plant Process and Project Design
- ME 580 Air Pollution Control
- CHEM 622 Analytical Separations
- BIOL 521 Stream Ecology
- BIOL 522 Aquatic Ecology
- BIOL 568 Conservation Biology
- BIOL 662 Ecosystems Ecology

Note:

- Graduate courses not shown in the list above require approval from the Certificate Program Director.

- Certificate courses do not constitute a degree program, but may be applied toward M.Eng., M.S., or Ph.D. degree requirements.

Other requirements:

Completion of graduate degree program at Speed School of Engineering (M.Eng., M.S., or Ph.D.).

Master of Engineering in Industrial Engineering

Major: IE

Degree Awarded: M.Eng.

Unit: SP

Program Webpage: louisville.edu/speed/industrial/

Program Information

The Master of Engineering with specialization in Industrial Engineering (M.Eng.IE) is a professional degree offered by the Speed School of Engineering. It is accredited at the advanced level by ABET, Inc.

Admission

Requirements for admission or readmission include:

1. Completion of a program of studies equivalent to that obtained through the Speed School of Engineering Division of Pre-Engineering and Basic Studies for the field of Industrial Engineering.
2. A cumulative baccalaureate program grade-point average of 2.50/4.00 for unconditional admission.

Prerequisite Requirements

Because the M.Eng.IE is accredited as part of a five year program, the requirements of item (1) above in the section of Admissions must be satisfied exactly. This is very difficult for students who have not matriculated through the preceding four years at the Speed School. Therefore, almost all students who earned an ABET, Inc. accredited undergraduate degree elsewhere pursue the M.S.IE or Ph.D. degrees.

Curriculum

Degree Requirements

To earn the M.Eng.IE degree, students must complete the academic courses and three cooperative internships (135 credit hours total) required for the B.S. IE degree within the Divisions of Pre-Engineering and Basic Studies (or equivalent) and the following 30 credit hours of study:

Required Courses

- IE 581- Ergonomic Techniques in the Workplace 3
- IE 630- Advanced Production Systems Design 3
- IE 640- Applied Systems Analysis 3
- IE 650- Material Flow Systems Design 3
- IE 657- Models for Design and Analysis of Logistical Systems 3
- IE xxx- Industrial Engineering electives 9

Thesis Options

- IE 697- M.Eng. Thesis in Industrial Engineering 6
- IE 699- Industrial Engineering Master's Project and IE xxx, Industrial Engineering elective .. 3

Total credit hours: 165

Advising

M.Eng.IE candidates are advised by the department chairman or research advisor.

Master of Science in Industrial Engineering

Major: IE

Degree Awarded: M.S.

Unit: GS

Program Webpage: louisville.edu/speed/industrial/

Program Information

Admission Requirements

Candidates for admission into the M.S.IE degree program must satisfy the following requirements for admission:

- Baccalaureate degree with complete transcripts
- 2.75/4.00 GPA for unconditional admission
- A combined verbal and quantitative score for the GRE basic examination of at least 1000
- For international students, a TOEFL score of at least 550 (written) or 213 (computer-based)

Prerequisite Requirements

A candidate with a B.S. IE degree will have to give evidence of having taken the courses listed below for non-B.S. IE degree holders. A candidate with a B.S. degree in an engineering discipline other than IE must take the following courses, unless his or her transcript contains an equivalent course.

- IE 515, Operations Research Methods
- IE513, Operations Management

A candidate with a baccalaureate in an area other than engineering (e.g., mathematics, physics, psychology) must take all of the above course prerequisites, plus any other courses his or her thesis advisor deems appropriate.

Curriculum

Degree Requirements

The following core of graduate course credits in Industrial Engineering is required for the M.S.IE:

Required Courses

- IE 541, Simulation 3
- IE 561, Engineering Statistics I¹ 3
- EM 582, Management of Human Systems .. 3
- IE 630, Advanced Production Systems Design 3
- IE 657, Models for Design and Analysis of Logistical Systems 3
- IE xxx, Industrial Engineering electives² 9

Thesis Options

- IE 690, M.S. Thesis in Industrial Engineering 6 or
- IE 699, Industrial Engineering Master's Project 3
and
IE xxx, Industrial Engineering elective 3

Total credit hours: 30

The specific courses selected will be at the discretion of the candidate with approval of his or

her advisor. A minimum of 30 credits is required for graduation.

Advising

Entering M.S.IE students will be advised by the M.S.IE Program Coordinator, Dr. Gerlad W. Evans. The candidate should select a thesis/project advisor prior to registering for his or her second semester.

¹If a student has previously taken a Probability and Statistics course comparable to EM 561, he or she is required to take EM 661 – Engineering Statistics II

²A student can use at most one of the pre-requisite courses (3 credits) taken at the University of Louisville towards meeting the 9 credit IE elective requirement

Doctor of Philosophy in Industrial Engineering

Major: IE

Degree Awarded: Ph.D.

Unit: GS

Program Webpage: louisville.edu/speed/industrial/

Program Information

The doctor of Philosophy in Industrial Engineering (Ph.D.) is a research degree offered by the Department of Industrial Engineering through the Graduate School.

Admission

Candidates for admission into the Ph.D. degree program must satisfy both the requirements for admission into the Graduate School and the requirements of the department. These requirements are summarized as follows:

1. Baccalaureate degree with complete transcripts.
2. 3.00/4.00 GPA for unconditional admission.
3. A combined verbal and quantitative score for the GRE basic examination of at least 1200.
4. For international students, a TOEFL score of at least 535 for paper-based tests and 210 for computer-based tests.

Students with suitable GRE scores and who have baccalaureate or master's degree in indus-

trial engineering from an ABET, Inc. accredited program may be admitted to degree status without condition. Frequently, applicants to the program will have completed a master's degree; however, a qualified student may be admitted directly to the doctoral program after receiving the baccalaureate. In the latter case, unless there is a specific waiver, the student will be required to complete the M.S.IE degree before proceeding to the additional course work and research required for the Ph.D.

Prerequisite Requirements

Students with a baccalaureate in an area other than industrial engineering will be required to resolve industrial engineering undergraduate deficiencies by taking up to 23 semester hours of additional courses. The required courses will normally be chosen from the following list:

- IE 240 Fundamentals of Industrial Engineering
- IE 320 Manufacturing Processes
- IE 360 Probability and Statistics for Engineers
- IE 380 Work Design
- IE 415 Operations Research
- IE 421 Facility Location and Layout
- IE 425 Production and Inventory Control
- IE 480 Introduction to Ergonomics and Work Physiology

All candidates with a baccalaureate degree in an area other than industrial engineering, will be required to demonstrate mathematical preparation comparable to that provided by an ABET, Inc. accredited engineering program. Typically, an acceptable undergraduate record in mathematics includes calculus, differential equations, and linear algebra.

Curriculum

Degree Requirements

Five of the following eight courses are required for the Ph.D. in industrial engineering unless comparable courses have already been completed:

- IE 541 Simulation
- IE 563 Experimental Design
- IE 581 Ergonomic Techniques
- IE 590 Stochastic Programming
- IE 611 Discrete Optimization
- IE 630 Adv. Production Systems Design

- IE 643 Analysis for Decision Making
- IE 657 Models for Design & Analysis of Logistical Systems

A minimum of 78 hours of post baccalaureate credits are required. Up to 30 hours of credit may be granted for a master's degree in industrial engineering from another institution. No more than 18 hours will be awarded for dissertation research.

The basic steps in completing the Ph.D. are given below. Also see the Ph.D. Student's Management Guide at: louisville.edu/speed/industrial/.

1. Submission of application (including scores for the GRE basic examination and the GRE subject examination in engineering, certified B.S. / M.S. transcripts, translated into English if necessary, at least three completed reference forms/letters, personal statement and curriculum vitae) by the student.
2. Admission to applicancy, following the completion of 12-15 hours of graduate-level course work and satisfactorily completing the industrial engineering undergraduate deficiency courses listed above. Admission to applicancy should be requested no later than the third semester of enrollment in the program. **All remedial courses must be taken for letter grades.**
3. Formation of a dissertation committee.
4. Submission of a written proposal for dissertation research to the dissertation committee.
5. Oral presentation of the dissertation proposal to the dissertation committee.
6. Completion of a written qualifying exam developed by dissertation committee.
7. Completion of an oral exam, based upon the student's answers to the qualifying exam questions, if required by the dissertation committee.
8. Admission to candidacy for the Ph.D. degree.
9. Submission and defense of the Ph.D. dissertation.

The Ph.D. candidate entering the program with a master's degree may take 12 to 15 hours of graduate-level course work before being admitted to applicancy status. Without a master's degree, a student may take anywhere from 21 to 27 hours. A candidate's admittance to applicancy is by vote of the faculty.

The dissertation committee, referred to in (step 3), will consist of at least five members of the graduate faculty. At least three of the committee members will be from the Industrial Engineering department and at least one from departments other than Industrial Engineering. The chair of the committee will be the student's dissertation advisor.

Following the presentation of the dissertation proposal (step five), the dissertation committee will review the student's transcript to verify the adequacy of the student's course work preparation to successfully pursue research in the chosen area. At this time, the committee may recommend additional course work.

The written qualifying exam referred to in step six will have the format of a seven-day, take-home exam. Each committee member will submit question(s)/problem(s) that should require approximately one working day of effort on the student's part to answer. Normally the questions/problems will relate to the student's proposed area of research. The main purpose of the qualifying exam is to allow the advisory committee to determine if the applicant is sufficiently prepared to pursue the proposed dissertation research.

After the student has submitted the written examination answers, and the respective committee members have reviewed them, the committee may require and administer an oral examination to the applicant (step seven). At the conclusion of the oral exam, the committee may, by simple majority vote, recommend that the applicant be admitted to candidacy for the Ph.D. degree, that the recommendation for admission to candidacy be delayed pending specific remedial work, or recommend that the applicant not be admitted to candidacy.

The defense, referred to in step nine, will be held on a draft of the dissertation that has been approved by the candidate's advisor. The Graduate School allows at most five years between the finished course work and the dissertation defense.

Advising

Entering Ph.D. candidates will be advised by the Graduate Admissions Committee Chair, Dr. Sunderesh Heragu, until such time as the candidate is admitted to applicancy. After admission to applicancy, the candidate will be advised by his or her dissertation advisor.

Financial Aid and Seminar Attendance

The IE department will hold seminars throughout each semester. The purpose of these seminars is to expose graduate students to research methods and topics and is intended to benefit graduate students in their research. Thus, all active graduate students are strongly encouraged to attend. If a student is absent for more than two seminars per semester, s/he risks losing financial aid for future semesters. Also, students whose status is deemed inactive by the GAC risk losing financial aid from the department or University.

Departmental Faculty

John S. Usher

*Professor
Chair*

William E. Biles

*Professor
Clark Professor of Computer-Aided Engineering*

Sunderesh S. Heragu

*Professor
Duthie Chair in Engineering Logistics*

Suraj M. Alexander

Professor

Gail W. DePuy

Professor

Gerald W. Evans

Professor

Herman R. Leep

Professor

Scherrill G. Russman

Professor and Assistant Dean

Mickey Wilhelm

Professor and Dean

Naira Campbell-Kyureghyan

Assistant Professor

Lijian Chen

Assistant Professor

Graduate Certificate in Logistics and Distribution

Program Information

The Graduate Certificate Program in Logistics and Distribution is offered jointly by the College of Arts and Sciences, the College of Business, and The J. B. Speed School of Engineering. It provides qualified applicants a high-quality program for structured graduate study in this truly interdisciplinary field. The program is designed primarily for people who are currently working in logistics and distribution organizations in the Louisville area, or for those who aspire to gain general knowledge in the field that may lead to career opportunities in logistics and distribution. As a result, the outcomes of the program are to provide, (1) a highly skilled workforce for regional employers; (2) a sought-after academic credential for employee-students; and (3) a career advancement credential for both employers and employees in the logistics and distribution sector.

Admission Requirements

Students who apply for admission to the certificate in logistics and distribution program are expected to meet the following typical U of L Graduate School standards:

- Submission of a University of Louisville Graduate School Application,
- At least two letters of recommendation,
- The possession of at least a baccalaureate degree,
- The submission of an official transcript for each prior degree earned,
- A minimum 2.75/4.0 undergraduate cumulative grade point average, and
- Submission of scores on the Graduate Record Examination (GRE) or the Graduate Management Admissions Test (GMAT).

Curriculum

The curriculum of the Certificate in Logistics and Distribution requires the completion of a total of 18 semester hours of coursework, consisting of six 3-semester hour courses. These courses are:

- MKT 525 Distribution Management 3

- MATH 588 Discrete Mathematics for Logistics and Distribution Applications 3
- ACCT 526 Finance and Accounting Applications in Logistics and Distribution 3
- IE 621 Facilities Planning 3
- IE 651 Warehousing and Transportation 3
- MKT 527 Logistics Management 3

Departmental Faculty

The faculty who teach in the certificate program will be drawn from the members of the Logistics and Distribution Institute (LoDI) faculty. A list of these faculty members, with links to their vitae, may be found on the web at: louisville.edu/org/lodi/faculty.html.

Master of Engineering in Mechanical Engineering

Major: ME
Degree Awarded: M.Eng.
Unit: SP
Program Webpage: louisville.edu/speed/mechanical/

Program Information

The Mechanical Engineering Department in the J.B. Speed School of Engineering at the University of Louisville offers programs of study leading to the degrees of Master of Science and Doctor of Philosophy in Mechanical Engineering. It also offers an integrated five-year program with a cooperative education component that culminates in the Master of Engineering degree and is accredited by ABET, Inc.

Master of Science

In addition to the Master of Engineering program, the Mechanical Engineering Department offers a Master of Science degree in Mechanical Engineering through the Graduate School. This program is appropriate for students not holding a mechanical engineering baccalaureate degree from the University of Louisville. Both thesis and non-thesis options are available.

Doctor of Philosophy in Mechanical Engineering

Through the Graduate School, the Mechanical Engineering Department offers a program of study leading to the Doctor of Philosophy degree in Mechanical Engineering. This program provides an opportunity for students to complete advanced course work and conduct independent research in one of a number of specialization areas. Those interested in the Ph.D. program should consult the Graduate School catalog for requirements and contact information.

Curriculum

Higher Studies Division

ME 644	3
ME 697 ^{1, 2}	6
ME Program Electives ^{3, 4, 5}	21

1. Upon admission into the Higher Studies Division, M.Eng. candidates are assigned a faculty academic advisor. Thesis students are encouraged to select a thesis topic and advisor during the first term of the graduate/professional year. The thesis advisor then serves as the student's academic advisor. Students must obtain the consent of their thesis advisor prior to enrolling in ME 697.
2. The faculty of the Mechanical Engineering Department has approved a non-thesis M.Eng. curriculum alternative that permits students to satisfy EAC/ABET, Inc. accreditation criteria by replacing the six M.Eng. thesis hours (ME 697) with one three-hour 600-level course selected from the list of approved Mechanical Engineering Program Electives, and a three-hour structured research project (ME 645).
3. At least nine of the 21 program elective credit hours must be at the 600 level or above.
4. Courses to meet the program elective requirements are selected with the assistance of the student's advisor.
5. The Mechanical Engineering Department's B.Sc. curriculum includes 14.0 EAC/ABET, Inc. design hours. The 500 and 600 level M.Eng. Program Electives must contain a minimum of 6.0 additional design hours.
6. The five-year total for the M.Eng. degree is 163 semester hours.

Master of Science in Mechanical Engineering

Major: ME
Degree Awarded: M.S.
Unit: GS
Program Webpage: louisville.edu/speed/mechanical/

Program Information

The Department of Mechanical Engineering of the J. B. Speed School of Engineering offers a program of study leading to the degree of Master of Science. It also offers an integrated five-year program of cooperative education leading to the professional degree of Master of Engineering.

Admission to the M.S. Program

Applicants for admission to the M.S. program in Mechanical Engineering should have a baccalaureate degree in Mechanical Engineering or a related discipline, with a GPA of 2.75/4.0 or better. Unconditional admission requires a composite score (verbal and quantitative) of no less than 1100 on the Graduate Record Examination (1500 preferred). International students must show proficiency in English by scoring 550 or higher on the TOEFL (Test of English as a Foreign Language) examination, or by completing the University's Advanced Level of the Intensive English as a Second Language Program. An applicant not meeting a requirement, but with otherwise acceptable credentials, may be admitted on a conditional basis. New students will not be considered for financial aid until after one semester of residency.

Advising

Upon enrollment, a student will be advised by the Department's M.S. academic advisor. After completing at least 12, but not more than 18 semester hours of graduate work, a permanent thesis advisor must be chosen by the student and approved by the Department Chair. During the semester following the selection of the permanent advisor, the student and thesis advisor should select the remaining two members of the thesis committee from among the graduate faculty, one of whom must be from outside the Mechanical Engineering Department.

Curriculum

	Semester Hours	Total
Courses in Major		
ME 600-level (graduate only) courses (in addition to thesis)	9	
ME electives 500-600 level	6	
ME 690, thesis	6	
Courses Outside of Major		
Non-ME electives (500-600 level) ¹	9	
Minimum Total²		30

Notes:

Non-mechanical engineering electives must be approved by the student's advisor. These courses usually lie in mathematics, computer science, or another engineering discipline.

A minimum of 12 hours of coursework, exclusive of thesis hours, must be taken at the 600-level.

Doctor of Philosophy in Mechanical Engineering

Major: ME
Degree Awarded: Ph.D.
Unit: GS
Program Webpage: louisville.edu/speed/mechanical/

Program Information

The Department of Mechanical Engineering in the J.B. Speed School of Engineering offers a program of study leading to the degree of Doctor of Philosophy in Mechanical Engineering. This program provides an opportunity for students to complete advanced course work and conduct

independent research in the following specialization areas: Biomechanics or Advanced Product Design and Development.

Curriculum

Completion of the program requires forty- eight (48) semester hours beyond a master's degree in Mechanical Engineering, or seventy- eight (78) semester hours beyond a baccalaureate degree in Mechanical Engineering.

Required Core Courses	Semester Hours	Total
Research Seminar	3	
Advanced Mathematics	6	
Mechanical Engineering Technical Core (appropriate for the specialization area)	6	
Technical Electives	15	
Dissertation Research	18	
Minimum Total		48

Admission to the Doctoral Program

Unconditional admission into the Doctor of Philosophy program requires an earned mechanical engineering master's degree and the following credentials:

- Minimum undergraduate GPA of 3.0/4.0; minimum graduate GPA of 3.25/4.0.
- Three letters of recommendation, with at least two addressing the applicant's ability to perform independent research successfully.
- A composite score (verbal and quantitative) on the Graduate Records Examination (GRE) of no less than 1100 (1500 preferred). International students must show proficiency in English by scoring 550 or higher on the TOEFL (Test of English as a Foreign Language) examination, or by completing the University's Advanced Level of the Intensive English as a Second Language Program.

Qualified applicants may be admitted directly to the doctoral program after receiving a baccalaureate degree. These students will be required to complete an additional 30 hours of coursework at the 500 and 600 level under an individual plan

developed in conjunction with the Chair of the Department's Graduate Studies Committee. Students with a B.S. in another branch of engineering, or in chemistry, mathematics, physics, or life sciences may be required to take up to 24 undergraduate units in mechanical engineering, and to demonstrate preparation comparable to that provided by an ABET, Inc. accredited engineering program.

Departmental Faculty

A complete faculty listing is on the following website: louisville.edu/speed/mechanical/.

Graduate Certificate in Data Mining

Program Information

To address the need for trained professionals in the interdisciplinary field of data mining, the Department of Computer Engineering and Computer Science (CECS) and the Department of Mathematics faculty have developed a joint certificate program in data mining. The certificate will consist of 18 hours, with two required courses from CECS, two required courses from Mathematics, and two elective courses selected from a list of relevant elective courses in CECS and Mathematics.

Admission Requirements

For continuing studies as non-degree student:

- Undergraduate Degree in technically related field or technical experience.
- Knowledge of calculus.
- Graduate application and \$50 application fee.

For degree status (those who want to continue for M.S. or Ph.D.) Additional Requirements:

- GRE scores.
- Two letters of recommendation.

Curriculum

Required courses and activities

Two required Computer Engineering courses:

- CECS 535 Introduction

- CECS 632, Data Mining

Two required Mathematics courses:

- Math 665 Advanced Linear Statistical Models
- Math 667 Methods of Classification

Two elective courses chosen from the following list of courses:

- CECS 545 Artificial Intelligence
- CECS 563 Experimental Design in Engineering
- CECS 619 Design and Analysis of Computer Algorithms
- CECS 630 Advanced Databases and Data Warehousing
- CECS 645 Advanced Artificial Intelligence
- MATH 560 Introduction to Statistical Data Analysis
- MATH 561 Probability Theory
- MATH 562 Mathematical Statistics
- MATH 566 Nonparametric Statistics
- MATH 567 Sampling Theory
- MATH 568 Time Series Analysis

Departmental Faculty

Dr. Mehmed Kantardzic (CECS Department)

Dr. Pat Cerrito (Math Department)

Institutional Accreditation and Memberships

Institutional Accreditation

The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate, bachelor, master, specialist, doctoral, and first-professional degrees (D.M.D., J.D., M.D.). Individuals who wish to contact the Commission on Colleges regarding the accreditation status of the university may write the Commission at 1866 Southern Lane, Decatur, Georgia 30033-4097, or call (404) 679-4500.

Professional Accreditation

Accountancy - The Association to Advance Collegiate Schools of Business (AACSB International)

Art Therapy - (Expressive Therapies) American Art Therapy Association

Audiology and Speech Pathology - American Speech-Language-Hearing Association

Business (Graduate and Undergraduate) - The Association to Advance Collegiate Schools of Business (AACSB International)

Chemistry - American Chemical Society (B.S. degree only)

Clinical Psychology - American Psychological Association

Computer Engineering and Computer Science - Computing Accreditation Commission of ABET, Inc. (B.S. degree only)

Counseling Psychology - American Psychological Association.

Dental Hygiene - Commission on Dental Accreditation of the American Dental Association

Dentistry - Commission on Dental Accreditation of the American Dental Association

Education - Education Professional Standards Board, Commonwealth of Kentucky and National Council for Accreditation of Teacher Education (NCATE)

Engineering - (Chemical Engineering, Civil Engineering, Electrical Engineering, Industrial Engineering, Mechanical Engineering, Computer Engineering and Computer Science programs) Engineering Accreditation Commission of ABET, Inc. (M.Eng. degree)

Family Therapy - Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE)

Graduate Medicine - (House Staff) Accreditation Council for Graduate Medical Education (ACGME)

Interior Design - Foundation for Interior Design Education Research

Law - Section of Legal Education and Admissions to the Bar of the American Bar Association and Association of American Law Schools

Medicine - Liaison Committee on Medical Education, a Joint Committee of the American Medical Association and the Association of American Medical Colleges

Music and Music Therapy - National Association of Schools of Music (NASM)

Nursing - Commission on Collegiate Nursing Education

Paralegal Studies Program - Section on Paralegal Education of the American Bar Association

Pathology and Laboratory Medicine - (Post Doctoral) Commission on Accreditation in Clinical Chemistry (COMACC)

Public Administration - National Association of Schools of Public Affairs and Administration

Public Health - Council on Education for Public Health (CEPH)

Social Work - Commission on Accreditation of the Council on Social Work Education

Sport Management - Sport Management Program Review Council of the National Association for Sport and Physical Education and North American Society for Sport Management

Theatre Arts - National Association of Schools and Theatre (NAST)

Other Accreditation

Research Resource Center - Association for Assessment and Accreditation of Laboratory Animal Care, International (AAALAC)

Human Subjects Protection Program: Association for the Accreditation of Human Research Protection Programs, Inc. (AAHRPP)

University Administration

Administrative Officers of the University

James R. Ramsey, Ph.D.
President

Shirley C. Willihnganz, Ph.D.
Executive Vice President and University Provost

Larry N. Cook, M.D.
Executive Vice President and Chancellor for Health Sciences Center

Manuel Martinez-Maldonado, M.D.
Senior Vice President for Research

Michael J. Curtin, M.B.A.
Vice President for Finance

Thomas R. Jackson, Ed.D.
Vice President for Student Affairs

Thomas M. Sawyer, B.A.
Acting Vice President for Information Technology

Larry L. Owsley, M.P.P., M.P.A.
Vice President for Business Affairs

Keith Inman, B.A.
Vice President for University Advancement

Daniel Hall, J.D.
Vice President for External Affairs

Thomas M. Jurich
Vice President for Athletics

Administrative Officers of the Graduate School

Ronald M. Atlas, Ph.D.
Dean of the Graduate School

Michael J. Cuyjet, Ed.D.
Associate Dean of the Graduate School

Richard W. Stremel, Ph.D.
Associate Dean of the Graduate School

Paul J. DeMarco, Ph.D.
Assistant Dean of the Graduate School

Deans

J. Blaine Hudson, Ed.D.
College of Arts and Sciences

R. Charles Moyer, Ph.D.
College of Business

Wood E. Currens, D.M.D.
School of Dentistry
Acting Dean

Robert D. Felner, Ph.D.
College of Education and Human Development

Ronald M. Atlas, Ph.D.
Graduate School

Terry L. Singer, Ph.D.
Kent School of Social Work

James Chen, J.D.
Brandeis School of Law

Edward Halperin, M.D.
School of Medicine

Christopher P. Doane, Ph.D.
School of Music

Cynthia McCurren, Ph.D., R.N.
School of Nursing
Acting Dean

Richard D. Clover, M.D.
School of Public Health and Information Sciences

Mickey R. Wilhelm, Ph.D.
J. B. Speed School of Engineering

Hannelore Rader, M.L.S.
University Librarian

2006-2007 Graduate Council

Annette Allen, Ph.D.

Associate Professor of Humanities
College of Arts and Sciences

Tim Brauch, GSC President

Mathematics, Graduate Student
College of Arts and Sciences

Namok Choi, Ph.D.

Associate Professor of Leadership, Foundations
and Human Resource Education
College of Education and Human Development

David Dubofsky, Ph.D.

Professor of Finance
College of Business

Evelyne Gozal, Ph.D.

Associate Professor of Pediatrics/Pharmacology
& Toxicology
School of Medicine

Susan M. Griffin, Ph.D.

Professor of English
College of Arts and Sciences

Carlton A. Hornung, Ph.D.

Professor of Epidemiology: Clinical Investigation
Sciences
School of Public Health and Information
Sciences

Ruth Huber, Ph.D.

Professor of Social Work
Kent School of Social Work

Lawrence A. Hunt, Ph.D.

Associate Professor of Microbiology and
Immunology
School of Medicine

Carolyn Klinge, Ph.D.

Professor of Biochemistry and Molecular Biology
School of Medicine

Ann E. Larson, Ph.D.

Associate Professor of Teaching and Learning
College of Education and Human Development

Steven Myers, Ph.D.

Associate Professor of Pharmacology &
Toxicology
School of Medicine

Seow-Chin Ong, Ph.D.

Assistant Professor of Music History
School of Music

George Pack, Ph.D.

Professor of Chemistry
College of Arts and Sciences

Rammohan K. Ragade, Ph.D.

Professor of Computer Engineering and
Computer Science
J. B. Speed School of Engineering

Karen Robinson, DNS

Associate Professor of Nursing
School of Nursing

Prasanna (Ron) Sahoo, Ph.D.

Professor of Mathematics
College of Arts and Sciences

David Scott, Ph.D.

Associate Professor of Perio, Endo & Dental
Hygiene
School of Dentistry

Joseph M. Steffen, Ph.D.

Associate Professor of Biology
College of Arts and Sciences

Nancy Theriot, Ph.D.

Associate Professor of Women's and Gender
Studies
College of Arts and Sciences

James L. Wittliff, Ph.D.

Professor of Biochemistry and Molecular Biology
School of Medicine

Graduate Faculty

There are two levels of Graduate Faculty Membership:

A **Member** of the Graduate Faculty is authorized to teach graduate courses, serve on graduate student advisory committees, and co-chair Master's Theses.

A **Senior Member** of the Graduate Faculty is authorized to teach graduate courses, serve on graduate advisory committees, and serve as thesis and dissertation advisors and chairs (mentors). Both levels of membership have the authority to serve on thesis and dissertation committees.

Robert D. Acland (Senior)

M.B., London Hospital Medical College
Professor of Surgery
Associate in Anatomical Sciences and
Neurobiology
Associate in Physiology and Biophysics

David H. Adamkin (Senior)

M.D., State University of New York at Syracuse
Professor of Pediatrics

Arthur J. Adams (Senior)

Ph.D., University of Iowa
Professor of Business Statistics

Bruce F. Adams (Senior)

Ph.D., University of Maryland
Professor of History

Ayotunde S. O. Adeagbo (Senior)

Ph.D., University of Ibadan
Associate Professor of Physiology and
Biophysics

Pascale Alard (Senior)

Ph.D., University of Paris XI
Assistant Professor of Microbiology and
Immunology

James E. Alexander, Jr. (Senior)

Ph.D., University of Oklahoma
Assistant Professor of Biology

Suraj Mammen Alexander (Senior)

*Ph.D., Virginia Polytechnic Institute and State
University*
Professor of Engineering Management and
Industrial Engineering

Ann Taylor Allen (Senior)

Ph.D., Columbia University
Professor of History

Annette Allen (Senior)

Ph.D., The University of Texas
Associate Professor of Humanities

Bruce W. Alphenaar (Senior)

Ph.D., Yale University
Professor of Electrical and Computer
Engineering

Pete Alter (Member)

Ph.D., University of Florida
Assistant Professor of Teaching and Learning

Robert A. Amchin (Senior)

Ph.D., University of Michigan
Professor of Music Education

David Anderson (Senior)

Ph.D., University of Pennsylvania
Associate Professor of English

Gary L. Anderson (Senior)

Ph.D., University of Arizona
Professor of Physiology and Biophysics
Associate in Surgery

Becky F. Antle (Member)

Ph.D., University of Louisville
Research Assistant Professor of Social Work

Deborah S. Armstrong (Senior)

Ph.D., University of Kentucky
Associate Professor of Nursing

John Arnez (Senior)

Ph.D., Yale University
Assistant Professor of Chemistry

George R. Aronoff (Senior)

M.D., Indiana University
Professor of Medicine in Nephrology
Professor of Pharmacology and Toxicology

Gavin E. Arteel (Senior)

Ph.D., University of North Carolina
Associate Professor of Pharmacology and
Toxicology

Jack Ashworth (Senior)

D.M.A., Stanford University
Professor of Music History

Ronald M. Atlas (Senior)

Ph.D., Rutgers University
Professor of Biology
Professor in the Center for Health Hazards
Preparedness

D. Mark Austin (Senior)

Ph.D., University of Oklahoma
Associate Professor of Sociology

Antonio Badia (Senior)

Ph.D., Indiana University
Associate Professor Computer Engineering and
Computer Science

Lateef O. Badru (Senior)

*Ph.D., State University of New York at Stony
Brook*
Associate Professor of Sociology
Associate Professor of Pan-African Studies

Barbara Baker (Senior)

Ph.D., Wayne State University
Professor of Surgery

Richard P. Baldwin (Senior)

Ph.D., Purdue University
Professor of Chemistry

Anita P. Barbee (Senior)

Ph.D., University of Georgia
Professor of Social Work

Gerard M. Barber (Senior)

Ph.D., Brandeis University
Professor of Social Work

John H. Barker (Senior)

M.D., University of Cordoba
Ph.D., University of Heidelberg
Professor of Surgery
Associate in Anatomical Sciences and
Neurobiology
Associate in Microbiology and Immunology

Charles C. Barr (Senior)

M.D., Johns Hopkins Medical School
Professor of Ophthalmology and Visual Sciences

Shirish Barve (Senior)

Ph.D., University of Kentucky
Professor of Gastroenterology/Hepatology

Paula J. Bates (Senior)

Ph.D., University of London
Associate Professor of Medicine in Hematology
and Oncology

Lora Battle-Bailey (Member)

Ph.D., Auburn University
Associate Professor of Teaching and Learning

Debra K. Bauder (Senior)

Ed.D., University of Kentucky
Associate Professor of Teaching and Learning

Melissa Baucus (Senior)

Ph.D., Indiana University School of Business
Associate Professor of Management

Kathy B. Baumgartner (Senior)

Ph.D., The University of Texas
Associate Professor of Epidemiology and Clinical
Investigation

Richard N. Baumgartner (Senior)

Ph.D., The University of Texas
Distinguished University Professor of
Epidemiology and Clinical Investigation

Sidney J. Baxendale (Senior)

D.B.A., Indiana University
Professor of Accountancy

Jennifer Bay-Williams (Senior)

Ph.D., University of Missouri
Associate Professor of Teaching and Learning

Cathy L. Bays (Member)

Ph.D., University of Cincinnati
Associate Professor of Nursing

Blake Raymond Beattie (Senior)

Ph.D., University of Toronto
Associate Professor of History

James Kevin Beggan (Senior)

Ph.D., University of California, Santa Barbara
Associate Professor of Sociology

Frederick W. Benz (Senior)

Ph.D., University of Iowa
Professor of Pharmacology and Toxicology

Gina E. Bertocci (Senior)

Ph.D., University of Pittsburgh
Associate Professor of Mechanical Engineering

Nageshwar R. Bhaskar (Senior)

Ph.D., The Ohio State University
Professor of Civil and Environmental
Engineering

Aruni Bhatnagar (Senior)

Ph.D., University of Kanpur, India
Professor of Cardiology
Professor of Pharmacology and Toxicology
Professor of Biochemistry and Molecular Biology

Matthew Biberman (Senior)

Ph.D., Duke University
Associate Professor of English

Martha E. Bickford (Senior)

Ph.D., Duke University
Professor of Anatomical Sciences and
Neurobiology

William E. Biles (Senior)

*Ph.D., Virginia Polytechnic Institute and State
University*
Professor of Industrial Engineering
Edward Reep Clark Chair of Computer Aided
Engineering

Dale Billingsley (Senior)

Ph.D., Yale University
Professor of English

Pat B. Blackwell (Member)

Ph.D., Purdue University
Assistant Professor of Surgery in Speech
Pathology

Linda K. Bledsoe (Senior)

Ph.D., University of Louisville
Associate Professor of Social Work

Mark E. Blum (Senior)

Ph.D., University of Pennsylvania
Professor of History

Haribabu Bodduluri (Member)

Ph.D., Indian Institute of Science
Professor of Microbiology and Immunology
Professor of Pharmacology and Toxicology

Beth Boehm (Senior)

Ph.D., The Ohio State University
Professor of English

Roberto Bolli (Senior)

M.D., University of Perugia, Italy
Professor of Cardiology Jewish Hospital Heart
and Lung Institute
Distinguished Chair in Cardiology

Carol E. Bonham (Member)

Ph.D., University of Arizona
Assistant Professor of Nursing

Puran S. Bora (Senior)

Ph.D., Kumaun University, Italy
Professor of Ophthalmology and Visual Sciences

Douglas C. Borchman (Senior)

Ph.D., Wayne State University
Professor of Ophthalmology and Visual Sciences
Professor of Biochemistry and Molecular Biology
Professor of Chemistry

Steven C. Bourassa (Senior)

Ph.D., University of Pennsylvania
Professor of Urban and Public Affairs

Lynn H. Boyd (Senior)

Ph.D., University of Georgia
Associate Professor of Management

Mary E. Bradley (Senior)

Ph.D., University of Virginia
Associate Professor of Mathematics

Roger D. Bradshaw (Senior)

Ph.D., Northwestern University
Assistant Professor of Mechanical Engineering

Jay T. Brandi (Senior)

Ph.D., University of Arizona
Professor of Finance

Ellen G. Brehob (Senior)

Ph.D., Pennsylvania State University
Associate Professor of Mechanical Engineering

Mark. D. Brennan (Senior)

Ph.D., Indiana University
Professor of Biochemistry and Molecular Biology

Michael E. Brier (Senior)

Ph.D., Purdue University
Professor of Medicine in Nephrology
Associate in Pharmacology and Toxicology

Leonard Bright (Member)

Ph.D., Portland State University
Assistant Professor of Urban and Public Affairs

Karen Britt (Senior)

Ph.D., Indiana University
Assistant Professor of Fine Arts

Betty C. Brown (Senior)

*Ph.D., Virginia Polytechnic Institute and State
University*
Professor of Accountancy

David N. Brown (Senior)

Ph.D., Purdue University
Associate Professor of Physics

Elizabeth Todd Brown (Member)

Ph.D., University of Louisville
Assistant Professor of Teaching and Learning

Garry Brown (Senior)

M.F.A., University of Memphis
Associate Professor of Theatre Arts

Joseph H. Brown (Senior)

Ph.D., Indiana University
Professor of Family Therapy

Reginald A. Bruce (Senior)

Ph.D., University of Michigan
Associate Professor of Management

Rhonda L. Buchanan (Senior)

Ph.D., University of Colorado
Professor of Classical and Modern Languages

Robert M. Buchanan (Senior)

Ph.D., University of Colorado
Professor of Chemistry

Julie Bunck (Senior)

Ph.D., University of Virginia
Associate Professor of Political Science

Barbara M. Burns (Senior)

Ph.D., Brown University
Professor of Psychological and Brain Sciences

R. Todd Burns (Member)

M.F.A., Indiana University
Associate Professor of Fine Arts

Vickie E. Burns (Member)

Ph.D., University of Missouri
Assistant Professor of Nursing

Nefertiti Burton (Senior)

M.F.A., University of Massachusetts
Associate Professor of Theatre Arts

Norbert J. Burzynski (Senior)

D.D.S., St. Louis University
M.D., University of Louisville
Professor of Diagnosis and General Dentistry

John A. Busch (Senior)

Ph.D., Indiana University
Associate Professor of Sociology

William S. Bush (Senior)

Ed.D., University of Georgia
Professor of Teaching and Learning

Janice M. Butters (Senior)

Ed.D., University of Louisville
Professor of Periodontics, Endodontics and
Dental Hygiene

Thomas B. Byers (Senior)

Ph.D., University of Iowa
Professor of English

Gregory P. Byrne (Member)

D.M.A., University of Alabama-Tuscaloosa
Associate Professor of Music

Anne Caldwell (Member)

Ph.D., University of Notre Dame
Associate Professor of Political Science

Ferrell R. Campbell (Senior)

Ph.D., University of Chicago
Professor of Anatomical Sciences and
Neurobiology

Naira Campbell-Kyeurghyan (Senior)

Ph.D., The Ohio State University
Assistant Professor of Industrial Engineering

Rey Carabeo (Senior)

Ph.D., University of Wisconsin-Madison
Assistant Professor of Microbiology &
Immunology

Joy Carew (Member)

Ph.D., Illinois Institute of Technology
Associate Professor of Pan-African Studies

Robert M. Carini (Senior)

Ph.D., Indiana University
Assistant Professor of Sociology

Mary Carothers (Senior)

M.F.A., Rhode Island School of Design
Associate Professor of Fine Arts

Margaret M. Carreiro (Senior)

Ph.D., University of Rhode Island
Associate Professor of Biology

Manuel F. Casanova (Senior)

*M.D., University of Puerto Rico School of
Medicine*
Professor of Psychiatry and Brain Sciences

Cara H. Cashion (Senior)

Ph.D., The University of Texas at Austin
Assistant Professor of Psychological & Brain
Sciences

Aristofanes Cedeño (Member)

Ph.D., Michigan State University
Associate Professor of Classical and Modern
Languages

Patricia B. Cerrito (Senior)

Ph.D., University of Cincinnati
Professor of Mathematics

Jonathan B. Chaires (Senior)

Ph.D., University of Connecticut
Professor of Medicine

Ying Kit Chan (Senior)

M.F.A., University of Cincinnati
Professor of Fine Arts

Karen M. Chandler (Senior)

Ph.D., University of Pennsylvania
Associate Professor of English

Dar-Jen Chang (Senior)

Ph.D., University of Michigan
Associate Professor of Computer Engineering
and Computer Science

L. Kevin Chapman (Member)

Ph.D., University of Louisville
Assistant Professor of Psychological and Brain
Sciences

William G. Cheadle (Senior)

*M.D., University of California, Irvine, School of
Medicine*
Professor of Surgery
Associate in Microbiology and Immunology

James Chen

J.D., Harvard University
Professor, School of Law

Lijian Chen (Member)

Ph.D., The Ohio State University
Assistant Professor of Industrial Engineering

Theresa S. Chen (Senior)

Ph.D., University of Louisville
Professor of Pharmacology and Toxicology

Darrel L. Chenoweth (Senior)

Ph.D., Auburn University
Professor of Electrical and Computer Engineering

Jason Chesney (Senior)

M.D., Ph.D., University of Minnesota
Assistant Professor of Medicine

Sufan Chien (Senior)

M.D., Shanghai First Medical College, Shanghai
Professor of Surgery

Namok Choi (Member)

Ph.D., Oklahoma State University
Associate Professor of Leadership, Foundations and Human Resource Education

Nan-Ting Chou (Senior)

Ph.D., The Ohio State University
Associate Professor of Economics

Dana Christensen (Senior)

Ph.D., Brigham Young University
Professor of Family Therapy

Jean Christensen (Senior)

Ph.D., University of California, Los Angeles
Professor of Music History

Karen Christopher (Senior)

Ph.D., University of Arizona
Associate Professor of Women's Studies
Associate Professor of Sociology

Barbara J. Clark (Senior)

Ph.D., The University of Texas Southwestern Medical Center
Associate Professor of Biochemistry and Molecular Biology

Stephen J. Clark (Senior)

D.M.D., University of Kentucky
Associate Professor of Periodontics, Endodontics and Dental Hygiene

Dewey M. Clayton (Senior)

Ph.D., University of Missouri
Associate Professor of Political Science

Thomas G. Cleaver (Senior)

Ph.D., The Ohio State University
Professor of Electrical and Computer Engineering

Richard N. Cloud (Senior)

Ph.D., University of Tennessee
Associate Professor of Social Work

Van G. H. Clouse (Senior)

Ph.D., Clemson University
Associate Professor of Management
Cobb Family Professor of Entrepreneurship

Richard D. Clover (Senior)

M.D., University of Oklahoma
Professor of Family and Community Medicine
William Ray Moore Chair of Family Practice
Professor of Health Knowledge and Cognitive Sciences

Jean Anne Clyde (Senior)

Ed.D., Indiana University
Professor of Teaching and Learning

Gary A. Cobbs (Senior)

Ph.D., University of California, Riverside
Professor of Biology

W. Geoffrey Cobourn (Senior)

D.Sc., Washington University
Professor of Mechanical Engineering

Louis F. Cohn (Senior)

Ph.D., Rensselaer Polytechnic Institute
Professor of Civil and Environmental Engineering

Robert W. Cohn (Senior)

Ph.D., Southern Methodist University
Professor of Electrical and Computer Engineering

Joseph D. Cole (Senior)

Ph.D., Southern Methodist University
Professor of Electrical and Computer Engineering

Rita M. Colella (Senior)

Ph.D., Rutgers University
Associate Professor of Anatomical Sciences and Neurobiology

Dermot J. Collins (Senior)

Ph.D., Georgia Institute of Technology
Professor of Chemical Engineering

Wanda L. Collins (Senior)

Ph.D., University of Tennessee
Associate Professor of Social Work

Mark W. F. Condon (Senior)
Ph.D., University of Missouri
 Professor of Teaching and Learning

Daniel J. Conklin (Member)
Ph.D., University of Notre Dame
 Assistant Professor of Medicine in Cardiology

Larry N. Cook, (Senior)
M.D., University of Louisville
 Professor of Pediatrics
 Associate Professor of Obstetrics, Gynecology
 and Women's Health

Paul A. Coomes (Senior)
Ph.D., The University of Texas
 Professor of Economics

Nigel G. F. Cooper (Senior)
Ph.D., University of Tennessee
 Professor of Anatomical Sciences and
 Neurobiology
 Professor of Ophthalmology and Visual Sciences

Richard E. Coppage (Senior)
D.B.A., University of Kentucky
 Professor of Accountancy

Mary Beth Coty (Member)
Ph.D., Vanderbilt University
 Assistant Professor of Nursing

Hollace L. Cox (Senior)
Ph.D., Indiana University
 Associate Professor of Electrical and Computer
 Engineering

Gary A. Crim (Senior)
D.M.D., University of Kentucky
 Professor of Diagnosis Sciences, Prosthodontics
 and Restorative Dentistry

Geoffrey Arthur Cross (Senior)
Ph.D., The Ohio State University
 Professor of English

A. Glenn Crothers (Member)
Ph.D., University of Florida
 Assistant Professor of History

John Cumber, (Senior)
Ph.D., University of Michigan
 Professor of History

David R. Cunningham (Senior)
Ph.D., University of Kansas
 Professor of Surgery in Communicative
 Disorders

George K. Cunningham (Senior)
Ph.D., University of Arizona
 Professor of Educational and Counseling
 Psychology

Michael R. Cunningham (Senior)
Ph.D., University of Minnesota
 Professor of Psychological and Brain Sciences

Nancy Cunningham (Senior)
Ph.D., Michigan State University
 Professor of Educational and Counseling
 Psychology

William Leonard Cunningham (Senior)
Ph.D., The University of Texas at Austin
 Professor of Classical and Modern Languages

Michael J. Cuyjet (Senior)
Ed.D., Northern Illinois University
 Associate Professor of Educational and
 Counseling Psychology

Matthieu Dalle (Member)
Ph.D., Pennsylvania State University
 Assistant Professor of Classical and Modern
 Languages

Udayan B. Darji (Senior)
Ph.D., Auburn University
 Professor of Mathematics

Douglas Stacy Darling (Senior)
Ph.D., University of Washington
 Professor of Biochemistry and Molecular Biology
 Professor of Periodontics, Endodontics and
 Dental Hygiene

Manabendra N. Das (Member)
Ph.D., The Ohio State University
 Associate Professor of Mathematics

Somnath Datta (Senior)
Ph.D., Michigan State University
 Professor of Bioinformatics and Biostatistics

Susmita Datta (Senior)
Ph.D., University of Georgia
 Associate Professor of Bioinformatics and
 Biostatistics

Christopher R. L. Davis (Senior)
Ph.D., Hertford College, Oxford University
 Professor of Physics

Deborah W. Davis (Senior)
D.N.S., Indiana University
 Associate Professor of Pediatrics

Michael L. Day (Senior)

Ph.D., Purdue University
Professor of Mechanical Engineering

William L. Dean (Senior)

Ph.D., University of Michigan
Professor of Biochemistry and Molecular Biology

Paul J. DeMarco (Senior)

Ph.D., Vanderbilt University
Associate Professor of Psychological and Brain Sciences
Associate in Ophthalmology and Visual Sciences

Donald R. Demuth (Senior)

Ph.D., Lehigh University
Professor of Periodontics, Endodontics, and Dental Hygiene

Gail W. DePuy (Senior)

Ph.D., Georgia Institute of Technology
Professor of Industrial Engineering

Ahmed Hassan Desoky (Senior)

Ph.D., North Carolina State University
Associate Professor of Computer Engineering and Computer Science

Anne Marie De Zeeuw (Senior)

Ph.D., The University of Texas at Austin
Professor of Music Theory

Jaydev N. Dholakia (Senior)

Ph.D., University, Baroda, India
Associate Professor of Biochemistry and Molecular Biology
Assistant Professor of School of Dentistry

Julia C. Dietrich (Senior)

Ph.D., University of Cincinnati
Professor of English

John M. Dillard (Senior)

Ph.D., State University of New York at Buffalo
Professor of Educational and Counseling Psychology

Christopher P. Doane (Senior)

Ph.D., The Ohio State University
Professor of Music

Mary E. Dogbe (Senior)

Ph.D., The University of Texas at Austin
Assistant Professor of Pan-African Studies

Carrie G. Donald (Senior)

J.D., University of Louisville
Associate Professor of Urban and Public Affairs

Brian L. Dos Santos (Senior)

Ph.D., Case Western Reserve University
Professor of Computer Information Systems
Frazier Family Professor of Computer Information Systems

David J. Doukas (Senior)

M.D., Georgetown University School of Medicine
Professor of Family and Geriatric Medicine

Timothy E. Dowling (Senior)

Ph.D., California Institute of Technology
Associate Professor of Mechanical Engineering

Stanley E. D'Souza (Senior)

Ph.D., University of Melbourne, Australia
Professor of Physiology and Biophysics

David A. Dubofsky

Ph.D., University of Washington
Professor of Finance

Lee A. Dugatkin (Senior)

Ph.D., State University of New York at Binghamton
Professor of Biology

Thaddeus Dumas (Senior)

Ed.D., University of San Francisco
Professor of Leadership, Foundations, and Human Resource Education

Donald B. DuPre (Senior)

Ph.D., Princeton University
Professor of Chemistry

Perri Kaye Eason (Senior)

Ph.D., University of California, Davis
Associate Professor of Biology

John W. Eaton (Senior)

Ph.D., University of Michigan
Professor of Medicine in Hematology and Oncology
Professor of Pharmacology and Toxicology

Mitch Eckert (Senior)

M.F.A., Ohio University
Associate Professor of Fine Arts

Stephen Edward Edgell (Senior)

Ph.D., Indiana University
Professor of Psychological and Brain Sciences

Terry D. Edwards (Senior)

J.D., University of Louisville
Associate Professor of Justice Administration

Nejat Egilmez (Senior)

Ph.D., State University of New York at Buffalo
Assistant Professor of Microbiology and Immunology

Christine T. Ehrick (Member)

Ph.D., University of California, Los Angeles
Associate Professor of History

William Dennis Ehringer (Senior)

Ph.D., Indiana University
Associate Professor of Physiology and Biophysics

Steven R. Ellis (Senior)

Ph.D., University of Iowa
Professor of Biochemistry and Molecular Biology

Adel S. Elmaghraby (Senior)

Ph.D., University of Wisconsin
Professor of Computer Engineering and Computer Science

Rifaat S. El-Mallakh (Senior)

M.D., University of Illinois
Associate Professor of Psychiatry and Behavioral Sciences

Paul N. Epstein (Senior)

Ph.D., Baylor College of Medicine
Professor of Pediatrics
Professor of Pharmacology and Toxicology

Edward A. Essock (Senior)

Ph.D., Brown University
Professor of Psychological and Brain Sciences
Professor of Ophthalmology and Visual Sciences

Robert J. Esterhay, Jr. (Senior)

M.D., Case Western Reserve University
Associate Professor of Health Information Sciences

Gerald W. Evans (Senior)

Ph.D., Purdue University
Professor of Industrial Engineering

Melissa Evans-Andris (Senior)

Ph.D., Indiana University
Associate Professor of Sociology

Paul W. Ewald (Senior)

Ph.D., University of Washington
Professor of Biology

Archie W. Faircloth (Senior)

D.B.A., University of Kentucky
Associate Professor of Accountancy

Jeff C. Falcone (Senior)

Ph.D., Indiana University
Associate Professor of Physiology and Biophysics

Teresa Whei-Mei Fan (Senior)

Ph.D., University of California, Davis
Associate Professor of Chemistry Associate Professor of Pharmacology and Toxicology

Aly A. Farag (Senior)

Ph.D., Purdue University
Professor of Electrical and Computer Engineering
Associate in the Center for Applied Microcirculatory Research

Allan George Farman (Senior)

B.D.S., University of Birmingham, England
Ph.D., University of Stellenbosch, South Africa
Professor of Biological and Biophysical Sciences
Professor of Surgical and Hospital Dentistry
Associate in Anatomical Sciences and Neurobiology

Jasmine Farrier (Member)

Ph.D., The University of Texas at Austin
Assistant Professor of Political Science

Anna Catharina Faul (Senior)

D.Litt.Et. Phill.Socialis Scientiae, Rand Afrikaans University
Associate Professor of Social Work

Richard A. Fee (Senior)

Ph.D., University of Maryland
Professor of Health Promotion, Physical Education and Sport Studies

Pamela W. Feldhoff (Senior)

Ph.D., Florida State University
Associate Professor of Biochemistry and Molecular Biology
Associate Professor of Pediatrics

Richard C. Feldhoff (Senior)

Ph.D., Florida State University
Professor of Biochemistry and Molecular Biology

Ronald Fell (Senior)

Ph.D., Iowa State University
Professor of Biology
Associate in Physiology and Biophysics

Robert D. Felner (Senior)

Ph.D., University of Rochester
Professor of Teaching and Learning

Gabino Rafael Fernandez-Botran (Senior)

Ph.D., The University of Kansas
Associate Professor of Pathology
Associate Professor of Microbiology and Immunology

John P. Ferrà (Senior)

Ph.D., University of Illinois
Professor of Communication

James O. Fiet (Senior)

Ph.D., Texas A&M University
Professor of Entrepreneurship
Professor of Management
Brown-Forman Chair in Entrepreneurship

F. John Firriolo (Senior)

D.D.S., University of Maryland
Professor of Oral Medicine and Oral Diagnosis

John T. Fleming (Senior)

Ph.D., University of Georgia
Associate Professor of Physiology and Biophysics
Associate in Center for Applied Microcirculatory Research

Catherine Fosl (Senior)

Ph.D., Emory University
Associate Professor of Communications
Associate Professor of Women's and Gender Studies

J. Price Foster (Senior)

Ph.D., Florida State University
Professor of Justice Administration

Michael R. Fowler (Senior)

J.D., Harvard University
Associate Professor of Political Science

Peter W. France (Senior)

Ph.D., Wayne State University
Professor of Physics

Linda H. Freeman (Senior)

D.N.S., Indiana University
Professor of Nursing

Mark French (Senior)

Ph.D., University of Iowa
Professor of Civil and Environmental Engineering

Andy Frey (Senior)

Ph.D., University of Denver
Associate Professor of Social Work

Hichem Frigui (Senior)

Ph.D., University of Missouri-Columbia
Assistant Professor of Computer Engineering and Computer Science

Rinda Frye (Senior)

Ph.D., University of Oregon
Associate Professor of Theatre Arts

Christopher B. Fulton (Senior)

Ph.D., Columbia University
Associate Professor of Fine Arts

Allen Furr (Senior)

Ph.D., Louisiana State University
Associate Professor of Sociology

Allan W. Futrell (Senior)

Ph.D., Bowling Green State University
Associate Professor of Communication

Patricia Gagnè (Senior)

Ph.D., The Ohio State University
Associate Professor of Sociology

Susan Galandiuk (Senior)

M.D., Universitaet Wuerzburg Medical School
Professor of Surgery
Associate in Physiology and Biophysics

Richard N. Garrison (Senior)

M.D., Emory University
Professor of Surgery

Thomas E. Geoghegan (Senior)

Ph.D., Hershey College of Medicine
Associate Professor of Biochemistry and Molecular Biology
Associate Professor of School of Dentistry

Richard Germain (Senior)

Ph.D., Michigan State University
Chair in Supply Chain Management, Marketing
Professor of Marketing
Associate in Industrial Engineering

Lawrence Gettleman (Senior)

D.M.D., Harvard University
M.S.D., St. Louis University
Professor of Biological and Biophysical Sciences
Associate in Chemical Engineering

Linda Maria Gigante (Senior)

Ph.D., University of North Carolina
Associate Professor of Fine Arts

John I. Gilderbloom (Senior)

Ph.D., University of California, Santa Barbara
Professor of Urban and Public Affairs

Ryan Gill (Senior)

Ph.D., The University of Texas at Dallas
Assistant Professor of Mathematics

Stephan F. Gohmann (Senior)

Ph.D., North Carolina State University
Professor of Economics

Zhanna Goldentul (Member)

U.S.A.A., Moscow Theatrical Art College
Costume Designer for Theatre Arts

Seana Golder (Senior)

Ph.D., University of Washington
Assistant Professor of Social Work

Alan Golding (Senior)

Ph.D., University of Chicago
Professor of English

L. Jane Goldsmith (Senior)

Ph.D., Case Western Reserve University
Associate Professor of Family and Community
Medicine
Associate Professor of Health Information
Sciences

Richard Goldstein (Senior)

Ph.D., Vanderbilt University
M.D. Thomas Jefferson University
Professor of Surgery

Lida G. Gordon (Senior)

M.F.A., Indiana University
Professor of Fine Arts

David Gozal (Senior)

M.D., Hebrew University of Jerusalem
Professor of Pediatrics
Professor of Pharmacology and Toxicology

Evelyne Gozal (Senior)

Ph.D., University of Southern California
Associate Professor of Pediatrics
Associate Professor of Pharmacology and
Toxicology

Donn Everette Graham (Senior)

M.A.T., Colorado State University
Professor of Voice

James E. Graham (Senior)

Ph.D., Indiana University
Assistant Professor of Microbiology and
Immunology

James H. Graham (Senior)

Ph.D., Purdue University
Professor of Computer Engineering and
Computer Science
Henry Vogt Chair of Computer Science and
Engineering

Craig A. Grapperhaus (Senior)

Ph.D., Texas A&M University
Associate Professor of Chemistry

John P. Greene (Member)

Ph.D., University of Wisconsin- Madison
Professor of Classical and Modern Languages

Robert M. Greene (Senior)

Ph.D., University of Virginia
Professor of Biological and Biophysical Sciences
Associate in Pediatrics

Henry Greenwell (Senior)

D.M.D., J.D., University of Louisville
Professor of Periodontics, Endodontics and
Dental Hygiene

T. Christopher Greenwell (Member)

Ph.D., The Ohio State University
Associate Professor of Health Promotion,
Physical Education and Sport Studies

Gary Gregg (Senior)

Ph.D., Miami University
Director of McConnell Center for Political
Leadership
Mitch McConnell Chair in Leadership

Ronald G. Gregg (Senior)

Ph.D., University of Queensland, Australia
Professor of Biochemistry and Molecular Biology
Professor of Ophthalmology and Visual Sciences

Susan M. Griffin (Senior)

Ph.D., University of Chicago
Professor of English

Paul Griner (Senior)

M.A., Syracuse University
Associate Professor of English

Elizabeth L. Grossi (Senior)

Ph.D., Indiana University of Pennsylvania
Associate Professor of Justice Administration

James T. Grubola (Senior)

M.F.A., Indiana University
Professor of Fine Arts

Jeff Guan (Senior)

Ph.D., University of Louisville
Associate Professor of Computer Information Systems

Mahesh C. Gupta (Senior)

Ph.D., University of Louisville
Professor of Management

Ramesh C. Gupta (Senior)

Ph.D., University of Roorkee, India
Professor of Pharmacology and Toxicology

Jafar Hadizadeh (Senior)

Ph.D., Imperial College
Professor of Geography and Geosciences

Karen C. Hadley (Member)

Ph.D., University of California, Berkeley
Associate Professor of English

D. Joseph Hagerty (Senior)

Ph.D., University of Illinois
Professor of Civil and Environmental Engineering

Theo Hagg (Senior)

M.D., Ph.D., University of California, San Diego
Professor and Endowed Chair of Neurological Surgery
Professor of Pharmacology and Toxicology

Dennis R. Hall (Senior)

Ph.D., The Ohio State University
Professor of English

Edward C. Halperin (Senior)

M.D., Yale University
Professor of Radiation Oncology
Professor of Pediatrics
Adjunct Professor of History
Ford Foundation Professor in Medical Education

Gerald B. Hammond (Senior)

Ph.D., Organic Chemistry University of Birmingham (England)
Professor of Chemistry

Carol Hanchette (Member)

Ph.D., University of North Carolina
Assistant Professor of Geography and Geosciences

Terence M. Hancock (Senior)

Ph.D., Indiana University
Associate Professor of Management

Barbara L. Hanger (Senior)

M.F.A., Ohio University
Associate Professor of Fine Arts

Patrick H. Hardesty (Senior)

Ph.D., Northwestern University
Associate Professor of Educational and Counseling Psychology

Susan Harkema (Member)

Ph.D., Michigan State University
Associate Professor of Neurological Surgery

Patrick D. Harris (Senior)

Ph.D., Northwestern University
Professor of Physiology and Biophysics
Professor of Surgery
Professor the Center for Applied Microcirculatory Research

Roswell A. Harris (Senior)

Ph.D., Vanderbilt University
Professor of Civil and Environmental Engineering

Benjamin Harrison (Senior)

Ph.D., University of California, Los Angeles
Professor of History

Joy Hart (Senior)

Ph.D., University of Kentucky
Professor of Communication

Cindy Harnett (Member)

Ph.D., Cornell University
Assistant Professor of Electrical and Computer Engineering

Bruce Haskell (Senior)

Ph.D., D.M.D., University of Pittsburgh
Clinical Professor of Orthodontics

Riffat Hassan (Senior)

Ph.D., University of Durham, England
Professor of Humanities

Kent E. Hatteberg (Senior)

D.M.A., The University of Iowa
Professor of Music Education

Ray Haynes (Member)

Ph.D., University of Louisville
Assistant Professor of Leadership, Foundations and Human Resource Education

Zijiang He (Senior)

Ph.D., University of Alabama-Birmingham
Professor of Psychology

David W. Hein (Senior)

Ph.D., University of Michigan
Professor of Pharmacology and Toxicology
Peter K. Knoefel Professor of Pharmacology and Toxicology

Dawn Heinecken (Senior)
Ph.D., Bowling Green State University
 Associate Professor of Women's Studies

Freddy J. Hendler (Senior)
M.D., State University of New York at Brooklyn
Ph.D., University of Chicago
 Professor of Medicine
 Professor of Biochemistry and Molecular Biology

Suzette A. Henke (Senior)
Ph.D., Stanford University
 Thurston B. Morton, Sr. Professor of English

Victor K. Henner (Senior)
Ph.D., Novosibirsk Institute of Mathematics and
Irkutsk State University
 Professor of Physics

Carla P. Hermann (Senior)
Ph.D., University of Kentucky
 Associate Professor of Nursing

Michal Hetman (Senior)
Ph.D., Polish Academy University-Warsaw
 Assistant Professor of Neurological Surgery

George E. Higgins (Member)
Ph.D., University of Pennsylvania
 Assistant Professor of Criminal Justice

Margaret Hill (Senior)
D.M.D., University of Louisville
 Associate Professor of Periodontics,
 Endodontics, and Dental Hygiene

Vicki Hines-Martin (Senior)
Ph.D., University of Kentucky
 Associate Professor of Nursing

Amy S. Hirschy (Member)
Ph.D., Peabody College at Vanderbilt University
 Assistant Professor of Educational and
 Counseling Psychology

William P. Hnat (Senior)
Ph.D., University of Akron
 Professor of Mechanical Engineering
 Associate in Orthopedic Surgery

Bruce M. Horner (Senior)
Ph.D., University of Pittsburgh
 Professor of English

Carlton A. Hornung (Senior)
Ph.D., Syracuse University
 Professor of Medicine Professor of
 Epidemiology: Clinical Investigation Sciences
 Professor of Health Information Sciences

Barry R. Horowitz (Senior)
Ph.D., Polytechnic Institute of Brooklyn
 Professor of Electrical and Computer
 Engineering

William C. Hoston (Member)
Ph.D., Massachusetts Institute of Technology-
Cambridge)
 Assistant Professor of Physics

Michael F. Hottos (Senior)
M.F.A., Brandeis University
 Professor of Theatre Arts

David A. Howarth (Senior)
Ph.D., The Ohio State University
 Professor of Geography and Geosciences

Shiping Hua (Senior)
Ph.D., University of Kansas
 Associate Professor of Political Science

Ruth Huber (Senior)
Ph.D., University of Washington
 Professor of Social Work

Charles L. Hubscher (Senior)
Ph.D., Florida State University
 Assistant Professor of Anatomical Sciences and
 Neurobiology

J. Blaine Hudson (Senior)
Ph.D., University of Kentucky
 Professor of Pan-African Studies

Benjamin G. Hufbauer (Senior)
Ph.D., University of California, Santa Barbara
 Associate Professor of Fine Arts

Thomas W. Hughes (Senior)
Ph.D., University of Cincinnati
 Associate Professor of Justice Administration

Mary A. Hums (Senior)
Ph.D., The Ohio State University
 Professor of Health Promotion, Physical
 Education and Sport Studies

Lawrence A. Hunt (Senior)
Ph.D., Harvard University
 Associate Professor of Microbiology and
 Immunology

Harrell E. Hurst (Senior)
Ph.D., University of Kentucky
 Professor of Pharmacology and Toxicology

Gregory S. Hutcheson (Member)
Ph.D., Harvard University
Associate Professor of Classical and Modern Languages

Marianne Hopkins Hutti (Senior)
D.N.S., Indiana University
Professor of Nursing

Suzanne T. Ildstad (Senior)
M.D., Mayo Medical School (Rochester)
Professor of Surgery

Ibrahim N. Imam (Member)
Ph.D., Auburn University
Associate Professor of Computer Engineering and Computer Science

David L. Imbroscio (Senior)
Ph.D., University of Maryland, College Park
Professor of Political Science

Tamer Inanc (Member)
Ph.D., The Pennsylvania State University
Assistant Professor of Electrical and Computer Engineering

Vasudeva Iyer (Senior)
M.D., Medical College, Trivandrum, India
D.M., Medical College, Vellore, South India
Clinical Professor of Neurology
Associate in Anatomical Sciences and Neurobiology

Alexei I. Izyumov (Senior)
Ph.D., Academy of Sciences, USSR
Associate Professor of Economics

Robert R. Jacobs (Senior)
Ph.D., University of North Carolina-Chapel Hill
Professor of Environmental and Occupational Health

C. S. Jayanthi (Senior)
Ph.D., Indian Institute of Technology, Delhi
Professor of Physics

George Robert John (Senior)
M.D., Wright State University
Assistant Clinical Professor of Ophthalmology and Visual Sciences

Baxter Edwin Johnson (Senior)
D.D.S., University of Pittsburgh
Professor of Orthodontic, Pediatric and Geriatric Dentistry

Hazel J. Johnson (Senior)
Ph.D., University of Florida
Professor of Finance

John R. Johnson (Senior)
M.D., University of Louisville
Professor of Orthopedic Surgery

John R. Jones, Jr. (Senior)
M.M., The Ohio State University
Associate Professor

Ricky L. Jones (Senior)
Ph.D., University of Kentucky
Associate Professor of Pan-African Studies

Steven P. Jones (Senior)
Ph.D., LSU Health Sciences Center-Shreveport
Assistant Professor of Cardiology (School of Medicine)
Associate Professor of Pan-African Studies

Irving G. Joshua (Senior)
Ph.D., The Pennsylvania State University
Professor of Physiology and Biophysics
Associate in Center for Applied Microcirculatory Research

Debra Journet (Senior)
Ph.D., McGill University, Canada
Professor of English

Marcia M. Jumblatt (Senior)
Ph.D., University of Louisville
Professor of Ophthalmology and Visual Sciences
Associate in Anatomical Sciences and Neurobiology

Enjoo Jung (Member)
Ed.D., Illinois State University
Assistant Professor of Teaching and Learning

Sara Kajdar (Member)
Ph.D., University of Virginia
Assistant Professor of Teaching and Learning

Tracy E. K'Meyer (Senior)
Ph.D., University of North Carolina
Associate Professor of History

Shamar S. Kakar (Senior)
Ph.D., National Dairy Research Institute
Professor of Medicine
Associate Professor of Biochemistry and Molecular Biology
Associate Professor of Physiology and Biophysics

Kyung A. Kang (Senior)
Ph.D., University of California, Davis
Professor of Chemical Engineering

Y. James Kang (Senior)
Ph.D., Iowa State University
 Professor of Medicine
 Associate Professor of Pharmacology and Toxicology
 Associate in Physiology and Biophysics
 Associate in Biochemistry and Molecular Biology

Mehmed M. Kantardzic (Senior)
Ph.D., University of Sarajevo, Bosnia
 Professor of Computer Engineering and Computer Science

Henry J. Kaplan (Senior)
M.D., Cornell Medical School of Cornell University
 Evans Professor of Ophthalmology and Visual Sciences

Julia N. Karcher (Member)
Ph.D., Florida State University
 Associate Professor of Accountancy

Karen Karp (Senior)
Ed.D., Hofstra University
 Professor of Teaching and Learning

Arnold J. Karpoff (Senior)
Ph.D., University of Oregon
 Associate Professor of Biology

Robert B. Kebric (Senior)
Ph.D., State University of New York at Binghamton
 Professor of History

Brenda E. Kee (Senior)
D.M.A., University of Michigan
 Professor of Piano

John L. Keedy (Senior)
Ed.D., University of Tennessee
 Professor of Leadership, Foundations and Human Resource Education

Susan E. Kelly (Senior)
Ph.D., University of California, San Francisco
 Associate Professor of Sociology

Bruce H. Kemelgor (Senior)
Ph.D., University of Illinois at Urbana - Champaign
 Associate Professor of Management

Robert S. Keynton (Senior)
Ph.D., The University of Akron
 Professor of Mechanical Engineering

Andre E. Kezdy (Senior)
Ph.D., University of Illinois at Urbana - Champaign
 Professor of Mathematics

Zafrulla Khan (Senior)
D.D.S., Bangalore University
 Professor of Diagnostic Sciences, Prosthodontics, and Restorative Dentistry
 Associate in Medicine

Ermalynn Kiehl (Member)
Ph.D., University of Florida
 Associate Professor of Nursing

Denis Kinane (Senior)
B.D.S., University of Edinburgh
 Professor of Microbiology and Immunology

La Creis Renee Kidd (Member)
Ph.D., Massachusetts Institute of Technology
 Assistant Professor of Pharmacology and Toxicology

John F. Kielkopf (Senior)
Ph.D., The Johns Hopkins University
 Professor of Physics

Jon-Lark Kim (Member)
Ph.D., University of Illinois-Chicago
 Assistant Professor of Mathematics

Robert H. Kimball (Senior)
Ph.D., Yale University
 Associate Professor of Philosophy

Jon B. Klein (Senior)
M.D., The University of Texas Medical Branch
Ph.D., University of Louisville
 Professor of Medicine
 Professor of Biology

Audrey D. Kline (Senior)
Ph.D., Auburn University
 Associate Professor of Economics

Carolyn Muriel Klinge (Senior)
Ph.D., The Pennsylvania State University
 Professor of Biochemistry and Molecular Biology

Martin Günter Klotz (Senior)
Ph.D., University of Jena, Germany
 Associate Professor of Biology

Thomas Knudsen (Senior)
Ph.D., Thomas Jefferson University, Philadelphia, PA
 Professor of Biochemistry and Molecular Biology
 Professor of Molecular, Cellular & Craniofacial Biology

Steven C. Koenig (Member)

Ph.D., The University of Texas at Austin
Associate Professor of Surgery

Herbert Koerselman (Senior)

D.M.A., University of Iowa
Professor of Trumpet

Cheryl A. Kolander (Senior)

H.S.D., Indiana University
Professor of Health Promotion, Physical
Education and Sport Studies

Avery H. Kolers (Senior)

Ph.D., University of Arizona
Associate Professor of Philosophy

Karen Kopelson (Senior)

Ph.D., Purdue University
Assistant Professor of English

Michelle M. Kosiewicz (Senior)

Ph.D., Binghamton University
Associate Professor of Microbiology and
Immunology

Natalie Kosine (Member)

Ph.D., Binghamton University
Assistant Professor of Microbiology and
Immunology

Steven G. Koven (Senior)

Ph.D., University of Florida
Professor of Urban and Public Affairs

Pawel M. Kozlowski (Senior)

Ph.D., University of Arizona
Associate Professor of Chemistry

Robin F. Krimm (Senior)

Ph.D., University of Virginia
Associate Professor of Anatomical Sciences and
Neurobiology

Ewa Kubicka (Senior)

Ph.D., Western Michigan University
Professor of Mathematics

Grzegorz Kubicki (Senior)

Ph.D., Western Michigan University
Professor of Mathematics

Anup Kumar (Senior)

Ph.D., North Carolina State University
Professor of Computer Engineering and
Computer Science

Nobuyuki Kuwabara (Senior)

Ph.D., Sophia University, Tokyo, Japan
Associate Professor of Anatomical Sciences and
Neurobiology

Frank E. Kuzmits (Senior)

Ph.D., Georgia State University
Professor of Management

Yousef Abu Kwaik (Senior)

Ph.D., State University of New York at Buffalo
Professor of Microbiology & Immunology

Diane W. Kyle (Senior)

Ed.D., University of Virginia
Professor of Teaching and Learning

Raymond W. LaForge (Senior)

D.B.A., University of Tennessee
Professor of Marketing
Brown Forman Professor of Marketing

George A. Lager (Senior)

Ph.D., University of British Columbia
Professor of Geography and Geosciences

H. Wayne Lambert (Member)

Ph.D., University of North Carolina
Assistant Professor of Anatomical Sciences and
Neurobiology

Zi-Jian Lan (Member)

Ph.D., University of Virginia
Assistant Professor of Dentistry

Andrew N. Lane (Senior)

Ph.D., University College, London
Professor of Medicine in Hematology and
Oncology
James Graham Brown Cancer Chair of Structural
Biology
Professor of Biochemistry and Molecular Biology

Ann E. Larson (Senior)

*Ph.D., University of Illinois at Urbana-
Champaign*
Associate Professor of Teaching and Learning

Lee Larson (Senior)

Ph.D., Michigan State University
Professor of Mathematics

Susan G. Lasky (Senior)

Ph.D., University of Toronto
Assistant Professor of Leadership, Foundations,
and Human Resource Education

Herbert A. Lassiter (Senior)
M.D., Medical College of Virginia
 Gratis Professor of Pediatrics and Obstetrics and
 Gynecology
 Gratis Associate Professor of Biochemistry and
 Molecular Biology

Walden L. S. Laukhuf (Senior)
Ph.D., University of Louisville
 Professor of Chemical Engineering

Thomas R. Lawson (Senior)
Ph.D., University of Washington
 Professor of Social Work

Eleanor D. Lederer (Senior)
M.D., Baylor College of Medicine
 Professor of Medicine in Physiology and
 Biophysics

Menq-Jer Lee (Senior)
Ph.D., McGill University (Montreal)
 Assistant Professor of Microbiology and
 Immunology

Kiseop Lee (Member)
Ph.D., Purdue University
 Assistant Professor of Mathematics

Herman R. Leep (Senior)
Ph.D., Purdue University
 Professor of Industrial Engineering

Greg Leichty (Senior)
Ph.D., University of Kentucky
 Professor of Communication

Alan C. Leidner (Senior)
Ph.D., University of Virginia
 Professor of Classical and Modern Languages

Patricia K. Leitsch (Senior)
Ph.D., Southern Illinois University
 Assistant Professor of Leadership, Foundations
 and Human Resource Education

Clara Leuthart (Member)
Ph.D., University of Louisville
 Associate Professor of Geography and
 Geosciences

Scott C. Levi (Member)
Ph.D., University of Wisconsin-Madison
 Assistant Professor of History

Alan S. Levitan (Senior)
D.B.A., University of Kentucky
 Professor of Accountancy

Barbara B. Lewis (Senior)
J.D., University of Louisville
M.L. & T., Marshall Wythe School of Law
 Professor of Law

Bingtuan Li (Senior)
Ph.D., Arizona State University
 Associate Professor of Mathematics

Yong Li (Senior)
Ph.D., Shanghai Institute of Biochemistry-China
 Assistant Professor of Biochemistry and
 Molecular Biology

John H. Lilly (Senior)
Ph.D., Rensselaer Polytechnic Institute
 Professor of Electrical and Computer
 Engineering

Erika T. Lin (Member)
Ph.D., University of Pennsylvania
 Assistant Professor of English

Amy Shearer Lingo (Member)
Ed.D., University of Kentucky
 Assisant Professor of Teaching and Learning

Irene Litvan (Senior)
M.D., Universidad de la Republica-Uruguay
 Professor of Neurology and Anatomical Sciences
 and Neurobiology

Kenneth Litwak (Senior)
*D.V.M., Ph.D., Bowman Gray School of
 Medicine, Winston-Salem*
 Assistant Professor of Surgery

Shudun Liu (Senior)
Ph.D., Rutgers University
 Associate Professor of Physics

Xiangqian Liu (Senior)
Ph.D., University of Minnesota
 Assistant Professor of Electrical and Computer
 Engineering

M. Cynthia Logsdon (Senior)
D.N.S., Indiana University
 Professor of Nursing

David Lominadze (Senior)
*Ph.D., Tbilisi State University-Republic of
 Georgia*
 Assistant Professor of Physiology and
 Biophysics

Subhash C. Lonial (Senior)
Ph.D., University of Louisville
 Professor of Marketing

Min-Zhan Lu (Senior)

Ph.D., University of Pittsburgh
Professor of English

Robert F. Lundy (Senior)

Ph.D., Florida State University
Assistant Professor of Anatomical Sciences and
Neurobiology

Frederick A. Luzzio (Senior)

Ph.D., Tufts University
Associate Professor of Chemistry

Thomas C. Mackey (Senior)

Ph.D., Rice University
Professor of History

David S. Magnuson (Senior)

Ph.D., University of British Columbia
Associate Professor of Anatomical Sciences and
Neurobiology
Associate Professor of Neurological Surgery

Daniel F. Mahony (Senior)

Ph.D., The Ohio State University
Professor of Health Promotion, Physical
Education and Sport Studies

Rosalie O'Dell Mainous (Senior)

Ph.D., University of Kentucky
Associate Professor of Nursing

Estella C. Majozo (Senior)

Ph.D., University of Iowa
Professor of English

Mary Makris (Senior)

Ph.D., Rutgers University
Associate Professor of Classical and Modern
Languages

Claudio Maldonado (Senior)

Ph.D., University of Louisville
Associate Professor of Physiology and
Biophysics (Research)
Associate in Surgery

Melvin J. Maron (Senior)

Ph.D., Polytechnic Institute of Brooklyn
Professor of Computer Engineering and
Computer Science

Gary Scott Marshall (Senior)

M.D., Vanderbilt University
Professor of Pediatrics

Michael Martin (Senior)

Ph.D., University of Alabama at Birmingham
Assistant Professor of Periodontics, Endodontics
and Dental Hygiene
Assistant Professor of Microbiology &
Immunology

Nancy C. Martin (Senior)

Ph.D., Harvard University
Professor of Biochemistry and Molecular Biology
Preston Pope Joyes Professor of Biochemical
Research

Robert C.G. Martin (Member)

M.D., University of Louisville
Associate Professor of Surgery

Manuel Martinez-Maldonado (Senior)

M.D., Temple Medical School
Professor of Medicine, Nephrology
Professor of Pharmacology and Toxicology
Associate in Department of English

Dismas A. Masolo (Senior)

Ph.D., Gregorian University, Rome
Professor of Philosophy
Justice Bier Distinguished Professor of
Humanities, 1997 - 2004

Scott Massey (Member)

M.F.A., Arizona State University
Assistant Professor of Fine Arts

Benjamin T. Mast (Member)

Ph.D., Wayne State University
Associate Professor of Psychological & Brain
Sciences

M. Gay Masters (Member)

Ph.D., University of Buffalo
Assistant Professor of Surgery

Susan M. Matarese (Senior)

Ph.D., University of Minnesota
Professor of Political Science

Carol Mattingly (Senior)

Ph.D., University of Louisville
Professor of English

Muriel C. Maurer (Senior)

Ph.D., University of Virginia
Associate Professor of Chemistry

Gabrielle Mayer (Member)

M.F.A., Bowling Green University
Assistant Professor of Fine Arts

James Robert McCabe (Senior)

Ph.D., University of Missouri
Associate Professor of Finance

Maureen A. McCall (Senior)

Ph.D., State University of New York at Albany
Professor of Psychological and Brain Sciences
Professor of Ophthalmology and Visual Sciences

Justin A. McCarthy (Senior)

Ph.D., University of California, Los Angeles
Professor of History

Craig J. McClain (Senior)

M.D., University of Tennessee
Professor of Medicine in Gastroenterology
University
Distinguished Chair in Hematology

Cynthia A. McCurren (Senior)

Ph.D., University of Kentucky
Associate Professor of Nursing Lawrence

Maggie B. McGatha (Member)

Ph.D., Vanderbilt University
Assistant Professor of Teaching and Learning

Charles Patrick McGraw (Senior)

Ph.D., Texas A&M University
Professor of Neurological Surgery
Professor of Anatomical Sciences and
Neurobiology

William G. McGregor (Senior)

M.D., University of Michigan
Professor of Pharmacology and Toxicology
Professor of Medicine

W. Paul McKinney (Senior)

M.D., The University of Texas
V.V. Cooke Professor of Public Health and
Information Sciences

Kenneth R. McLeish (Senior)

M.D., Indiana University
Professor of Medicine in Nephrology
Professor of Biochemistry and Molecular Biology
Associate in Microbiology and Immunology

John E. McLeod (Senior)

Ph.D., University of Toronto
Associate Professor of History

Kelly M. McMasters (Senior)

M.D., UMDNJ-Robert Wood Johnson Medical School
Professor of Surgical Oncology
Samuel D. and Lolita S. Weakley Endowed Chair
in Surgical Oncology

Shamus P. McNamara (Senior)

Ph.D., University of Wisconsin-Madison
Assistant Professor of Electrical and Computer
Engineering

Manual F. Medina (Senior)

Ph.D., University of Kansas
Associate Professor of Classical and Modern
Languages

Suzanne Meeks (Senior)

Ph.D., Catholic University of America
Professor of Psychological and Brain Sciences

Carolyn B. Mervis (Senior)

Ph.D., Cornell University
Professor of Psychological and Brain Sciences
Associate in Pediatrics

Robert G. Meyer (Senior)

Ph.D., Michigan State University
Professor of Psychological and Brain Sciences

Alica Miller (Member)

Ph.D., Michigan State University
Assistant Professor of Mathematics

Frederick N. Miller (Senior)

Ph.D., University of Cincinnati
Professor of Physiology and Biophysics
Associate in Pharmacology and Toxicology

Richard D. Miller (Senior)

Ph.D., The Pennsylvania State University
Associate Professor of Microbiology and
Immunology

Stephen K. Miller (Senior)

Ph.D., Michigan State University
Associate Professor of Leadership, Foundations
and Human Resource Education

Robert A. Mitchell (Senior)

Ph.D., Albany Medical College
Assistant Professor of Biochemistry and
Molecular Biology
Assistant Professor of Medicine in Hematology
and Oncology

Thomas C. Mitchell (Senior)

Ph.D., University of Wisconsin-Madison
Associate Professor of Microbiology and
Immunology

Jafar P. Mohsen (Senior)

Ph.D., University of Cincinnati
Professor of Civil and Environmental
Engineering

Dennis Molfese (Senior)

Ph.D., The Pennsylvania State University
Professor of Molecular, Cellular and Cranofacial
Biology
Associate in Psychological and Brain Sciences
Associate in Pediatrics

Victoria J. Molfese (Senior)

Ph.D., The Pennsylvania State University
Professor of Teaching and Learning
Ashland Incorporated Endowed Chair in
Teaching and Learning

Sharon Bortner Moore (Senior)

Ed.D., University of Louisville
Associate Professor of Teaching and Learning

Sharon E. Moore (Senior)

Ph.D., University of Pittsburgh
Professor of Social Work

Anita M. Moorman (Senior)

J.D., Southern Methodist University
Associate Professor of Health Promotion,
Physical Education, and Sport Studies

William J. Morison (Senior)

Ph.D., Vanderbilt University
Associate Professor of History

John C. Morrison (Senior)

Ph.D., The Johns Hopkins University
Associate Professor of Physics

George D. Mower (Senior)

Ph.D., Brown University
Professor of Anatomical Sciences and
Neurobiology

R. Charles Moyer (Senior)

Ph.D., University of Pittsburgh
Professor of Economics

Susan Muldoon (Senior)

Ph.D., University of Pittsburgh
Assistant Professor of Epidemiology: Clinical
Investigation Sciences

Karen A. Mullen (Senior)

Ph.D., University of Iowa
Associate Professor of English

Shin Murakami (Senior)

Ph.D., Kyoto University-Japan
Assistant Professor of Biochemistry and
Molecular Biology

Stanley A. Murrell (Senior)

Ph.D., University of Kansas
Professor of Psychological and Brain Sciences

Robert C. Myers (Senior)

M.S., University of Richmond
Associate Professor of Management

Steven Richard Myers (Senior)

Ph.D., University of Kentucky
Associate Professor of Pharmacology and
Toxicology

John F. Naber (Senior)

Ph.D., Virginia Tech University
Associate Professor of Electrical and Computer
Engineering

Sena Kathryn Naslund (Senior)

Ph.D., University of Iowa
Professor of English

Olf Nasraoui (Senior)

Ph.D., University of Missouri-Columbia
Associate Professor of Computer Science and
Computer Engineering

Cynthia Negrey (Senior)

Ph.D., Michigan State University
Associate Professor of Sociology

John P. Nelson (Senior)

Ph.D., University of Kentucky
Professor of Economics

Donald E. Nerland (Senior)

Ph.D., University of Kansas
Professor of Pharmacology and Toxicology

G. Stephen Nettleton (Senior)

Ph.D., University of Minnesota
Professor of Anatomical Sciences and
Neurobiology

Tamara L. Newton (Senior)

Ph.D., Rutgers University
Associate Professor of Psychological and Brain
Sciences

Raphael Chijioke Njoku (Member)

Ph.D., Dalhousie University, Halifax, NS, Canada
Assistant Professor of History
Assistant Professor of Pan African Studies

Mark E. Noble (Senior)

Ph.D., Indiana University
Professor of Chemistry

William I. Norton, Jr. (Member)

Ph.D., University of South Carolina
Assistant Professor of Management in
Entrepreneurship

Frank Nuessel (Senior)

Ph.D., University of Illinois at Urbana-Champaign
 Professor of Classical and Modern Languages

Naomi Joyce Oliphant (Senior)

D.M.A., University of Michigan
 Professor of Piano

Jennifer L. Olive (Member)

Ph.D., University of Georgia
 Assistant Professor of Health Promotion, P.E. and Sport Studies

Seow-Chin Ong (Senior)

Ph.D., University of California, Berkeley
 Associate Professor of Music History

Stephen M. Onifer (Senior)

Ph.D., Indiana University School of Medicine
 Assistant Professor of Neurological Surgery
 Assistant Professor of Anatomical Sciences and Neurobiology

David S. Owen (Member)

Ph.D., University of Illinois-Chicago
 Assistant Professor of Philosophy

George R. Pack (Senior)

Ph.D., State University of New York at Buffalo
 Professor of Chemistry

Simon Pack (Member)

Ph.D., The Ohio State University
 Assistant Professor of Health and Sport Sciences

John R. Pani (Senior)

Ph.D., University of Illinois at Urbana-Champaign
 Associate Professor of Psychological and Brain Sciences

George Pantalos (Senior)

Ph.D., The Ohio State University
 Professor of Surgery, Division of Thoracic and Cardiovascular Surgery

Arthur C. Parola (Senior)

Ph.D., The Pennsylvania State University
 Professor of Civil and Environmental Engineering

John C. Passmore (Senior)

Ph.D., University of North Dakota
 Professor of Physiology and Biophysics
 Associate in Center for Applied Microcirculatory Research

Christopher A. Paterson (Senior)

Ph.D., D.Sc., University of London
 Professor of Ophthalmology and Visual Sciences

Rodger A. Payne (Senior)

Ph.D., University of Maryland
 Professor of Political Science

William D. Pearson (Senior)

Ph.D., Utah State University
 Professor of Biology

William M. Penrod (Member)

Ed.D., University of Louisville
 Assistant Professor of Teaching and Learning

Michael H. Perlin (Senior)

Ph.D., University of Chicago
 Associate Professor of Biology

Julie M. Peteet (Senior)

Ph.D., Wayne State University
 Professor of Anthropology

Joseph Petrosko (Senior)

Ph.D., New Mexico State University
 Professor of Leadership, Foundations and Human Resource Education

Heywood M. Petry (Senior)

Ph.D., Brown University
 Professor of Psychological and Brain Sciences
 Professor of Ophthalmology and Visual Sciences

Wendy Pfeffer (Senior)

Ph.D., University of Toronto
 Professor of Classical and Modern Languages

D. Kay Phillips (Senior)

Ph.D., University of Colorado
 Associate Professor of Pediatrics

William M. Pierce (Senior)

Ph.D., University of Louisville
 Professor of Pharmacology and Toxicology
 Professor of Ophthalmology and Visual Sciences
 Professor of Chemistry

M. Michele Pisano (Senior)

Ph.D., Thomas Jefferson University
 Professor of Molecular, Cellular and Craniofacial Biology
 Professor of Pharmacology and Toxicology

Hiram C. Polk (Senior)

M.D., Harvard Medical School
 Ben A. Reid, Sr. Professor of Surgery

Nancy L. Potter (Senior)

Ph.D., University of Minnesota
Associate Professor of Philosophy

Robert C. Powers (Senior)

Ph.D., University of Massachusetts, Amherst
Professor of Mathematics

Glen Prater, Jr. (Senior)

Ph.D., The Ohio State University
Professor of Mechanical Engineering

Dianna C. Preece (Senior)

D.B.A., University of Kentucky
Professor of Finance

Jill E. Preminger (Senior)

Ph.D., University of Minnesota
Associate Professor of Surgery

Russell A. Prough (Senior)

Ph.D., Oregon State University
Professor of Biochemistry and Molecular Biology
Professor of Oral Health Associate in Surgery

Meng-Sheng Qiu (Senior)

Ph.D., University of Iowa
Professor of Anatomical Sciences and
Neurobiology

Peter M. Quesada (Senior)

Ph.D., University of California, Berkeley
Associate Professor of Mechanical Engineering
Associate in Orthopedic Surgery

Andrew S. Rabin (Member)

Ph.D., University of Chicago
Assistant Professor of English

J. Patrick Rafferty (Senior)

B.A., Bowling Green State University
Associate Professor of Music

Rammohan K. Ragade (Senior)

Ph.D., Indian Institute of Technology
Professor of Computer Engineering and
Computer Science
Associate in Industrial Engineering

Louis E. Raho (Senior)

Ph.D., Florida State University
Associate Professor of Management

Theresa A. Rajack-Talley (Senior)

Ph.D., University of Kentucky
Associate Professor of Pan-African Studies

P. S. Raju (Senior)

*Ph.D., University of Illinois at Urbana -
Champaign*
Professor of Marketing

Patricia A. S. Ralston (Senior)

Ph.D., University of Louisville
Professor of Chemical Engineering

Irma N. Ramos (Member)

*M.D., Nordestana University (Dominican
Republic)*
Assistant Professor of Environmental and
Occupational Health Sciences

Kenneth S. Ramos (Senior)

Ph.D., The University of Texas at Austin
Distinguished Professor and Chairman of
Biochemistry and Molecular Biology

James R. Ramsey (Senior)

Ph.D., University of Kentucky
Professor of Economics
Professor of Urban and Public Affairs

Madhavi J. Rane (Senior)

Ph.D., University of Akron
Assistant Professor of Medicine

C.H. Venkateswara Rao (Senior)

Ph.D., Washington State University
Professor of Obstetrics and Gynecology
Professor of Biochemistry and Molecular Biology

Mariusz Z. Ratajczak (Senior)

*M.D., Ph.D., D.Sci., Center for Clinical Hospital
WAM, Warsaw*
Professor of Internal Medicine
Professor of Microbiology and Immunology

John Russell Ray (Senior)

Ph.D., University of Michigan
Professor of Finance

Richard Redinger (Senior)

M.D., University of Western Ontario
Professor of Medicine Associate
Professor of Biochemistry and Molecular Biology

Grzegorz A. Rempala (Senior)

Ph.D., University of Warsaw
Professor of Mathematics
Professor of Biochemistry and Molecular Biology

Laurie A. Rhodebeck (Senior)

Ph.D., Yale University
Associate Professor of Political Science

John F. Richardson (Senior)

Ph.D., University of Western Ontario
Associate Professor of Chemistry

Vernon C. Rickert, Jr. (Member)

M.S.S.W., Florida State University
Adjunct Assistant Clinical Professor of Family
Therapy

Glynis Ridley (Senior)

Ph.D., University of Oxford
Associate Professor of English

S. Lee Ridner (Member)

Ph.D., University of Kentucky
Assistant Professor of Nursing

Thomas Riedel (Senior)

Ph.D., University of Massachusetts
Professor of Mathematics

Jon Hill Rieger (Senior)

Ph.D., Michigan State University
Professor of Sociology

William R. Rising (Member)

Ph.D., University of Massachusetts
Assistant Professor of Health Information
Sciences

Thomas D. Robbins (Member)

Ph.D., Florida State University
Adjunct Professor of Marriage and Family

Andrew M. Roberts (Senior)

Ph.D., New York Medical College
Associate Professor of Physiology and
Biophysics

Kay Thompson Roberts (Senior)

Ed.D., Indiana University
Professor of Nursing

Karen Robinson (Senior)

D.N.S., Indiana University
Professor of Nursing

Regina Roebuck (Member)

Ph.D., Cornell University
Associate Professor of Classical and Modern
Languages

George C. Rodgers (Senior)

Ph.D., Yale University
M.D., State University of New York
Professor of Pediatrics
Professor of Pharmacology and Toxicology

Fred Roisen (Senior)

Ph.D., Princeton University
Professor of Anatomical Sciences and
Neurobiology
Associate in Neurology

D. Gregg Rokosh (Senior)

Ph.D., University of Saskatchewan
Assistant Professor of Medicine

Robert N. Ronau (Senior)

Ph.D., Kent State University
Professor of Teaching and Learning

Mary Rosner (Senior)

Ph.D., The Ohio State University
Associate Professor of English

Eric C. Rouchka (Member)

D.Sc., Washington University
Assistant Professor of Computer Engineering &
Computer Science

Guillermo W. Rougier (Senior)

Ph.D., Buenos Aires University
Associate Professor of Anatomical Sciences and
Neurobiology

Steven Rouse (Senior)

D.M.A., University of Michigan
Professor of Music Theory and Composition

Peter P. Rowell (Senior)

Ph.D., University of Florida
Professor of Pharmacology and Toxicology

Kathleen M. Rudasill (Member)

Ph.D., University of Virginia
Assistant Professor of Educational and
Counseling Psychology

Carolyn R. Rude-Parkins (Senior)

Ph.D., University of Iowa
Associate Professor of Leadership, Foundations
and Human Resource Education

Susan M. Ryan (Senior)

Ph.D., University of North Carolina
Associate Professor of English

Heather Rypkema (Member)

Ph.D., Harvard University
Assistant Professor of Chemistry

Prasanna Sahoo (Senior)

Ph.D., University of Waterloo
Professor of Mathematics

Paul G. Salmon (Senior)

Ph.D., DePaul University
Associate Professor in Psychological and Brain Sciences
Associate Professor in Psychiatry and Behavioral Sciences

Daya S. Sandhu (Senior)

Ed.D., Mississippi State University
Professor of Educational and Counseling Psychology

Bibhuti K. Sar (Senior)

Ph.D., Virginia Commonwealth University
Associate Professor of Social Work

Marc T. Satterwhite (Senior)

D.M., Indiana University
Professor of Music

H. V. Savitch (Senior)

Ph.D., New York University
Professor of Urban and Public Affairs
Brown and Williamson Distinguished Research Professor

William C. Scarfe (Senior)

B.D.S., The University of Adelaide
Professor of Surgical and Hospital Dentistry

Gina D. Schack (Senior)

Ph.D., University of Connecticut
Professor of Teaching and Learning

James P. Scheetz (Senior)

Ph.D., University of Iowa
Associate Professor of Diagnosis and General Dentistry

Ryan Schroeder (Member)

Ph.D., Bowling Green State University
Assistant Professor of Sociology

David J. Schultz (Senior)

Ph.D., Pennsylvania State University
Associate Professor of Biology

Avital Schurr (Senior)

Ph.D., Ben Gurion University of the Negev
Professor of Anesthesiology
Associate in Pharmacology and Toxicology

Dale A. Schuschke (Senior)

Ph.D., University of North Dakota
Professor of Physiology and Biophysics
Assistant Research Scientist in the Center for Applied Microcirculatory Research

David A. Scott (Member)

Ph.D., McGill University (Montreal)
Associate Professor of Periodontics, Endodontics and Dental Hygiene

Steven Seif (Senior)

Ph.D., University of Illinois at Chicago
Associate Professor of Mathematics

Sandra Sephton (Senior)

Ph.D., Brigham Young University
Associate Professor of Psychiatry and Behavioral Sciences

Daniel I. Sessler (Senior)

M.D., Columbia University
Professor of Anesthesiology
Weakley Endowed Research Chair of Anesthesiology
Professor of Pharmacology and Toxicology

Mohammad Shafii (Senior)

M.D., University of Tehran
Professor of Psychiatry and Behavioral Sciences
Associate in Pediatrics

M. Keith Sharp (Senior)

Sc.D., Massachusetts Institute of Technology
Professor of Mechanical Engineering

Trimbak Shastri (Member)

Ph.D., University of Oklahoma
Associate Professor of Accountancy

Christopher B. Shields (Senior)

M.D., University of Toronto
Professor of Neurological Surgery
Associate in Orthopedic Surgery
Associate in Pediatrics

Julia W. Shinnick (Member)

Ph.D., The University of Texas
Assistant Professor of Music History

Haval Shirwan (Senior)

Ph.D., University of California, Santa Barbara
Professor of Surgery

Lawrence R. Shoemaker (Senior)

M.D., Vanderbilt University
Associate Professor of Pediatrics

Frederick W. Siegel (Senior)

Ph.D., University of Illinois at Urbana - Champaign
Associate Professor of Finance

Anibal M. Silveira (Senior)
D.D.S., Federal University of Rio Grande do Norte, Brazil
 Associate Professor of Orthodontics, Pediatrics,
 and Geriatric Dentistry

Thomas J. Simmons (Senior)
Ph.D., Kent State University
 Associate Professor of Teaching and Learning

David M. Simpson (Senior)
Ph.D., University of California, Berkeley
 Associate Professor of Urban and Public Affairs

Terry L. Singer (Senior)
Ph.D., University of Pittsburgh
 Professor of Social Work

Steven Skaggs (Senior)
M.S., Pratt Institute
 Professor of Fine Arts

Jeffrey T. Skinner (Senior)
M.F.A., Columbia University
 Professor of English

Gerald Sklare (Senior)
Ed.D., Wayne State University
 Professor of Educational and Counseling
 Psychology

J. Lea Smith (Senior)
Ph.D., University of Idaho
 Associate Professor of Teaching and Learning

James W. Snyder (Member)
Ph.D., University of Dayton
 Professor of Pathology and Microbiology &
 Immunology

Zhao-Hui Song (Senior)
Ph.D., University of Minnesota Medical School
 Associate Professor of Pharmacology and
 Toxicology

Barbara J. Speck (Senior)
Ph.D., University of North Carolina
 Associate Professor of Nursing

Frederick Speck (Senior)
D.M.A., University of Maryland
 Professor of Music

Karen E. Spierling (Senior)
Ph.D., University of Wisconsin-Madison
 Associate Professor of History

S. Srinivasan (Senior)
Ph.D., University of Pittsburgh
 Professor of Computer Information Systems

Robert St. Clair (Senior)
Ph.D., University of Kansas
 Professor of English

Robert H. Staat (Senior)
Ph.D., University of Minnesota
 Professor of Microbiology and Immunology
 Professor of Biological and Biophysical Sciences

Thomas L. Starr (Senior)
Ph.D., University of Louisville
 Professor of Chemical Engineering

J. Christopher States (Senior)
Ph.D., Albany Medical College Union University
 Professor of Pharmacology and Toxicology

Joseph M. Steffen (Senior)
Ph.D., University of New Mexico
 Associate Professor of Biology
 Associate in Biochemistry and Molecular Biology

Michael F. Steger (Member)
Ph.D., University of Minnesota
 Assistant Professor of Educational and
 Counseling Psychology

Mary A. Stenger (Senior)
Ph.D., University of Iowa
 Professor of Humanities

Robert Leo Stenger (Senior)
J.D., University of Iowa
 Professor of Law

Barbara Stetson (Senior)
Ph.D., Vanderbilt University
 Associate Professor of Psychological and Brain
 Sciences

Carol Stinson (Member)
Ph.D., Iowa State University
 Associate Professor of Health Promotion,
 Physical Education and Sport Studies

Ramona Stone (Member)
*M.S. Management, Technical University of Cluj-
 Napoca, Romania*
 Assistant Professor of Social Work

Robert D. Stout (Senior)
Ph.D., University of Michigan
 Professor of Microbiology and Immunology

William D. Stout (Member)
Ph.D., University of South Florida
 Associate Professor of Accountancy

Uldis N. Streips (Senior)
Ph.D., Northwestern University
Professor of Microbiology and Immunology
Professor of Dentistry

Richard W. Stremel (Senior)
Ph.D., University of California, Davis
Professor of Physiology and Biophysics

Bernard J. Strenecky (Senior)
Ed.D., University of Rochester
Professor of Teaching and Learning

Samuel C. Stringfield (Senior)
Ph.D., Temple University
Professor of Teaching and Learning

Jamie Studts (Senior)
Ph.D., University of Kentucky
Assistant Professor of Medicine

Gamini U. Sumanasekera (Senior)
Ph.D., Indiana University
Associate Professor of Physics

James T. Summersgill (Senior)
Ph.D., University of Louisville
Professor of Medicine in Infectious Diseases

Mahendra Sunkara (Senior)
Ph.D., Case Western Reserve University
Professor of Chemical Engineering

Lyle Sussman (Senior)
Ph.D., Purdue University
Professor of Management

Jill Suttles (Senior)
Ph.D., Brandeis University
Professor of Microbiology and Immunology

Ann M. Swank (Senior)
Ph.D., University of Pittsburgh
Professor of Health Promotion, Physical
Education and Sport Studies

David Swanson (Senior)
Ph.D., Indiana University-Bloomington
Assistant Professor of Mathematics

Clarence R. Talley (Senior)
Ph.D., University of Maryland
Associate Professor of Sociology

Hiromi Taniguchi (Senior)
Ph.D., Princeton University
Associate Professor of Sociology

David Tasman (Member)
D.M.D., University of Louisville
Clinical Associate Professor of Orthodontics,
Pediatric and Geriatric

Douglas Dillon Taylor (Senior)
*Ph.D., Bowman Gray School of Medicine of the
Wake Forest University*
Professor of Biochemistry and Molecular Biology

Robert L. Taylor (Senior)
D.B.A., Indiana University
Dean Emeritus
Professor of Management

Richard A. Tewksbury (Senior)
Ph.D., The Ohio State University
Professor of Justice Administration

Nancy M. Theriot (Senior)
Ph.D., University of New Mexico
Professor of History
Professor of Women's Studies

Lundeana M. Thomas (Senior)
Ph.D., University of Michigan
Associate Professor of Theatre Arts

Charles S. Thompson (Senior)
Ph.D., The Ohio State University
Professor of Teaching and Learning

Dallas Tidwell (Senior)
M.M., University of Louisville
Associate Professor of Music

Edith Davis Tidwell (Senior)
M.M., University of Louisville
Professor of Voice

David J. Tollerud (Senior)
M.D., Mayo Medical School
M.P.H., Harvard School of Public Health
Professor of Public Health and Information
Sciences
Adjunct Professor of Pharmacology and
Toxicology

James Tompkins (Senior)
M.A., University of Washington
Diplome, Ecole Jacques Lecoq Paris, France
Associate Professor of Theatre Arts

Robert V. Topp (Senior)
Ph.D., The Ohio State University
Professor of Nursing

John O. Trent (Senior)

Ph.D., University of Canterbury, New Zealand
Associate Professor of Internal Medicine
Associate in Biochemistry and Molecular Biology
Associate in Chemistry

Thomas R. Tretter (Member)

Ed.D., North Carolina State University
Assistant Professor of Teaching and Learning

Michael Tsung Tseng (Senior)

Ph.D., State University of New York at Buffalo
Professor of Anatomical Sciences of
Neurobiology
Associate in Anesthesiology

Carol Thorpe Tully (Senior)

Ph.D., Virginia Commonwealth University
Professor of Social Work

Michael H. Tunnell (Senior)

D.M.A., University of Southern Mississippi
Professor of Trumpet

Suresh C. Tyagi (Member)

Ph.D., University of Aligarh (India)
Professor of Physiology and Biophysics

Bruce M. Tyler (Senior)

Ph.D., University of California, Los Angeles
Associate Professor of History

Larry D. Tyler (Member)

Ph.D., University of Louisville
Professor of Mechanical Engineering

Charles Robert Ullrich (Senior)

Ph.D., University of Illinois
Professor of Civil and Environmental
Engineering

John S. Usher (Senior)

Ph.D., North Carolina State University
Professor of Industrial Engineering

Wayne M. Usui (Senior)

Ph.D., University of California, Riverside
Professor of Sociology

John Vahaly, Jr. (Senior)

Ph.D., Vanderbilt University
Associate Professor of Economics

Roland Valdes, Jr. (Senior)

Ph.D., University of Virginia
Professor of Biochemistry and Molecular Biology
Professor of Pathology

Jeffrey C. Valentine (Senior)

Ph.D., University of Missouri-Columbia
Assistant Professor of Educational and
Counseling Psychology

Russell Vandenbroucke (Senior)

D.F.A., Yale University
Professor of Theatre Arts

Riaan van Zyl (Senior)

Ph.D., University of Natal
Professor of Social Work

Vaclav Vetvicka (Senior)

*Ph.D., Czechoslovak Academy of Sciences,
Prague*
Professor of Pathology and Laboratory Medicine

Gennaro F. Vito (Senior)

Ph.D., The Ohio State University
Professor of Justice Administration

Ronald K. Vogel (Senior)

Ph.D., University of Florida
Professor of Political Science

Michael John Voor (Senior)

Ph.D., Tulane University
Associate Professor of Orthopedic Surgery
Associate in Anatomical Sciences and
Neurobiology

George Vourvopolous (Senior)

Ph.D., Florida State University
Adjunct Assistant Professor of Physics

Lisa Wagner (Member)

Ph.D., The Ohio State University
Associate Professor of Classical and Modern
Languages

Leonard C. Waite (Senior)

Ph.D., University of Missouri
Professor of Pharmacology and Toxicology
Professor in School of Dentistry

Kandi L. Walker (Member)

Ph.D., University of Denver
Associate Professor of Communication

Sherri Wallace (Senior)

Ph.D., Cornell University
Associate Professor of Political Science

Krista B. Wallace-Boaz (Member)

D.M., Northwestern University
Assistant Professor of Music

Mary P. Wall (Member)
Ph.D., University of Maryland
Assistant Professor of Nursing

Kevin M. Walsh (Senior)
Ph.D., University of Cincinnati
Professor of Electrical and Computer
Engineering

William F. Walsh (Senior)
Ph.D., Fordham University
Professor of Justice Administration

Richard M. Walter (Senior)
Ph.D., University of Tennessee
Professor of Accountancy

Peter L. Walton (Member)
M.D., The University of Pennsylvania
Assistant Professor of Family and Community
Medicine

Eugenia Wang (Member)
Ph.D., Case Western University
Professor of Biochemistry and Molecular Biology

Yang Wang (Senior)
M.D., Jiangxi Medical College, China
Ph.D., University of Toronto, Canada
Associate Professor of Medicine in Pediatrics

Brian Wattenberg (Senior)
Ph.D., Washington University
Associate Professor of Mathematics

James C. Watters (Senior)
Ph.D., University of Maryland
Professor of Chemical Engineering

William B. Wead (Senior)
Ph.D., The Ohio State University
Associate Professor of Physiology and
Biophysics
Associate in the Center for Applied
Microcirculatory Research

P. Daniel Weeks (Senior)
D.M.A., University of Cincinnati
Assistant Professor of Physiology and
Biophysics

Terence Allan Weigel (Senior)
Ph.D., University of Kentucky
Professor of Civil and Environmental
Engineering

William T. Weinberg (Senior)
Ph.D., University of Maryland
Professor of Health Promotion, Physical
Education and Sport Studies

Lee Shai Weissbach (Senior)
Ph.D., Harvard University
Professor of History

Samuel R. Wellhausen (Senior)
Ph.D., University of Louisville
Professor of Medicine

Randall Wells (Senior)
Ph.D., The Ohio State University
Professor of Teaching and Learning
Associate Professor of Business

Barbara L. Wheeler (Senior)
Ph.D., Fordham University
Professor of Music Therapy

John D. Whitesell (Senior)
M.F.A., Indiana University
Professor of Fine Arts

Scott Whittemore (Senior)
Ph.D., University of Vermont
Professor of Neurological Surgery

David L. Wiegman (Senior)
Ph.D., Indiana University
Professor of Physiology and Biophysics

Osborne P. Wiggins, Jr. (Senior)
Ph.D., New School for Social Research
Professor of Philosophy

Frederick L. Wightman (Senior)
Ph.D., University of California-San Diego
Professor of Psychological and Brain Sciences

Mickey R. Wilhelm (Senior)
Ph.D., University of Alabama
Professor of Industrial Engineering

Charles Arthur Willard (Senior)
*Ph.D., University of Illinois at Urbana -
Champaign*
Professor of Communication

Ann Elizabeth Willey (Senior)
Ph.D., Northwestern University
Associate Professor of English

Bronwyn T. Williams (Senior)
Ph.D., University of New Hampshire
Associate Professor of English

W. Wiley Williams (Senior)
Ph.D., Louisiana State University
Professor of Mathematics

Shirley C. Willihnganz (Senior)
Ph.D., University of Illinois
Professor of Communication

Gerold R. Willing (Member)
Ph.D., Auburn University
 Assistant Professor of Chemical Engineering

Deborah Griffith Wilson (Senior)
Ph.D., Purdue University
 Professor of Justice Administration

Ian Windmill (Senior)
Ph.D., Florida State University
 Associate Professor of Surgery in
 Communicative Disorders

Welby Winstead (Member)
M.D., The Johns Hopkins University
 Assistant Professor of Surgery

Paul A. Winter (Senior)
Ph.D., The Ohio State University
 Professor of Leadership, Foundations and
 Human Resource Education

Stephen J. Winters (Senior)
M.D., State University of New York
 Professor of Medicine in Endocrinology
 Professor of Biochemistry and Molecular Biology

Elaine O. Wise (Senior)
M.A., Indiana University
 Assistant Professor of English
 Assistant Professor of Humanities

Richard J. Wittebort (Senior)
Ph.D., Indiana University
 Professor of Chemistry

James L. Wittliff (Senior)
Ph.D., The University of Texas at Austin
 Professor of Biochemistry and Molecular Biology
 Professor of Surgery
 Associate in Obstetrics, Gynecology, and
 Women's Health

Joanna Wolfe (Senior)
Ph.D., University of Texas at Austin
 Associate Professor of English

John L. Wong (Senior)
Ph.D., University of California, Berkeley
 Professor of Chemistry

Janet Woodruff-Borden (Senior)
*Ph.D., Virginia Polytechnic Institute and State
 University*
 Associate Professor of Psychological and Brain
 Sciences

Andrew L. Wright (Senior)
Ph.D., University of Louisville
 Assistant Professor of Accountancy

Shi-Yu Wu (Senior)
Ph.D., Cornell University
 Professor of Physics

Xiao-Ming Xu (Senior)
Ph.D., University of Miami School of Medicine
 Professor of Neurological Surgery
 James R. Petersdorf Endowed Chair in the
 Department of Neurological Surgery

Yongzhi Xu (Senior)
Ph.D., University of Delaware
 Professor of Mathematics

Lung-Tsiung Yam (Senior)
M.D., National Taiwan University Medical School
 Professor of Medicine in Hematology and
 Oncology
 Associate in Pathology and Laboratory Medicine

Pamela A. Yankeelov (Senior)
Ph.D., University of Louisville
 Associate Professor of Social Work

M. Cecilia Yappert (Senior)
Ph.D., Oregon State University
 Professor of Chemistry
 Associate in Ophthalmology and Visual Sciences

Hong Ye (Senior)
Ph.D., Keele University-U.K.
 Assistant Professor of Oncology
 Associate in Ophthalmology and Visual Sciences

Wendy Yoder (Member)
Ph.D., Indiana University
 Assistant Professor of Classical & Modern
 Languages

Okbazghi Yohannes (Senior)
Ph.D., University of Denver
 Professor of Political Science

Esmay Yolcu (Senior)
Ph.D., Ankara University, Turkey
 Assistant Professor of Microbiology and
 Immunology

Paul York (Senior)
M.A., University of California, Santa Barbara
 Associate Professor of Mathematics

William W. Young, Jr. (Senior)
Ph.D., Washington University
 Professor of Molecular, Cellular and Craniofacial
 Biology
 Professor of Biochemistry and Molecular Biology
 Associate in Pharmacology and Toxicology

Jerry (Jun) Yu (Senior)
M.D., Shanghai Medical University
Ph.D., University of California, San Francisco
 Professor of Medicine

Wolfgang Zacharias (Senior)
Ph.D., Philipps-University Marburg
 Professor of Pharmacology and Toxicology
 Professor of Medicine in Hematology and
 Oncology

Pavel Zahorik (Member)
Ph.D., University of Wisconsin-Madison
 Assistant Professor of Psychological and Brain
 Sciences

Francis P. Zamborini (Senior)
Ph.D., Texas A&M University
 Associate Professor of Chemistry

Wei-Bin Zeng (Senior)
Ph.D., University of Pittsburgh
 Associate Professor of Mathematics

Qunwei Zhang (Member)
M.D., Fujian Medical University, P.R. of China
 Assistant Professor of Environmental and
 Occupational Health Sciences

Charles Ziegler (Senior)
Ph.D., University of Illinois
 Professor of Political Science

Jonathan R. Ziskind (Senior)
Ph.D., Columbia University
 Associate Professor of History

Wayne S. Zundel (Senior)
Ph.D., Stanford University
 Assistant Professor of Radiation Oncology

Jacek M. Zurada (Senior)
Ph.D., Technical University of Gdansk
 Professor of Electrical and Computer
 Engineering
 Samuel T. Fife Alumni Professor of Electrical
 Engineering

Jozef M. Zurada (Senior)
Ph.D., University of Louisville
 Professor of Computer Information Systems

Emeritus/Emerita Faculty

Roy L. Ackerman (Senior)
Ph.D., Western Reserve University
 Classical and Modern Languages

H. Garrett Adams (Senior)
M.D., Bowman Gray School of Medicine
 Pediatrics

Paulette Adams (Senior)
Ed.D., University of Kentucky
 Nursing

Peter R. Almond (Senior)
Ph.D., Rice University
 Radiology Oncology

Rea T. Alsup (Senior)
Ed.D., Columbia University
 Educational and Counseling Psychology

Donald R. Anderson (Senior)
M.F.A., Ohio University
 Fine Arts

Billy F. Andrews (Senior)
M.D., Duke University
 Pediatrics

Joseph F. Aponte (Senior)
Ph.D., University of Kentucky
 Psychological and Brain Sciences

Peter B. Aronhime (Senior)
Ph.D., Colorado State University
 Electrical and Computer Engineering

William F. Axton (Senior)
Ph.D., Princeton University
 English

Jerry W. Ball (Senior)
M.M., The University of Texas
 School of Music

William H. Banks, Jr. (Senior)
Ph.D., The Ohio State University
 College of Education and Human Development

George R. Barnes (Senior)
Ph.D., University of California, Irvine
 Mathematics

G. Keith Bayne (Senior)
Ph.D., Southern Illinois University
 Leadership, Foundations and Human Resource
 Education

Roger Bell (Senior)
Ed.D., Wayne State University
 Psychiatry and Behavioral Sciences

Samuel V. Bell, Jr. (Senior)
Ph.D., University of Kentucky
 Electrical Engineering and Engineering
 Technology

Edward H. Berman (Senior)
Ed.D., Columbia University
 Leadership, Foundations and Human Resource
 Education

Kunwar P. Bhatnagar (Senior)
Ph.D., State University of New York at Buffalo
 Anatomical Sciences and Neurobiology

Parimal Bhattacharjee (Senior)
Ph.D., London University
 Ophthalmology and Visual Sciences

Doris Bickel (Senior)
B.M., University of Louisville
 School of Music

Don E. Bierman (Senior)
Ph.D., Michigan State University
 Geography and Geosciences

John C. Birkimer (Senior)
Ph.D., The Ohio State University
 Psychological and Brain Sciences

Ray Bixler (Senior)
Ph.D., The Ohio State University
 Psychological and Brain Sciences

James Neal Blake (Senior)
Ph.D., University of Southern Mississippi
 Teaching and Learning

Kiron C. Bordoloi (Senior)
Ph.D., Louisiana State University
 Applied Sciences

Nettye Brazil (Senior)
Ph.D., University of Minnesota
 Teaching and Learning

Charles F. Breslin (Senior)
M.A., University of Louisville
 Humanities

Charles Wilbur Brockwell Jr. (Senior)
Ph.D., Duke University
 History

John W. Brown (Senior)
Ph.D., University of Illinois
 Chemistry

Jewell Brown Brownstein (Senior)
Ed.D., Indiana University
 College of Education and Human Development

Mary E. Burton (Senior)
Ph.D., Cornell University
 English

B. Edward Campbell (Senior)
M.B.A., University of Louisville
 Justice Administration

Laurence A. Carr (Senior)
Ph.D., Michigan State University
 Pharmacology and Toxicology

Gaspar Carrasquer (Senior)
M.D., University of Valencia
 Physiology and Biophysics

Michael A. Cassaro (Senior)
Ph.D., University of Florida
 Civil and Environmental Engineering

Hilda R. Caton (Senior)
Ed.D., University of Kentucky
 Teaching and Learning

Joseph S. Chalmers (Senior)
Ph.D., Wayne State University
 Physics

Henry A. Chodkowski (Senior)
M.F.A., Yale University
 Fine Arts

William M. Christopherson (Senior)
M.D., University of Louisville
 Pathology

Hsing Chuang (Senior)
Ph.D., Colorado St. University
 Mechanical Engineering

Robert L. Collins (Senior)
Ph.D., Virginia Polytechnic Institute
 Mechanical Engineering

Jerry Wilson Cooney (Senior)
Ph.D., University of New Mexico
 History

Dario A. Covi (Senior)
Ph.D., New York University
 Fine Arts

Ruth Craddock (Senior)
D.S.N., University of Alabama at Birmingham
 Nursing

Thomas H. Crawford (Senior)
Ph.D., University of Louisville
 Chemistry

Richard K. Crosby (Senior)
Ed.D., University of Kentucky
 Leadership, Foundations and Human Resource
 Education

Leonard P. Curry (Senior)

Ph.D., University of Kentucky
History

Rose Dagirmanjian (Senior)

Ph.D., University of Rochester
Pharmacology and Toxicology

R. Duncan Dallam (Senior)

Ph.D., University of Missouri
Biochemistry and Molecular Biology

Thomas D. Darby (Senior)

Ph.D., Medical College of South Carolina
Pharmacology and Toxicology

William S. Davis (Senior)

Ph.D., University of California, Los Angeles
Biology

Richard M. Davitt (Senior)

Ph.D., Lehigh University
Mathematics

James E. DeBurger (Senior)

Ph.D., Indiana University
Sociology

Pradeep Deshpande (Senior)

Ph.D., University of Arkansas
Chemical Engineering

Allan E. Dittmer (Senior)

Ph.D., Wayne State University
Teaching and Learning

Robert L. Douglas, Sr. (Senior)

Ph.D., University of Iowa
Pan-African Studies

John B. Dressman (Senior)

Ph.D., University of Arkansas
Mechanical Engineering

James M. Driscoll (Senior)

Ph.D., University of Delaware
Psychological and Brain Sciences

Kathleen Drummond (Senior)

Ph.D., Northwestern University
Administrative Services

Robert K. Durig (Senior)

Ph.D., Indiana University
Sociology

Denzil Edge (Senior)

Ph.D., The Ohio State University
Teaching and Learning

Harvey L. Edmonds (Senior)

Ph.D., University of California, Davis
Anesthesiology

Everett Egginton (Senior)

Ph.D., Syracuse University
Leadership, Foundations and Human Resource
Education

William F. Ekstrom (Senior)

Ph.D., University of Illinois
English
Executive Vice President, Emeritus

Marvin Fleischman (Senior)

Ph.D., University of Cincinnati
Chemical Engineering

John H. Flodstrom (Senior)

Ph.D., Northwestern University
Humanities

Margaret L. Fonda (Senior)

Ph.D., University of Tennessee
Biochemistry and Molecular Biology

Stanley R. Frager (Member)

Ph.D., University of California, Los Angeles
Kent School of Social Work

Lucy M. Freibert (Senior)

Ph.D., University of Wisconsin
English

John W. Gamel (Senior)

M.D., Stanford University
Ophthalmology and Visual Sciences

Donald L. Gambrall (Senior)

D.M.D., University of Louisville
Periodontics, Endodontics, and Dental Hygiene

Herbert Garfinkel (Senior)

Ph.D., University of Chicago
Political Science

John Edward Garrett (Senior)

Ph.D., Syracuse University
Teaching and Learning

K. Lai Gauri (Senior)

Ph.D., University of Bonn
Geography and Geosciences

Roger H. Geeslin (Senior)

Ph.D., Yale University
Mathematics

Earl R. Gerhard (Senior)

Ph.D., University of Illinois
Chemical Engineering

Dorothy H. Gibson (Senior)
Ph.D., The University of Texas
 Chemistry

David S. Gochman (Senior)
Ph.D., University of Colorado
 Social Work

Frances S. Goldsmith (Senior)
Ph.D., Purdue University
 Home Economics

Alan R. Gould (Senior)
D.D.S., University of California, Los Angeles
 Surgical and Hospital Dentistry
 Pathology & Laboratory Medicine

Sandra L. Graves (Senior)
Ph.D., University of Louisville
 Art Therapy

Robert D. Gray (Senior)
Ph.D., Florida State University
 Biochemistry and Molecular Biology
 Ophthalmology and Visual Sciences

Melvin E. Greer (Senior)
Ph.D., Tulane University
 Humanities

Joel A. Gwinn (Senior)
Ph.D., West Virginia University
 Physics

Dean O. Harper (Senior)
Ph.D., University of Cincinnati
 Chemical Engineering

Albert J. Harris (Senior)
Ph.D., The Ohio State University
 Theatre Arts

George H. Herbener (Senior)
Ph.D., University of Louisville
 Anatomical Sciences and Neurobiology

Susan Herlin (Senior)
Ph.D., Boston University
 History

David R. Hershberg (Senior)
Ph.D., University of Michigan
 Classical and Modern Languages

Frederic N. Hicks (Senior)
Ph.D., University of California, Los Angeles
 Anthropology

Robert D. Higginbotham (Senior)
Ph.D., University of Utah
 Microbiology and Immunology

Frederick K. Hilton (Senior)
*D.Sc., Johns Hopkins School of Hygiene and
 Public Health*
 Anatomical Sciences and Neurobiology

Mary A. Hilton (Senior)
Ph.D., Cornell University
 Biochemistry and Molecular Biology

Samuel Z. Himmelfarb (Senior)
Ph.D., University of California, Los Angeles
 Psychological and Brain Sciences

Jerald L. Hoffman (Senior)
Ph.D., University of Wisconsin
 Biochemistry and Molecular Biology

Carol Alf O'Connor Holloman (Senior)
Ph.D., Bowling Green State University
 Industrial Engineering

Thomas L. Holloman (Senior)
Ph.D., University of Louisville
 Civil and Environmental Engineering

Robert E. Hoye (Senior)
Ph.D., University of Wisconsin
 Leadership, Foundations and Human Resource
 Education

Kee-Chang Huang (Senior)
M.D., Sun Yat-Sen University
Ph.D., Columbia University
 Pharmacology and Toxicology

Wei-Feng Huang (Senior)
Ph.D., University of Virginia
 Physics

David R. Hume (Senior)
Ph.D., University of Kentucky
 Classical and Modern Languages

Graham H. Hunt (Senior)
Ph.D., University of Alberta
 Geography and Geosciences

Charles H. Jarboe (Senior)
Ph.D., University of Louisville
 Pharmacology and Toxicology

Thomas S. Jeffries (Senior)
Ed.D., Indiana University
 Leadership, Foundations and Human Resource
 Education

Leo B. Jenkins (Senior)
Ph.D., Purdue University
 Electrical Engineering

Thomas M. Jenkins (Senior)

Ph.D., Yale University
Mathematics

Knowlton W. Johnson (Senior)

Ph.D., Michigan State University
Justice Administration

Landis Jones (Senior)

Ph.D., Emory University
Political Science

David E. Justus (Senior)

Ph.d., University of Oklahoma
Microbiology and Immunology

James E. Jumblatt (Senior)

Ph.D., Columbia University
Ophthalmology and Visual Sciences

Khaled A. Kamel (Senior)

Ph.D., University of Cincinnati
Computer Engineering and Computer Science

Joel A. Kaplan (Senior)

M.D., Jefferson Medical College
Anesthesiology
Dean Emeritis School of Medicine

Kenneth F. Keller (Senior)

Ph.D., University of Louisville
Microbiology and Immunology

Letitia S. Kimsey (Senior)

M.D., University of Louisville
Microbiology and Immunology

Lael F. Kinch (Senior)

Ph.D., University of Kentucky
Sociology

Elias Klein (Senior)

Ph.D., Tulane University
Medicine
Chemical Engineering

Jay Martin Kloner (Senior)

Ph.D., Columbia University
Fine Arts

John C. Klotter (Senior)

J.D., University of Kentucky
Justice Administration

Kathleen M. Klueber (Senior)

Ph.D., University of Pittsburgh
Anatomical Sciences and Neurobiology

Prasad S. Kulkarni (Senior)

Ph.D., State University of New York
Ophthalmology and Visual Sciences

Philip G. Laemmle (Senior)

Ph.D., Indiana University
Political Science

Roger Lambert (Senior)

Ph.D., University of Minnesota
Biology

Calvin Allen Lang (Senior)

Sc.D., The Johns Hopkins University
Biochemistry and Molecular Biology

Karen K. Lind (Senior)

Ed.D., University of Louisville
Teaching and Learning

George C. Lindauer (Senior)

Ph.D., University of Pittsburgh
Mechanical Engineering

Donald F. Linton (Senior)

Ph.D., University of Kentucky
Engineering Mathematics and Computer
Science

Pinghui Victor Liu (Senior)

M.D., Tokyo Jikei-kai School of Medicine
Ph.D., Tokyo Medical School
Microbiology and Immunology

James B. Longley (Senior)

Ph.D., Cambridge University
Anatomical Sciences and Neurobiology

Eleanor Y. Love (Senior)

Ed.D., University of Illinois
Educational and Counseling Psychology

Louise Booth Lyons (Senior)

Ed.D., University of Kentucky
College of Education and Human Development

Stephanie Maloney (Senior)

Ph.D., University of Missouri
Fine Arts

Thomas Stephen Maloney (Senior)

Ph.D., Gregorian University
Humanities

Donna H. McCabe (Senior)

Ed.D., University of South Florida
Leadership, Foundations and Human Resource
Education

Kenneth P. McConnell (Senior)

*Ph.D., University of Rochester School of
Medicine and Dentistry*
Biochemistry and Molecular Biology

Andrea L. McElderry (Senior)

Ph.D., University of Michigan
History

Robert B. McFadden (Senior)

Ph.D., Queen's University
Mathematics

Joseph H. McMillan (Senior)

Ph.D., Michigan State University
Teaching and Learning

John W. Manning (Senior)

Ph.D., University of Iowa
Management

Adam P. Matheny, Jr. (Senior)

Ph.D., Vanderbilt University
Pediatrics

Peter M. Mears (Senior)

Ph.D., Mississippi State University
Marketing

Peter B. Meyer (Senior)

Ph.D., University of Wisconsin
Economics
Urban and Public Affairs

C. Eugene Miller (Senior)

Ph.D., Rensselaer Polytechnic Institute
Civil Engineering

Lovick C. Miller (Senior)

Ph.D., Harvard University
Psychiatry and Behavioral Sciences

Richard L. Miller (Senior)

*D.D.S., Washington University School of
Dentistry*
Ph.D., State University of New York
Oral Pathology

Robert H. Miller (Senior)

Ph.D., The Ohio State University
English

Roger E. Mills (Senior)

Ph.D., The Ohio State University
Physics

Suzanne Mitchell (Senior)

M.F.A., State University of New York at Buffalo
Fine Arts

James C. Moore (Senior)

M.D., University of Louisville
Physiology and Biophysics

Jack C. Morgan (Senior)

Ph.D., Purdue University
Teaching and Learning

Wesley K. Morgan (Senior)

Ph.D., University of Southern California
School of Music

William Morgan (Senior)

Ph.D., University of Delaware
Fine Arts

James Roy Morrill, III (Senior)

Ph.D., University of North Carolina
History

Thomas E. Mullin (Senior)

Ph.D., Oklahoma State University
Mechanical Engineering

X. J. Musacchia (Senior)

Ph.D., Fordham University
Physiology and Biophysics

Irwin D. Nahinsky (Senior)

Ph.D., University of Minnesota
Psychological and Brain Sciences

Anne O. Netick (Senior)

Ph.D., The University of Texas at Austin
Teaching and Learning

Lowell Willard Newton (Senior)

Ph.D., Tulane University
History

V. Daniel Ochs (Senior)

Ed.D., University of Virginia
Teaching and Learning

James Lawton O'Sullivan (Senior)

M.A., Boston University
Political Science

P. J. Ouseph (Senior)

Ph.D., Fordham University
Physics

Frederick M. Parkins (Member)

Ph.D., University of Pennsylvania
Orthodontics

Ruth N. Paton (Senior)

Ph.D., University of Tennessee
Social Work

Mario M. Paz (Senior)

Ph.D., Iowa State University
Civil and Environmental Engineering

Samuel B. Peavey (Senior)

Ed.D., Columbia University
College of Education and Human Development

William H. Pierce (Senior)

M.D., University of Louisville
Ph.D., Harvard University
Electrical Engineering

Charles A. Plank (Senior)

Ph.D., North Carolina State University
Chemical Engineering

Arlon G. Podshadley (Senior)

D.D.S., M.S., St. Louis University
Prosthodontics

John H. Pollock (Senior)

Ed.D., University of Kentucky
Teaching and Learning

Albert M. Potts (Senior)

M.D., Western Reserve University
Ph.D., University of Chicago
Biochemistry and Molecular Biology

F. Randall Powers (Senior)

Ed.D., Harvard University
College of Education and Human Development

Keith L. Raitz (Senior)

Ph.D., The Ohio State University
Leadership, Foundations and Human Resource
Education

Harold E. Richardson (Senior)

Ph.D., University of Southern California
English

Arthur M. Riehl (Senior)

Ph.D., University of Louisville
Computer Engineering and Computer Science

Marilyn Riese (Senior)

Ph.D., Yeshiva University
Pediatrics

Kenneth H. Reid (Senior)

Ph.D., University of Washington
Anatomical Sciences and Neurobiology

Richard D. Rink (Senior)

Ph.D., Tulane University
Anatomical Sciences and Neurobiology

John A. Robinson (Senior)

Ph.D., Pennsylvania State University
Psychological and Brain Sciences

P. Joanne Rowe (Senior)

Ph.D., Texas Woman's University
Health Promotion, Physical Education and Sport
Studies

Gordon C. Ruscoe (Senior)

Ph.D., University of Michigan
College of Education and Human Development

Harry C. Saxe (Senior)

Sc.D., Massachusetts Institute of Technology
Civil Engineering

Thomas G. Scharff (Senior)

Ph.D., University of Rochester
Pharmacology and Toxicology

Donald J. Scheer (Senior)

Ph.D., The Ohio State University
Electrical and Computer Engineering

Marilyn V. Schuler (Senior)

Ph.D., University of Kentucky
Classical and Modern Languages

Sydney P. Schultze (Senior)

Ph.D., Indiana University
Classical and Modern Languages

Robert R. Schulz (Senior)

Ed.D., Michigan State University
Leadership, Foundations and Human Resource
Education

William M. Schuyler, Jr. (Senior)

M.A., Princeton University
Humanities

Leland L. Scott (Senior)

Ph.D., University of Illinois
Mathematics

Edwin S. Segal (Senior)

Ph.D., Indiana University
Anthropology

Gradus L. Shoemaker (Senior)

Ph.D., University of Illinois
Chemistry

Curtis P. Sigdestad (Senior)

Ph.D., University of Iowa
Radiation Oncology

Dorothy M. Simpson (Senior)

Ph.D., Purdue University
College of Education and Human Development

John J. Sinai (Senior)

Ph.D., Purdue University
Physics

Arthur J. Slavin (Senior)
Ph.D., University of North Carolina
 Humanities

Richard P. Smith (Senior)
Ph.D., Emory University
 Psychological and Brain Sciences

Hugh T. Spencer (Senior)
Sc.D., The Johns Hopkins University
 Chemical Engineering

Dennis L. Spetz (Senior)
Ed.D., Indiana University
 Geography and Geosciences

William H. Spragens, Jr. (Senior)
Ph.D., University of Cincinnati
 Mathematics

Frank H. Stallings (Senior)
Ed.D., University of Kentucky
 College of Education and Human Development

Robert E. Stewart (Senior)
Ph.D., University of Waterloo
 Mechanical Engineering

John L. Strobe, Jr. (Senior)
J.D., Ph.D., University of Nebraska
 Leadership, Foundations and Human Resource
 Education

Walter Wallace Surwillo (Senior)
Ph.D., McGill University
 Psychiatry and Behavioral Sciences

Frank J. Swartz (Senior)
Ph.D., Western Reserve University
 Anatomical Sciences and Neurobiology

Richard Hanawalt Swigart (Senior)
Ph.D., University of Minnesota
 Anatomical Sciences and Neurobiology

K. Grant Taylor (Senior)
Ph.D., Wayne State University
 Chemistry

Francis C. Thiemann (Senior)
Ph.D., University of Oregon
 Leadership, Foundations and Human Resource
 Education

William T. Thompson (Senior)
M.S., University of Illinois
 Accounting

Thomas A. Van (Senior)
Ph.D., Duke University
 English

William VonderHaar (Senior)
M.D., University of Louisville
 Family and Community Medicine

Waldon B. Wacker (Senior)
Ph.D., The Ohio State University
 Ophthalmology and Visual Sciences

William J. Waddell (Senior)
M.D., University of North Carolina
 Pharmacology and Toxicology

Charles E. Wagner (Senior)
Ph.D., Indiana University
 Anatomical Sciences and Neurobiology

Patricia A. Walker (Senior)
Ph.D., University of Kentucky
 Teaching and Learning

Richard A. Ward (Senior)
Ph.D., University of Canterbury
 Chemical Engineering

Robert L. Weaver (Senior)
Ph.D., University of North Carolina
 Music History

Inez Webb (Senior)
M.S., University of Tennessee
 Home Economics

Harvey Curtis Webster (Senior)
Ph.D., Columbia University
 English

J. Allen Whitt (Senior)
Ph.D., University of California
 Sociology

Varley Wiedeman (Senior)
Ph.D., The University of Texas
 Biology

Walter Michael Williams (Senior)
Ph.D., University of Louisville
 Pharmacology and Toxicology

Julius Pan Wong (Senior)
Ph.D., Oklahoma State University
 Mechanical Engineering

Clark F. Wood (Senior)
M.A., University of Kentucky
 Health Promotion, Physical Education and Sport
 Studies

Thom J. Zimmerman (Senior)
M.D., University of Illinois
Ph.D., University of Florida
 Ophthalmology and Visual Sciences

Institutional Information

A

Academic Calendar	8
Academic Grievance Procedure	21
Academic Policies, Procedures and Requirements	12
Academic Probation	14
Academic Standing	14
Accelerated B.A./M.A. - Spanish	96
Accelerated B.A./M.A. - History	65
Accelerated B.A./M.A. - Humanities	68
Accelerated B.A./M.A. - Sociology	93
Accelerated B.A./M.A. Program - French	62
Accelerated B.S./M.S. - Physics	80
Accreditation - Institutional	311
Accreditation - Other	312
Accreditation - Professional	311
ADA Policy Statement University of Louisville	29
Administrative Officers of the Graduate School	312
Administrative Officers of the University	312
Admissions	11
African American Theatre - Certificate	100
Alice Eaves Barns Award	20
Americans with Disabilities Act	29
Anatomical Science and Neurobiology - M.S.	185
Anatomical Science and Neurobiology - Ph.D.	187
Application Fee	9
Application for Admission	9
Application for Degree	20
Application to the Graduate School	8
Archives and Records Center	31
Art (Creative) and Art History - M.A.	43
Art Education - M.A.T.	117
Art History - Ph.D.	45
Audiology - Au.D.	193
Auditors	12

B

Biochemistry and Molecular Biology - M.S.	194
Biochemistry and Molecular Biology - Ph.D.	196
Bioengineering - M.Eng.	285
Bioethics and Medical Humanities, Interdisciplinary - MA	163
Biology - M.A.	47
Biology - Ph.D.	49
Biostatistics-Decision Science - M.S.	259

C

Certificates	8
Changes of Grades	17
Chemical Engineering - M.Eng.	286
Chemical Engineering - M.S.	287
Chemical Engineering - Ph.D.	289
Chemistry - M.S.	51
Chemistry - Ph.D.	53
Chemistry/Chemical Physics - Ph.D.	80
Civil Engineering - M.Eng.	290
Civil Engineering - M.S.	291
Civil Engineering - Ph.D.	291
Clinical Investigation Sciences - Certificate	263
Clinical Investigation Sciences - M.Sc.	262
Code of Student Conduct	24
Code of Student Rights and Responsibilities	24
College of Arts and Sciences	43
College of Business	111
College of Education and Human Development	117
Communication - M.A.	55
Communicative Disorders - M.S.	201
Computer Engineering Computer Science - M.Eng.	292
Computer Science and Engineering - Ph.D.	294
Computer Science- M.S.	293
Continuing Registration	32
Continuous enrollment	13
Cooperative Ph.D. Program	7
Counseling and Personnel Services - MEd.	120
Counseling and Personnel Services - Ph.D.	118
Course and Credit Requirements	14
Course Loads	13
Course Numbering System	15
Curriculum and Instruction - Ph.D.	123

D

Data Mining - Certificate	309
Deans	312
Degree Candidacy	13
Degree status	11
Degree status - provisional	11
Degree status - provisional/special conditions	11
Degree status - special conditions	11
Disability Resource Center	32
Dissertation	18
Doctor of Philosophy Degree - Requirements	17
Drug-Free Schools and Communities Act Amendments of 1989	29

Dual Degree Program - Juris Doctor/Master of Urban Planning 105
 Dual Degree Program - M.S.S.W./Juris Doctor 175
 Dual Degree Program - M.S.S.W./M.A. in Pan-African Studies 175
 Dual Degree Program - M.S.S.W./M.A. in Women’s and Gender Studies 175
 Dual Degree Program - M.S.S.W./Master in Divinity 175
 Dual Degree Program - Women’s and Gender Studies - M.S.S.W./M.A. 106
 Dual Degree Program in Applied and Industrial Mathematics and Biostatistics - Decision Science 74
 Dual Degrees 7

E

Early Childhood Education - M.A.T. 139
 Early Elementary Education - M.E.D. 127
 Early Elementary Education (P-5) - M.A.T. . . 125
 Educational Administration - Ed.S. 129
 Educational Leadership and Organizational Development - Ed.D. 129
 Educational Leadership and Organizational Development - Ph.D. 131
 Electrical Engineering - M.Eng. 296
 Electrical Engineering - M.S. 297
 Electrical Engineering - Ph.D. 298
 Elementary Education - RANK I 126
 Emeritus/Emerita Faculty 342
 Engineering Management - M.Eng. 300
 English - M.A. 57
 English Rhetoric and Composition - Ph.D. . . . 59
 Entrepreneurship - Ph.D. 111
 Environmental Engineering - Certificate . . . 301
 Epidemiology - M.S. 264
 Exercise Physiology - M.S. 132
 Extension of Time 14

F

Fellowships 35
 Final Oral Examination 18
 Financial Aid 33
 Financial Aid and Financial Settlement 32

Financial Aid Recipients 33
 Financial Penalties 32
 French, Language and Literature - M.A. 61
 Full-and Part-Time Study 13
 Full-Time Study for University Fellows and Graduate Assistants 13

G

Good Standing 14
 Grade Point Average (GPA) 16
 Grades and Grading Policies 16
 Grading System 16
 Graduate Council (2006-2007) 313
 Graduate Credit 12
 Graduate Dean's Citation 20
 Graduate Degree Programs 6
 Graduate Faculty 313
 Graduate School 5, 163
 Graduate Student Honors 20
 Graduate Training Assistantships 34
 Guy Stevenson Award 20

H

Health Education - M.Ed. 134
 Health Professions Education - Certificate . . 135
 Higher Education - M.A. 135
 History - M.A. 63
 Human Resource Education - M.S. 136
 Humanities - M.A. 66
 Humanities - Ph.D. 68

I

Industrial Engineering - M.Eng. 302
 Information Technology Services 31
 Instructional Technology - M.Ed. 141
 Interdisciplinary Degrees 8
 Interdisciplinary Studies - M.A. 165
 Interdisciplinary Studies - M.S. 167
 Interdisciplinary Studies - Ph.D. 169
 International Center 31
 International Students 10

J

John M. Houchens Prize	20
John Richard Binford Memorial Award	20
Justice, Administration of - M.A.	69

K

Kent School of Social Work	171
--------------------------------------	-----

L

Latin American Studies - Certificate	97
Letters of Recommendation	10
Libraries	30
Logistics and Distribution - Certificate	306

M

M.S.S.W. Specializations	175
Marriage and Family Therapy - Post Master's Certificate	182
Master's Degree - Requirements	19
Mathematics - M.A.	72
Mathematics, Applied and Industrial - Mathematical Physics - Ph.D.	80
Mathematics, Applied and Industrial - Ph.D.	73
Mechanical Engineering - M.Eng.	307
Mechanical Engineering - M.S.	308
Mechanical Engineering - Ph.D.	308
Microbiology and Immunology - M.S.	204
Microbiology and Immunology - Ph.D.	205
Microfilming and Copyrighting	20
Middle Grades Education - RANK I	142
Middle School Education - M.A.T.	143
Middle School Education - M.Ed.	145
Minority Student Assistantships/Scholarships	34
Missing Grades	17
Mission Statement for the University of Louisville	6
Music Education - M.A.T.	146
Music Education - M.M.Ed.	227
Music History and Literature - M.M.	230
Music Performance - M.M.	232

N

New Graduate Student	12
Non-degree status	11
Nursing - M.S.N.	241

O

Oral Biology - M.S.	115
Overloads	13

P

Pan-African Studies - Certificate	77
Pan-African Studies - M.A.	76
Pass/Fail Grading Option	16
Perkins Loan	34
Personal Statement	10
Pharmacology and Toxicology - M.S.	208
Pharmacology and Toxicology - Ph.D.	212
Physical Education - M.A.T.	149
Physics - B.S./M.S. Five-Year Accelerated Program	79
Physics - M.S.	78
Physics - Ph.D. Joint Doctoral Program with UK	81
Physiology and Biophysics - M.S.	218
Physiology and Biophysics - Ph.D.	220
Plagiarism and Cheating	14
Police Executive Leadership Development - Certificate	71
Political Science - M.A.	81
Prerequisites	12
Privacy of Student Records	28
Probation	11
Professional Degrees	7
Psychology - Clinical - Ph.D.	84
Psychology - Experimental - Ph.D.	85
Public Administration - M.P.A.	88
Public Health - M.P.H.	279
Public Health Sciences - Ph.D.	266

R

Reading Education - M.Ed.	149
Registration	13
Regular Registration	32

Repetition of Courses 17
Requirements for Graduate Degrees 17
Residence Facilities 31
Residency Policy and Fees 35
Resigning Appointments 35

S

Satisfactory Academic Progress for Financial Aid
 Assessment 33
Satisfactory Progress 13
Scholarships 34
School of Dentistry 115
School of Medicine 185
School of Music 225
School of Nursing 241
School of Public Health and Information
 Sciences 259
Secondary Education - M.Ed. 152
Secondary Education - RANK I 153
Senior Citizen Tuition Remission 32
Social Work - M.S.S.W. 171
Sociology - M.A. 92
Spanish - M.A. 95
Special Education - Rank I 161
Special Education - Rank II 161
Special Facilities and Services 30
Sport Administration - M.S. 162
Stafford Loan Program (subsidized and
 unsubsidized) 34
Structure of the University 6
Student Grievance Officer 24
Student Health and Insurance 31
Student Life 32

Student Services 32

T

Test Scores 9
Theatre Arts - M.F.A. 99
Transcripts 9
Transfer of Credit 14

U

Undergraduates Taking Graduate Courses . . 15
University Policies and Procedures 24
Urban and Public Affairs - Ph.D. 101
Urban Planning - M.U.P. 104

V

Visiting Students 12

W

Welcome 5
Withdrawal Policy 33
Women's and Gender Studies - Certificate . 108
Women's and Gender Studies - M.A. 106