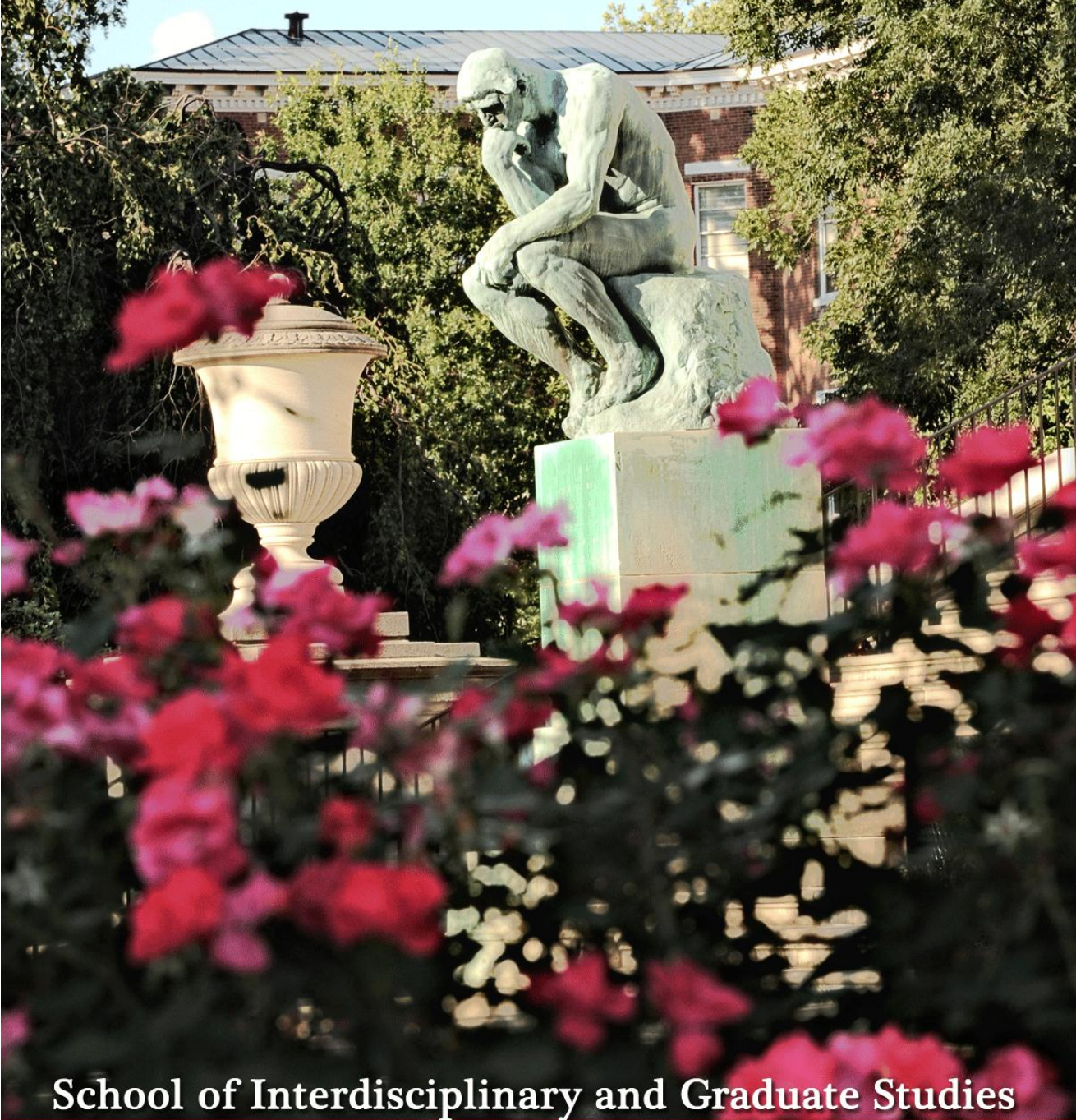


Graduate Catalog 2011-2012



School of Interdisciplinary and Graduate Studies



UNIVERSITY OF
LOUISVILLE
It's Happening Here.



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 www.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.

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General Information

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.

UofL 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.

Beth Boehm, Ph.D.

Vice Provost for Graduate Affairs and Interim Dean of the School of Interdisciplinary and Graduate Studies

The School of Interdisciplinary and Graduate Studies

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, School of Interdisciplinary and Graduate Studies, 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 School of Interdisciplinary and Graduate Studies, 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 School of Interdisciplinary and Graduate Studies 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 (now The School of Interdisciplinary and Graduate Studies) 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 School of Interdisciplinary and Graduate Studies 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 School of Interdisciplinary and Graduate Studies 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 School of Interdisciplinary and Graduate Studies 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 School of Interdisciplinary and Graduate Studies 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 student 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 School of Interdisciplinary and Graduate Studies, and they are urged to participate and become involved in the administration of the School of Interdisciplinary and Graduate Studies 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.

Application to Graduate Studies at the University of Louisville

Application to Graduate Studies at the University of Louisville 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.

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.

Educational Leadership and
Organizational Development

Doctor of Philosophy – Ph.D.

Anatomical Sciences and Neurobiology
Applied and Industrial Mathematics
Applied Sociology
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
Physiology and Biophysics
Public Health Sciences
Social Work
Urban and Public Affairs

Master of Accountancy – M.A.C.

Master of Arts – M.A.

Anthropology
Art (Creative) and Art History
Bioethics and Medical Humanities
(Interdisciplinary)
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
(Interdisciplinary)
Early Elementary Education
Health and Physical Education
Middle School Education
Middle School Education - Alternative
Certification
Music Education
Secondary Education
Secondary Education - Alternative
Certification
Special Education, Specialization in
Moderate/Severe Disabilities
Special Education, Specialization in
Learning and Behavior Disorders

Master of Business Administration – M.B.A.

Master of Education – M.Ed.

Counseling and Personnel Services
Early Elementary Education (Admission
to this program will end in Spring 2010.
This program will be replaced by the M.Ed.
in Teacher Leadership beginning Summer
2010.)
Educational Administration
Community Health Education
Instructional Technology
Middle School Education (Admission to
this program will end in Spring 2010. This
program will be replaced by the M.Ed. in
Teacher Leadership beginning Summer
2010.)
Reading Education
Secondary Education (Admission to this
program will end in Spring 2010. This
program will be replaced by the M.Ed. in
Teacher Leadership beginning Summer
2010.)
Special Education
Special Education, Concentration in
Assistive Technology
Special Education, Concentration in
Autism
Special Education, Concentration in
Learning and Behavior Disorders

Special Education, Concentration in
Moderate and Severe Disabilities
Special Education, Concentration in
Orientation and Mobility
Special Education, Concentration in
Visual Impairment
Teacher Leadership

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 Sciences and Neurobiology
Applied Geography
Biochemistry and Molecular Biology
Biology
Biostatistics: Decision Science
Chemical Engineering
Chemistry
Civil Engineering
Communicative Disorders
Computer Science
Electrical Engineering
Epidemiology
Exercise Physiology
Geography (See Applied Geography)
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

Graduate Certificate Programs

African American Theatre
Asian Studies
Clinical Investigative Sciences
Data Mining
Environmental Engineering
Health Professions Education
Instructional Leadership
Latin American and Latino Studies
Logistics and Distribution
Marriage and Family Therapy - Post
Master's (Program Suspended as of Fall
2011 – not accepting new applicants)
Medieval and Renaissance Studies
Network and Information Security
Pan-African Studies
Police Executive Leadership
Development
Public History
Real Estate Development
Translation
Women's and Gender Studies

Dual Degree Programs

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 Arts in Art (Creative) and Art History (Concentration in Critical and Curatorial Studies) (M.P.A./M.A.)
 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.)
 Combined Master of Urban Planning and Juris Doctor (M.U.P./J.D.)

Professional Degree Programs

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

Rank I Programs for Certified Teachers

Elementary Education
 Instructional Leadership
 Middle Grades Education
 Secondary Education
 Special Education

Application Requirements for All Graduate Programs

- Application for graduate admission
- Application fee
- Official transcript(s) from all previous colleges and universities attended
- Letters of recommendation (at least 2)
- Standardized Test Scores (check program requirements)

Some programs require additional materials, such as a personal statement, writing sample, etc. (consult specific program requirements in the graduate catalog).

Application for Admission

Apply online at graduate.louisville.edu/apply

A paper application is also available from the **School of Interdisciplinary and Graduate Studies** (to request an application be mailed, call 502-852-3101).

Applications and credentials should be sent to the Office of Graduate 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; some programs may have different deadlines and may require additional credentials. Applicants should consult the pertinent program section of this catalog or check directly with the program 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 Office of Graduate Admissions 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). As of January 1, 2012, the application fee will be \$60.00.

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. Be sure to include applicant's full name and birth date on the check.

Exceptions: Applicants who were accepted and enrolled previously in a graduate program at the University of Louisville, and who have not attended another college or university since enrollment at University of Louisville, will pay a \$30.00 processing fee. Students on any type of public assistance may be exempt from the application fee and may request an application fee waiver with appropriate documentation.

Applications will not be processed until the application fee is received (if one is required). Transcripts Official transcripts showing all degrees awarded and all undergraduate and graduate work completed at every college/university previously attended must be furnished by the degree-seeking applicant. 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 such as World Education Services (www.wes.org) or Educational Credential Evaluators (www.ece.org).

Unofficial or faxed copies of transcripts will not be accepted.

Test Scores

The Graduate Record Exam (GRE) is required for admission to most programs and for consideration for most fellowship and scholarship awards. 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:

**University of Louisville
Office of Graduate Admissions
105 Houchens Bldg
Louisville, Kentucky, 40292**

The University of Louisville institution code for score reporting is 1838. The Subject Test Section may be required by some graduate programs. The applicant should consult the specific graduate program requirements in this catalog.

Letters of Recommendation A minimum of two letters of recommendation are required; however some graduate programs require more. Letters should 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@louisville.edu or by regular mail.

International Students

All international students shall comply with regulations of the U.S. Department of Immigrations and Customs, its Student and Exchange Visitor Program and all related policies of the University of Louisville International Center.

All international students must be registered with the University of Louisville International Center and must present evidence of financial resources that are adequate to support their educational and living expenses in the United States for the duration of their studies.

Documentation showing that a University Fellowship or Graduate Assistantship has been awarded is normally considered evidence of adequate financial resources. International students for whom English is not their primary language must show English language proficiency by 1) demonstration of level of proficiency, specified by the program, on the TOEFL examination (www.toefl.org), or 2) demonstration of an accredited degree awarded by an acceptable institution which uses English as the primary language of instruction, or 3) by successful completion of the exit examination

for the advanced level of the Intensive English as a Second Language (IESL) Program at the University of Louisville. Acceptance to the IESL Program does not constitute acceptance to a graduate program.

For information and application forms, write to:

**University of Louisville
Intensive English as a Second Language
(IESL)**

Louisville, Kentucky 40292, U.S.A.

<http://louisville.edu/english/iesl/>

Applicants who have not demonstrated proficiency on the 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.

To serve as a Graduate Teaching Assistant, students whose native language is not English must present an acceptable score on the Test of Spoken English (TSE) or an IESL-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.

Information about the teaching competency demonstration may be obtained at <http://louisville.edu/english/iesl/GTA/international-graduate-teaching-assistants.html>.

International student services and programs are organized and administered by the International Student and Scholar Services (ISSS) staff, located in the International Center. The Office serves as an administrative, advising, and programming unit for all international students at the University of Louisville. The staff is trained to assist international students solve problems, handle matters with immigration, and answer general questions about life in Louisville or in the United States.

Please refer to the International Center web page at: <http://louisville.edu/internationalcenter/>.

Admissions

Upon receipt of the application for graduate studies, application fee and credentials, the graduate program will evaluate the application package and specify the admission status and any conditions of admission. The official admission letter will come from the dean of the enrollment unit or the dean's designee.

Degree status – good standing: In order for a student to be recommended for admission without conditions to degree status in good standing, all admission credentials must have been received and evaluated. The applicant must have earned a minimum grade-point average as specified by the enrollment unit. Each applicant should consult the specific graduate program descriptions in 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 whose application materials are incomplete (usually missing required credentials or letters), but who have submitted the application form and application fee. 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 graduate programs allow admission on a provisional basis. A student admitted on a provisional basis has one semester to furnish any credentials missing at the time of admission.

Degree status - special conditions: This status is intended for students whose applications are complete, but whose academic background is 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 graduate program.

Degree status - provisional/special conditions: An applicant who has both an incomplete application 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 the admitting graduate program, as well as one semester to furnish any credentials missing at the time of admission.

Additional Considerations for Admission to Degree Status

A student admitted with an undergraduate grade point standing of less than the minimum of the enrollment unit may be subject to program limitations on the number of hours in which he/she may enroll for each semester. Students 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 by a program to graduate study. Under unusual circumstances, programs that wish to admit students who do not meet this standard must submit a variance request to the Vice Provost for Graduate Affairs.

Non-degree status

Applicants who do not desire to seek an advanced degree but wish to take graduate course work may be permitted to enroll in non-degree status. Please note that not all programs will admit students to non-degree status. Application credentials must include the application form, application fee and an official transcript showing the award of a baccalaureate degree. No more than nine hours of course work taken in a non-degree status may be applied to a graduate degree program with departmental approval, and no more than fifteen hours may be accumulated while in non-degree status.

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 with the approval of the graduate program director or department chair. The visiting student is responsible for having the home institution provide a letter certifying that the student is in good standing. A graduate application is

required and transcripts may also be required by some departments.

University of Louisville graduate students who attend another college or university as visiting students must have the permission of their department chair, program director or major advisor. The guidelines for the Transfer of Credit stated in the graduate catalog apply to all credits earned as a visiting student. Visiting student status may be granted only to a student who is in good standing.

New Graduate Student Information

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 computerized 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 School of Interdisciplinary and Graduate Studies 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 School of Interdisciplinary and Graduate Studies 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 https://paprodic.louisville.edu/psp/paprod/EMPL OYEE/HRMS/c/ESTABLISH_COURSES.CATALOG_SEARCH.GBL.

Academic Policies, Procedures and Requirements

The general policies, procedures and requirements for advanced degrees are stated below; however, each program has specific degree requirements. These specific requirements are detailed in the program descriptions that follow this section. These requirements must be consulted so that the graduate student can 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 a variance is confirmed in writing by the Vice Provost for Graduate Affairs, in consultation with the Graduate Council.

Registration

The University of Louisville uses an on-line web registration system. The schedule of courses for each term may be reviewed at <http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>. Students must first contact their graduate advisor or graduate program director to discuss course selections. Students in good standing and admitted without conditions may proceed with the registration process. If, however, a student has been admitted with conditions, or is in probationary status, the student must contact the graduate program director regarding the implications of the admission status.

Full-Time Study

1. Full-time study is defined as enrollment in:
2. Nine credit hours during the Fall semester, OR
3. Nine credit hours during the Spring semester, OR
4. Six credit hours during the Summer semester, OR
5. In degree candidacy status.

Full-Time Study for University Fellows and Graduate Assistants

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

Continuous Enrollment

Continuous enrollment is defined as being registered in both Fall and Spring if registering for course work. If a student has been admitted to either masters or doctoral degree candidacy, continuous enrollment in candidacy status is required for the Fall, Spring and Summer terms (only one term of registration is required in summer terms). Students must be enrolled during the semester in which they wish to graduate.

Course Loads

Normally, the maximum number of hours that may be taken in a regular semester is 12. The maximum number of hours that may be taken in the Summer session (both terms) is 12, including research hours.

Overloads

A student who wishes to enroll in more than the maximum number of hours must petition the unit dean to obtain permission.

Auditing Courses

Auditing at the graduate-level is available only to students who are enrolled in a graduate program. A student who wishes to audit a course must obtain permission from the course instructor and the director of the program in which the student is enrolled using the proper form provided by the Office of the Registrar. Auditing a course will not satisfy a prerequisite for a graduate course or a degree requirement.

Transfer of Credit

Earned graduate credit may be transferred from accredited institutions that offer advanced degrees. The number of semester hours transferable, upon request, is six. Up to six additional transfer hours may be petitioned, provided that these additional hours are not credits 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.

Course work taken more than three years prior to the student's application to a graduate program will not normally be considered for transfer; however, such requests will be reviewed by the Vice Provost for Graduate Affairs upon recommendation by the department chair and the unit dean.

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 director of the graduate program in which the student is seeking additional graduate work. Six hours may be transferred from a previously earned master's degree toward

a doctoral degree or a second master's degree, subject to the approval of the degree program and the unit dean. 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 grade point average.

Courses in which grades of "P" were earned must have the approval of the unit dean in order to be transferred.

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 department chair and the approval of the unit dean.

Satisfactory Progress

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director. Based on the request of the graduate program, the unit dean will consider the student for readmission.

Satisfactory progress also requires 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 the student's termination from the program.

Degree Candidacy

Students enter Degree Candidacy upon completion of all course work, qualifying exams, required research credit hours and other co-curricular requirements. Students who are enrolled in degree candidacy are considered full-time students. While in Degree Candidacy, it is

the responsibility of both student and mentor to maintain contact to ensure continuous progress towards the completion of the degree. In some cases, a master's student may complete the requirements of a degree program without the need to enter Degree Candidacy.

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 all other degree requirements are met, students may enroll in Degree Candidacy in order to meet the requirement that all students must be enrolled during the semester in which they wish to graduate.

Enrollment in Degree Candidacy requires the approval of the unit dean. Units must inform the Vice Provost of Graduate Affairs when students have met all requirements and are ready to enter Degree Candidacy. 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 unit dean and the Vice Provost of Graduate Affairs have 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 enrollment in Degree Candidacy. In order to restore enrollment in Degree Candidacy, the student must receive approval of his/her graduate program director and that of the unit dean. To reestablish enrollment in Degree Candidacy, the student will be required to pay the candidacy fee for each semester during which candidacy was voided and/or not maintained.

Time Limitations for Degree-Seekers

Master's students must complete the degree requirements within six (6) years of beginning the program of study. Doctoral students have four (4) years after passing the qualifying exams and entering Degree Candidacy to finish all other degree requirements. While granting an extension of time is rare, requests for extension of time must be submitted in writing to the graduate program director of the student's department. Once reviewed by the department, the request is forwarded to the unit dean, and then to the Vice Provost for Graduate Affairs with supporting documentation for review. Students must be considered in good standing for the request to be considered.

Academic Standing

Good Standing

A graduate student is in good standing when his/her graduate grade point average is 3.0 on a 4-point scale or higher. A student must be in good standing in order to receive a degree.

Academic Probation

Any student with a point standing below 3.0 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 graduate program, the unit dean may approve continuation beyond a single semester.

Academic Dishonesty

Plagiarism, cheating and other forms of academic dishonesty are serious violations of academic conduct and may result in permanent dismissal. Students are expected to be familiar with the various forms of academic dishonesty as explained in the [Code of Student Rights and Responsibilities](#). A plea of ignorance is not a defense against the charge of academic dishonesty.

Policies Governing Graduate Courses

Graduate Students Taking 500-Level Courses

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 complete additional requirements (such as additional written work or oral presentations) that are more stringent than those required of undergraduates. These additional requirements for graduate credit must be specified in the course syllabi. The student's completion of graduate requirements must be verified in writing by the instructor if graduate credit is requested after the course is completed.

Not all 500-level courses are available for graduate credit. The student is advised to consult his/her department for information on any particular 500-level course.

Undergraduates Taking Graduate Courses

An undergraduate student with special permission of the unit dean and the instructor in the course may register in a 600-level graduate course. Such courses will satisfy requirements toward the undergraduate degree and therefore cannot be used for subsequent graduate credit. The student must be registered for at least one undergraduate course if requesting to enroll in a graduate course.

In rare cases, undergraduate students at the University of Louisville who are within six semester hours of completing the baccalaureate requirements and who are enrolled in a graduate course may obtain graduate credit. This can only occur if the course has 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 unit dean are obtained. Exceptions are those students enrolled in an accelerated Bachelor/Master's program.

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 program faculty and unit dean will monitor this Graduate GPA.

Grading System

The School of Interdisciplinary and Graduate Studies (SIGS) 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 program 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 of SIGS 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. Units or programs may choose not to 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 unit 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 or dissertation 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 program has the discretion of extending a Pass/Fail option to any or all of its graduate students and graduate courses.

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

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 unit 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.

Student Leave of Absence

A student who has been accepted into a graduate program is expected to remain in continuous enrollment, either full-time or part-time, throughout his/her matriculation. Students who fail to enroll for a period of more than 12 months will be considered to have withdrawn from the program. Once a student enters candidacy, he/she must maintain continuous candidacy (fall, spring, summer) and pay the appropriate candidacy fee.

However, if circumstances arise that may cause an interruption in graduate study, a student may apply for a leave of absence by requesting such a leave from the unit dean. A requested leave

cannot exceed one year; however, under extreme circumstances, a second, subsequent request may be granted by the Vice Provost for Graduate Affairs. Students must be considered in good standing for the request to be considered.

A student may not be enrolled in the university during a leave of absence. A student on a leave of absence is not required to pay tuition, fees, or candidacy fees, but is not entitled to any services from the university during the leave, including mentorship from faculty.

If a leave of absence is granted to a doctoral student in candidacy, the time limitation of completing all other requirements within four years after passing the qualifying examination shall be extended by the same time as the length of the leave. However, an appeal for an extension of this time limit, specifying the exact circumstances, can be included in the request for a leave or submitted in a subsequent letter at the time of re-enrolling to the Vice Provost for Graduate Affairs addressing this particular matter.

No degree will be granted to a student on an official leave of absence. The student must re-enroll in the next term following the conclusion of the leave and be enrolled in the term in which a degree is granted. A leave of absence does not relieve a student from adherence to policies regarding residency and candidacy (except that the time limit for candidacy may be extended, as indicated in the previous paragraph).

Degree Requirements

Requirements for the Doctor of Philosophy Degree Special Considerations for Doctoral Studies

In addition to the particular rules of the various graduate programs 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. Accordingly, no specific minimum number of credit hours has been established for Ph.D. programs. However, ordinarily the equivalent of three years of full-time graduate study is a minimum.

The doctoral degree is not awarded solely upon completion of a curriculum of 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 graduate program to begin work toward this degree. Doctoral degree programs typically have more restrictive criteria for admission than those for admission to a master's degree program. The prospective student should consult in person with the graduate program 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 both a strong foundation in the field and the development of a specialization. The student's program will consist of a major field and such minor fields as the major professor, the student, the program faculty, and department chair may agree upon. This program may be modified at any time upon the recommendation of the major professor and approval of the department chair and the dean of the unit.

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.

Residency for Doctoral Students

To ensure that doctoral students have the opportunity to participate fully 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 (except as indicated

below). The two-year requirement allows students to build mentoring relationships with faculty members and accrue classroom and research experience over time, while the full-time residency requirement is designed to provide students with at least one year of immersive, intensive study.

According to the Council of Graduate Schools, residency advantages students in the following ways: ". . . fluency in the language and vocabulary of the [field of] specialization is enhanced by frequent and close association with other students in the same field; competence in the field is enhanced by close familiarity with the university's libraries; valuable experience is gained by attending and participating in both formal and informal seminars, colloquia, discussions led by specialists visiting from other campuses, laboratories, or governmental research groups; and thesis or dissertation research is facilitated by frequent consultation with the advisor."

Full-time residency requires that a student be registered for a minimum of 18 credit hours within a twelve-month period. Registration for candidacy cannot be used to meet this requirement.

Alternative Residency Track

All doctoral students must meet the two-year enrollment requirement. Students enrolled in part-time doctoral work may substitute four terms of continuous enrollment (summer terms can be used to meet this requirement) for the full-time residency requirement.

Programs that allow part-time and/or off-site participation must provide a rationale to the Dean of the School of Interdisciplinary and Graduate Studies, indicating how they ensure that such students have access to an intensive and immersive educational experience.

Foreign Language Requirement

Foreign language proficiency is no longer a general requirement for graduate degrees. However, certain graduate programs 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 programs 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 of the program. It is the student's responsibility to be aware of the program's policy on the consequences in the case 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 Vice Provost for Graduate Affairs 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 shall be read by a reading committee, chaired by the major professor, and appointed by the unit dean upon the recommendation of the chair of the major department. This committee shall consist of not fewer than four members, and must include one representative from outside the program. All members must be qualified to serve on the committee as specified by their Unit's Guidelines for Graduate Faculty. The dissertation must be approved by the committee and the chair of the major professor's department.

If a student is enrolled in a doctoral program in Interdisciplinary Studies, the dissertation shall be approved by the chair of the major professor's department, and reading committees shall be appointed by the Dean of the School of Interdisciplinary and Graduate Studies upon recommendation of the major professor.

The dissertation is to be submitted in completed form to the chair of the major department, or to the chair of the major professor's department in the case of a student enrolled in a doctoral program in Interdisciplinary Studies, 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.

One unbound copy of the dissertation, signed by dissertation committee, must be deposited with the School of Interdisciplinary and Graduate Studies 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 are available on the website of the School of Interdisciplinary and Graduate Studies. Alternate standards must be approved

by the Vice Provost for Graduate Affairs if in conflict with this standard.

Final Oral Examination

The final oral 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 unit dean upon recommendation of the chair of the major department. The Committee will consist of four or more members representing the major department and at least one allied program. The major professor and the remaining Committee members must be qualified to serve on those capacities as specified by the unit's guidelines for graduate faculty. The examination committee for doctoral students in Interdisciplinary Studies will be approved by the Dean of the School of Interdisciplinary and Graduate Studies upon recommendation of the major professor.

The Dean of the School of Interdisciplinary and Graduate Studies 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.

Residency for Masters Students

Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the masters degree.

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 chair and the approval of the Vice Provost for Graduate Affairs.

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 on the web site of the School of Interdisciplinary and Graduate Studies).

Acceptance of the thesis shall be at the discretion of a special reading committee composed of the major professor and two other committee members. One member shall be from outside the program, and all three members must be qualified to serve on those capacities as specified by their Unit's Guidelines for Graduate Faculty. The committee shall be approved by the unit dean upon recommendation of the chair of the major department. 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 School of Interdisciplinary and Graduate Studies (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 chair of the department.

Final Oral Examination

The final oral examination shall be conducted by a committee of Graduate Faculty members recommended by the chair of the major department and appointed by the unit dean.

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 graduate program, 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.

For master's students enrolled in Interdisciplinary Studies, a member of the graduate faculty must agree to serve as the major professor to guide students in curriculum selection and thesis work. The chair of the major

professor's department will recommend to the Dean of the School of Interdisciplinary and Graduate Studies appointment of reading and examination committees.

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: <http://www.louisville.edu/commencement/>

Each student who is required to submit a dissertation or thesis to fulfill degree requirements must follow the guidelines for The Preparation of a Dissertation and The Preparation of a Thesis, which are located on the website of the School of Interdisciplinary and Graduate Studies. Prior to submission of the final copy of a dissertation/thesis, students must contact the School of Interdisciplinary and Graduate Studies 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 School of Interdisciplinary and Graduate Studies. 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 Awards and Honors

Student Awards: Programs may nominate graduate students for the following awards given at December and May commencement ceremonies. Those individuals who received their degrees in August must be nominated for consideration during the December commencement program.

Graduate Dean's Citation: Graduate Dean's Citations are awarded at each commencement to both MA and PhD students recommended by their departments in recognition of superior accomplishment (e.g., publications, teaching excellence, and 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 Vice Provost for Graduate Affairs for the May and December commencements.

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 will carry the graduate school banner at commencement ceremonies, and will also be a candidate for student commencement speaker. Thus, to be considered for the Stevenson Award, the student must be available for the ceremony.

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 to the School of Interdisciplinary and Graduate Studies for consideration. If one is deemed to be of special merit, a committee may recommend that its author be awarded the Houchens Prize. 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.

Faculty Awards: Department chairs and directors of graduate programs and former graduate students and those graduating at the May ceremony may nominate a faculty mentor for the following awards given at the May ceremony:

Outstanding Mentor of a Doctoral Student Outstanding Mentor of a Masters Student

Both awards honor faculty members who are deemed to excel in one-on-one mentoring of master or doctoral students to the completion of their degrees; in other words, these awards are given to faculty who successfully direct theses or dissertations, supervise students in labs, oversee students' internships or final professional papers.

Graduate Student Academic Grievance Procedure

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).

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:

1. The student should first discuss the matter with the person involved and attempt to resolve the grievance through informal discussion.
2. If there is no resolution, the student should discuss the matter with that person's supervisor or the person to whom such person reports, who should attempt to mediate a resolution.
3. 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.
4. If the matter has not been satisfactorily resolved through the informal process, the student shall submit a written statement of the grievance to the Unit Academic Grievance Committee through the Office of the Dean. The statement shall contain:
 - a. A brief narrative of the condition giving rise to the grievance;
 - b. designation of the parties involved; and
 - c. statement of the remedy requested.

Section 3: Committee Action. Upon receipt of the written statement, the Unit Academic Grievance Committee, or its representatives, shall:

1. 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.

2. 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.

3. Notify the grievant and the respondent of the right to challenge committee members for cause, and request early notification of challenge(s) to expedite the grievance procedure. Included in this notification will be a list of the names of all current, regular committee members.

4. Meet within twenty working days after receiving the written statement of any grievance and recommend to the dean of the unit whether sufficient grounds exist to accept a case for hearing. The committee shall hear the case when the dean concurs. The committee shall notify, in writing, all persons directly involved as to the reasons for its recommendation.

5. The action of the grievance committee as to whether to grant a hearing when accepted by the dean of the unit shall be final and binding on all parties except when subject to the condition of appeal.

6. 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 days prior to the hearing date (which shall be within 30 working days of receipt of the written grievance).

7. 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 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.

8. Maintain confidentiality throughout the entire grievance process. 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 Unit Academic Grievance Committee shall be conducted confidentially in the following manner:

1. 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.

2. 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.

3. Any committee member may question any of the participants at the hearing.

4. The grievant will present his or her statements and/or witnesses to the committee.

5. The respondent will have the opportunity to question the grievant(s) and the witnesses about their statements.

6. The respondent will present his or her statements and/or witnesses to the committee.

7. The grievant will have the opportunity to question the respondent(s) about their statements.

8. 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.

9. The committee will meet in closed session to decide upon its recommendation(s) to the dean.

10. The committee shall submit its report with recommendation(s) and reasons for the recommendation(s), to the grievant(s), the respondent(s), and the dean. If the grievance directly involves the dean, the report and recommendation(s) of the Unit Academic

Grievance Committee shall be referred for decision to the appropriate academic vice president (now referred to as the University Provost).

11. 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.

12. 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 shall approve or reject the committee's recommendation(s) within 28 days after receiving it (them). If the decision of the dean is not in accord with the committee's recommendation(s), the dean shall state the reasons for that decision, in writing, to all persons directly involved in the grievance and to the committee. The dean 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 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 21 days from the date of the final decision of the dean if the dean's decision does not concur with the recommendation of the grievance committee.

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@louisville.edu) is the preferred method of contact.

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:
<http://louisville.edu/library/archives/>.

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 (502)852-6585. Service for faculty and staff are available through the Faculty/Staff Assistance Program. For further information call (502)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
Phone: 502-852-6938**

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

**Director
Affirmative Action Office
Personnel Services Building
Phone: 502-852-6538**

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 Affirmative 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.

Code of Student Conduct

Code of Student Conduct

The Code of Student Conduct is the University's policy regarding non-academic 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 on the worldwide web <http://louisville.edu/dos/students/code-of-student-conduct.html> and through the Dean of Students Office, Student Activities Center, Room W301. If you have any questions or would like information pertaining to reporting an alleged incident of non-academic misconduct, please contact the Dean of Students Office 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

- b. 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.
 - h. 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

1. 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.
2. 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.
3. Preference may be given to programs designed for audiences consisting primarily of members of the University community.

4. Allocation of space shall be made based on priority of requests and the demonstrated needs of the organization.
5. Charges may be imposed for any unusual costs for use of facilities.
6. Physical abuse of assigned facilities may result in reasonable limitations on future allocation of space to offending parties and will require restitution of damages.
7. 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

1. 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.
2. Groups of a continuing nature must institute proceedings for formal recognition if they are to receive benefits from the University.
3. 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.
4. 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.
5. 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.
6. 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.

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 website: 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: 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 or visit <http://louisville.edu/internationalcenter/>

Residence Facilities

For complete information regarding accommodations and for application forms inquiries should be addressed to:

**University of Louisville
Residence Administration
University of Louisville
Louisville, KY 40292
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

Enrollment Management, Undergraduate Admissions, Orientation, Testing Services, Financial Aid, Registrar, 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: ulink.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.louisville.edu/financialaid

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](#).

**University of Louisville
Student Financial Aid Office
Louisville, KY 40292**

Website: louisville.edu/financialaid

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.louisville.edu/financialaid 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 fulltime 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 subsidized 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 assistant-ship.

Minority Student Assistantships/ Scholarships

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

(f) 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

(a) 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.

(c) 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.

(d) 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 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:

- (a) Stationed in Kentucky for the purpose of enrollment at an institution; or
- (b) On temporary assignment of less than one (1) year.
- (c) 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 person holding a permanent residency visa or classified as a political refugee shall establish domicile and residency in the same manner as another person.

- (a) 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) 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.

- (a) 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.

- (b) 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) 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.

- (a) 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) Filing of Kentucky resident income tax return for the calendar year preceding the date of application for a change in residency status; or

(d) Payment of Kentucky withholding taxes while employed during the calendar year for which a change in classification is sought;

(e) Full-time employment of at least one (1) year while living in Kentucky;

(f) 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;

(g) 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;

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

(i) Payment of real property taxes in Kentucky;

(j) 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;

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

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

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

(n) 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) 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.

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

(b) 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 Post-secondary 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 Enrollment Management
Houchens Building, Room 160
University of Louisville
Louisville, KY 40292
Phone (502) 852-5813/6528
Fax (502) 852-3146

Institutional Accreditation and Membership

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 - Council on Academic Accreditation in Audiology and Speech-Language Pathology

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

Theatre Arts - National Association of Schools and Theatre (NAST)

Urban Planning - American Planning Association (Master's degree)

Other Accreditation

European MBA (Germany) - Foundation for International Business Administration Accreditation (FIBAA)

Fort Knox Education Center - Military Installation Education Review (2009)

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)

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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.

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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

**Terence Allan Weigel
(Senior)**
Ph.D., University of Kentucky
Civil and Environmental
Engineering

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

Paul A. Winter (Senior)

*Ph.D., The Ohio State
University*

Leadership, Foundations and
Human Resource Education

Julius Pan Wong (Senior)

*Ph.D., Oklahoma State
University*

Mechanical Engineering

Thom J. Zimmerman

(Senior)

M.D., University of Illinois

Ph.D., University of Florida
Ophthalmology and Visual
Sciences

Jonathan R. Ziskind

(Senior)

Ph.D., Columbia University

History

Graduate Certificate in African American Theatre

Major: GCAAT

Degree Awarded: CERT

Unit: GA

Program Webpage: <http://louisville.edu/a-s/ta/AATPcertificate.html>

Program Information

The first (and only) graduate program in African American Theatre in the region

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 credits)	
Independent Study (3 credits)	

Minimum 15 credits

Departmental Faculty

Russell J. Vandenbroucke
Professor and 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

Master of Arts in Anthropology

Major: ANTH

Degree Awarded: MA

Unit: GA

Program Webpage: <http://louisville.edu/anthropology/>

Program Information

The **MA in anthropology at the University of Louisville** is designed to enhance student knowledge of and skills in dealing with contemporary social issues facing a globalizing community and world from an anthropological perspective and to be able to locate these in the long progression of human history and within the body of social science theory. We expect our graduates to enter professions as skilled administrators, researchers, and leaders. Although students may focus heavily on evolutionary anthropology, archaeology, or cultural anthropology, this is a general, comprehensive masters program.

Anthropology is the queen of multidisciplinary work, and we see our students taking courses from and pursuing collaborations with colleagues in Humanities, Sociology, History, Women and Gender Studies, Pan-African Studies, Political Science, Art History, Biology, and the Kent School of Social

Work. Students with little or no academic background in anthropology will be required to take some preparatory courses determined in consultation with the Anthropology Graduate Coordinator.

Admission criteria include an undergraduate GPA of minimally 3.0 from an accredited college or university, a combined score of at least 1000 on the GRE verbal and quantitative sections.

Curriculum

The **Master of Arts in Anthropology** is a 30-hour program. It comprises 24 hours of course work at the graduate level plus 6 hours of thesis or an internship. At least 18 of the 24 hours must be in courses at the 600 level.

Students may enroll in 6 credit hours in another department; students may enroll in 500-level courses in another department with the permission of the Anthropology Graduate Coordinator.

Courses taken at the 500 or 600 level as an undergraduate may be applied toward the M.A. in Anthropology on the condition that the student earned a grade of B or higher in the course. Graduate Coordinator approval is required. Coursework earned as undergraduate and used to meet the requirements for the undergraduate degree may not be used for graduate credit.

Degree Options

The Master of Arts in Anthropology requires 30 hours of academic work at the graduate level. All students enrolled in the M.A. program are required to complete one of the following options:

Thesis (24 seminar hours plus 6 credit hours of thesis)

Core Seminars	9 hours
Topical Electives	15 hours
Thesis	6 hours
	30 hours

Non-Thesis (24 seminar hours plus 6 credit hours of internship)

Core Seminars	9 hours
Topical Electives	15 hours
Thesis	6 hours
	30 hours

Course Offerings

Core Seminars:

608 Social and Cultural Theory
612 Contemporary Issues in Anthropology

Students must select one of the following courses:

609 Research Design: Archaeology
610 Research Design: Biological Anthropology
611 Research Design: Socio-Cultural Anthropology

Departmental Faculty

Jennie Burnet, Ph.D.

Assistant Professor

Amanda Coleman

Lecturer

Fabian Crespo, Ph.D.

Assistant Professor

Phil DiBlasi, M.S.

Staff Archaeologist

John Hale, Ph.D.

Professor (Adjunct)

Anita Harris, Ph.D.

Assistant Professor

Jonathan Haws, Ph.D.

Associate Professor

Yvonne Jones, Ph.D.

Associate Professor

Lisa Markowitz, Ph.D.

Associate Professor and

Chair

Kelly O'Connor, Ph.D.

Senior Lecturer

Shawn Parkhurst, Ph.D.

Associate Professor

Frances Purifoy, Ph.D.

Senior Lecturer

Julie Peteet, Ph.D.

Professor

Christopher Tillquist, Ph.D.

*Associate Professor and
Director of Graduate Studies*

Jeneen Wiche, M.A.

Lecturer

Jianhua Zhao, Ph.D.

Assistant Professor

Emeritus Faculty

Frederic Hicks, Ph.D.

Professor Emeritus

Russell Reid, Ph.D.

Professor Emeritus

Edwin Segal, Ph.D.

Professor Emeritus

Master of Science in Applied Geography

Major: AGEO

Degree Awarded: MS

Unit: GA

Program Webpage: <http://louisville.edu/geography/>

Program Information

M.S. in Applied Geography is designed to provide students with the analytical skills and background knowledge needed to solve real-world problems with geographic dimensions.

Our course offerings and faculty research areas include geographic information systems (GIS), remote sensing, climatology and meteorology, urban and regional studies, quantitative and qualitative methods, medical geography, globalization, glaciology, hydrology and water resources, geomorphology, glaciology, transportation and location analysis, border security, and land use/land cover change.

The department has state-of-the-art computer facilities with GIS and remote sensing software.

A thesis is required of all M.S. students in the program.

Program Admission

Students from geography and related fields are encouraged to apply. All applicants must have completed a B.A. or B.S. with a cumulative grade point average of 3.0 and a combined score of at least 1000 on the GRE. Applicants must submit two (2) letters of recommendation addressing candidate skills and readiness for graduate study, as well as a letter of intent outlining educational goals.

All materials must be submitted to the School of Interdisciplinary and Graduate Studies: <http://graduate.louisville.edu/admissions/application.html>

Curriculum

The **M.S. in Applied Geography** is a 36-hour program with a required thesis.

It includes 15 hours of foundation courses, 15 hours of electives, and a six-hour thesis. Eighteen hours of coursework must be at the 600 level. Up to six hours of 500- or 600-level coursework can be taken from other departments. Students may attend either full- or part-time.

Geographic information systems (GIS) proficiency is required for all students. If not attained at the undergraduate level or in a job-related environment, students will be required to take GEOG 558, in addition to the above requirements. After the second semester, each student will choose a thesis advisor and two other faculty members for a thesis committee.

Required Foundation Courses – 15 hours

GEOG 600 History and Philosophy of Geography
GEOG 640 Approaches and Methods in Applied Geography
GEOG 641 Research Design and Proposal Development
GEOG 656 Advanced Quantitative Methods
GEOG 660 Qualitative Methods
Electives at 500 or 600 level – 15 hours
Thesis – 6 hours

Departmental Faculty

Keith Mountain
Associate Professor
Chair

Jafar Hadizadeh
Professor

Carol Hanchette
Associate Professor

David Howarth
Professor

Clara Leuthart
Associate Professor

Jessica McCarty
Assistant Professor

Wei Song
Associate Professor

Margath Walker
Assistant Professor

Haifeng (Charlie) Zhang
Assistant Professor

Emeritus Faculty

John Anderson
Emeritus

Don Bierman
Emeritus

Terra Clark
Emeritus

James Conkin
Emeritus

Lal Gauri
Emeritus

George Lager
Emeritus

Master of Arts in Art (Creative) and Art History

Major: ART

Degree Awarded: MA

Unit: GA

Program Webpage: <http://art.louisville.edu>

Program Information

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

1. Application to Graduate School
2. Application Fee

3. Transcripts of all colleges attended (undergraduate or graduate)
4. Two letters of recommendation specific to the program
5. 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 (500 or 600 level) (<i>with approval of advisor</i>)	3
Fine Arts Elective (500 or 600 level) (<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 (ARTH 643/644) (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 547/647: Museum Methods I; ARTH 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)

Concentration

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 masters 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

Departmental Faculty

Ying Kit Chan

Chair and Professor, Studio Art

Lida G. Gordon

Professor, Studio Art

James Grubola

Professor, Studio Art

Steven Skaggs

Professor, Studio Art

John Whitesell

Professor, Studio Art

R. Todd Burns

Associate Professor, Studio Art

Mary Carothers

Associate Professor, Studio Art

Mitch Eckert

Associate Professor, Studio Art

Christopher B. Fulton

Associate Professor, Art History

Linda M. Gigante

Associate Professor, Art History

Barbara L. Hanger

Associate Professor, Studio Art

Benjamin Hufbauer

Associate Professor, Art History

Scott Massey

Associate Professor, Studio Art

Gabrielle Mayer

Associate Professor, Studio Art

Mark A. Priest

Associate Professor, Studio Art

Che Rhodes

Associate Professor, Studio Art

Karen Britt

Assistant Professor, Art History

Susan Jarosi

Assistant Professor, Art History

Jongwoo Kim

Assistant Professor, Art History

Delin Lai

Assistant Professor, Art History

John Begley

Adjunct Professor, Curatorial Studies

Peter Morrin

Adjunct Professor, Curatorial Studies

Donald Anderson

Professor Emeritus, Studio Art

Thomas Buser

Professor Emeritus, Art History

Henry Chodkowski, Jr.

Professor Emeritus, Studio Art

Dario A. Covi

Professor Emeritus, Art History

Robert L. Douglas, Sr.

Professor Emeritus, Art History

Jay M. Kloner

Professor Emeritus, Art History

Stephanie J. Maloney

Professor Emerita, Art History

Suzanne Mitchell

Professor Emerita, Studio Art

William D. Morgan

Professor Emeritus, Art History

Doctor of Philosophy in Art History

Major: ARTH

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: <http://art.louisville.edu>

Program Information

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

1. Application to the School of Interdisciplinary and Graduate Studies
2. Application Fee
3. Transcripts of all colleges attended (undergraduate or graduate)
4. Three current, substantive letters of recommendation, appended to the recommendation forms
5. Graduate Record Examination scores (a minimum GRE verbal score of 600 is required by the Art History Program for admission)
6. A statement of purpose (approximately one thousand words in length) that details academic interests, reasons for pursuing a doctoral degree in Art History, and intended field of study
7. A writing sample that can stand as evidence of the applicant's intellectual, investigative, and expository skills
8. International students must meet all criteria, including the TOEFL examination, set forth in the Graduate Catalog
9. 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.
10. 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.
11. 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 the comprehensive exam.
12. 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.
13. Through course work, independent study, and directed readings, each student must prepare her/himself to pass a written comprehensive exam before admission to candidacy. Language requirements must have been met and all course work completed before a student may take the comprehensive exam.
14. 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 Exam (3 credit hours maximum for each).

ARTH 745: Dissertation Research (12 credit hours maximum).

Comprehensive exam (upon completion of coursework and before beginning the dissertation).

Dissertation prospectus

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.

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

Ying Kit Chan

Chair and Professor, Studio Art

Lida G. Gordon

Professor, Studio Art

James Grubola

Professor, Studio Art

Steven Skaggs

Professor, Studio Art

John Whitesell

Professor, Studio Art

R. Todd Burns

Associate Professor, Studio Art

Mary Carothers

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Mitch Eckert

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Christopher B. Fulton

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Linda M. Gigante

Associate Professor, Art History

Barbara L. Hanger

Associate Professor, Studio Art

Benjamin Hufbauer

Associate Professor, Art History

Scott Massey

Associate Professor, Studio Art

Gabrielle Mayer

Associate Professor, Studio Art

Mark A. Priest

Associate Professor, Studio Art

Che Rhodes

Associate Professor, Studio Art

Karen Britt

Assistant Professor, Art History

Susan Jarosi

Assistant Professor, Art History

Jongwoo Kim

Assistant Professor, Art History

Delin Lai

Assistant Professor, Art History

John Begley

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Peter Morrin

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Donald Anderson

Professor Emeritus, Studio Art

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Henry Chodkowski, Jr.

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Dario A. Covi

Professor Emeritus, Art History

Robert L. Douglas, Sr.

Professor Emeritus, Art History

Jay M. Kloner

Professor Emeritus, Art History

Stephanie J. Maloney

Professor Emerita, Art History

Suzanne Mitchell

Professor Emerita, Studio Art

William D. Morgan

Professor Emeritus, Art History

Graduate Certificate in Asian Studies

Major: ASSTCAS

Degree Awarded: CERT

Unit: GA

Program Webpage: <http://louisville.edu/asianstudies/graduate-certificate-in-asian-studies.html>

Program Information

The Graduate Certificate in Asian Studies is a graduate-level interdisciplinary program housed in the College of Arts and Sciences, with Dr. John McLeod of the Department of History as Director. It allows you to learn more about the peoples of China, India, and Japan from the perspectives of art history, geography, history, religious studies, political science, sociology, and theatre arts. The fifteen-hour program may be completed as a “stand alone” program, or in conjunction with other graduate programs, for example the MA in History or Political Science, or the PhD in Art History or Humanities.

You must take 15 credit hours in graduate courses with an Asian emphasis. At least three of the five required courses must be at the 600 level, and the five courses must be drawn from at least three of the following disciplines: Anthropology, Art History, Classical and Modern Languages, Geography, History, Humanities, Political Science, Sociology, Theatre Arts, or Women’s and Gender Studies. A minimum of three credit hours must be in the Division of Humanities (exclusive of language courses), and at least 3 hours must be in the Division of Social Sciences.

To complete the Graduate Certificate, you must demonstrate reading knowledge in one of the following: Chinese, Japanese, or another language designated as an Asian language by the Program Director.

With the approval of the Program Director, an internship in a community or local business may be substituted for three (3) credit hours of classwork. To be eligible for this substitution, the internship must involve work that is primarily connected with Asia or Asian-Americans in some way.

Curriculum

ARTH 531	Studies in Asian Art
HIST 561	U.S. and Vietnam -WR
HIST 584	Women in East Asia
HIST 591	Civilizations of Ancient and Medieval India - WR
HIST 592	Civilizations of Modern India - WR
HIST 598	Nationalism and Modernity in East Asia
SOC 520	Sociology of South Asia
TA 567	Asian Theatre

Departmental Faculty

Allen Furr PhD
Professor, Sociology

Shiping Hua PhD
Professor, Political Science

Delin Lai PhD
Professor, Fine Arts

Yuxin Ma PhD
Professor, History

John McLeod PhD

Professor, History

Patrick Pranke PhD
Professor, Humanities

Wei Song PhD
*Professor, Geography and
Geosciences*

Mary Ann Stenger PhD
Professor, Humanities

Li Zeng PhD

*Professor, Classical and
Modern Languages*

Charles Ziegler PhD
Professor, Political Science

**Jianhua (Andrew) Zhao
PhD**
Professor, Anthropology

Master of Science in Biology

Major: BIOL

Degree Awarded: MS

Unit: GA

Program Webpage: <http://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 (BA-BS/MS) 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 requirements and application requirements can be viewed on the Department of Biology web site at www.louisville.edu/a-s/biology. Questions can be addressed to or further information obtained from the Director of Graduate Studies, Dr. Joseph M. Steffen, at (502) 852-7209 or joe.steffen@louisville.edu.

Curriculum

Requirements for the M.S. degree in Biology and for the Accelerated BA-BS/MS in Biology

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

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

Departmental Faculty

Ronald D. Fell, Chair
Professor
Ronald M. Atlas

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

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

Associate Professor

Awdesh Kalia

Assistant Professor

Jennifer Mansfield-Jones

Assistant Professor

Susanna K. Remold

Assistant Professor

David J. Schultz

Associate Professor

Micah Worley

Assistant Professor

Charles V. Covell, Jr.

Emeritus

William S. Davis

Emeritus

Roger G. Lambert

Emeritus

Varley E. Wiedeman

Emeritus

Doctor of Philosophy in Biology

Major: BIOL

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: <http://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:
 - a. an undergraduate GPA of 3.0 or higher;

- b. 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. A score of at least 6.5 on the IELTS exam is an acceptable alternative to the TOEFL. 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. No formal admission to the program can occur without the preliminary acceptance of a mentor. Faculty contact information is available at <http://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 <http://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.

Graduate Assistantships

Graduate Teaching Assistantships (GTA) are awarded by the Graduate Committee of the Department of Biology to meet the instructional needs of the Department and enhance and broaden the educational experience of doctoral students. All newly admitted students are automatically considered for this type of annual support, which includes a monthly stipend, tuition remission, and health insurance.

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

A small number of the most highly qualified accepted applicants will be nominated by the Department for University Fellowship awards, which carry a monthly stipend, tuition remission and health insurance benefits. These students must meet qualifications set by the Graduate School.

Curriculum

Requirements for the Ph.D. degree in Biology

Foundations in Biology	Hours Total	
One course to be selected by the student's committee from each category:		
1. Biostatistics	4	
2. 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:		
1. Population and Community Ecology	4	
2. Ecosystem Ecology or Behavior	4	16
B. Molecular, Cellular and Developmental (MCD) Biology Focus Area:		
1. 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	
2. 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
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
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
Associate Professor

Awdesh Kalia

Assistant Professor
Jennifer Mansfield-Jones

Assistant Professor
Susanna K. Remold

Assistant Professor
David J. Schultz

Associate Professor
Micah Worley

Assistant 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: MS

Unit: GE

Program Webpage: <http://www.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 catalogue. 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:

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 on a 4.0 scale.

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:

The general requirements as stated in the General Information section of this catalogue.

Completion of course curriculum as described in the section on Candidacy for the Ph.D. degree.

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).

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 MAT 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 MAT (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

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.

Applications will be reviewed by the Graduate Committee of the Chemistry Department and the Secondary MAT Screening Committee, the applicant must be approved by both committees.

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 BA in Chemistry. All graduate coursework must be approved by the student's MAT faculty advisor.

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

All students must submit an application to the College of Education and Human Development (CEHD) MAT 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 MS degree after successful completion of the Research Seminar and other previous requirements

Departmental Faculty

George R. Pack

Professor and 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 and Director of
Graduate Studies*

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

Doctor of Philosophy in Chemistry

Major: CHEM

Degree Awarded: Ph.D.

Unit: GE

Program Webpage: <http://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 catalogue. 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.

4. 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.

5. 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).

6. 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.

7. 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 MS degree will be awarded upon successful completion of the research seminar.

8. Research: Chem 691-692. A research advisor must be selected in the first semester in the graduate program.

Departmental Faculty

George R. Pack
Professor and Chair

Richard P. Baldwin
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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: MA

Unit: GA

Program Webpage: <http://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, one of whom must be outside the Department of Communication. 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)

506 Ethical Problems in Communication	
601 Communication Pro-Seminar (1 hour)	
605 Communication Theory & Practice	13 hours
616 Qualitative Communication Research	
617 Quantitative Methods in Communication	

Area 1: Interactional Communication (One course)

580 Interpersonal Communication	
590 Health Communication	
603 Communication Pedagogy	3 hours
620 Organizational Communication	
625 Personality and Communication	
650 Corporate Communication	
675 Risk Communication	

Area 2: Integrated Communication (One course)

520 Computer-Mediated Communication	
530 Science Communication	3 hours
652 Computer-Mediated Communication in Organizations	
653 Integrated Marketing Communication Campaigns	
654 Public Relations and Crisis Management	

Area 3: Social Advocacy (One course)

540 Public Communication Campaigns	
555 Persuasive Movements	3 hours
610 Problems of Public Discourse	
630 Communication and Multiculturalism	
640 Communication in Social Service	
651 Conflict Management	

Electives: Students may concentrate in an area by taking additional area courses as electives. Electives include 510: Special Topics in Speech; 660: Selected Topics in Mass Media; 690: Special Topics. 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.

9 hours

Thesis (includes oral defense)

698 Thesis	
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Non-Thesis Option

600 Practicum	6 hours
5xx or 6xx elective	

Total 37 hours

Pending approval of the department program coordinator, and approval by the School of Interdisciplinary and Graduate Studies, 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

Mary Ashlock
Michael Cunningham
Lindsay Della
Margaret D'Silva
Stuart Esrock
John Ferré
Karen Freberg

Allan Futrell, Chair
Jennifer Gregg
Director of Graduate Studies
Joy Hart
Greg Leichty
Selene Phillips
Siobhan Smith

Steve Sohn
Robert St. Clair
Kandi Walker
Charles Willard
Shirley Willihnganz

Master of Arts in English

Major: ENGL

Degree Awarded: MA

Unit: GE

Program Webpage: <http://louisville.edu/english/>

Program Information

Mission Statement

The M.A. in English provides graduate training in literatures written in English, 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. 5

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

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

1. Complete transcripts of previous undergraduate and graduate work;
2. Two academic letters of recommendation (that is, letters from faculty members who can address the applicant's academic performance and potential);
3. Score reports on the Graduate Record Examination General Test;
4. A sample of critical writing (at least ten pages);
5. Applicants who plan to focus on creative writing may submit a sample of their creative work in addition to the required critical essay;
6. 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 http://louisville.edu/english/graduate/gta_applicationII.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:

1. A "B" or better average in the major from an accredited college or university;
2. A "B" or better average overall from an accredited college or university;
3. A score in the 50th percentile or better on the GRE Verbal section;
4. Letters of recommendation that give promise of success in the program;
5. A writing sample that promises success in the program;
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).

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 5. 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 language 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.

Departmental Faculty

Department Chair

Susan Griffin

Professor and Chair

Professors

Dale B. Billingsley

*Associate University Provost
and Professor*

Boehm, Beth

*Provost of Graduate Affairs,
Interim Dean of the School of
Interdisciplinary and
Graduate Studies*

Byers, Thomas B.

*Director Commonwealth
Center and Professor
Cross, Geoffrey A.*

Professor

Dietrich, Julia C.

Professor

Golding, Alan C.

Professor

Griner, Paul F.

Professor

Hall, Dennis R.

Professor
Henke, Suzette A.
Morton Chair and Professor
Horner, Bruce M.
Professor
Journet, Debra S.
Professor
Lu, Min-Zhan
Professor
Mattingly, J. Carol
Professor
Skinner, Jeffrey T.
Professor
Williams, Bronwyn T.

Associate Professors
Anderson, David R.
Associate Professor
Biberman, S. Matthew
Associate Professor
Chandler, Karen M.
Associate Professor
Hadley, Karen C.,
Associate Professor
Sabbatical, Spring 2011
Jaffe, Aaron
Associate Professor
Kopelson, Karen L.
Director of Graduate Studies
and Associate Professor
Leung, Brian
Associate Professor
Petrosino, Kiki

Associate Professor
Rabin, Andrew
Associate Professor
Ridley, Glynis
Director of Undergraduate
Studies and Associate
Professor
Rosner, Mary I.
Director of Writing Center
and Associate Professor
Ryan, Susan M.
Vice Chair and Associate
Professor
Schneider, Stephen
Associate Professor
Stanev, Hristomir
Associate Professor
Willey, A. Elizabeth
Associate Professor
Sabbatical, Spring 2011
Wolfe, Joanna L.
Director of Composition and
Associate Professor

Assistant Professors
Núñez, Gabriela
Assistant Professor
Wise, Elaine O.
Chair of Humanities Division
and Associate Professor

Visiting & Term Faculty
D'Antoni, Joan

Instructor Term
Fenty, Sean
Assistant Professor Term
Hachten, Dale F.
Instructor Term
Rogers, Linda
Instructor Term
Seymour, Nicole
Assistant Professor Term
Smith, Steve
Instructor Term
Stewart, Thomas
Assistant Professor Term
Tanner, Denise J.
Instructor Term
Yohannes, Tamara
Assistant Professor Term

Emeritus/Emerita
Lucy M. Freibert
Emerita
Robert Miller
Emeritus
Harold E. Richardson
Emeritus
Mary Ellen Rickey
Emerita
Thomas A. Van
Emeritus
Axton Fellow
Knickerbocker, Alyssa
Axton Fellow
Axton Fall 2010

Doctor of Philosophy in English Rhetoric and Composition

Major: ERC
Degree Awarded: Ph.D.
Unit: GE
Program Webpage: <http://louisville.edu/english/>

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, and 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 http://louisville.edu/english/graduate/gta_applicationII.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.
8. 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 5th for Fall admission only.
9. All applicants must fulfill the general requirements of the School of Interdisciplinary and Graduate Studies.

Curriculum

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

	Semester	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	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	9	15
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Electives (12 hours):

Choose from offerings in Rhetoric and Composition . One elective may be taken		12
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Dissertation (690)	12	12
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Minimum Total		51
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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 <http://graduate.louisville.edu/Programs/theses-dissertations/preparation-of-theses-and-dissertations.html> 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

Department Chair

Susan Griffin

Professor and Chair

Professors

Dale B. Billingsley

*Associate University Provost
and Professor*

Boehm, Beth

*Provost of Graduate Affairs,
Interim Dean of the School of
Interdisciplinary and
Graduate Studies*

Byers, Thomas B.

*Director Commonwealth
Center and Professor*

Cross, Geoffrey A.

Professor

Dietrich, Julia C.

Professor

Golding, Alan C.

Professor

Griner, Paul F.

Professor

Hall, Dennis R.

Professor

Henke, Suzette A.

Morton Chair and Professor

Horner, Bruce M.

Professor

Journet, Debra S.

Professor

Lu, Min-Zhan

Professor

Mattingly, J. Carol

Professor

Skinner, Jeffrey T.

Professor

Williams, Bronwyn T.

Associate Professors

Anderson, David R.

Associate Professor

Biberman, S. Matthew

Associate Professor

Chandler, Karen M.

Associate Professor

Hadley, Karen C.,

Associate Professor

Sabbatical, Spring 2011

Jaffe, Aaron

Associate Professor

Kopelson, Karen L.

*Director of Graduate Studies
and Associate Professor*

Leung, Brian

Associate Professor

Petrosino, Kiki

Associate Professor

Rabin, Andrew

Associate Professor

Ridley, Glynis

*Director of Undergraduate
Studies and Associate
Professor*

Rosner, Mary I.

*Director of Writing Center
and Associate Professor*

Ryan, Susan M.

*Vice Chair and Associate
Professor*

Schneider, Stephen

Associate Professor

Stanev, Hristomir

Associate Professor

Willey, A. Elizabeth

Associate Professor

Sabbatical, Spring 2011

Wolfe, Joanna L.

*Director of Composition and
Associate Professor*

Assistant Professors

Núñez, Gabriela

Assistant Professor

Wise, Elaine O.

*Chair of Humanities Division
and Associate Professor*

Visiting & Term Faculty

D'Antoni, Joan

Instructor Term

Fenty, Sean

Assistant Professor Term

Hachten, Dale F.

Instructor Term

Rogers, Linda

Instructor Term

Seymour, Nicole

Assistant Professor Term

Smith, Steve

Instructor Term

Stewart, Thomas

Assistant Professor Term

Tanner, Denise J.

Instructor Term
Yohannes, Tamara
Assistant Professor Term

Emeritus/Emerita
Lucy M. Freibert

Emerita
Robert Miller
Emeritus
Harold E. Richardson
Emeritus
Mary Ellen Rickey

Emerita
Thomas A. Van
Emeritus
Axton Fellow
Knickerbocker, Alyssa
Axton Fellow

Master of Arts in French, Language and Literature

Major: FREN

Degree Awarded: MA

Unit: GA

Program Webpage: <http://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 a joint 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

MA program in French

Specific courses required of all students:

French 611 (offered Fall only), students are advised to complete this course at the earliest possible moment of their graduate career

French 699 (offered Fall and Spring), students should NOT take this course before their final semester in the MA program.

French 611 and 699 are **required** whether student follows thesis or non-thesis option.

Students choosing the **non-thesis option** will take a minimum of eight (8) courses with at least one course from each of the following rubrics (minimum 30 credits).

Students choosing the **thesis option** take a minimum of six (6) courses with at least one course from each rubric and complete between three and six (3-6) hours of thesis credit (French 690) (minimum 30 credits).

Rubrics

Language skills:

French 600, Stylistics

French 523, Advanced Skills, if appropriate
approved elective

Linguistics:

French 522, Phonetics

French 524, Translation

French 601, Studies in Linguistics
approved elective

Culture:

French 531, Special Topics

French 552 or alternate study-abroad program as approved by the Graduate Director

French 602, Studies in Culture
approved elective

Media:

French 603, Studies in Media
approved elective

Literature:

French 604, Studies in Literature
approved elective

French 531, 561, 562, 670, and 680 are course numbers used for electives in the French program.

With permission of the Graduate Director, students may complete the degree with appropriate course work in other disciplines.

Accelerated BA/MA 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 Emerit

Master of Arts in History

Major: HIST

Degree Awarded: MA

Unit: GE

Program Webpage: <http://www.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 MA program in history must have:

1. 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)
2. 21 undergraduate credit hours in history, with a minimum GPA of 3.0
3. a combined score of at least 1000 on the Verbal and Quantitative sections of the Graduate Records Examination (GRE)
4. 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.
5. 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.
6. 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:

1. A completed graduate application (available on line at <http://graduate.louisville.edu/apply/>); there is an application fee of \$50
2. Official transcripts verifying the receipt of a BA from an accredited institution
3. Scores from the Graduate Records Examination
4. At least two letters of recommendation from individuals familiar with the applicant's academic and/or professional capabilities and potential
5. A statement, not exceeding 500 words in length, addressing the question "Why are you pursuing an MA 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 <http://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 MA in History. No pass-fail courses may be applied to an MA.

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

For MA-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 MA 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 MA 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 be 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 BA/MA

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

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

1. have a minimum overall grade point average (GPA) of 3.0 and a GPA of 3.35 in history
2. 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)
3. 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

Ann T. Allen

Professor

Blake R. Beattie

Associate Professor

Mark E. Blum

Professor

John T. Cumbler, Jr.

Professor

Christine T. Ehrick

Associate Professor

Benjamin T. Harrison

Professor

Robert B. Kebric

Professor

Daniel Krebs

Assistant Professor

Tracy E. K'Meyer

Associate Professor and

Vice-Chair

Yuxin Ma

Assistant Professor

Thomas C. Mackey

Professor

Justin A. McCarthy

Professor

Edward C. McInnis

Visiting Assistant Professor

John E. McLeod

Associate Professor Chair

Raphael C. Njoku

Assistant Professor

Bruce M. Tyler

Associate Professor

Lee Shai Weissbach

Professor

Master of Arts in Humanities

Major: HUM

Degree Awarded: MA

Unit: GA

Program Webpage: <http://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 catalogue.

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 JD/MAHUM 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):

A total minimum of 30 semester hours as follows:

1. 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;
2. 3 semester hours in methodology (HUM 609 or 610 or appropriate substitute approved by the chair);
3. 6 semester hours in Thesis Guidance (HUM 645 A-F) *or* three semester hours in directed study project;
4. 9-12 semester hours in second discipline/area.
5. A minimum of 15 semester hours must be in courses at the 600 level, excluding thesis or directed study hours.
6. 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.
7. Pass a competency exam in French, German, Spanish, or an approved alternate foreign language.
8. An oral examination covering the content of the thesis.

Traditional MA with Thesis

(minimum of 30 hours)

12-15 hours in 1 discipline/area

9-12 hours in 2nd discipline/area

3 hours in Methods

6 hours in Thesis

Foreign Language Competency**

Traditional MA: Non Thesis

(minimum of 30 hours)

12-15 hours in 1 discipline/area

9-12 hours in 2nd discipline/area

3 hours in Methods

3 hours of Directed Study Project

Foreign Language Competency**

Example:

12 hours in Philosophy
9 hours in Art History
3 hours of HUM 510/610
6 hours of thesis
Foreign Language Competency**

Example:

15 hours in Philosophy
9 hours in Literature
3 hours of HUM 609
3 hours of Directed Study Project
Foreign Language Competency**

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

- 12 hours in one discipline/area
- 3 hours in Methods (609 or 610)
- 3 hours in second discipline/area
- 6 hours in Internship (650)
- 3 hours Direct Study Project (655)
- 3 hours in Interdisciplinary Seminar in Humanities and Civic Leadership (636)
- No foreign language requirement.
- Demonstrated writing proficiency is required for admission.

****This program is also offered for a dual degree with the Law School (JD/MAHUM). See the catalog of the Brandeis School of Law for details.***

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

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 1

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

- 9 credit hours in a second humanities discipline or area
- 3 credit hours in methodology: Humanities 609 or 610
- 3 credit hours in Directed Study Project: Humanities 655
- Foreign Language Competency
- An Oral Examination will cover the contents of the Directed Study Project
- 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 MA 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 BA/MA 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 MA. The guidelines for the Accelerated (BA/MA 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/MA 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/MA 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/MA in Humanities may elect the thesis or non-thesis option, whichever 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.

Departmental Faculty

All Division of Humanities faculty members who hold Graduate Faculty appointments

Elaine O. Wise
*Assistant Professor and
Chair of Humanities*

Traditional MA
Concentration Advisor

Annette Allen
*Associate Professor
Director of Humanities Ph.D*

and Humanities & Civic
Leadership MA
Concentration Advisor

Mary Ann Stenger
*Professor
Religious Studies Grad
Advisor*

Tatjana Soldat-Jaffe
*Assistant Professor
Linguistics and Humanities
MA and Concentration
Advisor*

Arthur J. Slavin
Professor Emeritus

Doctor of Philosophy in Humanities

Major: HUM

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: <http://louisville.edu/humanities/ph.d-program-in-humanities>

Program Information

Admission to the Ph.D. Program:

1. All applicants must fulfill the general requirements of the School of Interdisciplinary and Graduate Studies.
2. Completion of a Master's degree prior to the beginning of the program.
3. Official transcripts of all undergraduate, graduate and post-graduate work.
4. Graduate Record Examination (GRE) general test scores will be taken into consideration.
5. Submission of three recent letters of recommendation about the applicant's potential success in a doctoral program.
6. A written statement of intent of no more than one thousand words detailing the applicant's professional goals.
7. Submission of a scholarly or professional writing sample (10 - 20 pages).

Applications may be found at <http://graduate.louisville.edu/apply>. The application deadline is January 15.

Graduate Teaching Assistantship Applications are a separate document with the same deadline of January 15.

Curriculum

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

CORE REQUIREMENTS

Chronological Sequence:

*HUM 661: Humanistic Studies I

*HUM 662: Humanistic Studies II

Theory and Methods:

*HUM 609: Interdisciplinary Theory: Arts and Humanities

Interdisciplinary Topics Seminars:

*HUM 671: Interdisciplinary Seminar

*HUM 672: Interdisciplinary Seminar

Internships:

*HUM 650: Doctoral Internship

Capstone Course:

Total credit hours: 21

Credit Hours: 6

3

3

Credit Hours: 3

3

Credit Hours: 6

3

3

Credit Hours: 3

3

Credit Hours: 3

AREAS OF CONCENTRATION

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.

Primary Area:

Credit hours: 12

Aesthetics and Creativity OR Studies in Culture

Secondary Area:

Credit hours: 6

Aesthetics and Creativity OR Studies in Culture

Additional Requirements:

*Language - Each doctoral student must demonstrate basic proficiency in one classical or modern language in addition to English, and either basic proficiency in a second classical or modern language in addition to English, or an advanced proficiency in the first.

*Successful completion of three comprehensive exams: Core, Area of Concentration, and Specified field.

Optional Comprehensive Preparation Course

*HUM 689: Reading for Comprehensives

Dissertation Research:

Credit hours: 9

*HUM 700

9

Complete program credit hours:

48

Electives: Students may supplement the minimum of 48 hours with additional coursework in a specific discipline.

Departmental Faculty

Division of Humanities faculty who hold Graduate Faculty appointments:

Elaine O. Wise

*Assistant Professor and
Chair of Humanities*

Mary Ann Stenger

Professor

Director, Humanities Ph.D.

Program

Annette Allen

Associate Professor

Pam Beattie

Assistant Professor

Simona Bertacco

Assistant Professor

*Director for Admissions and
Curriculum, Humanities*

Ph.D. Program

Delinda Buie

Professor

Terry Burden

Assistant Professor

L. Allen Furr

Associate Professor
Karen Gray
Assistant Professor
Albert Harris
Professor Emeritus
Carl Hausman
Ad Hoc Professor
Professor Emeritus,
Pennsylvania State
University
Riffat Hassan
Professor Emerita
R. Michael Johmann

Assistant Professor
Elizabeth Patton
Assistant Professor
Natalie Polzer
Assistant Professor
Patrick Pranke
Assistant Professor
Arthur J. Slavin
Professor Emeritus
Tatjana Soldat-Jaffe
Assistant Professor

**Faculty with the Beijing
Foreign Studies Program,
in Beijing:**
Guohua Chen
Ad Hoc Professor
Li Jin
Ad Hoc Professor
Yian Wu
Ad Hoc Professor
Jian Zhang
Ad Hoc Professor
Zaixin Zhang
Ad Hoc Professor

Master of Science in Administration of Justice

Major: ADJ

Degree Awarded: MS

Unit: GA

Program Webpage: <http://www.louisville.edu/justiceadministration/>

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 National Crime Prevention Institute, 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 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 School of Interdisciplinary and Graduate Studies, University of Louisville, for purposes of pursuing the Master of Science in the Administration of Justice degree must provide the following:

1. Transcripts of all undergraduate and graduate work completed. The minimum requirement for admission is the Baccalaureate degree or its equivalent.
2. Two letters of recommendation from individuals who can speak to the applicant's academic or professional capabilities.
3. Scores on the General Test Section of the Graduate Record Examination (GRE).
4. 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.
5. Completed application for admission to the Graduate School, University of Louisville at <http://graduate.louisville.edu/apply/>.
6. \$50.00 application fee, check or money order made payable to the University of Louisville.
7. Applicants, for whom English is a second language, must meet University language proficiency requirements.
8. The faculty in Justice Administration consider applications and supporting materials and recommend a disposition. The minimum requirements for admission to degree status are a cumulative grade point average of at least a 3.0 on a 4-point scale and a score of at least 900 on the combined verbal and quantitative sections of the GRE as well as a positive evaluation of the letters of recommendation and the essay; or completion of 12 hours of graduate course credit with a minimum of a 3.0 GPA on a 4-point scale and the GRE will be waived.

For individuals who cannot meet these conditions, provisional admission may be offered. Provisional status is determined on a case by case basis. Factors which may be taken into consideration include:

1. Grade point average in the applicant's major and/or final 60 hours of undergraduate work.
2. Amount of time that has transpired between the applicant's undergraduate degree completion and the application to the graduate program in Justice Administration.
3. Applicant's work experience and accomplishments in their profession.
4. Grade point average in graduate work at other accredited academic institutions.
5. A less than 3.0 grade point average that is "offset" by a combined GRE score greater than 900 or a combined GRE score less than 900 that is "offset" by a greater than 3.0 grade point average.
6. Non-degree status is also an option for individuals who are interested in "testing the waters" or simply taking a graduate course. Please contact us if you would like additional details on provisional or non-degree admission.

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. A cumulative 3.0 grade point average must be maintained for all graduate coursework, grades of "D" must be repeated. Students are advised to complete the JA core courses prior to electives. 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. Electives outside of our department must have approval of the Graduate Program Coordinator.

The degree is offered in two formats, our traditional on campus classes and also via the internet, see department web-page for more information at: <https://louisville.edu/justiceadministration/degree/programs>

Students may choose either format or a combination of both methods of delivery.

Curriculum

Core Courses	Semester Hours	Semester Hours
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

Terry D. Edwards

Associate Professor Graduate Program Coordinator

Master of Arts in Mathematics

Major: MATH

Degree Awarded: MA

Unit: GA

Program Webpage: <http://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:

1. 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.
2. 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.
3. 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.
4. 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 Catalogue.

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 MAT 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 MAT (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

Students must have at least 21 credit hours of mathematics required for the BA with a cumulative GPA of 3.0 in those courses.

Applications will be reviewed by the Graduate Committee of the Mathematics Department and the Secondary MAT Screening Committee, and the applicant must be approved by both committees.

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 BA in Mathematics. All graduate coursework must be approved by the student's MAT faculty advisor.

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

All students must submit an application to the College of Education and Human Development (CEHD) MAT 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.

Departmental Faculty

Thomas Riedel

Professor

Department Chair

Mary E. Bradley

Associate Professor

Patricia B. Cerrito

Professor

Udayan B. Darji

Professor

Manabendra Das

Associate Professor

Richard M. Davitt

Professor Emeritus

Roger H. Geeslin

Professor Emeritus

Lee Gibson

Assistant Professor

Ryan S. Gill

Assistant Professor

Changbing Hu

Assistant Professor

Chakram S. Jayanthi

Assistant Professor

Thomas M. Jenkins

Professor Emeritus

Andre Kezdy

Professor

Jon-Lark Kim

Assistant Professor

Lael F. Kinch

Emeritus

Ewa Kubicka

Professor

Grzegorz Kubicki

Professor

Lee Larson

Professor

Kiseop Lee

Assistant Professor

Bingtuan Li

Director of Graduate Studies

Jiaxu Li

Assistant Professor

Robert B. McFadden

Professor Emeritus

Alica Miller

Assistant Professor

Lois K. Pedigo

Professor Emerita

Robert Powers

Professor

Grzegorz Rempala

Professor

Prasanna Sahoo

Professor

Leland L. Scott

Professor Emeritus

Steven Seif

Adjunct Professor

William H. Spragens

Professor Emeritus

David Swanson

Assistant Professor

David J. Wildstrom

Assistant Professor

W. Wiley Williams

Assistant Professor

Shi-Yu Wu

Adjunct Professor

Yongzhi Steve Xu

Professor

Wei-Bin Zeng

Adjunct Professor

Doctor of Philosophy in Applied and Industrial Mathematics

Major: MATH

Degree Awarded: Ph.D.

Unit: GE

Program Webpage: <http://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

Each student, with prior approval of the Graduate Studies Director, has to complete 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 – 12 to 18 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.P.H. 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 Biostatistics 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 qualifying 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

Thomas Riedel

Professor

Department Chair

Mary E. Bradley

Associate Professor

Patricia B. Cerrito

Professor

Udayan B. Darji

Professor

Manabendra Das

Associate Professor

Richard M. Davitt

Professor Emeritus

Roger H. Geeslin

Professor Emeritus

Lee Gibson

Assistant Professor

Ryan S. Gill

Assistant Professor

Changbing Hu

Assistant Professor

Chakram S. Jayanthi

Assistant Professor

Thomas M. Jenkins

Professor Emeritus

Andre Kezdy

Professor

Jon-Lark Kim

Assistant Professor

Lael F. Kinch

Emeritus

Ewa Kubicka

Professor

Grzegorz Kubicki

Professor

Lee Larson

Professor

Kiseop Lee

Assistant Professor

Bingtuan Li

Director of Graduate Studies

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Assistant Professor

Robert B. McFadden

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Alica Miller

Assistant Professor

Lois K. Pedigo

Professor Emerita

Robert Powers

Professor

Grzegorz Rempala

Professor

Prasanna Sahoo

Professor

Leland L. Scott

Professor Emeritus

Steven Seif

Adjunct Professor

William H. Spragens

Professor Emeritus

David Swanson

Assistant Professor

David J. Wildstrom

Assistant Professor

W. Wiley Williams

Assistant Professor

Shi-Yu Wu

Adjunct Professor

Yongzhi Steve Xu

Professor

Wei-Bin Zeng

Adjunct Professor

Graduate Certificate of Medieval and Renaissance Studies

Major: MRSTCMR

Degree Awarded: CERT

Unit: GA

Program Webpage: <http://louisville.edu/history>

Program Information

Requirements for the Graduate Certificate in Medieval and Renaissance Studies

A total of eighteen (18) hours in courses approved for graduate credit in accordance with the policies of the Graduate School.

Nine (9) credits hours from the list of "Approved Medieval and Renaissance Courses" must be taken in the student's home department. These credit hours may also count towards the student's graduate degree. In cases where the student's home department does not offer a sufficient number of Medieval and

Renaissance courses, the student may develop an alternative course of study with the approval of the Program Director.

Nine (9) credits hours from the list of "Approved Medieval and Renaissance Courses" must be taken outside of the student's home department. These credits must be distributed as follows: three (3) credits from the list of courses designated by the program as "History and Culture Courses"; three (3) credits from the list of courses designated by the program as "Textual Studies Courses"; three (3) credits from the list of courses designated by the program as "Arts and Music Courses." Substitutions must be approved by the Program Director.

Attendance at lectures and participation in workshops conducted each semester by visiting faculty selected by the Graduate Programs Committee.

Student must demonstrate reading knowledge at the M.A. level in one of the following: Latin, Greek, French, Italian, Hebrew, German, Spanish, Portuguese, or Arabic. Reading knowledge in other languages may be used to fulfill this requirement at the discretion of the Program Director. Reading knowledge may be demonstrated either by taking a language exam or by earning a "B" or above in a graduate level language course. Fulfillment of this requirement may overlap with the completion of a language requirement in the student's home department.

1. At least six (6) hours must be at the 600 level.
2. A single course may fulfill more than one of these requirements.
3. Independent Studies may not count towards the fulfillment of these requirements.

500-level courses taken for undergraduate credit may not count towards the fulfillment of these requirements. As is standard practice, those students enrolled in 500-level courses for credit towards the certificate must complete the requirements for graduate-level work specified by the instructor.

Coursework towards the Graduate Certificate in Medieval and Renaissance Studies may count towards the student's graduate degree.

Curriculum

History and Culture

HIST 551	Studies in Medieval History
HIST 555	English Medieval History, 1066-1500
HIST 571	The Renaissance
HIST 572	The Age of Reformation
HIST 575	Tudor England, 1485-1603
HIST 591	Civilizations of Ancient and Medieval India
HIST 651	Studies in Medieval History
HIST 662	Seminar in Early Modern European History
HUM 592	Perspectives on Medieval Culture
HUM 593	Perspectives on Early Modern Culture

Textual Studies

ENG 515	Introduction to Old English
ENG 523	History of the English Language
ENG 541	Studies in Old and Middle English Literature
ENG 542	Studies in Tudor and Elizabethan Literature
ENG 561	Chaucer
ENG 562	Shakespeare
ENG 563	Milton

ENG 591	History of Criticism: Plato to the New Criticism
ENG 624	Old and Middle English language and Literature
ENG 631	Renaissance Drama
ENG 632	Shakespeare
ENG 633	Sixteenth Century Poetry and Prose
ENG 634	Seventeenth Century Poetry and Prose
ENG 671	History of Rhetoric I
PHIL 608	Aquinas
HUM 581	Dante
HUM 661	Humanistic Studies I (Ancient and Medieval)
LAT 551	Introduction to Medieval Latin
LAT 552	Studies in Medieval Latin
SPAN 111	Studies in Medieval Spanish Literature
SPAN 113	Studies in Spanish Golden Age Literature
SPAN 644	Origins and Development of Spanish Culture
LING 523	History of the English Language

Arts and Music

ARTH 561	Studies in Medieval Art
ARTH 562	Medieval Architecture
ARTH 571	Studies in Renaissance Art
ARTH 661	Topics in Medieval Art
ARTH 671	Topics in Renaissance Art
MUS 652	Foundations of Music Theory
MUS 681	Music Notation to C. 1550: History, Transcription, Editing

NOTE: Many departments offer courses related to Medieval and/or Renaissance studies as "special topics" courses. These courses may be counted towards the requirements of the Graduate Certificate at the discretion of the Program Director.

Departmental Faculty

Dr. Blake R. Beattie

Associate Professor of History

Master of Arts in Pan-African Studies

Major: PAS

Degree Awarded: MA

Unit: GA

Program Webpage: <http://www.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.

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

Graduate Certificate in Pan-African Studies

Major: PAS

Degree Awarded: CERT

Unit: GE

Program Webpage: <http://louisville.edu/a-s/pas/gprograms.html>

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:

1. an official transcript reflecting previous degrees earned;
2. at least two letters of recommendation; and
3. 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

1. A total of fifteen (15) hours in courses approved for graduate credit in accordance with the policies of the Graduate School.
2. 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.
3. 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.
4. At least three hours must be at the 600 level.
5. A single course may satisfy more than one of these requirements.
6. 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: MS

Unit: GA

Program Webpage: <http://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 MS 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 University 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 MS 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:

1. A baccalaureate degree with at least 24 hours in physics, or the equivalent.
2. A minimum quality-point standing of 3.0 (base 4.0) in physics courses.
3. Mathematics course work through differential equations. (MATH 405 or equivalent).
4. 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 <http://graduate.louisville.edu/apply>.

Program admission procedure:

1. Admission into the Physics MS program is competitive. The application procedure is as follows:
2. Submit a completed graduate application to the School of Interdisciplinary and Graduate Studies together with the \$50.00 application fee. Applications may be submitted on-line at <http://graduate.louisville.edu/apply>. 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.
3. Official transcripts from each university or college attended must be submitted to the Office of Graduate Admissions.
4. Take the general section of the Graduate Record Examination and arrange for the official score to be sent to the Office of Graduate Admissions.
5. 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 <http://graduate.louisville.edu/apply>.
6. All applicants, whose native language is not English, are required to achieve a ToEFL score greater than 213 on the computer-based test, greater than 79 on the internet-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.
7. 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.

BS/MS 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:

1. Applicant will apply for admission to the five-year accelerated program in the second semester of the junior year.
2. Applicant will have completed at least 21 credit hours in Physics before applying to the program.
3. Applicant will have maintained at least a 3.0 GPA in Physics courses and a 3.35 GPA overall.
4. Once accepted, the student must meet the following requirements:
5. Submit a GRE General test score consistent with Graduate School guidelines.
6. 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.
7. 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)

Required courses in physics (12 hours):

PHYS 605	Theoretical Mechanics	(3)
PHYS 611	Electromagnetic Theory	(3)
PHYS 621-622	Quantum Mechanics I & II	(6)

Physics electives (six-nine hours): courses numbered 500 and above. Courses at 500 level or above which are required for the BA/BS degree will not normally satisfy this requirement.

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.

PHYS 699	Graduate Research and Thesis	(6 hours).
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At least 21 credit hours at the 600 level or above.

Non-thesis option: (33)

Required courses in physics (12 hours):

PHYS 605	Theoretical Mechanics	(3)
PHYS 611	Electromagnetic Theory	(3)
PHYS 621-622	Quantum Mechanics I & II	(6)

Physics electives (12 hours): courses numbered 500 and above. Courses at 500 level or above which are required for the BA/BS degree will not normally satisfy this requirement.

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.

PHYS 699	Graduate Research	(0-3 hours).
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At least 17 credit hours at the 600 level or above.

BS/MS accelerated program:

The non-physics undergraduate requirements of this degree are identical to the standard BS 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 BS/MS program are identical to the standard MS program (thesis and non-thesis option) except that the physics electives **must include** PHYS 542 and PHYS 556.

Departmental Faculty

David N. Brown

*Professor, High Energy
Experiment*

Chris L. Davis

*Professor, High Energy
Experiment*

Graduate Program Director

Peter W. France

*Professor, Experimental
Chemical Physics*

Chakram S. Jayanthi

*Professor, Condensed Matter
Theory*

Chair

John F. Kielkopf

*Professor, Astrophysics,
Atomic and Molecular*

Shi-Yu Wu

*Professor, Condensed Matter
Theory*

Timothy E. Dowling

*Associate Professor,
Atmospheric Physics*

Shudun Liu

*Associate Professor,
Condensed Matter Theory*

Sergio Mendes

*Associate Professor, Optical
Material Science*

John C. Morrison

*Associate Professor, Atomic
and Molecular Theory*

Gamini Sumanasekera

*Associate Professor,
Condensed Matter
Experiment*

Gerard M. Williger

*Associate Professor,
Astrophysics*

William Hoston

*Assistant Professor,
Theoretical Physics
Undergraduate Program
Director*

James T. Lauroesch

*Assistant Professor,
Astrophysics*

Benjamin MacCall

*Assistant Professor,
Atmospheric Physics*

Ming Yu

*Assistant Professor,
Condensed Matter Theory*

Xiaoping Tang

*Assistant Professor,
Condensed Matter
Experiment*

Victor K. Henner

*Adjunct Professor, High
Energy Theory*

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

Doctor of Philosophy in Physics

Major: PHYS

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: <http://www.physics.louisville.edu>

Program Information

Mission Statement

The Doctor of Philosophy degree in Physics will prepare students for research-oriented careers in government, industry, and academia.

General Information

The PhD is typically a five-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. The first two years of the program are very similar to the non-thesis MS program. Under normal circumstances PhD students will meet the requirements for the MS degree after two years of study. The remaining three years will be dedicated primarily to research leading to the required dissertation.

For the first two years of the program, 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. In most cases, support for the remaining three years of study is via Graduate Research Assistantships (GRAs) provided by extramural faculty research funding.

Program Admission

Departmental requirements for admission are as follows:

1. A baccalaureate degree with at least 24 hours in physics, or the equivalent.
2. A minimum quality-point standing of 3.0 (base 4.0) in physics courses.
3. Mathematics course work through differential equations. (MATH 405 or equivalent).
4. Submission of the Graduate Record Examination scores.

For general information concerning admission to graduate programs at the University of Louisville consult the application directions at <http://graduate.louisville.edu/apply>.

Program admission procedure:

Admission into the Physics PhD 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 application fee. Applications may be submitted on-line at <http://graduate.louisville.edu/apply>. Admittees 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. Persons familiar with the applicant's academic work should write these letters. Please use the recommendation form found at <http://graduate.louisville.edu/apply>.

All applicants whose native language is not English are required to achieve a ToEFL score greater than 213 on the computer-based test, greater than 550 on the paper-based test or greater than 80 on the

internet-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 department may recommend conditional admission of a student who does not satisfactorily meet the above requirements. If admission is granted, that student will be subject to those conditions specified by the department or the College of Arts and Sciences as being necessary to remedy the conditional admission.

Curriculum

General requirements for the Ph.D. degree are set forth in the General Information section of the graduate catalog. Specific requirements for the Ph.D. degree in physics are as follows:

A. Core Courses – 21 semester hours, comprising the seven 3 semester hour courses below:

- PHYS 561 – Mathematical Methods I
- PHYS 605 – Classical Mechanics
- PHYS 611 – Classical Electrodynamics
- PHYS 621 – Quantum Mechanics I
- PHYS 622 – Quantum Mechanics II
- PHYS 625 – Statistical Mechanics
- PHYS 650 – Research Methods for Physics and Astronomy

B. Elective Courses – 9-18 semester hours

Each student will be required to take at least 2 additional topical courses outside of his or her field of specialization and at least 1, but no more than 4, courses in his or her research specialization, as specified by the Graduate Program Director and thesis advisor. Courses outside the department can be substituted with the approval of the thesis advisor and Graduate Program Director.

C. Research Training – Minimum of 6 semester hours

Each student must earn a minimum of 6 semester hours of Physics Research – PHYS 699

D. Qualifying Examination

In order to demonstrate proficiency in knowledge of Physics and the ability to apply that knowledge, students will be required to pass a qualifying exam. The qualifying exam will have a written and oral component.

Written Component

To satisfy the written component, the student will take a written exam composed by members of the faculty of the department. The exam will cover intermediate and advanced problems in the areas of mechanics, electricity and magnetism, quantum mechanics, thermodynamics and statistical mechanics, and special topics. It will be administered twice yearly with advance notice, typically in September and January. Students will be required to pass all areas of the exam normally by the end of their fourth semester, or by the end of the first semester after completing their last class numbered lower than PHYS 699. Once a subject area part of the exam is passed, that part does not need to be retaken.

Oral Component

To satisfy the oral component the student must to pass an oral exam, in the form of a presentation to the Ph.D. committee of his or her proposed research. This exam must be passed before the student can move into candidacy status. The student is expected to take the exam before the end of their fifth semester as a

graduate student. The test may be taken at most two times, and must be passed by the end of the sixth semester.

E. Candidacy

Having passed the qualifying examination the student will register for degree candidacy and continue with their dissertation research.

F. Dissertation

A doctoral dissertation is required of each student

Departmental Faculty

David N. Brown

*Professor, High Energy
Experiment*

Chris L. Davis

*Professor, High Energy
Experiment
Graduate Program Director*

Peter W. France

*Professor, Experimental
Chemical Physics*

Chakram S. Jayanthi

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John F. Kielkopf

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Timothy E. Dowling

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*Associate Professor,
Condensed Matter Theory*

Sergio Mendes

*Associate Professor, Optical
Material Science*

John C. Morrison

*Associate Professor, Atomic
and Molecular Theory*

Gamini Sumanasekera

*Associate Professor,
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*Assistant Professor,
Condensed Matter
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Victor K. Henner

*Adjunct Professor, High
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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: MA

Unit: GA

Program Webpage: <http://www.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 MA 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 MA 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 MA/JD program in partnership with the Brandeis School of Law. This program allows the student to obtain the MA and JD 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 BA (or BS) degree and an MA degree in five years of study. This program allows students to earn an MA 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 MA program is competitive. The procedures for admission into the MA 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 BA or BS (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 MA program. Acceptance to the Intensive English Program does not constitute acceptance to the MA program. For information and application forms, write to IESL, University of Louisville, Louisville, KY 40292.

7. 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 <http://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 MA in Political Science: Thesis (30 hours) and Non-thesis (36 hours).

Thesis Option	Hours
Core Courses (6 hours total):	
Scope of Political Science (POLS670)	3
Methods of Political Research (POLS671)	3
Three of the following five courses (9 hours total):	
Seminar in Public Policy (POLS619)	3
Seminar in Public Administration (POLS625)	3
Seminar in American Politics (POLS629)	3
Seminar in International Relations (POLS639)	3
Seminar in Comparative Politics (POLS649)	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 (POLS670)	3

Methods of Political Research (POLS671)	3
Three of the following five courses (9 hours total):	
Seminar in Public Policy (POLS619)	3
Seminar in Public Administration (POLS625)	3
Seminar in American Politics (POLS629)	3
Seminar in International Relations (POLS639)	3
Seminar in Comparative Politics (POLS649)	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. Bunck
Associate Professor
Anne I. Caldwell
Associate Professor
Internship Advisor
Dewey M. Clayton
Associate Professor
Jasmine I. Farrier
Associate 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 Psychology - Clinical

Major: CPSY
Degree Awarded: Ph.D.
Unit: GA
Program Webpage: <http://louisville.edu/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 ways: (1) they are competent to conduct and to evaluate psychological research; (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, research, and clinical 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 1 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 teaching and research assistantships, University Fellowships, and placements in community service settings.

Program Admission Procedure

The Clinical Psychology Ph.D. Program application deadline is December 1.

1. Completed graduate applications should be submitted to the University of Louisville, Office of Graduate Admissions. There is a \$50 application fee (on-line at <http://graduate.louisville.edu/apply/>) or call the Office of Graduate Admissions at 502-852-3101 for more information. Our Ph.D. programs admit students to begin in the Fall semester, with a usual start date of July 1.
2. The Graduate Record Examination General Test is required. Those for whom English is not their native language must also submit TOEFL scores.
3. 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.
4. Three letters of recommendation from academic sources are required and must be submitted to the Office of Graduate Admissions.
5. Please go to the Psychological and Brain Sciences Clinical Psychology Ph.D. Program Webpage: <http://louisville.edu/psychology/doctorate/clinical-psychology/clinical-psychology-ph-d-program-application.html>. Click on Clinical Psychology, Ph.D. Program and this will take you to the Apply Page. At the end you will find the Instructions for Submission and the Applicant Data Sheets for Submission. There is also a checklist included in these forms that will help you with this process.
6. In addition to Graduate School requirements, each student must meet department requirements including core courses, research, the preliminary examination, a research portfolio, a dissertation, and an approved internship.

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:

620 Human Learning or 621 Cognitive Processes
642 Behavioral Neuroscience
670 Advanced Social Psychology
661 Advanced Developmental Psychology
673 Advanced Personality
610 and 611 Advanced Statistics I and II
501 History and Systems (waived with an A or B in undergraduate)

Clinical Core:

656 Legal and Ethical
679 and 680 Assessment I and II
683, 684, 697 Interventions I, II, and III
693 Interviewing
689 Advanced Clinical Psychopathology
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.

Departmental Faculty

Suzanne Meeks
Professor and Chair
Barbara M. Burns
Professor
Stephen E. Edgell
Professor
Edward A. Essock
Professor
Zijiang He
Professor
Richard Lewine
Professor

*Undergraduate Honors
Coordinator*
Maureen McCall
Professor
Carolyn B. Mervis
Professor
Robert G. Meyer
Professor
Stanley A. Murrell
Professor
Heywood M. Petry
Professor and Director,

*Ph.D. Program in
Experimental Psychology*
Fred Wightman
Professor
Janet Woodruff-Borden
Professor
Director of Clinical Training
Paul J. DeMarco
Associate Professor
Benjamin Mast
Associate Professor

Tamara Newton
Associate Professor
John R. Pani
Associate Professor
Edna Ross
Associate Professor
Paul G. Salmon
Associate Professor
Sandra Sephton
Associate Professor
Barbara Stetson
Associate Professor

Cara Cashon
Assistant Professor
Kevin Chapman
Assistant Professor
Keith Lyle
Assistant Professor
Patrick Shafto
Assistant Professor
Pavel Zahorik
Assistant Professor
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

Doctor of Philosophy in Psychology - Experimental

Major: EPSY

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: <http://www.louisville.edu/a-s/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.

Two concentrations are offered: Cognitive and Developmental Sciences, and Vision and Hearing Science. As defined below, these two concentrations have different required courses, first-year requirements and preliminary exam. The concentration area is chosen at the time of application.

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 Science degree, pass a Preliminary Examination prior to conduct of the dissertation, and complete the dissertation. In addition, VHS area students must successfully complete a first-year project and exam. Active and continuous involvement in research is essential. To remain in good standing, students must maintain an overall GPA of 3.0 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 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

Experimental Psychology Ph.D. Program Application Deadline (for both areas) is December 1.

1. Submit completed graduate application to Graduate Admissions, School of Interdisciplinary and Graduate Studies. There is a \$50 application fee (on-line at <http://graduate.louisville.edu/apply/>). Call the School of Interdisciplinary and Graduate Studies at 502-852-3101 for more information. The Ph.D. program admits students once per year, with a typical matriculation date of July 1.
2. 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.
3. 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.
4. Three letters of recommendation from academic sources are required and must be submitted to the Office of Graduate Admissions.
5. Fill out the departmental admissions packet and return directly to Ms. Carolyn Mask. This packet may be obtained by downloading found on the webpage at <http://louisville.edu/psychology/doctorate/experimental-psychology/apply.html>, or requesting by calling 502-852-8272 or sending email to [Carolyn Mask](#).
6. 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.
7. Only when the application is complete will the Department Review Committee review the application and inform prospective students of its decision. 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).

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; [Carolyn Mask](#).

Curriculum

Minimum Coursework

Cognitive and Developmental Sciences (CDS) Concentration

Two graduate courses in statistics

PSYC 610, Advanced Statistics I
PSYC 611, Advanced Statistics II

Two graduate core courses

PSYC 621, Cognitive Psychology
PSYC 661, Advanced Developmental Psychology

Six additional graduate courses (18 credits)

To be determined jointly by the student and his/her faculty mentor. The six electives are selected from lecture courses, seminars, or internships (2 semester limit) from within or outside of the Department of Psychological and Brain Sciences.

Vision and Hearing Science (VHS) Concentration

Statistics

PSYC 610 Advanced Statistics I
PSYC 611 Advanced Statistics II

VHS Core

PSYC 613 Methods in Vision and Hearing Science
PSYC 633 Visual Processes
PSYC 635 Sensory Neuroscience
PSYC 646 Hearing Science I
One of: PSYC 642 Behavioral Neuroscience
PSYC 643 Principles of Neuroscience
PSYC 645 Cognitive Neuroscience

Electives

Two seminars in VHS (609)
Two additional graduate-level courses (may be seminars)

Elective courses are to be determined jointly by the student and their respective faculty advisor. Multiple related undergraduate courses may satisfy one elective with permission of mentor and area director.

Research Hours

A minimum of 3 credit hours of research (CDS: PSYC 605; VHS: PSYC 602) is required to be taken each semester (including the summer), until the Preliminary examination is passed.

First-year Research Project and Exam -- VHS Concentration Only

(The CDS concentration does not include this requirement.)

After completing their first year of study, students will make a presentation of their research to-date and be given a brief oral exam by the area faculty over the student's research and research area.

MS Portfolio

Students are required to earn a Master of Science in Experimental Psychology. To earn the MS degree, the student will prepare a portfolio of written work reporting the research in which the student has been involved. The portfolio should demonstrate scope and quality of research commensurate with the degree. The portfolio typically is due at or shortly after the completion of two years of training and is evaluated by a faculty committee. After approval of the MS portfolio and 30 credit hours of graduate study, the student is awarded the Master of Science degree.

Preliminary Examination

Cognitive and Developmental Sciences Concentration

The Preliminary Examination will consist of an original written review and critique of a research area in cognitive and/or developmental sciences. The Preliminary Examination will be evaluated based on breadth of knowledge, integration of literature, critical thinking, and quality of scientific writing. Students will plan the preliminary examination in collaboration with their Preliminary Examination Committee. The Preliminary Examination must be completed by the end of the third year of training.

Vision and Hearing Science Concentration

The preliminary exam will be an oral exam administered by the VHS faculty. The domain of the exam

will be formed by a list of readings provided to the student. The list will be compiled by the area faculty and will cover: (1) basic foundational knowledge and research methods in the general field of vision and hearing science, and (2) advanced knowledge within the student's area of research focus.

Dissertation

An original research project conducted and described in a report (the doctoral dissertation) 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

Cara Cashion

Assistant Professor

Paul J. DeMarco

Professor

Stephen E. Edgell

Professor

Edward A. Essock

Professor

Zijiang He

Professor

Richard Lewine

Professor

Keith Lyle

Assistant Professor

Benjamin Mast

Associate Professor

Maureen McCall

Professor

Suzanne Meeks

Professor

Carolyn B. Mervis

Professor

Robert G. Meyer

Professor

Stanley A. Murrell

Professor

Tamara Newton

Associate Professor

John R. Pani

Associate Professor

Heywood M. Petry

Professor

Director, Ph.D. Program in

Experimental Psychology

Edna Ross

Assistant Professor

Paul G. Salmon

Associate Professor

Sandra Sephton

Associate Professor

Patrick Shafto

Assistant Professor

Barbara Stetson

Associate Professor

Fred Wightman

Professor

Janet Woodruff-Borden

Professor

Director, Ph.D. Program in

Clinical Psychology

Pavel Zahorik

Assistant Professor

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

Graduate Certificate in Police Executive Leadership Development

Major: PELDNON

Degree Awarded: CERT

Unit: GA

Program Webpage: <https://louisville.edu/justiceadministration/>

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.

JA 576 - Managing Organizational Performance	3
JA 612 - Criminal Justice Administration: Police	3
JA 625 - Legal Aspects of Criminal Justice Management	3
JA 665 - Special Topics in Justice and Criminology	3
Total Hours	12

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

Departmental Faculty

William F. Walsh

Director of Southern Police Institute

Professor

Gennaro Vito

Professor

Terry Edwards

Associate Professor

Alex Ferguson

Associate Director of Southern Police Institute

Master of Public Administration

Major: PADM

Degree Awarded: MPA

Unit: GA

Program Webpage: <http://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 MPA 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, background in political science as well as economics is helpful.

The Master in Public Administration Program offers joint degree programs with the Master in Urban Planning and the Master of Arts in Art (Creative) and Art History (Concentration in Critical and Curatorial Studies). For more information about the two dual programs please go the web page <http://supa.louisville.edu/>.

Program Admission Procedures

The procedures for admission into the MPA 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 <http://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 <http://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 MPA 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

MPA 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

Human Resources 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 MPA Program.

Departmental Faculty

Steven G. Koven
Professor and Director
Carrie Donald
Professor

John I. Gilderbloom
Professor
H.V. Savitch
Professor

Ronald K. Vogel
Professor
Dewey Clayton
Associate Professor

Jasmine Farrier
Associate Professor
Wyatt McDowell
Associate Professor
David Simpson
Associate Professor

Sherri Wallace
Associate Professor
Leonard Bright
Assistant Professor
Frank Goetzke
Assistant Professor

Sumei Zhang
Assistant Professor

Graduate Certificate in Public History

Major: PHISCHI

Degree Awarded: CERT

Unit: GA

Program Webpage: <http://louisville.edu/history/graduate-certificate-in-public-history.html>

Program Information

Interested in a career in museums, archives, historic homes, preservation or other related history and heritage fields? The Department of History at the University of Louisville now offers students enrolled in an MA program at the University the opportunity to earn a graduate certificate in public history through a combination of seminars in history, electives in related fields, and internship experiences in local historical institutions.

Those seeking the certificate in public history may complete the program as part of an MA program at the University or as a stand-alone certificate.

Admissions

Students seeking the Certificate in Public History as a stand -alone program should go to <http://graduate.louisville.edu/apply> and select the A&S non-degree seeking option and then the Public History program. Materials for admission are two letters of recommendation, college transcripts, GRE scores and a personal statement regarding their interest in the program. There is a \$50.00 application fee.

Students who are already enrolled in the History Masters program will need to follow the same admission procedure stated above at <http://graduate.louisville.edu/apply>, apply for a fee waiver and mark the option that says you are already enrolled, then in the dialogue box type in that in your initial application for graduate school you paid the \$50.00 fee. Your previous materials will be considered and you will only need to submit to graduate admissions an additional faculty recommendation for the program and a 500 word (or less) personal statement regarding your interest in the Public History program.

Curriculum

Course requirements:

Introduction to Public History	3
Public History Practicum (Internship)	3
One 600 level non-public history course in the Department of History	3
Two public history electives at 500 or above level	3, 3

Total

15

[Students in the history department MA program may apply up to six hours of appropriate courses to their graduate degree]

Sample of public history electives:

Introduction to Archives
Oral History
Museum Studies
Curatorial Methods
Introduction to Nonprofit Management
Design and Craft Theory (Material Culture Studies)

Departmental Faculty

Ann Allen

Modern Germany, European intellectual, modern Western Europe

Blake Beattie

Medieval Europe, Church

Mark Blum

German and Austrian intellectual and cultural modern European intellectual

Genevieve Carlton

Early modern Europe, cartography, witchcraft, science

Glenn Crothers

American antebellum, Ohio Valley, public

John Cumbler

Environmental, ethnic, labor, urban

Randall Dills

Russian and Soviet

Christine Ehrick

Latin America, 20th-century women

Benjamin Harrison

American diplomatic, 20th-century U.S.

Robert Kebrić

Ancient Greece and Rome, classical literature, cultural

Tracy K'Meyer

Chair; 20th-century U.S., oral

Daniel Krebs

Military, Colonial and Revolutionary American Yuxin Ma

East Asia, Women

Thomas Mackey

American constitutional and legal, 19th-century U.S.

Justin McCarthy

Turkey, Modern Middle East

Edward McInnis

History of Civilizations

John McLeod

Great Britain, British Empire, South Asia

Raphael Njoku

Modern Africa, African diaspora, Nigeria

Malissa Taylor

Islamic Middle East. Ottoman, 17th century

Damascus

Bruce Tyler

African-American, 20th-century U.S.

Lee Shai Weissbach

Vice Chair, American Jewish, Modern France

Daniel Vivian

Public History

Jennifer Westerfeld

Ancient Mediterranean

Part-Time Faculty

Brad Bowman

Naina Prakash

Michael Redman

Todd Stokes

Lynn Wagner

Elizabeth Fairhead

Emeritus Faculty

Charles Brockwell

Jerry Cooney

Andrea L. McElderry

Susan J. Herlin

James Morrill

Lowell Newton

Jonathan Ziskind

Adjunct Faculty

Cornelius L. Bynum

Assistant Professor of History, Purdue University

Edward C. Halperin

Dean of the School of Medicine, University of Louisville

John E. Kleber

Professor Emeritus of History, Morehead State University

Mark V. Wetherington

Director, The Filson Historical Society)

Graduate Certificate in Real Estate Development

Major: RED CRE

Degree Awarded: CERT

Unit: GA

Program Webpage: <http://supa.louisville.edu/gcred.htm>

Program Information

The Department of Urban and Public Affairs offers a Graduate Certificate in Real Estate Development designed to equip graduates with the skills needed to make better real estate decisions with respect to investment considerations and site analysis and planning. The program will be particularly attractive to planning students desiring to work in the private sector; however, the program will also be appealing to students enrolled in other graduate programs at the university or who wish to complete the GCRED on a stand-alone basis. The program may be completed in conjunction with the Master of Urban Planning program without the need to take any additional course work beyond what is required for the MUP program. For MUP students, the GCRED courses satisfy the requirements for the specialization in Housing and Community Development.

Applicants must have a bachelor's degree (any major is acceptable), and provide a completed application form, a transcript of all undergraduate work, and two letters of recommendation. Admission is competitive and generally requires a minimum undergraduate GPA of 3.00. 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 complete the Test of English as a Foreign Language (TOEFL) with a score of at least 78 on the internet-based test.

Curriculum

The program requires 18 credit hours, and may be completed in one year as a full-time student or up to four years as a part-time student. Courses may be waived by the Program Coordinator based on previous study; however, substitute course work will be required. The following 3-credit courses are required:

PLAN 605 Land Use and Planning Law
PLAN 614 Real Estate Market Analysis
PLAN 631 Real Estate Principles
PLAN 633 Real Estate Development
PLAN 634 Real Estate Finance and Investment
PLAN 636 Site Planning

Generally, PLAN 631 should be completed prior to PLAN 634 and PLAN 633. PLAN 633, which serves as a capstone course for the program, should be taken in the final semester or year of study. Although the program does not require an internship, GCRED students who are also in the MUP program may wish to complete the required planning internship by working in a real estate development firm.

Departmental Faculty

Steven C. Bourassa, Ph.D.

*KHC Real Estate Research Professor
Coordinator, Graduate Certificate Program in
Real Estate Development*

Sumei Zhang, Ph.D.

Assistant Professor of Urban and Public Affairs

Tony Arnold, J.D.

Boehl Chair in Property and Land Use

J. Michael McCoy, M.L.A.

Lecturer in Urban and Public Affairs

William J. Cahaney, M.A.

Lecturer in Urban and Public Affairs

Master of Arts in Sociology

Major: SOCI

Degree Awarded: MA

Unit: GA

Program Webpage: <http://www.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 MA 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). 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.

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 <http://louisville.edu/sociology/academic-programs/graduate/application-admission.html>

Those applying to the MA 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, no 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 MA program in Sociology are required to complete the following **core courses**:

SOC 604 Graduate Professional Seminar 1 credit hour
SOC 609 Seminar in Statistics I 3 credit hours
SOC 610 Seminar in Statistics II 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 (31 total credit hours)

13 credit hours of core courses, 12 credit hours of elective courses, and 6 credit hours of thesis (SOC 600)

Practicum Option (37 total credit hours)

13 credit hours of core courses, 18 credit hours of elective courses, and 6 credit hours of practicum (SOC 600)

No more than six credit hours of 500-level courses may be applied toward the master's 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 School of Interdisciplinary and Graduate Studies.

Departmental Faculty

L. Allen Furr

Professor

Chair

Jon H. Rieger

Professor

Wayne M. Usui

Professor

D. Mark Austin

Associate Professor

James K. Beggan

Associate Professor

John A. Busch

Associate Professor

Robert M. Carini

Associate Professor

Karen Christopher

Associate Professor

Melissa Evans-Andris

Associate Professor

Patricia Gagne'

Associate Professor

*Coordinator of Graduate
Program*

Cynthia Negrey

Associate Professor

Clarence Talley

Associate Professor

Hiromi Taniguchi

Associate Professor

Gul Aldikacti Marshall

Assistant Professor

Deborah Potter

Assistant Professor

Ryan Schroeder

Assistant Professor

J. Allen Whitt

Emeritus

Doctor of Philosophy in Sociology

Major: SOCI

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: <http://louisville.edu/sociology/academic-programs/doctoral>

Program Information

The Department of Sociology offers a **PhD in sociology**, which is focused on training professional researchers at the highest level to follow the discipline's focus on bringing scientific understandings to the study of social issues and problems. The unique combined requirements of an internship and a theoretically-driven dissertation provides students for both applied and academic careers. Training in both qualitative and quantitative methods and theory with substantive areas, along with internship placements in governmental, private, and non-governmental organizations, will prepare students to meet the growing demand for applied sociologists who are qualified to address directly the problems facing not only Kentucky, but our nation and the world.

Admissions Requirements

For regular admission, a student should have the following:

- graduate GPA of at least 3.0
- combined verbal/quantitative GRE score of 1000
- previous graduate course work in statistics, methods, and theory*
- completed thesis (or original independent work of research from another accredited graduate program)
- international students should also have a quantitative GRE subscore of at least 500 and a TOEFL score of at least 550

*Students may be allowed to make up deficiencies or use equivalent graduate courses regarding these prerequisites. Students who have completed similar courses in these areas may be asked to provide

both the course syllabus and completed course work to determine equivalency. Students should contact Dr. Jonetta Weber at jonettaweber@louisville.edu to discuss any questions regarding these prerequisites.

In exceptional cases, students not qualified for regular admission may be conditionally admitted by action of the Doctoral Admissions Committee.

Application Deadline

The deadline for applications for admission to the fall semester is June 1 and November 1 for the spring semester. (Late applications may be considered on an individual basis.) The Department of Sociology does not admit students during the summer session.

Students interested in being considered for a doctoral assistantship must submit their application materials (along with a letter of interest (a) indicating that they wish to be considered for an assistantship, and (b) elaborating why they feel they would be a good candidate for an assistantship) by February 1 for the fall semester and October 1 for the spring.

Application Materials

Applicants must submit *to the Graduate Admissions Office*:

- a formal graduate application (may be submitted online)
- official copies of transcripts from all colleges attended
- three letters of recommendation (preferably from former instructors, and in sociology, if possible)
- GRE scores (and, for international students, TOEFL scores)

Applicants must also submit *to Dr. Jonetta Weber* (jonettaweber@louisville.edu):

A personal statement addressing the questions below and of sufficient length (500-750 words) to give the Doctoral Admissions Committee a basis for evaluating the student's interest in and ability to complete the program.

Please explain your reasons for applying to the doctoral program in sociology at UofL.

What are your professional or occupational objectives, and how do you envision the department's program fitting into those objectives?

What areas of sociology do you find especially interesting for study and/or research, and with which sociology faculty might you be interested in working?

What areas (including specific sites) might be of interest to you for internship placement, and why?

Writing sample (either the student's thesis or another work of original independent research).

Curriculum

Following is the curriculum (64 total credit hours) and four-year timeline for students pursuing the PhD in sociology:

	Fall	Spring	Summer
Year 1	Proseminar (SOC 614, 1 credit hour) Program Evaluation & Impact Analysis (SOC 617, 3) Contemporary Theory (SOC 621, 3) Sociology Elective (3)	Advanced Multivariate Analysis (SOC 616, 3) Social Policy (SOC 625, 3) Sociology Elective (3)	Independent Study (SOC 702, 6 - for doctoral teaching assistants only)

Year 2	Fundamental Assumptions of Sociology (SOC 619, 3) Research Methods (not Sociology, 3) Sociology Elective (3) *Assemble internship and dissertation committee and chair	Qualitative Research Methods (SOC 618, 3) Independent Study (SOC 702, 3) Dissertation Research (SOC 700, 3) *Secure internship site	Independent Study (SOC 702, 6 - for doctoral teaching assistants only)
Year 3	Internship (SOC 701, 9)	Dissertation Research (SOC 700, 9) <i>*Write/present internship report; prepare for doctoral comprehensive exams</i>	Independent Study (SOC 702, 6 - for doctoral teaching assistants only) <i>*Take doctoral comprehensive exams</i>
Year 4	Dissertation Research (SOC 700, 9) <i>*Defend dissertation proposal</i>	Dissertation Research <i>*Defend dissertation</i>	

Internship

The internship will require students to secure a one-semester placement at a governmental, non-governmental, non-profit, charitable, or private organization, agreed upon by the student and her or his major advisor. Students who have earned 6 or more credit hours of C+ or lower may not begin or complete an internship placement. Further, the internship may not be started until students have passed all of the required methods courses with a grade of B- or higher. Under supervision of the chair of the internship committee, the student will conduct research for the organization in areas such as policy analysis, population need, or social problems on an issue agreed upon, in writing, by an authorized representative of the organization, the internship committee chair, and the student. The specific duties and responsibilities, a plan of research, and an outline of what the research report will encompass shall be written into the contract. The internship may consist of secondary analysis of data or the collection and analysis of original data.

The internship report will consist of the following sections: I. Summary of the Topic Being Researched, Purpose of the Research, Research Questions and/or Hypotheses, Summary of Assumptions and Concepts; II. Research Methods; III. Findings; IV. Summary and Conclusions or Recommendations. Before the report is submitted to the organization, it will be subject to a defense internal to the department, in which the student will present his or her research and respond to questions and criticisms by members of an internship committee. The committee will consist of three members of the graduate faculty from the Department of Sociology at UofL. The internship will be required of all Ph.D. students, including those who have completed a Practicum Report as part of the requirements of an M.A. in Sociology at the University of Louisville. (Note: For repeated courses, only the new grade counts.) The Graduate Advisor, who serves as the director of graduate studies, will oversee the internship component of the program. Each student's mentor will supervise the internship. Students who receive stipends from the host agency will not be eligible for university funding.

Comprehensive Exams

Upon completion of all course work and after successful defense of the internship report, all students will prepare for comprehensive exams. The purpose of the comprehensive exam is to demonstrate expertise in three specific areas of expertise. No student may take the comprehensive exam until he or she has completed all Incompletes or grades of X, except for dissertation or research hours. No student who has

more than 6 hours of a grade of C+ or below may take the comprehensive exam. Students will be tested in a methodological, theoretical, and a substantive applied area of their choosing. A reading list for each of these areas will be prepared by the student with assistance from members of the comprehensive exam committee.

The exam will consist of three questions (one question per area) developed by members of the exam committee. Students will not be permitted to see the questions until they begin taking the exam. Students will complete their exams during three four-hour sessions held in a secure setting over three consecutive days. Students will not be permitted to use books, notes, or any other materials while writing their essays. After a period of one week and not longer than two weeks, the chair of the exam committee will schedule an oral exam of a duration of not less than two and not longer than three hours, during which the student will respond to questions presented by members of the committee about the written essays. To render a passing grade, all committee members must agree to pass. Students who fail the exams may re-take the work judged unsatisfactory within the following semester. Students failing the second attempt will be expelled from the program.

Dissertation

Upon successful completion of the oral comprehensive exam, students will be admitted to candidacy. Students are required to write and present a dissertation research proposal to a dissertation committee for approval. The committee will consist of five members: three or four must be graduate faculty in the Department of Sociology; no more than two will be graduate faculty from other departments; and one may be from another university. The proposal will include a summary of research literature on the topic to be researched, the ways in which the proposed research is expected to expand upon the literature in meaningful ways, an explanation of the theoretical framework and relevant concepts that will, or is likely to, inform the data analysis, the data collection methods to be used, and the source of the data to be analyzed. Students may propose to use the data collected during their internships, but they must present in their research proposals a sound methodological and/or theoretical argument explaining how the proposed research will address gaps in the literature and why a case study method is an appropriate approach. After the proposal is completed, the dissertation committee chair will schedule a defense of the proposal, at which the student will address questions and concerns presented by committee members. Such concerns will be included in a final draft of the research proposal, which the student will distribute to all committee members.

After approval of the research proposal, the student will conduct research for the dissertation, which will include the elements required in the research proposal, as well as a section of findings, analysis and discussion of the findings, and summary and conclusion. Upon completion of a defensible draft of the dissertation, the student will submit the draft to all members of the dissertation committee. The student will also place a copy of the dissertation at the front desk in the Sociology Department, which may be read by interested faculty or students. The committee chair will schedule a defense to be held not less than one week after distribution of the final defense draft and its placement at the front desk of the Sociology Department, and not more than two weeks after its distribution. In the defense, the student will present his or her work and then respond to questions and criticisms from members of the committee. The student will be responsible for making any final changes required by committee members. Upon completion of the final document, it will be distributed to committee members and submitted to the University, following its applicable guidelines.

By combining rigorous courses in quantitative and qualitative research methods and theory with substantive areas (e.g., the sociologies of crime and delinquency; the environment; work, labor markets, and welfare; the family; medicine and mental health; education; and inequalities based on race, ethnicity, gender, and social class) with internship placements in governmental, non-profit, charitable, private, and non-governmental organizations, the proposed program will provide students with the data gathering and analytic tools needed to investigate and discover new knowledge about social problems, issues, and trends

and to offer specific policy recommendations toward the mitigation of such issues in applied settings. In addition, by requiring the completion of a comprehensive exam, dissertation proposal, and dissertation, the proposed program will provide students with the training and educational guidance needed to advance beyond concrete understandings of specific social issues in localized settings and toward more generalized and theoretically driven explanations of sociological trends.

The strength of this program is that it provides extensive training for students in two career directions, the applied and the theoretical. Students will prepare for the “real world” of Applied Sociology by completing the 9 credit hours of internship. They will undergo the rigors of the theoretical aspect of the discipline by completing a dissertation. When students complete the program they will be prepared to enter the professional work force as applied sociologists or they may choose a more traditional career in academia.

Grades

Doctoral students are expected to produce high quality work. Students who receive a grade lower than a C+, however, may re-take no more than 2 courses for which a grade lower than C+ has been earned. These courses may be retaken only once each. If the student cannot achieve grades higher than that on the second try, the student will be dismissed from the program.

Departmental Faculty

L. Allen Furr
Professor and Chair
Jon H. Rieger
Professor
Wayne M. Usui
Professor
D. Mark Austin
Associate Professor
James K. Beggan
Associate Professor
John A. Busch
Associate Professor

Robert M. Carini
Associate Professor
Karen M. Christopher
Associate Professor
Melissa Evans-Andris
Associate Professor
Patricia Gagne'
Associate Professor
Gul Aldikacti Marshall
Associate Professor
Cynthia Negrey
Associate Professor

Clarence R. Talley
Associate Professor
Hiromi Taniguchi
Associate Professor
Lauren Heberle
Associate Professor
Deborah A. Potter
Associate Professor
Ryan D. Schroeder
Associate Professor
Wayne M. Usui
Professor Emeritus

Master of Arts in Spanish

Major: SPAN

Degree Awarded: MA

Unit: GE

Program Webpage: <http://modernlanguages.louisville.edu/spanish/>

Program Information

General Information

The Master of Arts in Spanish prepares 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. The program will be immediately useful both to current teachers of Spanish and to professionals who seek to participate more actively in the global workplace or in local multi-ethnic communities. Core courses expose students to culture, linguistics, and translation/interpretation. Electives offer in-depth study of cultural topics as well as practical and pedagogical experience. Study abroad opportunities are available and may be supported by one of several departmental travel grants.

The MA in Spanish requires 30 hours of academic work in Spanish at the graduate level. The program may be completed in four semesters.

Admission Requirements and Procedure

Applications to the MA program in Spanish are considered throughout the academic year, with start dates in fall and spring. In line with Graduate School regulations, all application materials must be received at least 30 days before the intended start date. A prerequisite for admission is advanced proficiency in Spanish (speaking, aural comprehension, reading, and writing). Applicants who do not hold a BA in Spanish or the equivalent by the program start date may be required to take preparatory coursework to make up for any deficiencies. Upon approval of the Director of Graduate Studies, up to six hours of graduate-level coursework taken at another institution may be applied toward the degree.

To be submitted to the Graduate School:

1. Graduate School application and application fee.
2. Transcripts from all accredited institutions where undergraduate and/or graduate credit was earned. Minimum GPA required for undergraduate work: 3.0 on a four-point scale.
3. Two letters of recommendation. Letters must be recent (written no more than a year prior to application date) and should attest to the applicant's proficiency in Spanish and potential to do graduate work.
4. GRE scores. Minimum required: a combined score of 900 on the GRE verbal and quantitative sections.
5. TOEFL scores (for applicants for whom English is a second language). Minimum required: 550 on the TOEFL Examination (paper test) or at least 210 on the TOEFL Exam (computer test).

NOTE: The Director of Graduate Studies in Spanish may grant provisional admission to students who do not meet individual requirements.

To be submitted to the Director of Graduate Studies in Spanish:

1. A personal statement of 1-2 pages in Spanish discussing how the MA in Spanish relates to the applicant's professional or personal goals.
2. A sample of academic writing of at least five pages, preferably a paper written as part of the requirements for a university-level course. (May be in English or Spanish.)
3. Mail statement and writing sample directly to the Director of Graduate Studies in Spanish, Department of Classical and Modern Languages, University of Louisville, Louisville, KY, 40292.

Graduate Teaching Assistantships

The Department of Classical and Modern Languages offers a limited number of graduate teaching assistantships in Spanish. Applications are considered in the spring for start in the following academic year. Spanish MA applicants who wish to be considered must submit all GTA application materials by March 1st. (Details and application form are available at the Classical and Modern Languages webpage.)

Curriculum

		Semester Hours Total
SPAN 524	Introduction to Hispanic Linguistics	3
SPAN 554	Hispanic Culture through Film and Media	3
SPAN 611	Teaching and Research Methods in Spanish	3
SPAN 624	Studies in Hispanic Linguistics	3
SPAN 634	Spanish for the Workplace and Community	3
SPAN 638	Theory and Practice of Translation	3
SPAN 644	Origins and Development of Hispanic Culture	3
SPAN 648	Contemporary Issues in the Hispanic World	3
SPAN 5XX or	Two electives in Spanish	6
	Directed Research Project	No credit
Total Credit Hours		30

NOTE: At least 18 credit hours must be taken at the 600-level (courses restricted to graduate students). As a culminating experience, all MA candidates are required to complete a Directed Research Project and present it in a public forum.

Accelerated BA/MA in Spanish

This program allows undergraduate Spanish majors at the University of Louisville to get a head start on the MA in Spanish by taking up to nine hours of 500-level coursework (excluding SPAN 590) for graduate credit. Upon conferral of the BA in Spanish, students enter into masters status and complete the remaining requirements for the MA.

Eligibility requirements:

1. Students must have a minimum overall GPA and Spanish-major GPA of 3.35. (Also required for retention in the program.)
2. At the time of application, students must have completed Spanish 321, 322 and 355 with a grade of B or better. It is also recommended that students have completed one course at the 400 level before applying.
3. Students may apply no later than the end of their junior year.

To be submitted to the Graduate School:

1. An online Graduate School application.
2. Two letters of recommendation from individuals (preferably Spanish faculty) who can attest to the applicant's ability to handle graduate-level coursework in Spanish.
3. GRE scores (no later than the end of the start semester).

To be submitted to the Director of Graduate Studies in Spanish:

A personal statement of 1-2 pages in Spanish discussing how the MA in Spanish relates to the applicant's professional or personal goals.

Departmental Faculty

Rhonda L. 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

Matthieu Dalle
Assistant Professor of French
John P. Greene
Professor of French
Gregory S. Hutcheson
Associate Professor of Spanish
Alan Leidner
Professor of German
Robert Luginbill
Associate Professor of Classics
Mary Makris
Associate Professor of Spanish
Augustus A. 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
Roy Ackerman
Professor Emeritus
David R. Hume
Professor Emeritus
Hans Peterson
Professor Emeritus
Marilyn Schuler
Professor Emerita
Sydney Schultze
Professor Emerita

Certificate in Latin American and Latino Studies

Major: LASNON

Degree Awarded: CERT

Unit: GA

Program Webpage: <http://louisville.edu/latinamericanstudies>

Program Information

The Graduate Certificate in Latin American and Latino Studies (LALS) 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 School of Interdisciplinary and Graduate Studies, 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 LALS Graduate Certificate Program, students must meet the standard criteria for general admission to the University of Louisville School of Interdisciplinary and Graduate Studies, 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 LALS 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 LALS Graduate Certificate Program.

Requirements

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 LALS may also count toward the student's graduate degree.
9. Students may not apply 500-level courses taken for undergraduate credit.

Curriculum

Additional courses with substantial Latin American content, which are not listed below, may also be taken to fulfill the requirements for the LALS Graduate Certificate. This list is updated regularly on the LALS Website: <http://louisville.edu/latinamericanstudies>

ANTH 548	Special Topics in Cultural Anthropology
ANTH 608	Social and Cultural Theory
ANTH 611	Research Design: Socio-Cultural Anthropology
ARTH 542	Special Topics - Mexican Art and Architecture
ARTH 544	Pan-African Art: Form and Content
COMM 510	Special Topics in Speech (Health Communication Issues in Belize)
COMM 690	Special Topics (Intercultural Communication)
ENGL 549	Studies in Post-Colonial and/or Ethnic Literature
ENGL 554	Women's Personal Narratives
ENGL 682	Seminar in Linguistics
HIST 503	Race Class, and Identity in Latin America
HIST 533	Revolution and Reform in Twentieth-Century Latin America
HIST 534	The US and Latin America
HIST 535/611	The History of Mexico
HUM 562	Studies in Hispanic Culture
HUM 671	Interdisciplinary Seminar I

HUM 682	Topics in Studies in Culture
LAS 680	Issues in Latin American Studies
LAS 681	Latin American Studies Graduate Internship
LAW 886	International Law
LAW 992	Immigration Law
LING 690	Seminar in Linguistics: Theories of Culture/HUM 682/ ENG 682
LING 690	Seminar in Linguistics: Cultural Metaphors/HUM 682/ ENG 682
MKT 670	Global Marketing
ML 551	Special Topics (Panamanian Culture)
PAS 505	The Black Atlantic
PAS 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
PAS 542/643	Black Women's Voices
PAS 547	Language, Race, Class and Gender
PAS 581	Pan-African Art: Form and Content
PAS 621	Religions of the African Diaspora
POLS 506	Topics in International Relations
POLS 530	International Negotiation
POLS 554	Democratization and Regime Change
POLS 563	Women in Developing Countries/W MST 558
POLS 647	Seminar on Latin America
POLS 649	Seminar in Comparative Politics
SOC 512/612	Gender, Race, Work and Welfare
SOC 685	Seminar in Race and Ethnicity
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
TA 555	Special Topics in Theater
TA 665	Tools for a Global Theater
WGST 520	Women's Personal Narratives
WGST 558	Women in Developing Countries
WGST 593	Global Feminism

Departmental Faculty

Rhonda L. Buchanan

Professor of Spanish

*Director of Latin American
and Latino Studies*

Enid Trucios-Haynes

Professor

Fabian Crespo

Assistant Professor

Lisa Markowitz

Associate Professor

Dennis Menezes

Associate Professor

Gregory Hutcheson

Associate Professor

Manuel Medina

Associate Professor
Clare Sullivan
Associate Professor
Lisa C. Wagner
Associate Professor
Joy Hart
Professor
Robert St. Clair
Professor
Gabriela Nuñez

Assistant Professor
Christopher Fulton
Associate Professor
Margath Walker
Assistant Professor
Christine Ehrick
Associate Professor
Adrian Archuleta
Assistant Professor
Theresa Rajack-Talley

Associate Professor
Joy Carew
Associate Professor
Denise Martin
Associate Professor
Julie Bunck
Associate Professor
Tricia Gray
Visiting Assistant Professor

Master of Fine Arts in Theatre Arts

Major: TA

Degree Awarded: MFA

Unit: GE

Program Webpage: <http://www.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 MFA program are a baccalaureate degree from an accredited college or university and admission to the School of Interdisciplinary and Graduate Studies. 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 MFA 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 School of Interdisciplinary and Graduate Studies. Applicants to this program must have an interview with the Director of Graduate Studies.

Curriculum

Requirements for the MFA in Acting/Performance

Students pursuing the MFA 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)

MFA Performance Projects	7
Thesis Guidance (monograph)	3
Electives	3
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 Graduate 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 MFA 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.

Departmental Faculty

Russell J. Vandembroucke
Professor and Chair

Garry Brown
Associate Professor
Director of Undergraduate Studies

Nefertiti Burton
Associate Professor
Associate Dean for

International, Diversity, and Outreach Programs

Rinda L. Frye
Associate Professor
Director of Graduate Studies

Zhanna Goldentul
Instructor

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

Graduate Certificate in Translation

Major: TRANCTR

Degree Awarded: CERT

Unit: GA

Program Webpage: <http://louisville.edu/modernlanguages/>

Program Information

Translators work with a written text, transferring the content from one language to another. Translating well requires not only knowledge of both languages but also understanding of the source and target cultures. It is an exacting art that demands creative expression, philological precision, minute knowledge of historical and cultural contexts, and a nuanced sense of style in both the source and target languages.

The certificate program provides the rigorous academic training necessary for the professionalization of the prospective translator. It will prepare a student to begin to work for an agency or as an independent contractor. Such a program could serve as a gateway to specialized translation studies in legal, medical, and technical translation.

It will provide students who are already highly proficient in both languages the background in theory, technical resources, and research skills necessary to translate effectively. With the establishment of this certificate, U of L will provide graduate students, post-baccalaureate students, and members of the community seeking professional development and additional credentials the opportunity to acquire:

1. an introduction to theories in the field of translation
2. specific skills in various fields
3. hands-on professional experience

Curriculum

The certificate requires completion of a minimum of 21 credit hours focusing on comparative grammar, professional writing skills, culture, translation history and theory, nonliterary translation, and computer translation and terminology management. The minimum requirement for the completion of the graduate certificate in Spanish Translation is 21 hours.

All students must take SPAN 638 (Translation: Theory and Practice), TRAN/SPAN 662 (Translation Workshop), and TRAN/SPAN 667 (Computers in Translation).

Students must complete a three-hour internship or directed study.

Coursework towards the Graduate Certificate in Spanish Translation may count towards the student's graduate degree. (Consult the Director of Graduate Studies in the particular degree program.)

For students in the MA program in Spanish, up to six hours of courses may count toward both the certificate requirements and the MA requirements.

Students may complete an optional medical concentration by fulfilling a one-hour introductory course to clinical research, a three-hour course on medical terminology and by doing their internship in the medical field.

Departmental Faculty

Classical & Modern Languages

Rhonda Buchanan
William Day
Bonnie Fonseca-Greber
Mary Makris
Clare Sullivan

Humanities

Simona Bertacco

Medical School

Julio Ramirez
Jesse Roman

School of Public Health and Information Sciences

Carlton Hornung
Irma Ramos

Consultant

Jennifer Maxwell

Doctor of Philosophy in Urban and Public Affairs

Major: UPA

Degree Awarded: Ph.D.

Unit: GA

Program Webpage: <http://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

1. Bachelor's degree with at least a 3.0 GPA (on 4.0 scale);
2. Master's degree in an appropriate field with at least a 3.5 GPA (on a 4.0 scale);
3. GRE score of at least 500 Verbal, 500 Quantitative, and 4.5 Analytical.
4. 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:

1. Transcripts from all institutions attended;
2. Supplemental application (available from School web site);
3. 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. 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 609 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 609 prior to enrolling in SOC 610. Students with no prior study in economics 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.

Core Required Courses (18 semester hours)

UPA 602 Urban Policy and Governance	(3)
UPA 603 Urban Economics	(3)
UPA 606 Research Methods	(3)
UPA 610 Urban Theory and Public Affairs	(3)
UPA 621 Policy Analysis and Program Evaluation	(3)
SOC 610 Seminar in Statistics	(3)

Field Specialization (18 semester hours)

Urban Policy and Administration Field	
UPA 630 Politics and Urban Policy	(3)
UPA 660 Advanced Organizational Behavior	(3)
UPA 661 Public Administration and Organizational Theory	(3)
Approved electives	(9)

Urban Planning and Development Field

UPA 623 Comparative Urban Development	(3)
UPA 683 Land Use Planning	(3)
UPA 684 Planning Theory	(3)
Approved electives	(9)

Dissertation Research (12 semester hours)

UPA 700 Dissertation Research	(12)
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Departmental Faculty

Mark Austin

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Leonard Bright

Assistant Professor of Urban and Public Affairs

Steven C. Bourassa

KHC Real Estate Research Professor and Director Ph.D. Program in Urban and Public Affairs

Carrie Donald

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John I. Gilderbloom

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David Imbroscio

Professor of Political Science and Urban and Public Affairs

Steven G. Koven

Professor of Urban and Public Affairs

Cynthia Negrey

Associate Professor of Sociology

H. V. Savitch

Brown & Williamson Distinguished Research

*Professor of Urban and
Public Affairs*
David M. Simpson
*Fifth Third Bank Professor of
Community Development*

Wei Song
*Associate Professor of
Geography and Geosciences*
Wayne M. Usui
Professor of Sociology

Sumei Zhang
*Assistant Professor of Urban
and Public Affairs*

Master of Urban Planning

Major: URPL

Degree Awarded: MUP

Unit: GA

Program Webpage: <http://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 School of Urban and Public Affairs offers a Master of Urban Planning (MUP) degree in cooperation with the Department of Geography and Geosciences. The MUP 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 MUP 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 graduate 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 MUP 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 JD 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 MUP courses are approved to be counted as electives toward the JD 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 MUP 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 MUP 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 JD courses are approved to be counted as electives toward the MUP degree:

- Administrative Law
- Energy Law

- Environmental Law
- Constitutional Law II
- Property II
- Real Estate Transactions
- Water Resources Law & Policy

Any other JD course approved by the Director of the MUP 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 JD degree and of law credits toward the MUP 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 JD degree, and likewise shall count as a three-credit graded elective toward the MUP degree. To receive MUP credit, the student must earn at least a “B” (3.0) in the course.

Departmental Faculty

David M. Simpson

*Associate Professor
MUP 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: MA

Unit: GA

Program Webpage: <https://louisville.edu/wgs/>

Program Information

MA 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.

MSSW/MA in Women's and Gender Studies

The dual MSSW/ 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 MSSW 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

1. 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).
2. Students must have a 3.0 GPA in undergraduate work. Provisional admission is possible for students who do not meet this requirement.
3. 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.
4. 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.
5. 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.
6. 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).
7. 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.
8. Students must maintain a 3.0 average in order to be in good standing.

9. 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.
10. 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 513: U.S. Social Justice Movements
 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 682: Gender, Race, Culture and Health Care
 WGST 513: U.S. Social Justice Movements
 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 682: Gender, Race, Culture and Health Care
 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 513: U.S. Social Justice Movements

WGST 538: American Women in Sports
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

Departmental Faculty

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Professor and Chairperson

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

*Assistant Professor, Pan
African Studies*

Ann Allen

Professor, History

Annette Allen

*Associate Professor,
Humanities*

Beth Boehm

Vice Provost of Graduate

*Affairs, Interim Dean of the
School of Interdisciplinary
and Graduate Studies and
Professor of English*

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Barbara Burns

Professor, Psychology

Thomas B. Byers

Professor, English

Karen Chandler

Associate Professor, English

Anne Caldwell

*Associate Professor, Political
Science*

Julia Dietrich

Professor, English

Christine Ehrick

Associate Professor, History

Rinda Frye

*Associate Professor, Theatre
Arts*

Patricia Gagne

*Associate Professor,
Sociology*

Alan Golding

Professor, English

Trish Gray

*Term Appointment, Political
Science*

Susan Griffin

Professor, English

Anita Harris

*Assistant Professor,
Anthropology and Pan
African Studies*

Karen Hadley

Associate Professor, English

Susan Herlin

*Associated Professor,
Emerita, History and Pan
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Suzette Henke

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Katherine Johnson

*Assistant Professor,
University Libraries*

Cheryl Kolander

Professor, HPES

Karen L. Kopelson

Assistant Professor, English

Gul Marshall

*Assistant Professor,
Sociology*

Carol Mattingly

Associate Professor, English

Diane Pecknold

*Visiting Teaching Scholar,
Commonwealth Center for
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Wendy Pfeffer

*Professor, Classical and
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Natalie Polzer

*Assistant Professor,
Humanities*

Nancy Potter

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Anu Sabhlok

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Edwin S. Segal

*Professor, Emeritus,
Anthropology*

Arthur Slavin

*Professor, Emeritus,
Humanities*

Mary Ann Stenger

*Associate Professor,
Humanities*

Tamara Yohannes

Term appointment, English

Graduate Certificate in Women's and Gender Studies

Major: WGST

Degree Awarded: CERT

Unit: GA

Program Webpage: <https://louisville.edu/wgs/graduate-studies/graduate-certificate.html>

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:

1. 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:
2. Completing a Graduate School application form and sending in the application fee
3. Submitting an official transcript reflecting previous degrees earned
4. 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.
5. 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

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.

One course among the 15 hours must be WGST 601 or WGST 602.

At least two courses must be at the 600-level.

Courses must be chosen from both humanities and social sciences disciplines, with consultation of WGS chairperson.

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.

A single course may satisfy more than one requirement.

Course work toward the graduate certificate in WGS may also count toward the student's graduate degree.

Departmental Faculty

Nancy M. Theriot
Professor and Chairperson

Karen Christopher
Associate Professor

Cate Fosl
Associate Professor

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Audre Lorde Endowed Chair
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Term appointment, English*

Joseph Petrosko

Professor

Bridgette O. Pregliasco

Assistant Professor

Michael Rowland

Assistant Professor

Brad Shuck

Assistant Professor

James Stone

Professor

Sam Stringfield

Professor

Molly Sullivan

Assistant Professor

Kirsten Ewart Sundell

Instructor

Kristin Wilson

Assistant Professor

Doctor of Philosophy in Entrepreneurship

Major: ENTR

Degree Awarded: Ph.D.

Unit: GB

Program Webpage: <http://business.louisville.edu/entrepreneurshipphd/>

Program Information

Admission to the program is highly competitive. It is based on an applicant's past graduate and undergraduate school records, score on the graduate management admissions test (GMAT), prior experiences, a personal statement and letters of recommendation. Applicants are only admitted in fall semesters of even years (2010, 2012, etc.).

No specific graduate or undergraduate major is required. However, an MBA is strongly preferred. A student who does not have a master's degree in business may be required to complete a set of courses equivalent to a "core" that is covered in an MBA program. Questions about prerequisites should be directed to the program director. 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 years and

the program in four years, subject to progress on a dissertation. Students generally take 19 courses consisting of seminars and directed readings and/or research. A student's curriculum choices are supervised and approved by an advisory committee.

All required courses are offered on a biennial basis in the Fall, 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, both the content and sequencing of these course requirements may change in order to address topics of current interest. Applicants should contact the Program Director, Dr. David Dubofsky, for the most current requirements.

YEAR 1 --First month (August) in the program

New students may be required to take a CD-based review of statistics and/or a statistics “boot camp”, taught by several College of Business faculty. Faculty mentors for research assistantships are established.

FALL I

Entrepreneurship 780: Seminar in Management: Strategy

This seminar introduces first-semester Ph.D. students to theory, focusing on what theory is, what it takes to make a theoretical contribution to entrepreneurship, and the importance of theory as a foundation for research. We examine core theories in strategic management and organization theory and consider how they have applied to study entrepreneurship. *Instructor: Dr. Melissa Baucus.*

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, overview of statistical methods, overview of qualitative methods and an overview of psychometric theory. *Instructor: Dr. Manju Ahuja*

Entrepreneurship 780: Economic Theory of the Firm

Part 1 of the course will cover the basic microeconomic theory of the firm, production functions, cost functions, the basic firm profit maximization model, the basic cost minimization model, firm supply and competitive markets. Part 2 will cover the theory of monopoly, price discrimination, monopolistic competition, oligopoly, product differentiation, entry, barriers to entry and exit. Part 3 will cover managerial contracting and incentives, contracting design and the principal-agent problem, information asymmetry, adverse selection, screening, signaling, moral hazard and agency theory. *Instructor: Dr. Yong Chao*

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. *Instructor: Dr. Richard Germain*

SPRING I

ELFH 703: Multivariate Statistics

The purpose of the course is to develop an understanding of multivariate statistics by students, so that they can: (a) understand the use of these statistics in published research studies, (b) apply multivariate methods to quantitative research problems in their area of interest, (c) use statistical software to analyze data using multivariate methods, and (d) correctly interpret the results of computer analyzed multivariate data. *Instructor: Dr. Joe Petrosko*

PhD Seminar in Finance and Venture Capital

This co-taught seminar reviews research in the funding of new and growing businesses from the perspective of both the funds provider and the entrepreneurial team. The seminar acquaints students with what has been learned about financing the launch of a new business, as well as to prepare them to conduct their own research in this burgeoning area. *Instructors: Dr. James O. Fiet and TBD*

Entrepreneurship 740: Organizational Behavior and Human Resources Issues in Entrepreneurial Firms

An intensive and critical introduction to the analysis and practice of organizational behavior. This seminar addresses the challenges faced by entrepreneurs as they attempt to create an organization in support of launching a new venture. Because they lack many initial resources, the accomplishment of this goal is different and perhaps more difficult than that faced by existing firms. *Instructors: Dr. Bruce Kemelgor and Dr. Sherry Thatcher*

***PhD Seminar in Discovery* (1.5 credits)**

Reviews research on entrepreneurial discovery from the perspectives of the aspiring entrepreneurs and scholars. The coverage is both theoretically descriptive and prescriptive. *Instructor: Dr. James O. Fiet*

***PhD Seminar in New Product Strategy from a Marketing Perspective* (1.5 credits)**

The seminar is designed to teach doctoral students the fundamentals of new product strategy, from a marketing perspective. The course is designed to cover a range of topics and approaches (i.e. theory and method) and progresses through three main areas of discussion: a) conjoint and identification of the "best" new product concept, b) pioneer advantage versus "fast followers", and c) demand estimation for new products. *Instructor: Dr. Robert Carter*

SUMMER I

Entrepreneurship 750: Issues and Developments in the Quantitative Approach to Entrepreneurship Research

This seminar integrates theoretical developments and research findings, as presented in previous seminars in the program, with their method implications. It also supplements the previous seminars on research design and statistical techniques by focusing on aspects that were not previously covered or by elaborating on issues that were only treated in passing. *Instructor: Dr. Per Davidsson*

Qualifying exam preparation course

Qualifying exam (July)

First year paper due (by mid-August)

FALL II

Entrepreneurship 780: Structural Equation Modeling and Measurement Theory

The course is designed to provide the student with an understanding of the rationale underlying SEM, the use of SEM in research, the interpretation of SEM analyses, and the evaluation of research using SEM. A working knowledge of basic statistics, regression modeling, exploratory factor analysis, reliability analysis and validity and multivariate statistics is assumed. *Instructor: Dr. Richard Germain*

Entrepreneurship 733: Psychological Foundations of Entrepreneurship

This seminar has four fundamental purposes: 1) Increase familiarity with current research that addresses important questions about the psychology of entrepreneurship, 2) assess "gaps" in these literatures and propose research agendas to address them, 3) build an understanding of the seminal papers that underlie current contributions, and 4) write, develop skills in "mapping out" and writing one's own research papers. *Instructor: Dr. Dean Shepherd*

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. *Instructor: Dr. Simon Parker*

Elective #1*

SPRING II

Entrepreneurship 710: Sociological Foundations of Entrepreneurship

The course takes an evolutionary approach, examining six popular perspectives from sociology, economics, history and political science in terms of their ability to explain organizational change. We examine the creation, persistence, transformation and disbanding of organizations of many different types. The course begins by focusing on organizational emergence. We pay special attention to the role of entrepreneurs, not only in their role as founders of organizations but also in terms of their place in society. We consider the importance of human and social capital, such as social networks as well as the role of economic and social inequality. Next, we focus on social change and models for historical analysis. We then turn to the emergence of new types of organizations and industries, as well as the forces that maintain and reproduce established populations. Last, we turn to the community level of analysis, focusing especially on social networks and inter-organizational relations. *Instructor: Dr. Howard Aldrich*

Entrepreneurship 700: Current Topics in Entrepreneurship Research

The focus is on theory building and empirical testing of the factors shaping the identification, evaluation, and exploitation of opportunities and the creation of new organizations. The objective of the course is to give students an introduction to the major theoretical threads and controversies in the field. It will also examine the methodologies that are important to research in this area. Students will learn about various perspectives, examine different methodologies, explore some original empirical research, make connections between theory and empirical research, and practice critiquing and identifying insight in research. *Instructor: Dr. Scott Shane*

Entrepreneurship 730: Entrepreneurship from a Strategic Perspective

This seminar has two objectives: 1) to expose students to the central theoretical issues in the field of strategic management and 2) to assist students in developing their research to contribute to their chosen field of work. *Instructor: Dr. Jay Barney*

Elective #2*

SUMMER II

Entrepreneurship 785: Pedagogical Seminar

This seminar has two fundamental purposes: 1) understand the theory and practical applications of university teaching with emphasis on the unique aspects of teaching entrepreneurship and 2) begin to develop individual teaching skills relevant to the topic and student learning styles. *Instructor: Dr. Melissa Baucus*

Required paper must be completed and defended in order to progress into candidacy.

FALL III

Dissertation Proposal

SPRING III

Dissertation

YEARS IV and V (if necessary)

Dissertation

*One of the two electives must be in methods or statistics, and is taken outside the College of Business. Possible courses include:

PSYC 610	Advanced Statistics I
PSYC 611	Advanced Statistics II
SOC 610	Seminar in Statistics II
SOC 615	Seminar in Research Methodology
SOC 618	Qualitative Field Research Methods
PHST 620	Introduction to Statistical Computing
PHST 630	Applied Statistical Models
PHST 662	Mathematical Statistics
PHST 684	Categorical Data Analysis
PHST 691	Bayesian Inference and Decision
PHST 780	Advanced Nonparametrics
ELFH 602	Survey Research and Attitude Measurement
ELFH 701	Intermediate Applied Statistics
ELFH 704	Qualitative Field Research Methods
ELFH 705	Qualitative Data Analysis and Representation
MATH 560	Statistical Data Analysis
MATH 561	Probability
MATH 562	Mathematical Statistics

Departmental Faculty

Manju Ahuja

Professor

Melissa Baucus

Associate Professor

Robert E. Carter

Assistant Professor

David Dubofsky

Professor

Chair, Ph.D. Program

Committee

Program Director

James O. Fiet

Professor

Brown-Forman Chair in

Entrepreneurship

Richard Germain

Professor

Challenge for

Excellence Chair in

Supply Chain Management

Bruce H. Kemelgor

Associate Professor

Joe Petrosko

Professor

Sherry M.B. Thatcher

Associate Professor

Term Appointments

Howard Aldrich

Professor

Jay B. Barney

Professor

Per Davidsson

Professor

Simon Parker

Professor

Dean Shepherd

Professor

Scott Shane

Professor

Master of Science in Oral Biology

Major: OBIO

Degree Awarded: MS

Unit: GD

Program Webpage: <http://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. Developmental biology, oral microbiology and innate immunology are particular strengths of the program.

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 Admission by the following admission deadlines for COMPLETE applications:

June 1 for Fall
November 1 for Spring
March 1 for Summer

Applications that are not complete by the deadline 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
- A personal statement of interest in the program
- TOEFL scores, if English is not applicant's native language

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 Seminars in Oral Biology (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 Immunology (2 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 School of Interdisciplinary and Graduate Studies 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 recommended in partial fulfillment to these 6 semester hours.

Total semester hours required for M.S. degree: 30 semester hours

Departmental Faculty

David A. Scott

Director

Dianne Foster

Program Administration

Norbert J. Burzynski

Professor

Janice M. Butters

Associate Professor

Steven Clark

Assistant Professor

Gary A. Crim

Professor

Douglas S. Darling

Associate Professor

Don R. Demuth

Professor

Connie L. Drisko

Professor

Allan G. Farman

Professor

Lawrence Gettleman

Professor

Sven-Ulrik Gorr

Associate Professor

Robert M. Greene

Professor

Henry Greenwell

Professor

George Hajishengallis

Associate Professor

Betty Harokopakis

Assistant Professor

Bruce Haskell

Professor

Margaret Hill

Associate Professor

B. Edwin Johnson

Professor

Zafrulla Khan

Professor

Denis F. Kinane

Professor

Mike Martin

Assistant Professor

Richard L. Miller

Professor

Regan L. Moore

Associate Professor

Michelle L. Pisano

Professor

William Scarfe

Associate Professor

James P. Scheetz

Professor

David A. Scott

Associate Professor

Anibal M. Silveira

Associate Professor

Robert H. Staat

Professor

Master of Arts in Teaching in Art Education

Major: EDAR

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-ae.html>

Program Information

This program leads to Kentucky certification in Art Education, grades P-12. Applicants to the program should have excellent academic credentials as well as successful experience working with children and/or adolescents. Applicants should have an undergraduate degree with a major in Fine Arts.

Curriculum

Initial Assessment: Admission to Teacher Education. Minimum GPA 2.75, GRE 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree with major in Fine Arts (or equivalent course work), C or higher in English 102 and oral communication.

*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 teacher performance assessment (TPA); Positive recommendation from Middle/Secondary Program Committee.

EDTP 612	Student Teaching P-12	6
EDTP 677	Capstone Seminar: Initial Certification 2	3
EDSP 545	Exceptional Child in the Regular Classroom	3

Certification Assessment: 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 each student teaching; Satisfactory certification teacher performance assessment (TPA); Passing scores on required PRAXIS content and PLT exams; Positive recommendation from Middle/Secondary Program Committee.

EDTP 503	Developing Cross-Cultural Competence1	3
ART 5xx	Academic support course1	3
ART 6xx	Academic support course1	3
EDTP 620	Reading and Writing Across the Curriculum/Adolescent Literature1	3

1 Can be taken at any point in the program; at least one must be at the 600 level.

2 Must be taken concurrently with Student Teaching

Minimum total hours **36**

Degree Assessment: Satisfactory dispositions assessment; All program course work with 3.0 cumulative GPA (and no more than a total of two "C's" in degree courses); Satisfactory degree teacher performance assessment (TPA).

Degree Candidacy: If not enrolled during the semester in which you are graduating, you will need to register for master's candidacy as outlined in the graduate catalog, <http://louisville.edu/graduatecatalog/academic-policies-and-requirements/>, under the section called academic policies and requirements.

Departmental Faculty

Nicole Fenty
Assistant Professor
Barbara Hanger

Associate Professor
Penny Howell
Assistant Professor

Jean Wolph
Instructor, Director of Louisville Writing Project

Master of Education in Community Health

Major: HPE

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-ch.html>

Program Information

Students generally pursue careers at work-sites (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 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 submit Graduate Record Examination (GRE) scores. 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. Some programs may require a higher GRE score. Exit Requirements: Minimum of 3.0 GPA, and two of the following: portfolio, internship, exit exam, research project or thesis.

PLEASE NOTE: Admission for the Spring 2010 Semester, and thereafter, will be decided by a screening committee.

The deadlines for admission will be:

March 1 for Summer or Fall admission.

October 1 for Spring admission.

The Community Health Admissions Screening Committee requires the following materials:

1. Transcripts of all undergraduate and graduate work. Minimum cumulative grade point average (GPA) of 2.75 or higher either overall or within the last 60 hours (senior college hours).
2. GRE scores of at least 800 (verbal and quantitative combined)

3. Test of English as a Foreign Language (TOEFL) score for international students from countries where English is not the native language. Students holding a baccalaureate or advanced degree from an accredited institution in the U.S. are exempt from this requirement.
4. Two letters of recommendation
5. Formal Statement of Purpose

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
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Electives – Courses approved by advisor.	9
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Minimum total hours:	36
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Exit Requirements: Student must also satisfactorily complete an exit exam and submit a portfolio of all Hallmark Assessments and internship materials.

Departmental Faculty

Richard A. Fee

Professor

Cheryl Kolander

Professor

Barbara Mercer

Lecturer

Carol O'Neal

Associate Professor

Bill Weinberg

Instructor

Master of Education in Counseling and Personnel Services

Major: CPS

Degree Awarded: MED

Unit: GE

Program Webpage: <http://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 (2) letters of recommendation and a statement of professional goals not to exceed 750 words. Deadlines for completed applications are March 1st for the summer and fall semesters and October 1st for the spring semester. (Extended deadline of June 15 for fall if spaces are available after the March 1 deadline).

Curriculum

Mental Health Counseling

Initial Assessment: Admission to School of Interdisciplinary and Graduate School & Mental Health Counseling Program

General Requirement: Undergraduate prerequisite: Course in abnormal psychology ¹ 3

Core Professional Area (total 30 hours)

ELFH 600 Introduction to Research Methods and Statistics ² 3

ECPY 540 Evaluation & Measurement 3

ECPY 605 Human Development 3

ECPY 619 Empirical and Theoretical Foundations of Counseling & Psychotherapy 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 672 Practicum: Must complete ECPY 629 with at least a B.

ECPY 672 Practicum in Mental Health Counseling ³ 3

Mental Health Counseling Concentration (total 15 hours)

ECPY 621 Differential Diagnosis & Treatment in Counseling 3

ECPY 626 Consultation 3

ECPY 640 Assessment Methods for Counselors 3

ECPY 672 Practicum in Mental Health Counseling ³ 3

ECPY 682 Internship in Mental Health Counseling ³ 3

Professional Electives from the 9 areas designated in Curriculum Guidelines for LPCC (15 hours) ⁴

Minimum total hours: 60

Degree Assessment: All program course work with a 3.0 cumulative GPA.

¹. Students 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 can transfer it into the program as an elective course.

2. *ELFH 600 must be taken within the first 9 hours.*
3. *At 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.*

Kentucky Board of Licensed Professional Counselors Curriculum Guidelines: ⁴

1. The helping relationship, including counseling theory and practice
2. Human growth and development
3. Lifestyle and career development
4. Group dynamics, process, counseling, and consulting
5. Assessment, appraisal, and testing of individuals
6. Social and cultural foundations, including multicultural issues
7. Principles of etiology, diagnosis, treatment planning, and prevention of mental and emotional disorders and dysfunctional behavior
8. Research and evaluation
9. Professional orientation and ethics.

School Counseling (P-12)

General Requirement: Undergraduate pre-requisites as required by concentration

Core Professional Area (total 30 hours)

ECPY 540	Evaluation and Measurement in Education	3
ECPY 619	Empirical and Theoretical Foundations of Counseling and Psychotherapy	3
ECPY 605	Human Development	3
ECPY 630	Theories and Techniques of School Counseling	3
ECPY 650	Group Process and Practice	3
ECPY 663	Multicultural and Diversity Issues	3
ECPY 670	Career Development and Counseling	3
ECPY 730	Social, Legal, & Ethical Issues in Counseling	3
ELFH 600	Introduction to Research Methods and Statistics	3

Mid-Point Assessment: Prior to Practicum in School Counseling: Students must earn at least a B in ECPY 630 & the acceptable completion of midpoint portfolio that will be completed in ECPY 624

ECPY 674	Practicum in School Counseling	3
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School Counseling Concentration (total 18 hours)

ECPY 611	Learning Systems: Theory and Practice	3
ECPY 624	Foundations of School Counseling	3
ECPY 626	Consultation	3
ECPY 627	Leadership & Professional Orientation in School Counseling	3
ECPY 640	Assessment Methods for Counselors	3
ECPY 684	Internship in School Counseling	3
(internship is required for candidates who do not hold teaching certification)		3

MINIMUM TOTAL HOURS **48**

Notes: ECPY 674 Practicum in School Counseling must be applied for by March 1 for Fall term and October 1 for Spring term.

1. Students must earn at least a B in ECPY 630 to be eligible to enroll in ECPY 674 School Counseling Practicum.

2. For school counseling certification, a grade of “B” or better is required in ECPY 674.
3. Transfer of credit is dependent upon receipt of transcript and advisor’s approval.
4. Upon admission, students have six years to complete their program.
5. All students must have liability insurance prior to taking practicum.
6. 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 conditions for continuation thereafter, or (3) dismissal from the program.
7. The program requires the acceptable completion of a program portfolio.
8. The program is not official unless signed by both advisor and student.

College Student Personnel

Initial Assessment: Admission to Interdisciplinary and Graduate Studies & College Student Personnel Program

Core Professional Area (total 30 hours)	3
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 hours)	3
Minimum total hours:	45
Degree Assessment: All program course work with a 3.0 cumulative GPA.	

Counseling Psychology

Initial Assessment: Admission to School of Interdisciplinary and Graduate School & Counseling Psychology Program

General Requirement: Undergraduate prerequisite: Degree in psychology or completion of 4 leveling courses. ¹

Core Professional Area (total 30 hours)

ECPY 540 Evaluation & Measurement	3
ECPY 605 Human Development	3
ECPY 619 Empirical and Theoretical Foundations of Counseling & Psychotherapy	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
ELFH 600 Introduction to Research Methods and Statistics ²	3

Mid-Point Assessment: Prior to ECPY 673 Practicum: Must complete ECPY 629 with at least a B.

ECPY 673 Practicum in Counseling Psychology ³	3
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Counseling Psychology Concentration (total 24 hours)

ECPY 611 Learning Systems	3
ECPY 621 Differential Diagnosis & Treatment in Counseling	3
ECPY 648 Psychological Assessment I	3
ECPY 649 Psychological Assessment II	3
ECPY 673 Practicum in Counseling Psychology ³	3
ECPY 683 Internship in Counseling Psychology ³	3
ECPY 775 Biological Bases of Behavior	3
ELFH 601 Applied Statistics	3

Professional Elective (6 hours)

Minimum total hours: **60**

Degree Assessment: All program course work with a 3.0 cumulative GPA.

^{1.} *Students 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.*

^{2.} *ELFH 600 must be taken within the first 9 hours.*

^{3.} *At least 900 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. Counseling psychology students take one practicum in counseling, and one practicum in psychological assessment.*

Art Therapy

Initial Assessment: Admission to School of Interdisciplinary and Graduate School & Art Therapy Program

General Requirement: Undergraduate prerequisite includes 18 credit hours in studio art and 15 credit hours in psychology. ¹

Core Professional Area (total 30 hours)

ECPY 540 Evaluation & Measurement in Education	3
ECPY 605 Human Development	3

ECPY 619 Empirical and Theoretical Foundations of Counseling & Psychotherapy	3
ECPY 629 Theories and Techniques of Counseling & Psychotherapy	3
ECPY 650 Group Process & Practice	3
ECPY 663 Multicultural & Diversity Issues (<i>section taught by an ATR</i>)	3
ECPY 670 Career Counseling	3
ECPY 730 Social, Legal & Ethical Issues (<i>section taught by an ATR</i>)	3
ELFH 600 Introduction to Research Methods and Statistics	3
Mid-Point Assessment: Prior to ECPY 676 Practicum: Must complete ECPY 643 with at least a B.	
ECPY 676 Practicum in Art Therapy - Counseling ²	3
Art Therapy Concentration (total 24 hours)	
ECPY 621 Differential Diagnosis & Treatment in Counseling	3
ECPY 632 Clinical Art Therapy I: Theories	3
ECPY 633 Clinical Art Therapy II: Assessment and Practice	3
ECPY 638 Group Art Therapy Techniques	3
ECPY 639 Research in Art Therapies	3
ECPY 641 Applied Methods in Art Therapies	3
ECPY 643 Field Studies in Art Therapy	3
ECPY 676 Practicum in Art Therapy - Counseling ²	3
Professional Elective from the educational areas designated in Curriculum Guidelines for LPCC and ATR (6 hours) ³	

Art Therapy elective include, but are not limited to, the following: ECPY 653 Medical/Grief Counseling in Art Therapy, ECPY 655 Art for Children with Special Needs, and ECPY 694 Chemical and Substance Abuse in Art Therapy.

Minimum total hours

60

Degree Assessment: All program course work with a 3.0 cumulative GPA.

- ^{1.} Students admitted to the Art Therapy Program who have not completed prerequisites of 15 hours in Psychology and 18 credit hours in Studio Art must do so within the first year of study.
- ^{2.} *At least 700 hours of field placement must be completed during field studies and two practicums. Ten hours per week are required during field studies. No less than 20 hours per week are required during the two practicums.*

American Art Therapy Associate (AATA) Educational Standards

1. History and theory of art therapy
2. Techniques of practice in art therapy
3. Applications of art therapy with people in different treatment settings
4. Group work
5. Art therapy assessment
6. Ethical and legal issues of art therapy practice
7. Standards of practice in art therapy
8. Cultural and social diversity

Kentucky Board of Licensed Professional Counselors Curriculum Guidelines: ³

1. The helping relationship, including counseling theory and practice
2. Human growth and development
3. Lifestyle and career development
4. Group dynamics, process, counseling, and consulting
5. Assessment, appraisal, and testing of individuals
6. Social and cultural foundations, including multicultural issues
7. Principles of etiology, diagnosis, treatment planning, and prevention of mental and emotional disorders and dysfunctional behavior
8. Research and evaluation
9. Professional orientation and ethics.

Departmental Faculty

Linda T. Shapiro, Ed.D.

Assistant Professor
Acting Chair, ECPY
Department

Michael J. Cuyjet, Ed.D.

Associate Professor
Program Coordinator

Amy S. Hirschy, Ph.D.

Assistant Professor

Thomas R. Jackson, Ph.D.

Adjunct Faculty

Bridgette O. Pregliasco, Ed.D.

Assistant Professor

Fred W. Rhodes, Ed.D.

Adjunct Faculty

Gale S. Rhodes, Ed.D.

Adjunct Faculty

Assistant University Provost

Doctor of Philosophy of Education Counseling and Personnel Services

Major: CPS

Degree Awarded: Ph.D.

Unit: GE

Program Webpage: <http://louisville.edu/education/departments/ecpy/>

Program Information

The Doctor of Philosophy with an emphasis in Counseling and Personnel Services encompasses 5 specialties: 1) College Student Personnel, 2) Counseling Psychology, 3) Educational Psychology, Measurement, and Evaluation, 4) Mental Health Counseling, and 5) School Counseling.

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) <i>Selected with Program Committee Approval</i>	33
Research Methodology (27 hours minimum) <i>Selected with Program Committee Approval</i>	
Statistics and Methodology I (<i>ELFH 601 or equivalent required</i>)	3
Statistics and Methodology II ^b (<i>ELFH 701 – Intermediate Multiple Regression</i>)	3
Statistics and Methodology III (<i>ELFH 703 - Multivariate educational statistics</i>)	3
Research Electives:	6
<i>e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.</i> ^{a,b}	
Dissertation/Portfolio Research	12
Elective Component or Master's Degree Master's Degree comprises Elective component of program.	
<i>a. Selected with Program Committee Approval within program guidelines/framework</i>	
<i>b. ELFH 600 may not be used for this course.</i>	
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) <i>Selected with Program Committee Approval</i>	42
RESEARCH METHODOLOGY (27 hours minimum) <i>Selected with Program Committee Approval</i>	
Statistics and Methodology I (ELFH 601 or equivalent required)	3
Statistics and Methodology II ^b (ELFH 702 – Applied Multiple Regression)	3
Statistics and Methodology III (ELFH 703 - multivariate educational statistics)	3
Research Electives:	6
e.g., <i>Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.</i> ^{a,b}	
ELECTIVE COMPONENT (21 hours Minimum) <i>Selected with Program Committee Approval</i>	21
a. <i>Selected with Program Committee Approval within program guidelines/framework</i>	
b. <i>ELFH 600 may not be used for this course.</i>	
Minimum total hours:	90

Departmental Faculty

Linda T. Shapiro, Ed.D.

Assistant Professor

Acting Chair, ECPY

Department

Michael J. Cuyjet, Ed.D.

Associate Professor

Program Coordinator

Amy S. Hirschy, Ph.D.

Assistant Professor

Thomas R. Jackson, Ph.D.

Adjunct Faculty

Bridgette O. Pregliasco,

Ed.D.

Assistant Professor

Fred W. Rhodes, Ed.D.

Adjunct Faculty

Gale S. Rhodes, Ed.D.

Adjunct Faculty

Assistant University Provost

Doctor of Philosophy in Curriculum and Instruction

Major: EDCI

Degree Awarded: Ph.D.

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/phd-ci>

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, 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) <i>Selected with Program Committee Approval</i>	33
Research Methodology (27 hours minimum) <i>Selected with Program Committee Approval</i>	
Statistics and Methodology I (<i>ELFH 601 or equivalent required</i>)	3
Statistics and Methodology II ^b (<i>ELFH 701 – Intermediate Multiple Regression</i>)	3
Statistics and Methodology III (<i>ELFH 703 - Multivariate educational statistics</i>)	3
Research Electives:	6
e.g., <i>Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.</i>	
Dissertation/Portfolio Research	12
Elective Component or Master's Degree Master's Degree comprises Elective component of	
Minimum total hours:	60
<u>90 Hour Program</u>	

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) <i>Selected with Program Committee</i>	42
RESEARCH METHODOLOGY (27 hours minimum) <i>Selected with Program Committee Approval</i>	
Statistics and Methodology I (ELFH 601 or equivalent required)	3
Statistics and Methodology II ^b (ELFH 702 – Applied Multiple Regression)	3
Statistics and Methodology III (ELFH 703 - multivariate educational statistics)	3
Research Electives:	6
e.g., <i>Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.</i>	
Dissertation/Portfolio Research	12
ELECTIVE COMPONENT (21 hours Minimum) <i>Selected with Program Committee Approval</i>	21
a. <i>Selected with Program Committee Approval within program guidelines/framework</i>	
Minimum total hours:	90

Departmental Faculty

Peter Alter, Ph.D.

Assistant Professor

Debra Bauder, Ed.D.

Associate Professor

Jenny Bay-Williams, Ph.D.

Professor

Acting Chair of

Middle/Secondary Education

Nina Beck, M.Ed.

Instructor

Tricia Bronger, M.Ed.

Instructor

E. Todd Brown, Ph.D.

Associate Professor

Sherri Brown, Ph.D.

Associate Professor

William S.Bush, Ed.D.

Professor

Director of Center for

Research in Math and

Science Teacher

Development

Ginevra R. Courtade, Ph.D.

Assistant Professor

Monica E.Delano, Ph.D.

Assistant Professor

Betty Doyle, M.Ed.

Instructor

Nicole Fenty, Ph.D.

Assistant Professor

Claudia George, M.Ed.

Instructor

Lohelen B.Hambrick, M.Ed

Instructor

Penny Howell, Ed.D.

Assistant Professor

Karen Karp, Ed.D.

Professor

Sharon Kerrick, Ph.D.

Assistant Professor

Diane W. Kyle, Ed.D.

Professor

Timothy J. Landrum, Ph.D.

Associate Professor

Ann Elisabeth Larson,

Ph.D.

Professor & Vice Dean

Amy Lingo, Ed.D.

Associate Professor

G. Richmond Mancil, Ph.D.

Associate Professor

Maggie McGatha, Ed.D.

Associate Professor

Sheri Moore, Ed.D.

Associate Professor

Lori Norton-Meier, Ph.D.

Associate Professor

Robert Pennington, Ph.D.

Assistant Professor

Susan Peters, Ph.D.

Assistant Professor

Robert Ronau, Ph.D.

Professor

Kathleen Rudasill, Ph.D.

Assistant Professor

Gina D. Schack, Ph.D.

Professor

Terry Scott, Ph.D.

Professor

Caroline Sheffield, Ph.D.

Assistant Professor

Christine Sherretz, Ed.D.

Assistant Professor

Melissa Shirley, Ph.D.

Assistant Professor

Thomas Simmons, Ph.D.

Associate Professor

Samuel C. Stringfield,

Ph.D.

Professor

Steve Swan, M.Ed.

Term Instructor

Shelley Thomas, Ed.D.

Assistant Professor

Thomas R. Tretter, Ed.D.

Associate Professor

Master of Arts in Teaching in Early Elementary Education (P-5)

Major: ERED

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-eee.html>

Program Information

The MAT in Early Elementary Education enables graduate students to earn their initial teaching certificate for grades P-5 in Kentucky. Candidates learn to teach through instruction in pedagogy, child development, special education, gifted education, technology and diversity. They develop their skills in field experiences in local area schools. The Early Elementary Education program emphasizes meeting the needs of the individual learner using best instructional practices in a standards-based environment. Through coursework and clinical field experiences, teacher education students become critical thinkers who are prepared to meet the demands of 21st century elementary education.

Curriculum

Initial Assessment: Admission to Education, Minimum GPA 2.75, GRE 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree, C or higher in English 102 and oral communication. Completion of prerequisite courses with 3.0 overall gpa, and no grade lower than a "C." Prerequisite courses include: Biology, Physical Science, Science Lab, MATH 151, MATH 152, ART 407, MUSE 525, and HSS 274.

*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)	3
*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
¹ Can be taken at any point in the program.	
² Must be taken concurrently with student teaching.	
* Course is required for certification	
Minimum total hours	36
Degree Assessment: All program course work with 3.0 cumulative GPA (and no more than a total of two “C’s” in degree courses); Positive recommendation from Elementary Program Committee (including assessment of dispositions and final degree portfolio).	

Departmental Faculty

E. Todd Brown
Associate Professor

Sherri Brown
Associate Professor, Director
Early Childhood and
Elementary Program

Betty Doyle
Instructor

Jill Jacobi-Vessels

Assistant Professor

Deborah Jinkins

Instructor

Karen Karp

Professor

Diane Kyle

Department Chair, Professor

Stefanie Livers

Instructor

Stefanie Livers

Instructor

Lori Norton-Meier

Associate Professor

Christine Sherretz

Assistant Professor

Ingrid Weiland

Assistant Professor

RANK I Program in Elementary Education

Major: ERED

Degree Awarded: NON

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/certified-teacher-programs.html>

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 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	
EDAP 642	Literacy Learning & Cultural Differences	
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		

Minimum of 18 hours in 600-level courses is required.

Transfer credit must be officially accepted by the advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.

A maximum of 6 hours taken in non-degree status can be applied toward a Rank I -MEd degree (upon approval of advisor).

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".

You must have a total of 60 graduate credit hours including a masters degree.

Rank 1 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
Elective	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 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

Meera Alagaraja

Assistant Professor

Roger Buskill

Instructor

Namok Choi

Professor

Phyllis Connelly

Assistant Professor

Jason Curry

Instructor

Rod Githens

Assistant Professor

W. Blake Haselton

Professor

Dean

Ann Herd

Assistant Professor

Amy Hirschy

Assistant Professor

Craig Hochbein

Assistant Professor

John Keedy

Professor

Pradeep Kotamraju

Instructor

Pat Leitsch

Instructor

Antonette MacDonald

Asst Professor

Donna Pearson

Assistant Professor

Joseph Petrosko

Professor

Bridgette O. Pregliasco

Assistant Professor

Michael Rowland

Assistant Professor

Brad Shuck

Assistant Professor

James Stone

Professor

Sam Stringfield

Professor

Molly Sullivan

Assistant Professor

Kirsten Ewart Sundell

Instructor

Kristin Wilson

Assistant Professor

Master of Education in Early Elementary Education

Major: ERED

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-ered.html>

Program Information

The M.Ed. in Early Elementary Education program involves certified teachers in expanding their knowledge, skills, and dispositions. The program stresses the importance of teachers demonstrating current content and pedagogical knowledge; enhancing their commitment and capacity to teach diverse learners; studying and learning from their practice; and developing as a professional leader.

The M.Ed. in Early Elementary Education aims at helping practicing teachers learn more about how to help all students be successful through research-based, best instructional practices and how to enhance their professional skills as reflective teacher leaders.

Curriculum

Admission Requirements: Baccalaureate degree or its equivalent from an accredited institution, two letters of recommendation, minimum combined score of 800 (verbal and quantitative) on the GRE, Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language, a copy of a Kentucky teaching certificate, and 2.75 cumulative grade point average, or 2.75 grade point average for the senior college years.

Inquiry (Critical Thinker) (6 hours)

EDAP 606 Orientation and Readings (take in first semester of enrollment) 3

ELFH 600 Introduction to Research Methods & Statistics 3

Advocacy (Professional Leader) (6 hours) 6

Leadership: (Select one of the following) (3 hours)

EDAP 607 Leadership and change 3

EDAP 625 Social and Ethical Dev. of Teaching 3

EDAP 624 Curriculum Theory 3

ELFH 603 Administrative Leadership in a Reform Environment 3

Diversity: (Select one of the following) (3 hours)

EDAP 626 Affirming Diversity 3

EDAP 642 Literacy Learning & Cultural Differences 3

EDTP 503 Developing Cross-Cultural Competence 3

Action (Problem Solver) (3 hours)

EDAP 680 Capstone Course 3

AREA OF EMPHASIS (At least 12 credits)

Elective: (3 hours)

Minimum total Hours: 30

Midpoint Requirement: M.Ed. candidates are required to submit a mid-program portfolio to a faculty advisor at the completion of 15 credit hours of course work. The faculty advisor will assess the candidate's portfolio, which must be at the target or satisfactory level. If this mid-point portfolio requirement is not met a candidate will be prohibited from course registration beyond 15 credit hours.

Exit Requirements: Portfolio or Master's Thesis (EDAP 699)

Note

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 and approval of SIGS.
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".

The M.Ed. in Early Elementary Education program involves certified teachers in expanding their knowledge, skills, and dispositions. The program stresses the importance of teachers demonstrating current content and pedagogical knowledge; enhancing their commitment and capacity to teach diverse learners; studying and learning from their practice; and developing as a professional leader.

The M.Ed. in Early Elementary Education aims at helping practicing teachers learn more about how to help all students be successful through research-based, best instructional practices and how to enhance their professional skills as reflective teacher leaders.

Departmental Faculty

E. Todd Brown

Associate Professor

Sherri Brown

*Associate Professor, Director
Early Childhood and
Elementary Program*

Betty Doyle

Instructor

Jill Jacobi-Vessels

Assistant Professor

Deborah Jinkins

Instructor

Karen Karp

Professor

Diane Kyle

Department Chair, Professor

Stefanie Livers

Instructor

Stefanie Livers

Instructor

Lori Norton-Meier

Associate Professor

Christine Sherretz

Assistant Professor

Ingrid Weiland

Assistant Professor

Professional Certificate for Instructional Leadership

Major: EDAD

Degree Awarded: NON

Unit: GE

Program Webpage: <http://louisville.edu/education/departments/elfh/ed-leadership>

Program Information

Instructional Leadership Supervisor of Instruction (Post-master's/Rank I*)

Program Admission Requirements

Admission to Graduate School:

1. Evidence of bachelor's and master's degrees.
2. Transcripts of all undergraduate and graduate work.
3. General Test Section score on the Graduate Record Examination.
4. Admission to this Program:
5. Qualification for a Kentucky classroom teaching certificate, except speech & hearing disorders.
6. General Test Section score on the Graduate Record Examination of 800 (V + Q).
7. A 3.0 grade point average on 4.0 scale for all collegiate preparation.
8. Completion of three years (one year = 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 1)*

Program Admission Requirements

Admission to Graduate School:

1. Evidence of bachelor's and master's degrees.
2. Transcripts of all undergraduate and graduate work.
3. General Test Section score on the Graduate Record Examination.
4. Admission to this Program:
5. Qualification for a Kentucky classroom teaching certificate.
6. General Test Section score on the Graduate Record Examination of 800 (V + Q).
7. A 2.75 grade point average on a 4.0 scale on all collegiate preparation.
8. 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 1)

Program Admission Requirements

Admission to Graduate School:

1. Evidence of bachelor's and master's degrees.
2. Transcripts of all undergraduate and graduate work.
3. General Test Section score on the Graduate Record Examination.
4. Admission to this Program:
5. General Test Section score on the Graduate Record Examination of 800 (V + Q).
6. A 3.0 grade point average on a 4.0 scale on all collegiate preparation.
7. Qualification for a Kentucky classroom teaching certificate.
8. Successful completion of three years (one year = a minimum of 140 contract days) of K-12 teaching experience.
9. 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 1)*

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

A grade point average of 3.0 in all courses counting on this program.

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

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.

Completion of three (3) years of full-time teaching experience.

Successful completion of the Kentucky Principal Internship Program.

Professional Certificate for Instructional Leadership - Superintendent (Post-master's/Rank 1)

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

A grade point average of 3.0 in all courses counting on this program.

Successful completion of a portfolio. Information about the portfolio is found in "Guidelines for Portfolio Completion Requirement", available from your advisor.

Successful completion of an additional two years of experience in an approved school leadership position (e.g. principal, supervisor, counselor).

Departmental Faculty

Meera Alagaraja
Assistant Professor
Roger Buskill
Instructor
Namok Choi
Professor
Phyllis Connelly

Assistant Professor
Jason Curry
Instructor
Rod Githens
Assistant Professor
W. Blake Haselton
Professor

Dean
Ann Herd
Assistant Professor
Amy Hirschy
Assistant Professor
Craig Hochbein
Assistant Professor

John Keedy
Professor
Pradeep Kotamraju
Instructor
Pat Leitsch
Instructor
Antonette MacDonald
Asst Professor
Donna Pearson
Assistant Professor

Joseph Petrosko
Professor
Bridgette O. Pregliasco
Assistant Professor
Michael Rowland
Assistant Professor
Brad Shuck
Assistant Professor
James Stone

Professor
Sam Stringfield
Professor
Molly Sullivan
Assistant Professor
Kirsten Ewart Sundell
Instructor
Kristin Wilson
Assistant Professor

Specialist in Education in Educational Administration

Major: EDAD

Degree Awarded: Ed.S.

Unit: GE

Program Webpage: <http://louisville.edu/education/departments/elfh>

Program Information

Degree Program Admission Requirements

Admission:

1. Evidence of bachelor's and master's degree.
2. Transcripts of all undergraduate and graduate work
3. Admission to this Program:
4. General Test Section score on the Graduate Record Examination of 900 (Verbal + Quantitative)
5. A 3.0 grade point average
6. A written rationale for pursuing the degree
7. Successful, relevant professional experience

Curriculum

**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 3.0 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.

ELFH 720 Adv. Internship in Adm. & Supervision	3
ELFH 782 Reflective Practice for School Leaders	3
ELFH Course	3
Courses	21
Minimum total hours for EdS:	30
Minimum total for Rank I	60

Departmental Faculty

Meera Alagaraja

Assistant Professor

Roger Buskill

Instructor

Bradley Carpenter

Assistant Professor

Namok Choi

Professor

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Brad Shuck

Assistant Professor

James Stone

Professor

Sam Stringfield

Professor

Molly Sullivan

Assistant Professor

Kirsten Ewart Sundell

Instructor

Kristin Wilson

Assistant Professor

Doctor of Education in Educational Leadership and Organizational Development

Major: ELOD

Degree Awarded: Ed.D.

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/phd-elod.html>

Program Information

The Doctor of Philosophy with an emphasis in Educational Administration/Educational Leadership and Organizational Development encompasses five specialties: P-12 Administration, Postsecondary Administration, Sport Administration, Human Resource Development, and Evaluation.

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, 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

ELFH 715 Advanced Organizational Theory

3

RESEARCH METHODOLOGY (27 hours minimum), *selected with Program Committee*

Statistics and Methodology I (<i>ELFH 601 or equivalent required</i>)	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., <i>Field Survey Research, additional qualitative methodologies and/or</i> ELFH 777 Capstone for Education Doctorate Degree	12
MASTER'S DEGREE OR ELECTIVE COMPONENT <i>Master's Degree comprises Elective</i> <i>a. Selected with Program Committee Approval within program guidelines/framework</i> <i>b. ELFH 600 may not be used for this course.</i>	
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	42
RESEARCH METHODOLOGY (27 hours minimum), selected with Program Committee	
Statistics and Methodology I (ELFH 601 or equivalent required)	3
Statistics and Methodology II^b (ELFH 702 – Applied Multiple Regression)	3
Statistics and Methodology III (ELFH 703 - multivariate educational statistics)	3
Research Electives: e.g., <i>Field Survey Research, additional qualitative methodologies and/or</i>	6
Dissertation/Portfolio Research	12
ELECTIVE COMPONENT (21 hours Minimum), selected with Program Committee Approval	21
<i>a. Selected with Program Committee Approval within program guidelines/framework</i> <i>b. ELFH 600 may not be used for this course.</i>	
Minimum total hours	90

Departmental Faculty

Meera Alagaraja
Assistant Professor
Roger Buskill
Instructor
Bradley Carpenter
Assistant Professor
Namok Choi
Professor
Phyllis Connelly
Assistant Professor
Jason Curry
Instructor
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Assistant Professor
James Stone

Professor
Sam Stringfield
Professor

Molly Sullivan
Assistant Professor
Kirsten Ewart Sundell

Instructor
Kristin Wilson
Assistant Professor

Doctor of Philosophy in Educational Leadership and Organizational Development

Major: ELOD

Degree Awarded: Ph.D.

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/phd-elod.html>

Program Information

The Doctor of Philosophy with an emphasis in Educational Administration/Educational Leadership and Organizational Development encompasses five specialties: P-12 Administration, Postsecondary Administration, Sport Administration, Human Resource Development, and Evaluation.

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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.

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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	
ELFH 715 Advanced Organizational Theory	3
RESEARCH METHODOLOGY (27 hours minimum), <i>selected with Program Committee</i>	
Statistics and Methodology I (ELFH 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., <i>Field Survey Research, additional qualitative methodologies and/or</i>	
ELFH 777 Capstone for Education Doctorate Degree	12
MASTER'S DEGREE OR ELECTIVE COMPONENT <i>Master's Degree comprises Elective</i>	
<i>a. Selected with Program Committee Approval within program guidelines/framework</i>	
<i>b. ELFH 600 may not be used for this course.</i>	
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	
Statistics and Methodology I (ELFH 601 or equivalent required)	3
Statistics and Methodology II^b (ELFH 702 – Applied Multiple Regression)	3
Statistics and Methodology III (ELFH 703 - multivariate educational statistics)	3
Research Electives: e.g., <i>Field Survey Research, additional qualitative methodologies and/or</i>	6
Dissertation/Portfolio Research	12
ELECTIVE COMPONENT (21 hours Minimum), selected with Program Committee Approval	21
<i>a. Selected with Program Committee Approval within program guidelines/framework</i>	
<i>b. ELFH 600 may not be used for this course.</i>	
Minimum total hours	90

Departmental Faculty

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Brad Shuck
Assistant Professor

James Stone
Professor

Sam Stringfield
Professor

Molly Sullivan
Assistant Professor

Kirsten Ewart Sundell
Instructor

Master of Science in Exercise Physiology

Major: EXP

Degree Awarded: MS

Unit: GE

Program Webpage: <https://louisville.edu/education/degrees/ms-ep.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 technologists” 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 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 School of Interdisciplinary and Graduate Studies. 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, three (3) letters of recommendation a resume, and a personal statement explaining interest in the program and long term objectives.

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. 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
EDFD 601 Applied Statistics	3 OR

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
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Departmental Faculty**Patricia Benson***Instructor***Gary Bernstein***Instructor***Adrienne Bratcher***Instructor***David Britt***Professor***Stefanie C. Burnett***Instructor***Richard A. Fee***Professor***Dolph Martel Denny,****M.D.***Professor***Chris Greenwell***Associate Professor***Marion Hambrick***Assistant Professor***Saori Hanaki-Martin***Instructor***Meg Hancock***Instructor***Mary A. Hums***Professor***Pat Keiffner***Instructor***Kristi King***Assistant Professor***Cheryl A. Kolander***Professor***Alexis Lyras***Assistant Professor***Barbara Mercer***Instructor***Anita M. Moorman***Professor, Interim Co-Chair***Carol S. O'Neal***Associate Professor***Jessica Schilero***Instructor***Betty Straub***Instructor and Director of**Research for the Center for**Health Promotion***Ann Swank***Professor, Interim Co-Chair***Daniela Terson de Paleville***Instructor***Carla Vidoni***Assistant Professor***Bill Weinberg***Professor, Dept. Vice Chair*

Graduate Certificate in Health Professions Education

Major: HPENON

Degree Awarded: CERT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees>

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

Departmental Faculty

Meera Alagaraja, Ph.D.

Assistant Professor

Roger Buskill

Instructor

Jason Curry

Instructor

Rod Githens, Ph.D.

Assistant Professor and

Director, Human Resource

Education Graduate

Program

Ann Herd, Ph.D.

Term Assistant Professor

Sharon Kerrick, Ph.D.

Term Assistant Professor

Pradeep Kotamraju, Ph.D.

Term Assistant Professor and

Deputy Director, National

Research Center for Career

and Technical Education

Pat Leitsch, Ph.D.

Assistant Professor

Antonette McDonald, Ph.D.

Instructor and Program

Manager, B.S. in Workforce

Leadership Program

Donna Pearson, Ph.D.

Term Assistant Professor and

Assistant Director, National

Research Center for Career
and Technical Education

Michael Rowland, Ph.D.

Term Assistant Professor and

Coordinator, Health

Professions Education

Program

Brad Shuck, Ed.D.

Assistant Professor

James Stone, Ed.D.

Professor, Distinguished

University Scholar and

Director, National Research

Center for Career and

Technical Education

Master of Arts in Teaching Health and Physical Education

Major: HPE

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-hpe.html>

Program Information

The Master of Arts in Teaching Health and Physical Education degree provides Kentucky certification in grades P-12.

Curriculum

Initial Assessment: Admission to Teacher Education. Minimum GPA 2.75, GRE 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree with major in Physical Education and concentration in School Health (or equivalent course work), C or higher in English 102 and oral communication, Completion of prerequisite courses: ECPY 507 and EDTP 501.

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

Mid-point assessment: Prior to Student Teaching: All content methods classes listed above passed with a cumulative 3.0 GPA; Positive recommendation from the Health and Physical Education Program Committee (includes assessment and mid-point portfolio).

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

Minimum total hours **36**

**These courses are the exit requirements for this program. Includes Teacher Certification in P-12 Health and Physical Education*

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 Health and Physical Education Program Committee.

HSS 614	Action Research Project *	3
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Degree Assessment: Satisfactory dispositions assessment; All program course work with 3.0 cumulative gpa (and no more than a total of two "C's" in degree courses); satisfactory degree portfolio.

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Instructor

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Research for the Center for

Health Promotion

Ann Swank

Professor, Interim Co-Chair

Daniela Terson de Paleville

Instructor

Carla Vidoni

Assistant Professor

Bill Weinberg

Professor, Dept. Vice Chair

Master of Arts in Higher Education

Major: HED

Degree Awarded: MA

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/ma-he.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:

1. Evidence of a Bachelor's Degree and 2.75 cumulative grade point average (GPA).
2. Transcripts of all undergraduate and graduate work.
3. General Test score on the Graduate Record Examination of 800 (verbal + quantitative).
4. Two letters of recommendation.
5. Department committee reviews application materials and makes recommendation to School of Interdisciplinary and Graduate Studies.

Curriculum

General Requirements (3 hours)

ELFH 600 Introduction to Research Methods and Statistics 3

Professional Area (15 hours)

ELFH 607 Principles of Educational Leadership (for higher Education) **OR** 3

ELFH 605 Leadership, Training & Performance 3

ELFH 659 Strategic Planning **OR** 3

ELFH 606 Program Evaluation 3

ELFH 678 The American College and University **OR** 3

ELFH 681 Philosophy of Higher 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) (9 hours) 9

Exit Requirements (3 or 4 hours)

ELFH 690 Internship in Postsecondary Education **OR** 3

Minimum total hours 30

Concentration in Sport Administration

Professional Area

ELFH 607 Principles of Educational Leadership 3

ELFH 620 Legal Issues in Education 3

EDFH 682 Organ. & Admin. of Higher Educ. Institutions 3

EDFH 600 Introduction to Research Methods & Statistics 3

EDFD 680 The American College and University **OR** 3

EDFD 681 The Philosophy of Higher Education 3

SPAD 625 Sport Administration 3

Specialization Area

SPAD 618 Rise of the Sport System in America **OR** 3

SPAD 680 Athletic in Higher Education 3

SPAD 505 Sport Facility Management **OR** 3

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 **OR** 3

SPAD 692 Internship in Sport Administration 6

Minimum Total Hours 31-33

Departmental Faculty

Amy Hirschy

Assistant Professor

Bridgette Pregliasco

Assistant Professor

Program Contact

Kristen Wilson

Assistant Professor

Master of Science in Human Resource Education

Major: HRE

Degree Awarded: MS

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/ms-hre.html/>

Program Information

This program educates professionals who lead workplace performance, development, and learning in corporations, education institutions, government agencies, health-care organizations, the military, non-profit organizations, and community-based groups.

Program Admission Procedure

Admission is competitive and decisions are made in five cycles each year.

Unconditional admission requires (a) a minimum cumulative grade point average (GPA) of 3.0 for all coursework taken AND a minimum GPA of 2.75 for coursework at the undergraduate degree-granting institution, (b) a GRE score of at least 800 (verbal + quantitative), (c) appropriate fit for the program, and (d) strong letters of recommendation.

Complete details regarding admissions procedures are located on the program webpage.

Curriculum

Core Courses (24-27 hours)

ELFH 600 Introduction to Research Methods and statistics (Take within the first 6 hours)	3
ELFH 616 Internship and Portfolio Seminar OR	3
ELFH 699 Thesis (requires 33 hours)	3-6
ELFH 605 Leading Training and Performance	3
ELFH 614 Program and Organization Evaluation	3
ELFH 661 Adult Learning	3

ELFH 662 Organizational Analysis	3
ELFH 664 Organizational Change and Consulting	3
ELFH 672 Instructional Design and Development	3
Electives: (choose 6 hours)	
ELFH 611 Human Resource Functions	3
ELFH 641 Seminar	3
ELFH 663 Methods of Facilitation	3
ELFH 673 e-Learning Design and Development	3
ELFH 696 Independent Study	3
Minimum total hours	30-33

Midpoint Assessment: Summary for 5 courses of Course Competency Self-Assess, Reflections, Hallmark Assessment Rubrics.

Exit Assessment: Competency Assessment and Program Reflection Paper or Thesis.

Degree Assessment: A minimum of 30 hours with an overall grade point average of 3.0, and no more than 2 grades of C. Satisfactory completion of Program Portfolio.

Departmental Faculty

Meera Alagaraja, Ph.D.

Assistant Professor

James Atkinson

Adjunct Faculty

Cathy Avdevich

Adjunct Faculty

Roger Buskill

Instructor

**Dana Cosby-Simmons,
Ph.D.**

Adjunct Faculty

Jason Curry

Instructor

Roy Elam

Adjunct Faculty

Rod Githens, Ph.D.

*Assistant Professor and
Graduate Program Director*

Ann Herd, Ph.D.

Term Assistant Professor

Sharon Kerrick, Ph.D.

*Assistant Professor, College
of Business*

Ray Klein

Adjunct Faculty

Pradeep Kotamraju, Ph.D.

Instructor

Elizabeth Krauss

Adjunct Faculty

Antonette McDonald, Ph.D.

*Term Assistant Professor and
Undergraduate Program
Director*

Donna Pearson, Ph.D.

*Associate Professor and
Career and Technical*

Education Program Director

Stacy Rogers

Adjunct Faculty

Michael Rowland, Ph.D.

*Term Assistant Professor and
Health Professions Education
Program Director*

Brad Shuck, Ed.D.

Assistant Professor

James Stone, Ed.D.

*Professor, Distinguished
University Scholar and
Director, National Research
Center for Career and
Technical Education*

Richard Swain

Adjunct Faculty

Richard Swanson

Adjunct Faculty

Master of Education in Instructional Technology

Major: IT

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-it.html>

Program Information

Initial Requirements:

Teaching certification in B-12 Area.

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).

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 **OR** 3

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 Seminar² 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

Minimum total hours 33

¹ Denotes Courses that are required for the endorsement.

² Denotes 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.

Departmental Faculty

Stephen B. Swan

Term Instructor

Program Director

Master of Arts in Teaching in Interdisciplinary Early Childhood Education

Major: IECE

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-iece.html/>

Program Information

Interdisciplinary Early Childhood Education Birth to Primary Teacher Certification Program

The IECE program emphasizes in-depth academic preparation and field experiences that allow teachers to be knowledgeable about the field of early childhood/special education and to develop critical thinking and lifelong learning skills. The program emphasizes:

1. Nurturing students as active agents in their own learning
2. Authentic, performance-based assessment of teaching and learning
3. Meeting the needs of all students
4. Responding constructively to socio-cultural differences among students

The program prepares students interested in working with children from birth to age 5 in a wide variety of settings—day care centers, public and private preschools, community programs, and clinics. This program

gives students authentic experiences with infants, toddlers, and preschool children in the areas of curriculum development, typical and atypical child development, programs and services for children and their families, family involvement and intervention, screening and assessment, program administration, current topics, and practicum/action research.

The goals of this program include:

1. IECE Teacher Certification
2. Preparation of teachers for the education of typical and atypical children in different settings
3. Provide background information on Kentucky Child Learning and Assessment Standards

Curriculum

Initial Assessment: Admission to Teacher Education, Minimum GPA 2.75, GRE 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree, C or higher in English 102 and oral communication.

EDTP 527	Inquiry into Early Childhood Education and Child Development	3
EDTP 532	Curriculum and Methods in Early Childhood Education	3
EDTP 536	Theories of Play	3
EDTP 537	Infant/Toddler Development and Care	3
EDTP 638	Literacy and Social Studies Methods in IECE	3
EDTP 639	Mathematics and Science Methods in IECE	3
EDTP 630	Building Learning Communities (with Field Experience)	3
EDSP 533	Curriculum and Methods in Early Childhood Special Education	3
EDSP 684	Family Dynamics and Early Interventions in IECE	3
EDSP 683	Early Childhood/Special Education Screening	3

Mid-Point Assessment: Prior to Student Teaching: No lower than 2.0 in EDTP 638 and EDTP 639; successful completion of all courses listed above except EDSP 684; Positive recommendation from Program Committee (including assessment of dispositions and mid-program portfolio).

EDTP 614	Student Teaching (Birth to Primary)	3
EDTP 615	Student Teaching (Primary)	3

Exit Assessment (Certification and Degree): All course work completed with 3.0 cumulative GPA (and no more than a total of two "C's" in degree courses); 2.0 or higher in each student teaching course; positive recommendation from Program Committee (including assessment of dispositions and final certification portfolio)

Minimum total hours **36**

Departmental Faculty

E. Todd Brown

Associate Professor

Sherri Brown

Associate Professor, Director

Early Childhood and

Elementary Program

Betty Doyle

Instructor

Jill Jacobi-Vessels

Assistant Professor

Deborah Jinkins

Instructor

Karen Karp

Professor

Diane Kyle

Department Chair, Professor

Stefanie Livers

Instructor

Lori Norton-Meier

Associate Professor

Christine Sherretz

Assistant Professor

Ingrid Weiland

Assistant Professor

Dianna Zink

Instructor, Director of the

Early Learning Campus

Rank I Program in Middle Grades Education

Major: MSED

Degree Awarded: NON

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/certified-teacher-programs.html/>

Program Information

Program Admission Procedure

Holds Certification in a 5-9 area or has an M.Ed. or Rank II Equivalence.

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		12
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 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 -MEd 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.	

Departmental Faculty

Meera Alagaraja
Assistant Professor
Roger Buskill
Instructor
Namok Choi
Professor

Phyllis Connelly
Assistant Professor
Jason Curry
Instructor
Rod Githens
Assistant Professor

W. Blake Haselton
Professor
Dean
Ann Herd
Assistant Professor

Amy Hirschy
Assistant Professor
Craig Hochbein
Assistant Professor
John Keedy
Professor
Pradeep Kotamraju
Instructor
Pat Leitsch
Instructor
Antonette MacDonald

Assistant Professor
Donna Pearson
Assistant Professor
Joseph Petrosko
Professor
Bridgette O. Pregliasco
Assistant Professor
Michael Rowland
Assistant Professor
Brad Shuck
Assistant Professor

James Stone
Professor
Sam Stringfield
Professor
Molly Sullivan
Assistant Professor
Kirsten Ewart Sundell
Instructor
Kristin Wilson
Assistant Professor

Master of Arts in Teaching in Middle School Education

Major: MSED

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-mse.html>

Program Information

The MAT in Middle School Education enables graduate students to earn their initial teaching certification for Kentucky in the content areas of English, Mathematics, Science or Social Studies. Teacher candidates learn to teach through instruction in pedagogy, child development, special education, technology and diversity. The program integrates field experiences that align both with program studies and professional education career goals.

Curriculum

Single Area Certification

Initial Assessment: Admission to Teacher Education Minimum GPA 2.75, GRE 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree, C or higher in English 102 and oral communication. Completion of prerequisite courses (<https://louisville.edu/education/ssa/admissions/itc-admissions-page/itc-graduate/middle-and-secondary-education-application/education-prerequisite-course-requirements.html>) with 2.50 GPA or higher.

*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)

Choose one from that following courses (3 hours)

EDTP 607	Middle School Language Art Methods	3
EDTP 608	Middle School Math Methods	3
EDTP 609	Middle School Science Methods	3
EDTP 610	Middle School Social Studies Methods	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 teacher performance assessment (TPA) and positive recommendation from Middle/Secondary Program Committee.

*EDTP 617	Student Teaching: Middle School	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 teacher performance assessment (TPA). 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

¹ Can be taken at any point in the program.

² Must be taken concurrent with student teaching.

Minimum total hours 36

Degree Assessment: Satisfactory dispositions assessment. All program course work with 3.0 cumulative GPA (and no more than a total of two “C’s” in degree courses). Satisfactory degree teacher performance assessment (TPA).

Degree Candidacy: If not enrolled during the semester in which you are graduating, you will need to register for a degree candidacy as outlined in the graduate catalog, <http://louisville.edu/graduatecatalog/academic-policies-and-requirements/>, under the section called academic policies and requirements.

Double Area Certification

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

(NOTE: The above three courses must be taken prior to either of the next 2 courses)

Choose two from that following courses (6 hours)

EDTP 607	Middle School Language Art Methods	3
EDTP 608	Middle School Math Methods	3
EDTP 609	Middle School Science Methods	3
EDTP 610	Middle School Social Studies Methods	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 teacher performance assessment (TPA).; 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 teacher performance assessment (TPA). Passing scores on PRAXIS content and PLT exams. Positive recommendation from Middle/Secondary Program Committee.

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
1 Can be taken at any point in the program		
2 Must be taken concurrent with student teaching.		

Minimum total hours **36**

Degree Assessment: Satisfactory dispositions assessment. All program course work with 3.0 cumulative GPA (and no more than a total of two “C’s” in degree courses). Satisfactory degree teacher performance assessment (TPA).

Degree Candidacy: If not enrolled during the semester in which you are graduating, you will need to register for a degree candidacy as outlined in the graduate catalog, <http://louisville.edu/graduatecatalog/academic-policies-and-requirements/>, under the section called academic policies and requirements.

Departmental Faculty

Jennifer Bay-Williams
Department Chair, Professor
Peggy Brooks
Instructor, KTIP Coordinator
William S. Bush
*Professor, Director of Center
 for Research in Mathematics
 and Science Teacher
 Development*
Janet Calvert
*Instructor and Coordinator
 of Alternative Certification
 Program*
Penny Howell

Assistant Professor
Ann Larson
Vice Dean and Professor
Maggie McGatha
*Associate Professor,
 Assistant Dept. Chair*
Danna Morrison
*Instructor, Coordinator of
 Field & Clinical Placements*
Susan Peters
Assistant Professor
Bob Ronau
Professor
Gina Schack

Professor
Caroline Sheffield
Assistant Professor
Melissa Shirley
Assistant Professor
Shelley Thomas
Assistant Professor
Thomas Tretter
*Associate Professor &
 Director, Gheens Science
 Hall & Rauch Planetarium*
Jean Wolph
*Instructor & Director,
 Louisville Writing Project*

Master of Education in Middle School Education

Major: MSED

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/departments/t-l/advanced-programs.html/>

Program Information

Admission Requirements: Baccalaureate degree from an accredited institution, two letters of recommendation, minimum combined score of 800 on the GRE, Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language, a copy of a Kentucky teaching certificate, and 2.75 cumulative grade point average, or 2.75 grade point average for the senior college years.

Program Admission Procedure

- Holds certification in a 5-9 area.
- Admission into Graduate School.
- Completion of Official Program with advisor is required.

Curriculum

Inquiry (Critical Thinker) (6 hours)

EDAP 606 Orientation and Readings (take in first semester of enrollment) 3

ELFH 600 Introduction to Research Methods & Statistics 3

Advocacy (Professional Leader) (6 hours)

Leadership: (select one of the following) (3 hours)

EDAP 607 Leadership and change **OR** 3

EDAP 625 Social and Ethical Dev. of Teaching **OR** 3

EDAP 624 Curriculum Theory **OR** 3

ELFH 603 Administrative Leadership in a Reform Environment 3

Diversity: (Select one of the following) (3 hours)

EDAP 626 Affirming Diversity 3

EDAP 642 Literacy Learning & Cultural Differences **OR** 3

EDTP 503 Developing Cross-Cultural Competence **OR** 3

Action (Problem Solver) (3 hours)

EDAP 680 Capstone Course 3

AREA OF EMPHASIS (At least 12 credits)

Elective (3 hours)

Minimum total hours: 30

Midpoint Requirement: M.Ed. candidates are required to submit a mid-program portfolio to a faculty advisor at the completion of 15 credit hours of course work. The faculty advisor will assess the candidate's portfolio, which must be at the target or satisfactory level. If this mid-point portfolio requirement is not met a candidate will be prohibited from course registration beyond 15 credit hours.

Exit Requirements: Portfolio or Master's Thesis (EDAP 699)

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 and approval by SIGS.
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

Jennifer Bay-Williams

Department Chair, Professor

Peggy Brooks

Instructor, KTIP Coordinator

William S. Bush

*Professor, Director of Center
for Research in Mathematics
and Science Teacher*

Development

Janet Calvert

*Instructor and Coordinator
of Alternative Certification
Program*

Penny Howell

Assistant Professor

Ann Larson

Vice Dean and Professor

Maggie McGatha

*Associate Professor,
Assistant Dept. Chair*

Danna Morrison

*Instructor, Coordinator of
Field & Clinical Placements*

Susan Peters

Assistant Professor

Bob Ronau

Professor

Gina Schack

Professor

Caroline Sheffield

Assistant Professor

Melissa Shirley

Assistant Professor

Shelley Thomas

Assistant Professor

Thomas Tretter

*Associate Professor &
Director, Gheens Science
Hall & Rauch Planetarium*

Jean Wolph

*Instructor & Director,
Louisville Writing Project*

Master of Arts in Teaching in Music Education

Major: EDMU

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-me.html>

Program Information

The MAT Program enables graduate students to earn their initial teaching certification for Kentucky, grades P-12. The teacher candidates learn to teach through instruction in pedagogy, child development, special education, technology and diversity.

The Department of Teaching and Learning is committed to the highest standards of professional preparation. Our programs have sought and received national accreditation from the National Council for Accreditation of Teacher Education.

Graduates of initial teacher certification programs at the University of Louisville begin their teaching careers secure in the knowledge that they have been prepared for the real world of classrooms through a rigorous teacher preparation program.

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.

Curriculum

Initial Assessment: Admission to Teacher Education. Minimum GPA 2.75, GRE 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree with major in Music and all required prerequisite courses (as determined by Music faculty), C or higher in English 102 and oral communication.

MUED 605 Pre-Student Teaching: Orientation and General Methods (Vocal)* **OR** 3

MUED 606 Pre-Student Teaching: 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. No student may receive credit for both MUED 556 and 605/606.

MUED 628 Qualitative Research Methods 2

MUED 629 Foundations of Music Education 2

MUED 630 Quantitative Research Methods 2

MUED 639 Learning Theories in Music Education 2

MUS 611 Applied Music **OR** 2

MUS 659 Conducting 2

MUS 612 Applied Music **OR** 2

MUS 660 Conducting 2

Exit Requirement

MUED 607 Student Teaching Seminar 2

MUED 608 Student Teaching Seminar 2

MUED 609 Capstone Seminar 3

MUED 610 Music Student Teaching in the Elementary/Secondary I 4

MUED 611 Music Student Teaching in the Elementary/Secondary II 4

Minimum total hours **30**

Certification Assessment: Satisfactory dispositions assessment; "B-" or higher in student teaching; 2.50 content GPA, Satisfactory portfolio; Passing scores on required PRAXIS content and PLT exams; Positive recommendation from Music faculty.

Degree Assessment: Satisfactory dispositions assessment; “B-” or higher in student teaching; All program course work with 3.0 cumulative GPA (and no more than a total of two “C’s” in degree courses); Satisfactory degree portfolio.

Departmental Faculty

Amy Acklin

Assistant Professor

Robert Amchin

Professor

Master of Education in Reading Education

Major: RE

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-re.html>

Program Information

The Teacher Literacy Leadership Program will provide an M.Ed. in Reading Education which includes the Kentucky Reading and Writing Endorsement (P-12).

Admission Requirements

Teaching certification in P-12 Area, Admission to M.Ed. in Reading program, Meeting with faculty advisor to discuss KYETS, U of L Program Themes, Conceptual Framework, and IRA Standards, baccalaureate degree or its equivalent from an accredited institution, two letters of recommendation, minimum combined score of 800 on the GRE, Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language, a copy of a Kentucky teaching certificate, and 2.75 cumulative grade point average, or 2.75 grade point average for the senior college years.

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
<i>Special Program or Institutes</i> * (These are selective programs.) (See Special Programs note below)	
EDAP 694 Kentucky Reading Project	3
EDAP 612 Louisville Writing Project	3
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 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

* *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.

Departmental Faculty

LaTricia Bronger

Instructor

Nicole Fenty

Assistant Professor

Penny Howell

Assistant Professor

Christine Sherretz

Assistant Professor

Jean Wolph

Instructor

Rank I Program in Secondary Education

Major: SE

Degree Awarded: NON

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/certified-teacher-programs.html>

Program Information

Program Admission Procedure

Hold Certification in an 8-12 area and a MAT 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:	
Minimum of 18 hours in 600-level courses is required.	
Transfer credit must be officially accepted by the advisor (maximum of six hours) - final acceptance is dependent upon receipt of official transcripts.	
A maximum of six hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).	
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	

Minimum of 18 hours in 600-level courses is required.

Transfer credit must be officially accepted by the advisor (maximum of six hours) - final acceptance is dependent upon receipt of official transcripts.

A maximum of six hours taken in non-degree status can be applied toward a Rank I -MEd degree (upon approval of advisor).

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".

You must have a total of 60 graduate credit hours including a masters degree.

Departmental Faculty

Meera Alagaraja
Assistant Professor
Roger Buskill
Instructor

Namok Choi
Professor
Phyllis Connelly
Assistant Professor

Jason Curry
Instructor
Rod Githens
Assistant Professor

W. Blake Haselton

Professor

Dean

Ann Herd

Assistant Professor

Amy Hirschy

Assistant Professor

Craig Hochbein

Assistant Professor

John Keedy

Professor

Pradeep Kotamraju

Instructor

Pat Leitsch

Instructor

Antonette MacDonald

Asst Professor

Donna Pearson

Assistant Professor

Joseph Petrosko

Professor

Bridgette O. Pregliasco

Assistant Professor

Michael Rowland

Assistant Professor

Brad Shuck

Assistant Professor

James Stone

Professor

Sam Stringfield

Professor

Molly Sullivan

Assistant Professor

Kirsten Ewart Sundell

Instructor

Kristin Wilson

Assistant Professor

Master of Arts in Teaching in Secondary Education

Major: SE

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-se.html>

Program Information

The Master of Arts in Teaching (MAT) degree in Secondary Education leads to certification in Biology, Chemistry, Earth Science, English, Mathematics, Physics, and Social Studies Education (grades 8-12). Business Education leads to certification in grades 5-12. Foreign Language Education (Spanish and French) leads to certification in grades P-12.

Curriculum

Initial Assessment: Admission to Teacher Education Minimum GPA 2.75, GRE 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree, C or higher in English 102 and oral communication. Completion of prerequisite courses (<https://louisville.edu/education/ssa/admissions/itc-admissions-page/itc-graduate/middle-and-secondary-education-application/education-prerequisite-course-requirements.html>) with 2.50 GPA or higher.

*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)

Choose from one of the following courses (3 hours):

*EDTP 622 High School English Methods 3

*EDTP 623 High School Math Methods	3
*EDTP 624 High School Science Methods	3
*EDTP 625 High School Social Studies Methods	3
*EDTP 628 Business Methods 5-12	3
*EDTP 629 Foreign Language Methods P-12	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 3 credits of meeting content requirements; ECPY 607 and EDTP 501, 602, 609 passed; Satisfactory mid-point teacher performance assessment (TPA); Positive recommendation from Middle/Secondary Program Committee.

Choose one of the following courses (6 hours)

*EDTP 612 Student Teaching P-12	3
*EDTP 618 Student Teaching: Middle and High School	3
*EDTP 619 Student Teaching: High School	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 or higher in student teaching; Satisfactory certification teacher performance assessment (TPA); Passing scores on PRAXIS content and PLT exams; Positive recommendation from Middle/Secondary Program Committee.

Academic support course¹:	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

¹ Can be taken at any point in the program.

² Must be taken concurrently with student teaching.

Minimum total hours **36**

Degree Assessment: Satisfactory dispositions assessment; All program course work with 3.0 cumulative GPA (and no more than a total of two “C’s” in degree courses); Satisfactory degree teacher performance assessment (TPA).

Degree Candidacy: If not enrolled during the semester in which you are graduating, you will need to register for a degree candidacy as outlined in the graduate catalog, <http://louisville.edu/graduatecatalog/academic-policies-and-requirements/>, under the section called academic policies and requirements.

Departmental Faculty

Jennifer Bay-Williams
Department Chair, Professor
Peggy Brooks
Instructor, KTIP Coordinator
William S. Bush

*Professor, Director of Center
for Research in Mathematics
and Science Teacher
Development*
Janet Calvert

*Instructor and Coordinator
of Alternative Certification
Program*
Penny Howell
Assistant Professor
Ann Larson

Vice Dean and Professor
Maggie McGatha
*Associate Professor,
Assistant Dept. Chair*
Danna Morrison
*Instructor, Coordinator of
Field & Clinical Placements*
Susan Peters
Assistant Professor

Bob Ronau
Professor
Gina Schack
Professor
Caroline Sheffield
Assistant Professor
Melissa Shirley
Assistant Professor
Shelley Thomas

Assistant Professor
Thomas Tretter
*Associate Professor &
Director, Gheens Science
Hall & Rauch Planetarium*
Jean Wolph
*Instructor & Director,
Louisville Writing Project*

Alternative Route to 8-12 Certification in Secondary Education

Major: SE

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-ac.html>

Program Information

The Alternative Certification program is designed to provide the local school districts with qualified teachers and interested candidates with a flexible, supportive route to teacher certification. The program provides candidates with an opportunity to pursue initial teacher certification while working as a full time teacher on a temporary provisional certificate.

Employment is not required for initial acceptance to this program. However, candidates must be employed in a Kentucky-accredited school by the start of the school year in order to continue in the program. This program is a two year, 30 credit hour program resulting in initial teacher certification and a Master of Arts in Teaching degree. The Alternative Certification program certifies teachers in middle and secondary education.

Curriculum

Initial Assessment: Admission to Teacher Education. Minimum GPA 2.75, GRE 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree, C or higher in English 102 and oral communication. Completion of prerequisite courses (<https://louisville.edu/education/ssa/admissions/itc-admissions-page/itc-graduate/middle-and-secondary-education-application/education-prerequisite-course-requirements.html>) with 2.50 GPA or higher. Passing scores on the appropriate content PRAXIS II test(s).

EDTP 631 Integrated Teaching and Learning I	3
EDTP 632 Integrated Teaching and Learning II	3
Choose one from the following (3 credit hours)	
EDTP 622 High School English Methods	3
EDTP 623 High School Math Methods	3

EDTP 624 High School Science Methods	3
EDTP 625 High School Social Studies Methods	3
EDTP 628 Business Methods 5-12	3
EDTP 629 Foreign Language Methods P-12	3
EDTP 633 Integrated Teaching and Learning III	3
EDTP 629 Practicum for Alternative Certification	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 mid-point teacher performance assessment (TPA); positive recommendation from Middle/Secondary Program Committee.

Certification Assessment: Satisfactory dispositions assessment; all program course work with 2.5 cumulative GPA; Satisfactory certification teacher performance assessment (TPA); 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. Satisfactory Alternative Certification degree teacher performance assessment (TPA)

Degree Candidacy: If not enrolled during the semester in which you are graduating, you will need to register for a degree candidacy as outlined in the graduate catalog, <http://louisville.edu/graduatecatalog/academic-policies-and-requirements/>, under the section called academic policies and requirements.

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Caroline Sheffield
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Melissa Shirley
Assistant Professor
Shelley Thomas
Assistant Professor
Thomas Tretter
Associate Professor & Director, Gheens Science Hall & Rauch Planetarium
Jean Wolph
Instructor & Director, Louisville Writing Project

Master of Education in Secondary Education

Major: SE

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-se.html>

Program Information

Admission Requirements: Baccalaureate degree or its equivalent from an accredited institution, two letters of recommendation, minimum combined score of 800 on the GRE, Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language, a copy of a Kentucky teaching certificate, and 2.75 cumulative grade point average, or 2.75 grade point average for the senior college years.

Curriculum

Inquiry (Critical Thinker) (6 hours)

EDAP 606 Orientation and Readings (take in first semester of enrollment) 3

ELFH 600 Introduction to Research Methods & Statistics 3

Advocacy (Professional Leader) (6 hours)

Leadership: (select one of the following) (3 hours)

EDAP 607 Leadership and change 3

EDAP 625 Social and Ethical Dev. of Teaching 3

EDAP 624 Curriculum Theory 3

ELFH 603 Administrative Leadership in a Reform Environment 3

Diversity: (Select one of the following) (3 hours)

EDAP 626 Affirming Diversity 3

EDAP 642 Literacy Learning & Cultural Differences 3

EDTP 503 Developing Cross-Cultural Competence 3

Action (Problem Solver) (3 hours)

EDAP 680 Capstone Course 3

AREA OF EMPHASIS (At least 12 credits)

Elective (3 hours)

Minimum total hours: 30

Midpoint Requirement: M.Ed. candidates are required to submit a mid-program portfolio to a faculty advisor at the completion of 15 credit hours of course work. The faculty advisor will assess the candidate's portfolio, which must be at the target or satisfactory level. If this mid-point portfolio requirement is not met a candidate will be prohibited from course registration beyond 15 credit hours. Exit Requirements: Portfolio or Master's Thesis (EDAP 699)

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 and approval by SIGS.
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

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Jean Wolph

*Instructor & Director,
Louisville Writing Project*

Master of Education in Special Education

Major: SPE

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-spe.html>

Program Information

This master's degree can be taken to gain expertise in Autism. 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-Education Certification (For those interested in Autism)

This degree is designed for master's degree candidates who may be advancing their current teaching certification or whose goals are in the area of early childhood/special education, specifically

comprehensive-care centers, institutions, hospitals, clinics, day care centers, preschools, and community programs.

Prerequisites for Admission: Baccalaureate degree from an accredited college 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

Midpoint 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

Departmental Faculty

Debra Bauder
Associate Professor
Latricia Bronger
Instructor
Ginevra Courtade
Assistant Professor

Monica Delano
Assistant Professor
Nicole Fenty
Assistant Professor
Timothy Landrum
Associate Professor
Amy Lingo
Associate Professor

Rob Pennington
Assistant Professor
Terry Scott
Professor
Thomas Simmons
Associate Professor

Master of Education in Special Education with Concentration in Moderate and Severe Disabilities P-12

Major: SPE

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-se-msd.html>

Program Information

Admission Requirements: Baccalaureate degree or its equivalent from an accredited institution, two letters of recommendation, minimum combined score of 800 on the GRE, Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language, a copy of a Kentucky teaching certificate, and 2.75 cumulative grade point average, or 2.75 grade point average for the senior college years.

Prerequisite to entry into the program:

EDSP 540 Intro to Exceptional Children	3
Teacher certification	

Curriculum

Inquiry (Critical Thinker) (9 hours)

EDSP 644 Applied Behavior Analysis	3
EDSP 639 Research Analysis in Special Education	3
EDSP 669 Single Subject Research Methods and Designs	3

Advocacy: (Professional Leader) (6 hours)

EDSP 597 Seminar in Special Education: Issues in Special Education	3
EDSP 627 Applications of Assistive Technology	3

Action (Problem Solver) (3 hours)

EDSP 635 Moderate and Severe Disabilities Practicum	3
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Midpoint Assessment: Completion of ½ of Experienced Teacher Standards, with ¾ of indicators

Area of Emphasis (At least 18 hours)

EDSP 634 Characteristics & Needs of Students with Moderate and Severe Disabilities	3
EDSP 520 Assessment of Exceptional Learners	3
EDSP 609 Moderate/Severe Disabilities Curriculum and Methods I	3
EDSP 594 Educational Management of Physical, Health, & Multiple Disabilities	3
EDSP 670 Autism: Introduction and Understanding	3
EDSP 646 Augmentative Communication	3

Minimum total hours

36

Exit Requirements: Portfolio (All ETS standards and $\frac{3}{4}$ of indicators for each standards) or Master's Thesis (EDSP 699)

Notes

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 Practicum (EDSP 635).
2. Successful completion of the appropriate PRAXIS Exams are required for Moderate and Severe Disabilities teacher certification:
3. Successful completion of midpoint evaluation of program, performance and portfolio.
4. Minimum of 18 hours in 600-level courses is required.
5. Transfer credit must be officially accepted by the advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.
6. A maximum of 6 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
7. All courses must be completed within 6 years of admission to the program.
8. 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

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Latricia Bronger
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Assistant Professor

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Timothy Landrum
Associate Professor
Amy Lingo
Associate Professor

Rob Pennington
Assistant Professor
Terry Scott
Professor
Thomas Simmons
Associate Professor

Master of Education in Special Education with Concentration in Learning and Behavior Disorders P-12

Major: SPE

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-se-lbd.html>

Program Information

This program leads to certification in Kentucky for areas of Behavior Disorders, Learning Disabilities, and Mild Mental Disability, grades P-12.

Applicants to the program should have excellent academic credentials as well as successful experience working with children and/or adults with Learning and Behavior Disorders (LBS). The Alternative Certification program requires that students become employed in an LBD classroom on a temporary provisional certificate.

Classes start in the Summer each year, and admitted students must secure employment before the start of the Fall term. Those who are not employed may have the option to pursue the traditional version of the program, which requires field placements and student teaching. Completion of this degree/licensure program will lead to certification as an LBD teacher only (not an Elementary, Middle or Secondary content area teacher).

Curriculum

Initial Assessment: Admission to Teacher Education, Minimum GPA 2.75, GRE combined score 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree, C or higher in English 102 and oral communication.

Student Characteristics (6 hours)

EDSP 540 Introduction to Exceptional Children 3

EDSP 675 Characteristics, Needs, & Responses to Students with EBD 3

Pedagogy (30 hours)

EDSP 612 LBD Curriculum Methods and Assessment I 3

EDSP 616 LBD Curriculum Methods and Assessment II 3

EDSP 617 Practicum in Learning and Behavior Disorders 3

EDSP 644 Applied Behavior Analysis 3

EDSP 640 Teaching Reading Special Education P-12 3

Mid-Point Assessment: Satisfactory dispositions assessment; grade no lower than B- in all coursework; satisfactory mid-point portfolio; positive recommendation from the Special Education Program Committee.

EDSP 618 Instructional Technology for Students with Special Needs

EDSP 647 Teaching Mathematics to Students with Disabilities 3

EDSP 637 Transition, Collaboration, and Inclusion 3

EDTP/AP Content Course 3

EDTP/AP Content Course 3

Research (3 hours)

EDSP 639 Research Methods in Special Education (Must be taken in last six hours) 3

Elective: Choose from one of the following courses (3 hours) 3

EDSP 537 Language Learning for Exceptional Children 3

EDSP 627 Applications of Assistive Technology 3

EDSP 670 Autism: Introduction and Understanding 3

EDSP 681 Early Childhood Education and Exceptional Children 3

Minimum total hours 42

Certification and Degree Assessment: Satisfactory dispositions assessment; 3.0 cumulative GPA (and no more than a total of two “C”s in degree courses); satisfactory portfolio; passing scores on PRAXIS exams; positive recommendation from the Special Education Program Committee.

Departmental Faculty

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Nicole Fenty
Assistant Professor
Timothy Landrum
Associate Professor
Amy Lingo
Associate Professor

Rob Pennington
Assistant Professor
Terry Scott
Professor
Thomas Simmons
Associate Professor

Master of Education in Special Education with Concentration in Orientation and Mobility

Major: SPE

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/departments/t-l>

Program Information

PROGRAM HAS BEEN TEMPORARILY SUSPENDED BY EDUCATION PROFESSIONAL STANDARDS BOARD; NO NEW APPLICANTS ARE BEING ACCEPTED AT THIS TIME
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Admission Requirements: Baccalaureate degree or its equivalent from an accredited institution, two letters of recommendation, minimum combined score of 800 on the GRE, Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language, a copy of a Kentucky teaching certificate, and 2.75 cumulative grade point average.

Prerequisite to entry into the program:

EDSP 540 Intro to Exceptional Children	3
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Curriculum

Inquiry (Critical Thinker) (9 hours)

EDSP 644 Applied Behavior Analysis	3
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EDSP 639 Research Analysis in Special Education	3
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EDSP 669 Single Subject Research Methods and Designs	3
Advocacy: (Professional Leader) (6 hours)	
EDSP 597 Seminar in Special Education: Issues in Special Education	3
EDSP 627 Applications of Assistive Technology	3
Action (Problem Solver) (3 hours)	
EDSP 631 Internship in Orientation and Mobility	3
Midpoint Assessment: Completion of ½ of Orientation and Mobility Standards, with ¾ of indicators for each standard	
Area of Emphasis (At least 18 hours)	
EDSP 624 Characteristics and Needs of Students who are Blind and Visually Impaired	3
EDSP 625 Standard English and Nemeth Braille Codes	3
EDSP 620 Introduction to Orientation and Mobility	3
EDSP 621 Advanced Methods in Orientation and Mobility I	
EDSP 622 Advanced Methods in Orientation and Mobility II	3
EDSP 623 Foundations in O&M for Infants, Preschool and Multiply Impaired	3
Minimum total hours	
EDSP 631 Internship in Orientation and Mobility	3
Exit Requirements: Portfolio (All ETS standards and ¾ of indicators for each standards) or Master's Thesis (EDSP 699)	

Notes:

Minimum of 18 hours in 600-level courses is required.

Transfer credit must be officially accepted by the advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.

A maximum of 6 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).

All courses must be completed within 6 years of admission to the program.

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

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Associate Professor
Latricia Bronger
Instructor
Ginevra Courtade
Assistant Professor

Monica Delano
Assistant Professor
Nicole Fenty
Assistant Professor
Timothy Landrum
Associate Professor
Amy Lingo
Associate Professor

Rob Pennington
Assistant Professor
Terry Scott
Professor
Thomas Simmons
Associate Professor

Master of Education in Special Education with Concentration in Visual Impairment

Major: SPE

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/departments/t-1>

Program Information

PROGRAM HAS BEEN TEMPORARILY SUSPENDED BY EDUCATION PROFESSIONAL STANDARDS BOARD; NO NEW APPLICANTS ARE BEING ACCEPTED AT THIS TIME

Admission Requirements: Baccalaureate degree or its equivalent from an accredited institution, two letters of recommendation, minimum combined score of 800 on the GRE, Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language, a copy of a Kentucky teaching certificate, and 2.75 cumulative grade point average.

Prerequisite to entry into the program:

EDSP 540 Intro to Exceptional Children or equivalent	3
Teacher certification	

Curriculum

Inquiry (Critical Thinker) (9 hours)

EDSP 644 Applied Behavior Analysis	3
EDSP 639 Research Analysis in Special Education	3
EDSP 669 Single Subject Research Methods and Designs	3

Advocacy: (Professional Leader) (6 hours)

EDSP 597 Seminar in Special Education: Issues in Special Education	3
EDSP 627 Applications of Assistive Technology	3

Action (Problem Solver) (3 hours)

EDSP 629 Visuals Impairment Practicum	3
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Midpoint Assessment: Completion of ½ of Experienced Teacher Standards, with ¾ of indicators for each standard

Area of Emphasis (At least 18 hours)

EDSP 619 Orientation and Mobility/Daily Living Skills for Teachers	3
EDSP 624 Characteristics and Needs of Students who are Blind and Visually Impaired	3
EDSP 625 Standard English and Nemeth Braille Codes	3
EDSP 626 Educational Procedures for Low Vision Children	3
EDSP 628 Seminar: Assessment of the Visually Impaired Students	3

EDSP 634 Characteristics & Needs of Students with Moderate and Severe Disabilities	3
Minimum total hours	36
Exit Requirements: Portfolio (All ETS standards and $\frac{3}{4}$ of indicators for each standards) or Master's Thesis (EDSP 699)	

Notes

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 Practicum (EDSP 629).
2. Successful completion of the appropriate PRAXIS Exams are required for Visual Impairment teacher certification.
3. Successful completion of midpoint evaluation of program, performance and portfolio.
4. Minimum of 18 hours in 600-level courses is required.
5. Transfer credit must be officially accepted by the advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.
6. A maximum of 6 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
7. All courses must be completed within 6 years of admission to the program.
8. 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

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Amy Lingo
Associate Professor

Rob Pennington
Assistant Professor
Terry Scott
Professor
Thomas Simmons
Associate Professor

Master of Education in Special Education with Concentration in Assistive Technology

Major: SPE

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-se-at.html>

Program Information

Admission Requirements: Baccalaureate degree or its equivalent from an accredited institution, two letters of recommendation, minimum combined score of 800 on the GRE, Test of English as a Foreign

Language required of all foreign students from countries in which English is not the native language, a copy of a Kentucky teaching certificate, and 2.75 cumulative grade point average, or 2.75 grade point average for the senior college years.

Prerequisite to entry into the program:

EDSP 540 Intro to Exceptional Children or equivalent 3

Curriculum

Inquiry (Critical Thinker) (9 hours)

EDSP 644 Applied Behavior Analysis 3

EDSP 639 Research Analysis in Special Education 3

EDSP 669 Single Subject Research Methods and Designs 3

Advocacy: (Professional Leader) (6 hours)

EDSP 597 Seminar in Special Education: Issues in Special Education 3

EDSP 627 Applications of Assistive Technology 3

Action (Problem Solver) (3 hours)

EDSP 668 Assistive Technologies Seminar 3

Midpoint Assessment: Completion of ½ of Experienced Teacher Standards, with ¾ of indicators

Area of Emphasis (18 hours)

EDSP 663 Low Tech Assistive Technologies 3

EDSP 664 Assistive Technology: Computer Access and Switches and Toys 3

EDSP 661 Assistive Technology: Assessment Data Collection and Decision-Making 3

EDSP 665 Assistive Technology: Multimedia and the Classroom Integration 3

EDSP 632 Assistive Technology: Implementation into the General Education Curriculum 3

Choose one from the following. (3 hours)

EDSP 618 Instructional Technology for Students with Special Needs 3

EDSP 646 Augmentative Communication 3

EDSP 672 Autism: Collaboration and Technology 3

Minimum total hours 36

Exit Requirements: Portfolio (All ETS standards and ¾ of indicators for each standard) or Master's Thesis (EDSP 699)

Note:

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

Debra Bauder, Ed.D.

Associate Professor

Thomas Simmons

Associate Professor

Master of Arts in Teaching in Special Education Specialization in Learning and Behavior Disorders P-12

Major: SPE

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-se-lbd.html>

Program Information

Due to ESEA regulations pertaining to highly effective teachers, the CEHD is re-evaluating the MAT program for Learning and Behavior Disorders. The CEHD will not be accepting applications for this program in 2011-2012.

This program leads to certification in Kentucky for areas of Behavior Disorders, Learning Disabilities, Mild Mental Disability, and Orthopedic Impairments at all grade levels from preschool through high school. In order to be accepted into this program, applicants must be employed in an LBD classroom on a temporary provisional certificate. Full-time course work is required to complete the program. The program leads to certification for LBD only. Individuals completing this program would not be certified to teach in a typical classroom (Elementary, Middle or Secondary) unless they completed an additional certification program.

Curriculum

Initial Assessment: Minimum GPA 2.75, GRE combined score 800 (V+Q), three letters of recommendation, personal statement, dispositions self-assessment, bachelor's degree, C or higher in English 102 and oral communication.

Student Characteristics (6 hours)

EDSP 540 Introduction to Exceptional Children 3

EDSP 675 Characteristics, Needs, & Responses to Students with EBD 3

Pedagogy (30 hours)

EDSP 612 LBD Curriculum Methods and Assessment I 3

EDSP 616 LBD Curriculum Methods and Assessment II 3

EDSP 607 Student Teaching in Learning & Behavior Disorders 3

EDSP 644 Applied Behavior Analysis	3
EDSP 640 Teaching Reading Special Education P-12	3
Mid-Point Assessment: Satisfactory dispositions assessment; grade no lower than B- in all	
EDSP 618 Instructional Technology for Students with Special Needs	3
EDAP 647 Teaching Mathematics to Students with Disabilities	3
EDSP 637 Transition, Collaboration, and Inclusion	3
EDTP/AP Content Course	3
EDTP/AP Content Course	3
Research (3 hours)	
EDSP 639 Research Methods in Special Education (<i>Must be taken in last six hours</i>)	3
Elective: Choose from one of the following courses (3 hours)	
EDSP 537 Language Learning for Exceptional Children	3
EDSP 627 Applications of Assistive Technology	3
EDSP 670 Autism: Introduction and Understanding	3
EDSP 681 Early Childhood Education and Exceptional Children	3
Minimum total hours	42
Certification and Degree Assessment: Satisfactory dispositions assessment; 3.0 cumulative GPA; satisfactory portfolio; passing scores on PRAXIS exams; positive recommendation from the Special Education Program Committee.	
Degree Candidacy: If not enrolled during the semester in which you are graduating, you will need to register for a degree candidacy as outlined in the graduate catalog, http://louisville.edu/graduatecatalog/academic-policies-and-requirements/ , under the section called academic policies and requirements.	

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Amy Lingo
Associate Professor

Rob Pennington
Assistant Professor
Terry Scott
Professor
Thomas Simmons
Associate Professor

Master of Arts in Teaching in Special Education Specialization in Moderate/Severe Disabilities P-12

Major: SPE

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-se-msd.html>

Program Information

This program leads to Kentucky certification for Moderate and Severe Disabilities, grades P-12. Applicants to the program should have excellent academic credentials as well as successful experience working with children and/or adults with Moderate and Severe Disabilities (MSD). The Alternative Certification program requires that students become employed in an MSD classroom on a temporary provisional certificate. Classes start in the Summer each year, and admitted students must secure employment before the start of the Fall term. Those who are not employed may have the option to pursue the traditional version of the program, which requires field placements and student teaching. Completion of this degree/licensure program will lead to certification as an MSD teacher only (not an Elementary, Middle or Secondary content area teacher).

Curriculum

Initial Assessment: Admission to Teacher Education. Minimum GPA 2.75, GRE 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree, C or higher in English 102 and oral communication.

Student Characteristics (6 hours)

EDSP 540 Introduction to Exceptional Children 3

EDSP 594 Foundational Concept in Intellectual and Physical Disabilities 3

Pedagogy (27 hours)

EDSP 609 MSD Curriculum and Methods I 3

EDSP 611 MSD Curriculum and Methods II 3

EDSP 608 Student Teaching in Moderate/Severe Disabilities 3

EDSP 644 Applied Behavior Analysis 3

EDSP 520 Assessment of exceptional Learners 3

Mid-Point Assessment: Satisfactory dispositions assessment; grade no lower than B- in all

EDAP 647 Teaching Mathematics to Students with Disabilities 3

EDSP 614 Transition Programs and Services for Children and Youth with Disabilities 3

EDSP 646 Augmentative Communication 3

EDSP 670 Autism: Introduction and Understanding 3

Research (3 hours)

EDSP 639 Research Analysis in Special Education (Must be taken in last 6 hours) 3

Elective: Choose from one of the following courses. (3 hours)

EDSP 627 Applications of Assistive Technology 3

EDSP 671 Autism: Strategies and Techniques 3

EDSP 699 Single Subject Research Methods 3

Minimum total hours 39

Certification and Degree Assessment: Satisfactory dispositions assessment; 3.0 cumulative GPA (and no more than a total of two “C’s” in degree courses); satisfactory portfolio; passing scores on PRAXIS exams; positive recommendation from the Special Education Program Committee.

Degree Candidacy: If not enrolled during the semester in which you are graduating, you will need to register for a degree candidacy as outlined in the graduate catalog, <http://louisville.edu/graduatecatalog/academic-policies-and-requirements/>, under the section called academic policies and requirements.

Departmental Faculty

Debra Bauder
Associate Professor
Latricia Bronger
Instructor
Ginevra Courtade
Assistant Professor

Monica Delano
Assistant Professor
Nicole Fenty
Assistant Professor
Timothy Landrum
Associate Professor
Amy Lingo
Associate Professor

Rob Pennington
Assistant Professor
Terry Scott
Professor
Thomas Simmons
Associate Professor

Rank I Program in Special Education

Major: SPE

Degree Awarded: NON

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees>

Program Information

Rank I programs are planned graduate level programs designed for Kentucky teachers seeking rank change for salary purposes. *Rank I programs are not degree programs.* They are recognized only in the state of Kentucky. By state regulation, Rank I status is sixty (60) semester hours of approved graduate credit including a Master's degree.

Admissions Requirements

Students may apply to the program by first going to the [School of Interdisciplinary and Graduate Studies](#) web site. Admission requirements include the following credentials:

1. Official transcripts with a GPA of 2.75 in the Bachelor's degree and a GPA of 3.0 in the Master's degree

2. Teaching certificate
3. TOEFL (Students holding a baccalaureate or advanced degree from an accredited institution in the U.S. are exempt from this requirement.)

Curriculum

Rank I

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 (religion and law are not appropriate);
- 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.

Departmental Faculty

Meera Alagaraja

Assistant Professor

Roger Buskill

Instructor

Namok Choi

Professor

Phyllis Connelly

Assistant Professor

Jason Curry

Instructor

Rod Githens

Assistant Professor

W. Blake Haselton

Professor and Dean

Ann Herd

Assistant Professor

Amy Hirschy

Assistant Professor

Craig Hochbein

Assistant Professor

John Keedy

Professor

Pradeep Kotamraju

Instructor

Pat Leitsch
Instructor
Antonette MacDonald
Assistant Professor
Donna Pearson
Assistant Professor
Joseph Petrosko
Professor

Bridgette O. Pregliasco
Assistant Professor
Michael Rowland
Assistant Professor
Brad Shuck
Assistant Professor
James Stone
Professor

Sam Stringfield
Professor
Molly Sullivan
Assistant Professor
Kirsten Ewart Sundell
Instructor
Kristin Wilson
Assistant Professor

Master of Science in Sport Administration

Major: SPAD

Degree Awarded: MS

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/ms-sa.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, current resume, GRE test scores, and at least two recommendations for the School of Interdisciplinary and Graduate Studies (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 605	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)	
SPAD 525 Sport Event Management	3
SPAD 529 American Women in Sport	3
SPAD 530 Sport Promotion and Publicity	3
SPAD 561 Special Topics in Sport Administration	3
SPAD 680 Athletics in Higher Education	3
Other Classes Approved by an Advisor	3
Minimum Total Hours	36
Exit Requirements - Students must complete one of the following: written examination, research project, or thesis	

Departmental Faculty

Patricia Benson

Instructor

Gary Bernstein

Instructor

Adrienne Bratcher

Instructor

David Britt

Professor

Stefanie C. Burnett

Instructor

Richard A. Fee

Professor

Dolph Martel Denny, M.D.

Professor

Chris Greenwell

Associate Professor

Marion Hambrick

Assistant Professor

Saori Hanaki-Martin

Instructor

Meg Hancock

Instructor

Mary A. Hums

Professor

Pat Keiffner

Instructor

Kristi King

Assistant Professor

Cheryl A. Kolander

Professor

Alexis Lyras

Assistant Professor

Barbara Mercer

Instructor

Anita M. Moorman

Professor, Interim Co-Chair

Carol S. O'Neal

Associate Professor

Jessica Schilero

Instructor

Betty Straub

Instructor and Director of

Research for the Center for

Health Promotion

Ann Swank

Professor, Interim Co-Chair

Daniela Terson de Paleville

Instructor

Carla Vidoni

Assistant Professor

Bill Weinberg

Professor, Dept. Vice Chair

Master of Education in Special Education with Concentration in Autism

Major: SPE

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-se-a.html>

Program Information

Admission Requirements: Baccalaureate degree or its equivalent from an accredited institution, two letters of recommendation, minimum combined score of 800 on the GRE, Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language, and 2.75 cumulative grade point average, or 2.75 grade point average for the senior college years.

Prerequisite to entry into the program:

EDSP 540 Intro to Exceptional Children or equivalent	3
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Curriculum

Inquiry (Critical Thinker) (9 hours)

EDSP 644 Applied Behavior Analysis	3
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EDSP 639 Research Analysis in Special Education	3
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EDSP 669 Single Subject Research Methods and Designs	3
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Advocacy: (Professional Leader) (6 hours)

EDSP 597 Seminar in Special Education: Issues in Special Education	3
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EDSP 627 Applications in Assistive Technology	3
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Action (Problem Solver) (3 hours)

EDSP 635 Moderate and Severe Disabilities Practicum	3
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Midpoint Assessment: Completion of ½ of Experienced Teacher Standards, with ¾ of indicators

Area of Emphasis (At least 15 hours)

EDSP 670 Autism: Introduction and Understanding	3
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EDSP 671 Autism: Strategies and Techniques	3
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EDSP 646 Augmentative Communication	3
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EDSP 672 Autism: Collaboration and Technology	3
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EDSP 673 Supporting Students with Asperger's Syndrome in the Classroom	3
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Elective (6 hours)	3
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Minimum total hours	36
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Exit Requirements: **Portfolio (All ETS standards and ¾ of indicators for each standards) or Master's Thesis (EDSP699)**

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

Debra Bauder
Associate Professor
Latricia Bronger
Instructor
Ginevra Courtade
Assistant Professor
Monica Delano

Assistant Professor
Nicole Fenty
Assistant Professor
Timothy Landrum
Associate Professor
Amy Lingo
Associate Professor

Rob Pennington
Assistant Professor
Terry Scott
Professor
Thomas Simmons
Associate Professor

Alternative Route to 5-9 Certification in Middle School

Major: MSED

Degree Awarded: MAT

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/mat-ac.html>

Program Information

The Alternative Certification program is designed to assist local school districts in meeting the demand for qualified teachers in high need content areas. The program provides candidates with an opportunity to pursue initial teacher certification while working as a full time teacher on a temporary provisional license.

Employment is not required for initial acceptance to the program. However, candidates must be employed in a Kentucky-accredited school by the start of the school year in order to continue in the program. This program is a two year, 30 credit hour program resulting in initial teacher certification and a Master of Arts in Teaching degree. The Alternative Certification program certifies teachers in middle and secondary education.

Curriculum

Initial Assessment: Admission to Teacher Education. Minimum GPA 2.75, GRE 800 (V+Q), three letters of recommendation, professional statement, bachelor's degree, C or higher in English 102 and oral communication. Completion of prerequisite courses (<https://louisville.edu/education/ssa/admissions/itc-admissions-page/itc-graduate/middle-and-secondary-education-application/education-prerequisite-course-requirements.html>) with 2.50 GPA or higher. Passing scores on the appropriate content PRAXIS II test(s).

EDTP 631 Integrated Teaching and Learning I	3
EDTP 632 Integrated Teaching and Learning II	3
Choose one from the following courses (3 hours)	

EDTP 607 Middle School Language Arts Methods	3
EDTP 608 Middle School Math Methods	3
EDTP 609 Middle School Science Methods	3
EDTP 610 Middle School Social Studies Methods	3
EDTP 633 Integrated Teaching and Learning III	3
EDTP 627 Practicum for Alternative Certification	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 teacher performance assessment (TPA). 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	
EDTP 505 Challenging Advanced Learners	3
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 teacher performance assessment (TPA). Passing score on 5-9 PLT PRAXIS exam.

Degree Assessment: Satisfactory dispositions assessment. All program course work with 3.0 cumulative GPA (and no more than a total of two “C’s” in degree courses). Satisfactory Alternative Certification degree teacher performance assessment (TPA).

Degree Candidacy: If not enrolled during the semester in which you are graduating, you will need to register for a degree candidacy as outlined in the graduate catalog, <http://louisville.edu/graduatecatalog/academic-policies-and-requirements/>, under the section called academic policies and requirements.

Departmental Faculty

Jennifer Bay-Williams
Department Chair, Professor
Peggy Brooks
Instructor, KTIP Coordinator
William S. Bush
*Professor, Director of Center
for Research in Mathematics
and Science Teacher
Development*
Janet Calvert
*Instructor and Coordinator
of Alternative Certification
Program*
Penny Howell

Assistant Professor
Ann Larson
Vice Dean and Professor
Maggie McGatha
*Associate Professor,
Assistant Dept. Chair*
Danna Morrison
*Instructor, Coordinator of
Field & Clinical Placements*
Susan Peters
Assistant Professor
Bob Ronau
Professor
Gina Schack

Professor
Caroline Sheffield
Assistant Professor
Melissa Shirley
Assistant Professor
Shelley Thomas
Assistant Professor
Thomas Tretter
*Associate Professor &
Director, Gheens Science
Hall & Rauch Planetarium*
Jean Wolph
*Instructor & Director,
Louisville Writing Project*

Master of Education in Teacher Leadership

Major: LEADMED

Degree Awarded: MED

Unit: GE

Program Webpage: <http://louisville.edu/education/degrees/med-tl.html>

Program Information

The M.Ed. program is designed for certified teachers who plan to seek a masters degree. The program was designed in collaboration with P-12 classroom teachers, district specialists, and university faculty and school administrators for preparing teacher leaders. The program can lead to an endorsement for Teacher Leadership.

Specialization Areas

Students will work with a faculty mentor to develop a specialization unique to their professional needs. The Master of Education in Teacher Leadership has a number of specializations such as:

1. Interdisciplinary Early Childhood Education
2. Elementary Education
3. Middle Grades Education
4. Secondary Education
5. English as a Second Language
6. Content Area or Teaching Specialty (e.g. Humanities, Biology, Women & Gender Studies, etc.)
7. Special Education Core
8. Autism
9. Assistive Technology
10. Orientation and Mobility
11. Learning and Behavioral Disorders
12. Moderate and Severe Disabilities
13. Visual Impairment

Program Highlights

1. individualized to meet professional goals
2. based on three levels of leadership development
3. many specialized courses specific to content area and grade level
4. preparation pathway to National Board Application
5. courses taught by nationally recognized faculty
6. focused on meeting needs of diverse learners
7. emphasizes coaching and mentoring
8. places your classroom and school as the focus of course discussions and assessments

Curriculum

CARDS 4 (Entry Assessment): Admission to School of Interdisciplinary and Graduate Studies and to the Teacher Leader M.Ed. program; Self-Assessment on Kentucky Guide to Reflective Classroom Practice; Professional Growth Plan.

EDAP 637 Using Assessment to Improve Student Achievement	3
EDAP 638 Instructional Strategies for Diverse Learners	3
EDAP/EDSP 639 Education Research in the P-12 Setting	3

CARDS 5 (Mid-point Assessment- after Level I Leadership and 9 hours of Level II coursework):

Successful completion of all Level I work and 6-9 hours of Level II work; self-assessment on standards 1-4 of the Kentucky Guide to Reflective Practice, Diversity Field Experience Reflection. Scored acceptable or target on Rubrics for Advanced Candidates (by advisor); acceptable Dispositions assessment, minimum GPA of 3.0.

Teacher Leadership – Level I (9 hours)

Teacher Leadership – Level II – Specialization 12-15

Elective: 0-3

Teacher Leadership – Level III (6 hours)

EDAP 677 Teacher Leadership Through Coaching and Mentoring 3

CARDS 6 (Exit Assessment): Successful completion of all required coursework, adapted NBPTS Entry #4, updated and revised Professional Growth Plan, final self-assessment on all standards of the Kentucky Guide to Reflective Practice. Scored acceptable or target on Rubrics for Advanced Candidates (by advisor).

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

Faculty from the departments of Early Childhood & Elementary Education, Middle and Secondary Education, and Special Education contribute to this program.

Interdisciplinary Master of Arts in Bioethics and Medical Humanities

Major: ISBMH

Degree Awarded: MA

Unit: GM

Program Webpage: <http://www.med.louisville.edu/bioethisma.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 Andrea Sinclair at (502) 852-6501.

Program Admission Procedure

Please refer to <http://louisville.edu/bioethicsma/admissions.html>

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

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: MA

Unit: GI

Program Webpage: <http://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: MS

Unit: GI

Program Webpage: <http://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.

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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, and 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.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 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.

Doctor of Philosophy in Interdisciplinary Studies

Major: IS

Degree Awarded: Ph.D.

Unit: IS

Program Webpage: <http://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 and have an approved program of study in order to be formally admitted by the School of Interdisciplinary and Graduate Studies.

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. International students for whom English is not their primary language must show English language proficiency by one of the following: a) TOEFL examination score at or above 550 (paper based test and a 5.0 on the TWE test), 213 (computer based test), 79 (internet based test); b) IELTS test score of 6.5 or higher; c) successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville; d) demonstration of a degree award from an acceptable English language institution.

5. Three letters of recommendation from individuals who are able to comment on the student's academic abilities and potential for success in graduate school.

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. The curriculum must include coursework representing each of the disciplinary areas in the interdisciplinary degree program. An overall minimum of 36 semester hours of graduate level coursework is required, but may be higher to reflect the standards for doctoral study in the disciplines represented in the interdisciplinary degree program.
2. 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 graduate degrees.
3. The curriculum plan must include coursework that provides training in research methodology deemed suitable to the interdisciplinary nature of the program.
4. A dissertation involving original research that crosses established disciplinary lines is required.
5. 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 of a unit.
6. A student's primary mentor must meet their unit's minimum guidelines for directing doctoral dissertations. If a student's mentor has not directed a dissertation in the past, the student must also have a co-mentor who has previous experience directing dissertations.

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 a faculty steering committee and the Director of the Interdisciplinary Studies Program . A program proposal must involve course work and faculty from at least two academic departments or units and it must cross traditional disciplinary organizational structures and programmatic lines of study.

An individual interested in this program must first identify faculty willing to serve on a steering committee, which will be composed of the primary mentor and at least two additional faculty representing at least two different departments or units. Before agreeing to participate in the supervision of an interdisciplinary Ph.D. student, faculty must obtain the consent of their departmental chair or dean.

The student will work with the steering committee to develop an Interdisciplinary Program of Study which must be submitted to the Graduate Council for review and approval before the student is allowed to matriculate. The Program of Study must justify the need for an interdisciplinary program and address the potential for career placement upon degree completion. The proposal must contain a curriculum plan and a description of the qualifying exam required to advance to candidacy.

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:

Paul DeMarco, Ph.D.
School of Interdisciplinary and Graduate Studies
Houchens Building, Suite 105
University of Louisville
Louisville, Kentucky 40292
Phone: (502) 852-5110
Email: paul.demarco@louisville.edu

Curriculum

Curriculum will be determined by a student's steering committee during the development of each individual's program proposal (see details above). For an Interdisciplinary Track, a core of faculty may propose a curriculum that will form the basis for an area of concentration.

Departmental Faculty

Faculty participants will be determined during the development of each individual student's program proposal.

Master of Science in Social Work

Major: SW

Degree Awarded: MSSW

Unit: GK

Program Webpage: <http://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 in Marriage and 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, 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:

1. A bachelor's degree from a regionally accredited institution of higher learning;
2. A minimum of 27 credit hours in the social sciences, i.e. communications (6), natural sciences (3), humanities (9), and social sciences (9);
3. A minimum of three credit hours in each of the following courses: statistics, research methodology, and human biology.
4. Additionally, an undergraduate GPA of 3.00 is recommended 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.
5. The application file is complete when all of the following are received by Graduate Admissions, University of Louisville, Louisville, Kentucky 40292:
6. Completed and signed application form. It is recommended that the application be typed. Application forms are available on-line at graduate.louisville.edu/apply.
7. \$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.
8. 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.

9. 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.
10. 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:
 11. Describe a social problem or problem strategy that is of greatest interest to you.
 12. 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.
 13. Describe in detail how you would insure that your work is relevant to the most economically and socially disadvantaged groups in our society.
 14. 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.

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".

If you wish to be considered for the MFT, SSW, GER or ADCS specializations; please check the *future students link* at 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.

If you wish to be considered for any of the dual degree programs, you must also complete the other unit's application process.

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. A test link to the TOEFL is available at louisville.edu/student/services/testing/index.html.

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.

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

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)

Additionally, students:

- Have the time to complete necessary prerequisites classes before Fall term.
- May register at earliest registration opportunity, with maximum scheduling choices.

Options No Longer Available:

- None

May 15 (traditional admission)

Students are eligible for:

- Field placement (practicum selections become more limited)
- Scholarships
- Registration continues (scheduling choices more limited)

Options No Longer Available:

- 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)

Options No Longer Available:

- 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.

Options No Longer Available:

- 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 plans, please refer to the Kent School's Catalog online at the *future students* link 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 the *future students* link of the Kent School website, 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 at the University of Louisville (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 (SSW), Alcohol and Drug Counseling (ADCS), or Gerontology (GER) while obtaining the M.S.S.W. degree. 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 additional coursework. For more complete descriptions of these programs, please refer to the *future students* link at the Kent School website: louisville.edu/kent.

M.S.S.W./Master in Divinity

The joint M.S.S.W./MDiv 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 *future students* link at the Kent School website: louisville.edu/kent.

Marriage and Family Therapy (MFT)

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; for more information on application specifics, prospective students should access the program's website at louisville.edu/kent/family.

School Social Work (SSW)

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 specialization 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.

Curriculum

For a complete description of possible 30 and 60 hour curriculum plans, please refer to the Kent School website: louisville.edu/kent.

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 results 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 foundation 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: <http://louisville.edu/kent/programs/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 which can be found at the *future students* link at the Kent School website, louisville.edu/kent. 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 (Foundation Practice I), SW 671 with SW 605 (Foundation Practice II), 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 curriculum, 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 coursework 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 in the Kent School online catalog found at the *future students* link at the Kent School website, louisville.edu/kent. The next listing 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 in the Kent School online catalog found at the *future students* link at the Kent School website, louisville.edu/kent. The next listing 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

Terry L. Singer

Professor and Dean

Becky F. Antle

Assistant Professor

Anita P. Barbee

Professor

Gerard M. (Rod) Barber

Professor

Lisa Barrett

Instructor

Linda K. Bledsoe

Associate Research Professor

Sharon Bowland

Assistant Professor

Joseph H. Brown

Professor

Dana N. Christensen

Professor and Director of

Marriage and Family

Specialization

Richard Cloud

Associate Professor

Coordinator, Alcohol and

Drug Counseling

Specialization

Wanda Collins

Associate Professor

Anna C. Faul

Associate Professor and

Associate Dean of Academic

Affairs

Co-Director, Gerontology

Specialization

Andy Frey

Associate Professor

Coordinator, School Social

Work Specialization

Martha Fuller

Instructor and Director of

Field Education

Seana Golder

Associate Professor

Ruth Huber

Professor and Director of

Doctoral Program

Thomas R. Lawson

Professor and Director of

International Program

Sharon Moore

Professor

Noell Rowan

Assistant Professor

Co-Director, Gerontology

Specialization

Director, BSW Program

Bibhuti Sar

Associate Professor and

Director CFL Program

Ramona Stone

Assistant Research Professor

Dana Sullivan

Assistant Research Professor

Carol Tully

Professor

Riaan Van Zyl

Professor and Associate

Dean of Research

Kim Wadlington

Instructor

Pamela Yankeelov

Associate Professor and

Associate Dean of Student

Services

Doctor of Philosophy in Social Work

Major: SW

Degree Awarded: Ph.D.

Unit: GK

Program Webpage: <http://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:

Graduate Admissions

University of Louisville

Louisville, KY 40292

1. Completed Graduate School Application
2. Application for Admission to the UL Ph.D. in Social Work Program
3. Official transcripts from each college/university attended, and documentation of the receipt of a Master's Degree in Social Work, e.g. MSW, MSSW, from a CSWE accredited program or international equivalent.
4. Official report of GRE scores
5. Three recommendations (at least two from academicians)
6. Application fee of \$50
7. A current resume
8. A sample of scholarly writing
9. 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:

1. Review of application materials by the doctoral admissions committee
2. Admission committee interviews with those recommended
3. Recommendation to the School of Interdisciplinary and Graduate Studies

Doctoral Admission Requirements

Students are expected to hold master's degrees in Social Work, i.e. MSW, MSSW, 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	Semester Hours	Cumulative 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

Sharon Bowland
Assistant Professor

Wanda Lott Collins
Associate Professor

Anna C. Faul, Ph.D.

Associate Professor
Associate Dean, Academic
Affairs

Thomas R. Lawson, Ph.D.
Professor

Bibhuti K. Sar, Ph.D.

Director Ph.D. Program in
Social Work

Terry L. Singer, Ph.D.
Professor and Dean

Riaan van Zyl, Ph.D.
Professor

Associate Dean for Research

Post Master's Certificate in Marriage and Family Therapy

Major: MFTCMF

Degree Awarded: CERT

Unit: GK

Program Webpage: <http://louisville.edu/kent/family/descflyr.htm>

Program Information

The Family Therapy Program in the Kent School of Social Work 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 Shelby Campus of the University of Louisville during fall, spring, and summer semesters. Supervised practice includes (1) a live supervision class that meets one evening per week, (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.

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.

1. 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).
2. 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).
3. One (1) three semester hour course in *research* (e.g., methodology, data analysis, evaluation).
4. One (1) three semester hour course in an area of specific professional interest.
5. A semester-long practicum.

Admissions

Prospective students must submit the following completed materials:

The University of Louisville Graduate School Application; see <http://graduate.louisville.edu/apply>;

An official copy of transcripts from all colleges or universities attended;

Three (3) (please note difference from graduate school application) letters of recommendation indicating potential for success in the program;

1. A letter of intent that explains the applicant's interest in applying to this program,
2. knowledge of family therapy,
3. work experience (voluntary or paid) in human services,
4. affiliation with professional organizations (including conference attendance),
5. professional goals and expectations.
6. A current résumé; and

7. 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 (#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:

Nancy Bruner at nebrun01@louisville.edu (502) 852-0383

It may be advisable to call Nancy Bruner, 852-0383, the FT Program Assistant, to check on the status of your application. Each application will be reviewed by the Family Therapy Program faculty. 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 and or faculty. 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

The curriculum (below) has been designed to combine didactic coursework with clinical supervision over a two-year period. All classes meet on Fridays, either morning or afternoon, except the first summer course, which meets all day on Fridays for a 7 week period. State licensure defines how therapists without masters degrees in family therapy can establish "equivalency" if they wish to become licensed.

The Post Masters Program at the UofL provides the critical MFT coursework, however, each applicant's master's degree transcript must be reviewed by the program to insure that they have taken other related coursework that state licensure requires. Students interested in applying should also review these state requirements first to assess what if any additional coursework they might need:

<http://mft.ky.gov/> (Then go to link on right side of page "Laws and Regulations Booklet")

<u>Summer (1st year)</u>		
SW 700 Foundations of Family Therapy: Theory and Practice (5)		
<u>Fall (1st year)</u>	<u>Spring (1st year)</u>	<u>Summer (1st year)</u>
701 FT Assessment (3)	703 Macro MFT (3)	Community Supervision
Community Supervision	Community Supervision	(Possible Electives)

<u>Fall (2nd year)</u>	<u>Spring (2nd year)</u>	<u>Summer (2nd year) if needed</u>
702 Marital Therapy (3) Community Supervision	704 Integrating MFT (3) Community Supervision	Community Supervision (Possible Electives)

Practicum and Supervision:

Practicum settings may be drawn from the student's work setting, if appropriate or an alternate part-time setting where the student can have access to an appropriate client base. Settings must be approved at the time of application. If an applicant does not have access to a clinical population, the FT program may have suggestions for the applicant, however, practicum arrangements are primarily the responsibility of the applicant to pre-arrange. Clinical Supervision must be obtained from an AAMFT Supervisor approved by the Family Therapy Program. It is also expected that students will be exposed to more than one supervisor during their program, typically having one for the first year and one for the second. Fees for supervision are contracted directly with the program approved Supervisors, not through tuition. Applicants should plan on supervision running between \$60 and \$80 per week. Teaming up with another student or students to share their supervision time can greatly reduce this fee. Upon completion of the two-year academic coursework and supervision, and all related courses required by the state (if necessary), the student will be immediately eligible to apply for licensure in the state of Kentucky.

Post Masters Option for Advanced Standing MSSW/ MFT Track Graduates:

For Advanced Standing Students who completed the MSSW/MFT Track, there is an option to continue with MFT studies and work toward their licensure in MFT. The following table illustrates what their course of study would look like:

Post Masters Program Option for Advanced Standing Students		
<u>Fall (1st year)</u>	<u>Spring (1st year)</u>	<u>Summer (1st year)</u>
<u>Community Supervision</u> SW 702 Marital Therapy (3) 3 credits hrs	<u>Community Supervision</u> SW 704 Integrating MFT(3) SW 705 Prof. Issues in MFT (1) 4 credits hrs	<u>Community Supervision</u>
<u>Fall (2nd year)</u>	<u>Spring (2nd year)</u>	Completion:
<u>Community Supervision</u> Human Development Elective1[1] (3)	<u>Community Supervision</u>	Apply for licensure

Community Supervision

Designates the two year /1000 hours of post masters clinical experience required by the Kentucky Board of Licensure for Marriage and Family Therapy. Clinical settings may be drawn from the student's work

setting, if appropriate or an alternate part-time setting where the student can have access to an appropriate family client base. The Family Therapy Program must approve settings at the time of Postmasters application. Practicum arrangements (including supervision) are primarily the responsibility of the applicant to pre-arrange. Clinical Supervision must be obtained from an AAMFT Supervisor, approved by the Family Therapy Program. Fees for supervision are contracted directly with the approved Supervisors, not through tuition. Teaming up with another student or students to share their supervision time can greatly reduce the fee. Upon completion of the minimum two-year academic coursework and supervision, and all related courses required by the state (if necessary), the student will be immediately eligible to apply for licensure in the state of Kentucky.

Departmental Faculty

Becky F. Antle, MSSW, PhD

Assistant Professor

Joe Brown, PhD

Professor of Family Therapy at the Kent School of Social Work

Pat Coppinger, MA, LMFT

Adjunct Clinical Instructor

Dana Christensen, PhD

Director of the Family Therapy Program

Master of Science in Anatomical Science and Neurobiology

Major: ASNB

Degree Awarded: MS

Unit: GM

Program Webpage: <http://www.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 some science background is required.

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 (e.g., to prepare for a career in teaching, or to prepare for further higher education programs such as a Ph.D. program, Dental 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 who wish 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: <http://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.

All international applicants whose native language is not English must submit Test of English as a Foreign Language (TOEFL) scores. Students holding a bachelor's or advanced degree from an accredited institution in the United States are exempt from this requirement.

Program candidates are only admitted in the fall semester (orientation begins the first Monday in August). Review of applications begins mid-January 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:

- Gross Anatomy (ASNB 601) 6.5 hours
- Microscopic Anatomy (ASNB 603) 5.0 hours
- Neuroanatomy (ASNB 607) 3.0 hours
- Neural Systems (ASNB 608) 4.0 hours
- Dental Gross and Neuroanatomy (ASNB 672) 3.0 hours
- Head and Neck Anatomy (ASNB 673) 4.0 hours
- General and Oral Histology (ASNB 671) 5.0 hours

In addition, Anatomy Seminar (ASNB 606, 1 credit hour) must be taken for credit each semester prior to candidacy.

Credit for laboratory research may be earned by registering for Original Investigation (ASNB 619).

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 is nine (9) in the fall or spring semester and six (6) in the summer semester. 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). 12 credit hours (including research hours) is the maximum allowed for summer sessions.

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 (6) years maximum.

Original Research

Students will conduct this required research under the direction of a member or joint/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 studies, 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 three concurrent academic semesters.

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 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 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.

Departmental Faculty

Fred J. Roisen

*Professor
Chairman, ASNB*

Robert Acland

*Professor/Emeritus
Director, Fresh Tissue
Laboratory*

John Barker

*Associate Professor
Surgery*

Kunwar P. Bhatnagar

Professor Emeritus

Maxwell Boakye

*Associate Professor
Neurological Surgery*

Richard Benton

Assistant Professor

Martha E. Bickford

Professor

Jun Cai

*Assistant Professor
Pediatrics*

Ferrell R. Campbell

*Professor/Emeritus
Director, Analytical
Microscopy & Histology
Laboratory*

Manuel Casanova

*Professor
Endowed Chair, Psychiatry*

Rita M. Colella

*Associate Professor
Course Director, Medical
Microscopic Anatomy*

Jennifer Brueckner-Collins

Professor

Nigel G.F. Cooper

Professor

*Vice-Chair for Research
Director, Molecular
Neurobiology Core
Laboratory*

Rif El-Mallakh

*Associate Professor
Psychiatry*

Allan Farman

*Professor
Diagnosis & General
Dentistry*

Robert Friedland

*Professor
Chairman, Department of
Neurology*

Susan Harkema

*Professor
Neurological Surgery*

Nicole R. Herring

*Assistant Professor
Course Director, Advanced
Head and Neck*
Raymond Ho
*Professor
Course Director, Dental
Gross and Neuroanatomy;
Head and Neck Anatomy*
Charles H. Hubscher
*Professor
Director, Graduate Program*
John Johnson
*Associate Professor
Chairman, Orthopedic
Surgery*
Kathleen M. Klueber
Associate Professor Emerita
Robin F. Krimm
*Professor
Course Director, General
and Oral Histology*
Ashok Kumar
Professor
Nobuyuki Kuwabara
*Associate Professor
Facilitator for Guest Clinical
Gross Anatomy Instructors*
Irene Litvan
*Professor
Endowed Chair, Neurology*
James B. Longley
Professor Emeritus
Qingxian Lu
*Assistant Professor
Ophthalmology and Visual
Sciences*

Robert F. Lundy, Jr.
*Associate Professor
Director, Graduate
Admissions*
David Magnuson
*Professor
Neurological Surgery*
Maureen McCall
*Professor
Ophthalmology and Visual
Sciences*
Claire Meena-Leist
Assistant Professor
Nicholas Mellen
*Assistant Professor
Pediatrics*
J. Patrick Moore
Assistant Professor
George D. Mower
*Professor
Course Director, Medical
Neurosciences*
G. Stephen Nettleton
*Professor
Vice Chairman for
Administration and Academic
Affairs, Education
Coordinator
Course Director, Medical
Gross; Human Embryology*
Siva Panguluri
Instructor
Jeff Petruska
Assistant Professor
Matthew Qiu
Professor

*Director, Neurochemistry
Shared Instrumentation
Laboratory*
Kenneth Reid
Professor Emeritus
Richard Rink
Professor Emeritus
Guillermo W. Rougier
Professor
Richard H. Swigart
Professor Emeritus
Gülgün Tezel
*Professor
Ophthalmology and Visual
Sciences*
Tongalp Tezel
*Associate Professor
Ophthalmology and Visual
Sciences*
Gordon Tobin
Professor Surgery
Michael T. Tseng
*Professor
Course Director, Dental
Hygiene*
Michael Voor
*Associate Professor
Orthopedic Surgery*
Scott Whittemore
*Professor
Endowed Chair,
Neurological Surgery*
Welby Winstead
*Assistant Professor
Surgery, Otolaryngology*

Doctor of Philosophy in Anatomical Science and Neurobiology

Major: ASNB

Degree Awarded: Ph.D.

Unit: GM

Program Webpage: <http://www.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 therapeutic 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 some science background is required.

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:

1. A formal application submitted to the Office of Graduate Admissions (see website: <http://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.

All international applicants whose native language is not English must submit Test of English as a Foreign Language (TOEFL) scores. Students holding a bachelor's or advanced degree from an accredited institution in the United States are exempt from this requirement.

Program candidates are only admitted in the fall semester (orientation begins the first Monday in August). Review of applications begins mid-January and continues until all positions are filled. Admission into the program is competitive, and applicants are encouraged to submit their applications early. All applications are automatically considered for a fellowship, which provides a stipend and covers tuition and health insurance.

Curriculum

Required coursework

Students must complete the following courses:

Biochemistry (BIOC/CHEM 545 or equivalent)	3
Cell Biology (MBIO 667 or equivalent)	3
Two lab rotation (ASNB 618)	6

One methods course (e.g. ASNB 665)	3
Anatomy seminar (ASNB 606) each semester prior to candidacy	1

Students must complete at least 12.0 credits of departmental courses (non-research), including at least 6.0 credits of following core courses:

Gross Anatomy (ASNB 601)	6.5
Microscopic Anatomy (ASNB 603)	5
Neuroanatomy (ASNB 607)	3
Neural Systems (ASNB 608)	4
Dental Gross and Neuroanatomy (ASNB 672)	3
Head and Neck Anatomy (ASNB 673)	4
General and Oral Histology (ASNB 671)	5

Students must complete one of following elective courses^{1,2}:

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)	4
Physiology I (PHY 605)	3
Physiology II (PHY 606)	3
Introduction to Statistical Computing (PHST 620)	3
Advanced Biostatistics (BIOL 650)	4

¹*Course substitutions can be made if approved by the ASNB Graduate Education Committee.*

²*ASNB 607 and 608 fulfill both core and elective requirements.*

Following completion of all required coursework, each student is considered a Masters Candidate and will register as such (MAST).

Laboratory Rotations

Each student will complete at least two rotations in different laboratories prior to the 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 can obtain credit for further research in that laboratory by registering for Original Investigation (ASNB 619). Faculty reserve the right to decline accepting a student. Upon selection of an advisor, a letter of agreement will be signed by both the student and advisor which will be filed with the Graduate Program Director.

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 second year. 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.

The principal advisor who will direct the student's research must be a member or joint/associate member of the Department Faculty as well as a member of the Graduate Faculty.

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.*

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 (approximately 30 minutes in length), open to everyone, in which the student will present background information and an 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. The student must consecutively register for DOCT 600 and maintain candidacy year around (fall, spring and summer) until the degree is awarded.

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

Robert Acland

Professor/Emeritus
Director, Fresh Tissue
Laboratory

John Barker

Associate Professor
Surgery

Kunwar P. Bhatnagar

Professor Emeritus

Maxwell Boakye

Associate Professor
Neurological Surgery

Richard Benton

Assistant Professor

Martha E. Bickford

Professor

Jun Cai

Assistant Professor
Pediatrics

Ferrell R. Campbell

Professor/Emeritus

Director, Analytical
Microscopy & Histology
Laboratory

Manuel Casanova

Professor
Endowed Chair, Psychiatry

Rita M. Colella

Associate Professor
Course Director, Medical
Microscopic Anatomy

Jennifer Brueckner-Collins

Professor

Nigel G.F. Cooper

Professor
Vice-Chair for Research
Director, Molecular
Neurobiology Core
Laboratory

Rif El-Mallakh

Associate Professor
Psychiatry

Allan Farman

Professor
Diagnosis & General
Dentistry

Robert Friedland

Professor
Chairman, Department of
Neurology

Susan Harkema

Professor
Neurological Surgery

Nicole R. Herring

Assistant Professor
Course Director, Advanced
Head and Neck

Raymond Ho

Professor
Course Director, Dental
Gross and Neuroanatomy;
Head and Neck Anatomy

Charles H. Hubscher

Professor
Director, Graduate Program

John Johnson

Associate Professor
Chairman, Orthopedic
Surgery

Kathleen M. Klueber

Associate Professor Emerita

Robin F. Krimm

Professor

Course Director, General and
Oral Histology

Ashok Kumar

Professor

Nobuyuki Kuwabara

Associate Professor

Facilitator for Guest Clinical
Gross Anatomy Instructors

Irene Litvan

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Qingxian Lu

Assistant Professor

Ophthalmology and Visual
Sciences

Robert F. Lundy, Jr.

Associate Professor

Director, Graduate

Admissions

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Professor

Neurological Surgery

Maureen McCall

Professor

Ophthalmology and Visual
Sciences

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Assistant Professor

Nicholas Mellen

Assistant Professor

Pediatrics

J. Patrick Moore

Assistant Professor

George D. Mower

Professor

Course Director, Medical
Neurosciences

G. Stephen Nettleton

Professor

Vice Chairman for
Administration and
Academic Affairs, Education
Coordinator

Course Director, Medical

Gross; Human Embryology

Siva Panguluri

Instructor

Jeff Petruska

Assistant Professor

Matthew Qiu

Professor

Director, Neurochemistry

Shared Instrumentation

Laboratory

Kenneth Reid

Professor Emeritus

Richard Rink

Professor Emeritus

Guillermo W. Rougier

Professor

Richard H. Swigart

Professor Emeritus

Gülgün Tezel

Professor

Ophthalmology and Visual
Sciences

Tongalp Tezel

Associate Professor

Ophthalmology and Visual
Sciences

Gordon Tobin

Professor

Surgery

Michael T. Tseng

Professor

Course Director, Dental
Hygiene

Michael Voor

Associate Professor

Orthopedic Surgery

Scott Whittemore

Professor

Endowed Chair, Neurological

Surgery

Welby Winstead

Assistant Professor

Surgery, Otolaryngology

Doctor of Audiology

Major: AUDI

Degree Awarded: Au.D.

Unit: GM

Program Webpage: <http://www.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.

Year	Semester	Course#	Title	Credits
1	Fall	600	Anatomy & Physiology	4
		604	Essential Techniques in Audiometry	3
		606	Acoustics & Speech Acoustics	3
		614	Clinical Methods I	1
		610	Clinical Clerkship I	1
			Total Credits	11
	Spring	648	Hearing Science	3
		624	Amplification Technology	3
		622	Electrophysiologic Techniques in Audiology I	3
		615	Clinical Methods II	1
		610	Clinical Clerkship I	1
			Total Credits	11
	Summer			
		636	Pediatric Audiology	3
		630	Amplification Selection & Fitting	3
		616	Genetics	2
		608	Anatomy & Physiology II	2
		620	Clinical Clerkship II	2

			Total Credits	12
2	Fall	628	Differential Diagnosis in Audiology	3
		629	Cochlear Implants & FM Systems	3
		612	Pathology of the Aud. & Vestib. Systems	3
		620	Clinical Clerkship II	2
			Total Credits	11
	Spring	650	Research Methods	3
		654	Auditory Processing Disorders	3
		638	Educational Audiology	3
		620	Clinical Clerkship II	2
			Total Credits	11
	Summer	621	Audiologic Rehabilitation	3
		626	Assessment & Management Vestib. Disorders	2
		632	Professional Issues	2
		635	Internship	4
		660	Investigation	1
3			Total Credits	12
	Fall	656	Practice Management in Audiology	3
		646	Medical Audiology	3
		660	Investigation	1
		635	Internship	4
			Total Credits	11
	Spring	652	Prevention of Hearing Loss	2
		642	Gerontologic Audiology	3
		660	Investigation	1
		635	Internship	4
4			Total Credits	10
	Summer		DOCT 600	1
	Fall		DOCT 600	1
	Spring		DOCT 600	1

Clinical Services

The Audiology Program at the University of Louisville offers a variety of unique clinical services at a variety of sites. Services are provided and/or supervised by the faculty and staff. Students will initially rotate through the university clinical sites, including the Ambulatory Care Building and University of Louisville Hospital, Kosair-Children's Hospital, University Audiology Associates, and HearCare Associates. Students also have the opportunity for clinical rotations in affiliated sites outside the university.

Departmental Faculty

David R. Cunningham
Professor

Ian M. Windmill
Associate Professor

Jill E. Preminger
Associate Professor

George O. Purvis

*Chief Audiology and Speech
Pathology, V. A.*

Fred Wightman
*Heuser Hearing Research
Endowed Chair*

Barbara Eisenmenger
Clinical Instructor
Hayley Gardner

Clinical Instructor

Julie Manche
Clinical Instructor

Shelley Moats
Clinical Instructor

Sue Windmill
Clinical Instructor

Master of Science in Biochemistry and Molecular Biology

Major: BIOC

Degree Awarded: MS

Unit: GM

Program Webpage: <http://biochemistry.louisville.edu/>

Program Information

As teachers and scientists, the faculty of the Department of Biochemistry and Molecular Biology subscribe to the following missions:

1. Provide up-to-date and high-quality classroom and laboratory instruction in the discipline of biochemistry and molecular biology to students at the University.
2. 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.
3. Train students and post-doctoral fellows in biochemical research.
4. Encourage and enhance the professional development of faculty colleagues, especially junior faculty.
5. Serve as a resource for information on biochemistry and molecular biology for the University and the community at large.
6. Contribute to the orderly and smooth functioning of the University by serving on committees, and participating in advising, policy-making and administrative activities.
7. Serve as role models for students, fellows, staff and colleagues with regard to integrity, fairness, collegiality, and civility.
8. Perform service that advances and enhances the discipline of biochemistry and molecular biology.
9. Advocate the benefits of science and the scientific method to society.
10. 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 scores

These completed documents should be submitted to the Office of Graduate Admissions.

Requirements for the MS Degree in Biochemistry and Molecular Biology

The Department of Biochemistry and Molecular Biology offers both a thesis option and non-thesis option for the MS degree

MS Degree in Biochemistry and Molecular Biology thesis option

- MS 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 MS 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 MS 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 School of Interdisciplinary and Graduate Studies' 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.

MS Degree in Biochemistry and Molecular Biology non-thesis option

- MS 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 MS 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 MS with a non-thesis option, course requirements include BIOC 645 and 647 (or their equivalent), BIOC 611, and the remaining hours (up to 18 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

Curriculum

Fall Semester

Course #	Title	Hours
606	Seminar	1
611	Biochemical Molecular Methods	4
613	Biochemistry Lab (Rotation)	2 - 4
619	Research	1 - 15
641	Eukaryotic Genetics	4
645	Biochemistry I	4
668	Molecular Biology	4

Spring Semester

Course #	Title	Hours
680	Biomolecular Interactions	2
660	Molecular Endocrinology	2
612	Advanced Laboratory Techniques	2
675	Biochemistry of Cancer	2
630	Laboratory Ethics	1
606	Biochemistry Seminar	1
613	Biochemistry Lab (Rotation)	2 - 4
619	Research	1 - 15
647	Biochemistry II	4
661/PHTX 661	Molecular Toxicology	3

Departmental Faculty

Ronald G. Gregg, Ph.D.

Professor and Chair

Alan Cheng, Ph.D.

Assistant 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

Chuan Hu, Ph.D.

Assistant Professor

Ted Kalbfleisch, Ph.D.

Assistant Professor

Carolyn M. Klinge, Ph.D.

Professor

Yong Li, Ph.D.

Assistant Professor

Nancy C. Martin, Ph.D.

Professor

Russell A. Prough, Ph.D.

Professor

Kenneth S. Ramos, Ph.D.
Professor

David Samuelson, Ph.D.
Assistant Professor

Vilius Stribinskis, Ph.D.
Assistant Professor

Eugenia Wang, Ph.D.
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
Professor of Biochemistry
and Molecular Biology*

Douglas Borchman, Ph.D.
*Professor of Ophthalmology
& Visual Sciences, Associate
Professor of Biochemistry &
Molecular Biology*

Jonathan Chaires, Ph.D.
*Professor of Medicine, JGB
Endowed Chair in Cancer
Biophysics, Professor of
Biochemistry & Molecular
Biology*

Jason Chesney, Ph.D., M.D.
*Associate Professor of
Medicine,
Associate Professor of
Biochemistry & Molecular
Biology*

Geoffrey Clark, Ph.D.
*Professor of Medicine,
Professor of Biochemistry &
Molecular Biology*

Douglas S. Darling, Ph.D.
*Professor of Dental-Perio.
Endo & Dental Hygiene,
Professor of Biochemistry &
Molecular Biology*

Sham Kakar, Ph.D.
*Professor of Medicine,
Professor of Biochemistry &
Molecular Biology*

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*

Mark Linder, Ph.D.
*Associate Professor of
Pathology, Associate
Professor of Biochemistry &
Molecular Biology*

Qingxian Lu, Ph.D.
*Assistant Professor of
Ophthalmology & Visual
Sciences, Assistant 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,
Professor of Biochemistry &
Molecular Biology, Director
of James Graham Brown
Cancer Center*

Robert A. Mitchell, Ph.D.
*Associate Professor of
Medicine, Associate*

*Professor of Biochemistry &
Molecular Biology
James Graham Brown
Cancer Center*

David W. Powell, Ph.D.
*Assistant Professor of
Medicine, Assistant Professor
of Biochemistry & Molecular
Biology*

Madhavi Rane, Ph.D.
*Assistant Professor of
Medicine, Assistant Professor
of Biochemistry & Molecular
Biology*

Shigeo Tamiya, Ph.D.
*Assistant Professor of
Ophthalmology & Visual
Sciences, Assistant Professor
of Biochemistry & Molecular
Biology*

John O. Trent, Ph.D.
*Associate Professor of
Medicine,
Associate 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
Professor of Biochemistry &
Molecular Biology*

Doctor of Philosophy in Biochemistry and Molecular Biology

Major: BIOC

Degree Awarded: Ph.D.

Unit: GM

Program Webpage: <http://biochemistry.louisville.edu/>

Program Information

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2. 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.
3. Train students and post-doctoral fellows in biochemical research.
4. Encourage and enhance the professional development of faculty colleagues, especially junior faculty.
5. Serve as a resource for information on biochemistry and molecular biology for the University and the community at large.
6. Contribute to the orderly and smooth functioning of the University by serving on committees, and participating in advising, policy-making and administrative activities.
7. Serve as role models for students, fellows, staff and colleagues with regard to integrity, fairness, collegiality, and civility.
8. Perform service that advances and enhances the discipline of biochemistry and molecular biology.
9. Advocate the benefits of science and the scientific method to society.
10. 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 Biochemistry 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

1. 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.
2. Transcript of course work. A two-semester course in organic chemistry is required.
3. 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.
4. The Graduate Record Examination general test.
5. At least two letters of recommendation, preferably from faculty in biology and/or chemistry.
6. A personal or phone interview with members of the Department of Biochemistry and Molecular Biology is encouraged for all applicants.
7. A personal statement of interest.

Curriculum

Course #	Title	Hours
606	Seminar	1
611	Biochemical Molecular Methods	4
613	Biochemistry Lab (Rotation)	2 - 4
619	Research	1 - 15
641	Eukaryotic Genetics	4
645	Biochemistry I	4
668	Molecular Biology	4
Course #	Title	Hours

680	Biomolecular Interactions	2
660	Molecular Endocrinology	2
612	Advanced Laboratory Techniques	2
675	Biochemistry of Cancer	2
630	Laboratory Ethics	1
606	Biochemistry Seminar	1
613	Biochemistry Lab (Rotation)	2 - 4
619	Research	1 - 15
647	Biochemistry II	4
661/PHTX 661	Molecular Toxicology	3

Departmental Faculty

Ronald G. Gregg, Ph.D.

Professor and Chair

Alan Cheng, Ph.D.

Assistant 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

Chuan Hu, Ph.D.

Assistant Professor

Ted Kalbfleisch, Ph.D.

Assistant Professor

Carolyn M. Klinge, Ph.D.

Professor

Yong Li, Ph.D.

Assistant Professor

Nancy C. Martin, Ph.D.

Professor

Russell A. Prough, Ph.D.

Professor

Kenneth S. Ramos, Ph.D.

Professor

David Samuelson, Ph.D.

Assistant Professor

Vilius Stribinskis, Ph.D.

Assistant Professor

Eugenia Wang, Ph.D.

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

Professor of Biochemistry

and Molecular Biology

Douglas Borchman, Ph.D.

Professor of Ophthalmology &

Visual Sciences

Associate Professor of

Biochemistry & Molecular

Biology

Jonathan Chaires, Ph.D..

Professor of Medicine, JGB

Endowed Chair in Cancer

Biophysics

Professor of Biochemistry &

Molecular Biology

Jason Chesney, Ph.D., M.D.

Associate Professor of

Medicine

Associate Professor of

Biochemistry & Molecular

Biology

Geoffrey Clark, Ph.D.

Professor of Medicine

Professor of Biochemistry &

Molecular Biology

Douglas S. Darling, Ph.D.

Professor of Dental-Perio.

Endo & Dental Hygiene

Professor of Biochemistry &

Molecular Biology

Sham Kakar, Ph.D.

Professor of Medicine

Professor of Biochemistry &

Molecular Biology

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

Mark Linder, Ph.D.

Associate Professor of

Pathology

Associate Professor of

Biochemistry & Molecular Biology

Qingxian Lu, Ph.D.

Assistant Professor of Ophthalmology & Visual Sciences

Assistant 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
Professor of Biochemistry & Molecular Biology
Director of James Graham Brown Cancer Center*

Robert A. Mitchell, Ph.D.

*Associate Professor of Medicine
Associate Professor of Biochemistry & Molecular Biology*

Biology

James Graham Brown Cancer Center

David W. Powell, Ph.D.

Assistant Professor of Medicine

Assistant Professor of Biochemistry & Molecular Biology

Madhavi Rane, Ph.D.

Assistant Professor of Medicine

Assistant Professor of Biochemistry & Molecular Biology

Shigeo Tamiya, Ph.D.

Assistant Professor of Ophthalmology & Visual Sciences

Assistant Professor of Biochemistry & Molecular Biology

John O. Trent, Ph.D.

Associate Professor of Medicine

Associate 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
Professor of Biochemistry & Molecular Biology*

Master of Science in Communicative Disorders

Major: CMDS

Degree Awarded: MS

Unit: GM

Program Webpage: <http://www.louisville.edu/medschool/surgery/com-disorders/slp>

Program Information

The Division of Speech-Language Pathology, Department of Surgery, School of Medicine offers a Master of Science in Communicative Disorders for speech-language pathology majors. The 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 1000. 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

Speech Language Pathology Core Program

Year 1 Fall

CMDS 572	Anatomy and Physiology for Communicative Sciences	4
CMDS 620	Neurological Disorders of Speech Production	
3		
CMDS 661	Assessment of Childhood Language Disorders	
3		

Year 1 Spring

CMDS 667	Aphasia	3
CMDS 612	Preschool Language Intervention	3
CMDS 669	Cognitive Disorders	3
CMDS 695	Special Topics – 2 Day Seminar TBA	0
CMDS 652	School Age Language and Phonology Intervention	0
CMDS 611	Practicum: Speech Pathology	1

Year 1 Summer

CMDS 671	Clinical Methods in Speech Language Pathology	2
CMDS 663	Voice Disorders	3
CMDS 690	Dysphagia	3
CMDS 611	Practicum: Speech Pathology	2
ELFH 600	Introduction to Research Methods and Statistics	3*
EDSP 637	Trans-disciplinary Collaboration for Inclusion	3***

Year II Fall

CMDS 668	Professional Issues in Audiology and Speech Pathology	3
CMDS 611	Practicum: Speech Pathology	3
CMDS 665	Fluency Disorders	3
CMDS 696	Augmentative/Alternative Communication	3
CMDS 699	Thesis	1-3**
AUDI 605	Intro to Audiological Techniques and Rehab	3*
ELFH 600	Introduction to Research Methods and Statistics	3*
OBIO 501	Biomedical Data Analysis: Experimental Design & Statistics	3**

Year II Spring

CMDS 695	Special Topics 3-Day Seminar TBA	3
CMDS 611	Practicum: Speech Pathology	5
CMDS 699	Thesis	1-3**

CMDS 610	Practicum: Audiology	1*
ELFH 600	Introduction to Research Methods and Statistics	3*
EDSP 540	Introduction to Exceptional Children	3***

* If necessary

**Required for thesis

***Teacher Certification

OOD=Out of Department

Preparatory Phase

Fall Semester

CMDS 572	Anatomy and Physiology for Communicative Sciences	4
AUDI 605	Intro to Audiological Techniques and Rehab	3
CMDS 563	Clinical Phonetics	3
CMDS 564	Normal Speech & Language Development	3

Spring Semester

CMDS 570	Clinical Observation in Speech Pathology and Audiology	1
CMDS 545	Survey of Communication Processes and Disorders	3
ENG 522 or LING 522	Structure of Modern American English	3
EDSP 540	Intro to Exceptional Children **	3
EDSP 600	Introduction to Research Methods and Statistics	3*
EDSP 637	Trans-disciplinary Collaboration **	3

Students must choose one of the following courses:

PSYC 362	Life-Span Developmental Psych.	3
ECPY 663	Multicultural Issues	3
ECPY 607	Learning and Human Development	3
PSYC 435	Seminar in Infancy	3

Summer Semester (Optional)

EDSP 540	Intro to Exceptional Children	3**
EDSP 600	Introduction to Research Methods and Statistics	3*
EDSP 637	Trans-disciplinary Collaboration	3**

OOD=Taught by faculty outside of the department

*If necessary **Teacher Certification Program (optional)

Departmental Faculty

Barbara M. Baker, Ph.D.

Director and Professor

Rhonda Mattingly, Ed.D.

Lecturer and Clinical Coordinator

M. Gay Masters, Ph.D.

Assistant Professor

Alan F. Smith, Ph.D.

Lecturer

Elizabeth A. Katzman, Ed.D.

Clinical Supervisor

Master of Science in Microbiology and Immunology

Major: MBIO

Degree Awarded: MS

Unit: GM

Program Webpage: <http://www.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, three letters of recommendation, and a short biographical sketch are required. The applicant must meet the other general requirements of the School of Interdisciplinary and Graduate Studies as outlined in the General Information section of this catalog. The application deadline is March 1st each year. Submission prior to March 1 is strongly encouraged in order to ensure that all required materials (especially letters of reference) are received by the deadline. 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:

Required Courses			
	course title	credit hours	semester
BIOC 645	Biochemistry I	4	Fall
-or- MBIO 602	Immunology	3	Fall
MBIO 606	Seminar/Journal Club	2	Fall, Spring &
MBIO 690	Research Methods in Microbiology & Immunology	2	Fall
BIOC 606-03	Survival Skills and Research Ethics	1	Spring
MBIO 619	Research	1-12	Fall, Spring, &
MBIO 620	Thesis(optional)	1-6	Fall, Spring, &

Electives:

Select two courses from the list of suggested electives

	course title	credit hours	semester
MBIO 618	Topics in Advanced Microbiology	1-3	Fall & Spring

	Advanced Immunology : Innate and Adaptive Immunity	2	Spring
	Advanced Immunology: Autoimmunity, Cancer, and	2	Fall
	Cell Biology of Viruses	1	Spring
MBIO 687	Microbial Pathogenesis	2	Spring
MBIO 671	Epidemiology and Pathogenesis of Human Viruses	1	Spring
MBIO 672	Recombinant viruses and viral vectors	1	Spring
	(must take both 1 hour courses to equal one elective.)		
MBIO 667	Cell Biology	3	Spring

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, form 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 School of Interdisciplinary and Graduate Studies' 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 School of Interdisciplinary and Graduate Studies.

Departmental Faculty

Robert D. Stout
Professor and Chair

Yousef Abu Kwaik
Professor

Pascale Alard
Associate Professor

Haribabu Bodduluri
Professor

Paula Chilton
Assistant Professor

Dong Hoon Chung
Assistant Professor

James E. Graham
Associate Professor

Lawrence A. Hunt
Associate Professor

Venkatakrishna R. Jala
Assistant Professor

Colleen Johnson
Professor

Michele Kosiewicz
Associate Professor

Matthew Lawrenz
Assistant Professor

Bing Li
Assistant Professor

Richard D. Miller
Associate Professor

Thomas C. Mitchell
Associate Professor

Haval Shirwan
Professor

Uldis N. Streips
Professor

Jill Suttles
Professor

Jonathan Warawa
Assistant Professor

Esma Yolcu
Assistant Professor

Huang-Ge Zhang
Professor

Joint Faculty
Donald R. Demuth
Professor

Periodontal, Endodontal &
Dental Hygiene
School of Dentistry

G. Rafael Fernandez-Botran

*Associate Professor Of
Pathology And Laboratory
Medicine*

George Hajishengallis

*Associate Professor
Dept. of Periodontics &
Endodontics
School of Dentistry*

Henry Kaplan

*Professor
Chairman, Ophthalmology &
Visual Sciences*

Richard J. Lamont

*Professor
Periodontics, Endodontics,
and Dental Hygiene
School of Dentistry*

Mariusz Ratajczak

*Professor
Dept. Of Medicine*

Hui Shao

*Joint Faculty Assistant
Professor
Dept. of Ophthalmology and
Visual Sciences*

Robert H. Staat

*Professor of Biological and
Biophysical Sciences
School of Dentistry*

Douglas D. Taylor

*Professor
Dept. of Obstetrics and
Gynecology*

Associate Faculty

William G. Cheadle

*Professor
Dept. of Surgery*

Suzanne Ildstad

Professor of Surgery

*Director, Institute of Cellular
Therapeutics*

Gary S. Marshall

*Professor
Dept. of Pediatrics*

Kenneth McLeish

*Professor
Dept. of Medicine
Kidney Disease Program*

Susanna K. Remold

*Associate Faculty
Assistant Professor, Dept. of
Biology*

David Scott

*Associate Professor of
Endodontics & Dental
Hygiene*

School of Dentistry

James W. Snyder

*Professor
Clinical Services, Dept. of
Pathology*

Matthew Spite

*Assistant Professor of
Medicine*

James T. Summersgill

*Professor, Div. of Infectious
Diseases Dept. of Medicine*

Silvia M. Uriarte

*Assistant Professor of
Medicine
Kidney Disease Program*

Micah Worley

*Assistant Professor
Dept. Of Biology*

Jun Yan

*Assistant Professor, Dept. of
Medicine*

*James Graham Brown Cancer
Center*

Adjunct Faculty

Carl Bruder

*Karolinska Institute
Stockholm, Sweden*

Karen Cost

*Assistant Professor of
Microbiology and
Immunology*

*Director, Clinical
Immunology Laboratory*

Nejat Egilmez

*Associate Professor of
Microbiology and
Immunology*

*School of Medicine &
Biomedical Sciences
State University of New
York(SUNY)*

Anthony J. Janckila

*Associate Professor of
Microbiology and
Immunology*

*Technical Director, Special
Hematology Laboratory*

*Department of Veteran's
Affairs Medical Center*

Gerald Sonnenfeld

*Assistant Professor of
Microbiology and
Immunology*

Binghamton University

Dennis Taub

*Director, Clinical Core
Laboratory*

*Laboratory of Immunology
National Institute of Aging,
NIH*

Emeritus Faculty

Pinghui Liu

Professor

Doctor of Philosophy in Microbiology and Immunology

Major: MBIO

Degree Awarded: Ph.D.

Unit: GM

Program Webpage: <http://www.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, three letters of recommendation, and a short biographical sketch are required. The applicant must meet the other general requirements of the School of Interdisciplinary and Graduate Studies as outlined in the General Information section of this catalog. The application deadline is March 1st each year. Submission prior to March 1 is strongly encouraged in order to ensure that all required materials (especially letters of reference) are received by the deadline. 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:

Required Courses		credit hours	semester
	course title		
MBIO 601	Molecular Microbiology	2	Fall
MBIO 602	Immunology	3	Fall
MBIO 667	Cell Biology	3	Spring
BIOC 645	Biochemistry I	4	Fall
MBIO 606	Seminar/Journal Club	2	Fall & Spring
MBIO 600	Laboratory Rotations in Microbiology and Immunology	1-2	Fall & Spring
MBIO 690	Research Methods in Microbiology & Immunology	2	Fall
MBIO 618	Topics in Advanced Microbiology		
	Cell Biology of Viruses	1	Spring
BIOC 606-03	Survival Skills and Research Ethics	1	Spring
MBIO 619	Research	1-12	Fall, Spring, &

Elective Courses:

▲ **Select three courses from the list of suggested electives**

	course title	credit hours	semester
MBIO 618	Topics in Advanced Microbiology	1-3	Fall & Spring
	Advanced Immunology : Innate and Adaptive Immunity	2	Spring
	Advanced Immunology: Autoimmunity, Cancer, and	2	Fall
MBIO 687	Microbial Pathogenesis	2	Spring
MBIO 671	Epidemiology and Pathogenesis of Human Viruses	1	Spring
MBIO 672	Recombinant viruses and viral vectors	1	Spring
	(must take both 1 hour courses to equal one elective.)		
BIOC 668	Molecular Biology	4	Fall
BIOC 675	Cancer Biology	4	Spring
OBIO	Biomedical Data Analysis: Experimental Design and	3	Fall
BIOC 647	Adv. Biochemistry II	4	Spring
	at least 1 elective must be offered in the Department MBIO		

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 the end of their second semester. Selection of the Research Advisor and formation of the Dissertation Committee must be approved by the Dean of the School of Interdisciplinary and Graduate Studies. 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 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.

Departmental Faculty

Robert D. Stout

Professor and Chair

Yousef Abu Kwaik

Professor

Pascale Alard

Associate Professor

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Professor

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David Scott

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Endodontics & Dental

Hygiene

School of Dentistry

James W. Snyder

Professor

Clinical Services, Dept. of
Pathology

Matthew Spite

Assistant Professor of

Medicine

James T. Summersgill

Professor

Div. of Infectious Diseases

Dept. of Medicine

Silvia M. Uriarte

Assistant Professor of

Medicine

Kidney Disease Program

Micah Worley

Assistant Professor

Dept. Of Biology

Jun Yan

*Assistant Professor, Dept. of
Medicine*

James Graham Brown Cancer
Center

Adjunct Faculty**Carl Bruder**

Karolinska Institute
Stockholm, Sweden

Karen Cost

*Assistant Professor of
Microbiology and
Immunology
Director, Clinical
Immunology Laboratory*

Nejat Egilmez

*Associate Professor of
Microbiology and
Immunology*

School of Medicine &
Biomedical Sciences
State University of New
York(SUNY)

Anthony J. Janckila

*Associate Professor of
Microbiology and
Immunology
Technical Director, Special
Hematology Laboratory*

Department of Veteran's
Affairs Medical Center

Gerald Sonnenfeld

Assistant Professor of

*Microbiology and
Immunology
Binghamton University*

Dennis Taub

*Director, Clinical Core
Laboratory
Laboratory of Immunology
National Institute of Aging,
NIH*

Emeritus Faculty**Pinghui Liu**

Professor

Master of Science in Pharmacology and Toxicology

Major: PHTX

Degree Awarded: MS

Unit: GM

Program Webpage: <http://www.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. The Department Strategic Plan includes 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 Strategic Plan.

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.

1. **Application forms.** All candidates for admission to graduate programs at the University of Louisville must complete the application form found at <http://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 sharon@louisville.edu 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 examination scores may be accepted in place of the GRE. Information can be obtained from:

1. University of Louisville Testing Center, or
2. Graduate Record Examination Educational Testing Service Box 955 Princeton, NJ 08541, or
3. <http://www.gre.org/>
4. 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-thirds 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@louisville.edu or via mail to:

J. Christopher States, Ph.D.
Director, Graduate 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 <http://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 <http://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 (<http://graduate.louisville.edu/students/international-financial-declaration.html/>) and submit appropriate financial documentation.

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

The Masters Program in Pharmacology and Toxicology is a 1.5+ year course of study culminating in the presentation and defense of a masters thesis. The masters thesis may be based on laboratory research, a “dry” library-based research project, or a combination of the two. The M.S. curriculum is designed for:

- (a) individuals interested in a terminal masters degree who do not require extensive research experience or credentials, e.g. pharmaceutical representatives, medical insurance providers, medico-legal professionals;
- (b) for pairing with other programs to form hybrid or dual science/business or public health degrees, such as an M.S./M.B.A. or M.S./M.P.H. programs;
- (c) for individuals interested in progressing through management ranks in Pharma or biotech businesses;
- (d) when coupled with extensive scientific writing experience or electives as the basis for a scientific writing career;
- (e) when combined with theoretical and practical training in laboratory analysis as the basis for a career in biotechnology.

M.S. Curriculum

First Year - Fall Semester

Courses	Title	Hours
PHTX 660	Principles of Drug and Chemical Action	4
BIOC 645	Biochemistry I	4
PHTX 672/673	Research Methods in Pharmacology and Toxicology I & II	2
Co-curricular		
PHTX 606	Seminar	1

First Year - Spring Semester

PHTX 655	Neuropharmacology	2
PHTX 674/675	Research Methods in Pharmacology and Toxicology III & IV	2
Co-curricular		
PHTX 619	Research	3-4
PHTX 606	Seminar	1
BIOC 603	Research Ethics	1

Summer After First Year

PHTX 619	Research	9
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Second Year - Fall Semester

PHTX 656	Cardiovascular and Renal Pharmacology	2
PHTX 657	Endocrine and Metabolic Pharmacology	2
PHTX 658	Selective Toxicity and Chemotherapeutics	1
PHTX 625	Scientific Writing	2
Co-curricular		
PHTX 619	Research	2-4
PHTX 606	Seminar	1

Second Year - Spring Semester (if required)

Masters Candidacy		
Preparation, presentation, and defense of MS thesis Award of M.S. degree.		2

Departmental Faculty

Faculty with Primary Appointments

Arteel, Gavin E.

Professor

Benz, Frederick W.

Professor

Cai, Jian

Assistant Professor

Chen, Theresa S.

Professor

Davis, Keith R.

Professor

Gupta, Ramesh

Professor

Hein, David W.

Professor and Chair

Hurst, Harrell E.

Professor

Kang, Y. James

Professor

Kidd, La Creis R.

Assistant Professor

Lukashevich, Igor S.

Professor

Matoba, Nobuyuki

Assistant Professor

McGregor, W. Glenn

Professor

Myers, Steven R.

Associate Professor

Nerland, Donald E.

Professor

Palmer, Kenneth E.

Associate Professor

Pierce, William M.

Professor

Rowell, Peter P.

Professor

Sankar, Uma

Assistant Professor

Song, Zhao-Hui

Professor

States, J. Christopher

Professor

Williams, Walter M.

Professor

Faculty with Secondary Appointments

Aronoff, George A.

Professor

Barve, Shirish

Beverly, Levi J.

Assistant Professor

Brier, Michael E.

Professor

Bodduluri, Haribabu

Professor

Cai, Lu

Professor

Cave, Matthew C.

Assistant Professor

Chesney, Jason A.

Associate Professor

Conklin, Daniel

Associate Professor

Cunningham, Albert R.

Associate Professor

Eaton, John W.

Professor

Epstein, Paul N.

Professor

Fan, Teresa Whei-Mei

Professor

Frieboes, Hermann B.

Assistant Professor

Gozal, Evelynne

Associate

Goldstein,

Richard

Professor

Guo, Yiru

Associate Professor

Hagg, Theo

Professor

Hetman, Michal

Professor

Jenson, A. Bennett

Professor

Jones, Steven P.

Associate Professor

Jonsson, Colleen B.

Professor

Keller, Brad B.

Professor

Li, Chi

Associate Professor

McClain, Craig

Professor

McMasters, Kelly M.

Professor

Miller, Donald M.

Professor

Ng, Chin K.

Associate Professor

Pisano, M. Michele

Professor

Rodgers, George C.

Professor

Roman, Jesse

Professor

Scott, David A.

Associate Professor

Sullivan, Janice E.

Professor

Watson, Walter (Bert)

Assistant Professor

Wattenberg, Brian (Binks)

Associate Professor

Ye, Hong

Associate Professor

Zacharias, Wolfgang

Professor

Doctor of Philosophy in Pharmacology and Toxicology

Major: PHTX

Degree Awarded: Ph.D.

Unit: GE

Program Webpage: <http://www.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 2020 Strategic Plan 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 2020 Strategic Plan.

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.

1. **Application forms.** All candidates for admission to graduate programs at the University of Louisville must complete the application form found at <https://graduate.louisville.edu/sigs/admissions/application.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 examination 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

<http://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-thirds 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@louisville.edu or via mail to:

J. Christopher States, Ph.D.

Director, Graduate 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 <http://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 <http://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 (<http://louisville.edu/graduate/financial-support/international-financial-declaration.html>) and submit appropriate financial documentation.

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

Ph.D. in Pharmacology & Toxicology Curriculum

Courses	Title	Hours
<i>First Year - Fall Semester</i>		
PHTX 660	Principles of Drug and Chemical Action	4
BIOC 645	Biochemistry I	2
PHTX 672/673	Research Methods in Pharmacology and Toxicology I & II	2
Co-curricular		
PHTX 619	Research (Lab rotations 1 & 2)	2

PHTX 606	Seminar	1
Written qualifying exam 1A (end of semester)		
First Year - Spring Semester		
PHTX 655	Neuropharmacology	2
BIOC 647	Biochemistry II	4
MBIO 667	Cell Biology	3
PHTX 674/675	Research Methods in Pharmacology and Toxicology III & IV	2
Co-curricular		
PHTX 619	Research	2-4
PHTX 606	Seminar	1
BIOC 603	Research Ethics	1
Written qualifying exam 1B (end of semester)		
Summer After First Year		
PHTX 619	Research	9
Second Year - Fall Semester		
PHTX 656	Cardiovascular and Renal Pharmacology	2
PHTX 657	Endocrine and Metabolic Pharmacology	2
PHTX 658	Selective Toxicity and Chemotherapeutics	1
PHTX 625	Scientific Writing	2
Co-curricular		
PHTX 619	Research	2-4
PHTX 606	Seminar	1
Written qualifying exam 1C (end of semester)		
Second Year - Spring		
Students may take 1-3 elective courses for enrichment		0-9
PHTX 619	Research	3-12
Co-curricular		
Submission, presentation, and defense of PhD dissertation proposal (NIH grant format) and MS		
Awarding of MS degree and transition to PhD candidacy.		

Departmental Faculty

Faculty with Primary Appointments

Arteel, Gavin E.

Professor

Benz, Frederick W.

Professor

Cai, Jian

Assistant Professor

Chen, Theresa S.

Professor

Davis, Keith R.

Professor

Gupta, Ramesh

Professor

Hein, David W.

Professor and Chair

Hurst, Harrell E.

Professor

Kang, Y. James

Professor

Kidd, La Creis R.

Assistant Professor

Lukashevich, Igor S.

Professor

Matoba, Nobuyuki

Assistant Professor

McGregor, W. Glenn

Professor

Myers, Steven R.

Associate Professor

Nerland, Donald E.

Professor

Palmer, Kenneth E.

Associate Professor

Pierce, William M.

Professor

Rowell, Peter P.

Professor

Sankar, Uma

Assistant Professor

Song, Zhao-Hui

Professor

States, J. Christopher

Professor

Williams, Walter M.

Professor

Faculty with Secondary

Appointments

Aronoff, George A.

Professor

Barve, Shirish

Professor

Beverly, Levi J.

Assistant Professor

Brier, Michael E.

Professor

Bodduluri, Haribabu

Professor

Cai, Lu

Professor

Cave, Matthew C.

Assistant Professor

Chesney, Jason A.

Associate Professor

Conklin, Daniel

Associate Professor

Cunningham, Albert R.

Associate Professor

Eaton, John W.

Professor

Epstein, Paul N.

Professor

Fan, Teresa Whei-Mei

Professor

Frieboes, Hermann B.

Assistant Professor

Gozal, Evelynne

Associate Professor

Goldstein, Richard

Professor

Guo, Yiru

Associate Professor

Hagg, Theo

Professor

Hetman, Michal

Professor

Jenson, A. Bennett

Professor

Jones, Steven P.

Associate Professor

Jonsson, Colleen B.

Professor

Keller, Brad B.

Professor

Li, Chi

Associate Professor

McClain, Craig

Professor

McMasters, Kelly M.

Professor

Miller, Donald M.

Professor

Ng, Chin K.

Associate Professor

Pisano, M. Michele

Professor

Rodgers, George C.

Professor

Roman, Jesse

Professor

Scott, David A.

Associate Professor

Sullivan, Janice E.

Professor

Watson, Walter (Bert)

Assistant Professor

Wattenberg, Brian (Binks)

Associate Professor

Ye, Hong

Associate Professor

Master of Science in Physiology and Biophysics

Major: PHZB

Degree Awarded: MS

Unit: GM

Program Webpage: <http://www.louisville.edu/medschool/physiology/>

Program Information

GENERAL PROCEDURES AND REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN
THE DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS

I. PROGRAM OVERVIEW AND OBJECTIVES

The Department of Physiology and Biophysics is located in the Health Sciences Center of the University of Louisville which provides our graduate students with an active and intellectually stimulating environment. Our Graduate Program offers a Master of Science Degree to provide several career options: 1) to develop competence in directed research for advanced technical positions in industry, government, and university medical research laboratories; 2) to prepare students with a good general knowledge of human physiology to enable them to communicate physiological concepts to future students; and 3) to explore the possibility of a future career as an independent scientist in medically-related research. The typical Master of Science (M.S.) Graduate Program includes a directed research emphasis and consists of thirty (30) semester hours typically over a twelve-month (3 semesters) period to include the following: 22 credit hours of basic medical sciences and at least 8 credit hours of directed physiological research.

II. ADMISSION

A. APPLICATION PROCEDURES

The University of Louisville School of Interdisciplinary and Graduate Studies (SIGS) catalog gives a general description of admission procedures. Application information can be found on the SIGS website (www.graduate.louisville.edu). The following application items must be submitted to the School of Interdisciplinary and Graduate Studies' Admissions Office at the University of Louisville:

1. One official transcript of the applicant's previous work for each college or university that has been previously attended.
2. Two letters of recommendation from people who are well acquainted with the applicant's previous academic work.
3. Applicants must forward scores from the Analytical, Verbal and Quantitative portions of the Graduate Record Examination (GRE).
4. TOEFL Examination scores for foreign students from non-English speaking countries.
5. A non-returnable application fee to the University of Louisville. (\$50.00)
6. Applicants must state in a letter to the Department but submitted to the SIGS (referred to as the Personal Statement in the application materials), why they desire a M.S. degree in this Department of Physiology and Biophysics.

B. ADMISSION REQUIREMENTS

1. A cumulative undergraduate grade point average that is usually 2.80 or higher on a scale of 4.0 (A=4. B=3, etc)
2. A Graduate Record Examination Score which usually averages at the 40th percentile or higher in the verbal, quantitative and analytical sections.
3. Satisfactory MCAT scores will also be accepted in lieu of the GRE. 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).

C. PROCEDURES FOR DETERMINING ADMISSIONS

The Department attempts to hold a personal interview with all qualified applicants. Typically, this interview will be with two to four Department faculty members. If the applicant cannot come for an interview, then consideration of the application without the interview or, in some cases, a telephone interview will be conducted.

Two committees will manage student admission into the Department Graduate Programs: the Graduate Program Executive Committee (GPEC) and the Graduate Admission Committee (GAC). (Refer to Appendix A for details of composition and function.)

III. MINIMAL REQUIREMENTS FOR THE MASTER'S DEGREE

A. Advisor Selection

1. FIRST SEMESTER TEMPORARY ADVISOR

The Director of Graduate Studies will meet with the new student to discuss the student's academic and research interests. The Director of Graduate Studies will serve as a Temporary Advisor until a Permanent Advisor is selected.

2. SELECTION OF PRINCIPAL ADVISOR

During the first semester, beginning graduate students will visit research laboratories in which they have an interest. First-year students must select a Principal Advisor within the first 5 months of their graduate study. The selection process involves approval by the student, the Principal Advisor, the Director of Graduate Studies, and the Department Chair.

APPENDIX A

ADMISSION

Two committees will control student admission into the Department Graduate Programs: The Graduate Program Executive Committee (GPEC) and the Graduate Admission Committee (GAC). The GPEC will recommend students to be interviewed based upon a dossier of information obtained from the Admission Office of the School of Interdisciplinary and Graduate Studies (SIGS). The GAC will conduct student interviews and vote on admission as representatives of the entire faculty of the Department.

A. Structure of Admission Committees:

The GPEC will consist of the Director of Graduate Admissions, the Director of Graduate Studies, and one other Departmental faculty member, all of whom are appointed by the Departmental Chair for staggered five-year terms.

The GAC will be composed of three tenured or tenure-track Department faculty members and members of GPEC, for a total membership of six. The full-time faculty of the Department will elect the three faculty representatives to GAC for staggered three-year terms.

B. Functions of the Admission Committees:

The GPEC evaluates all requests for admission into the Program. The Director of Admissions will create a dossier of information on applicants that complete the application process. This dossier will be derived from PeopleSoft and OnBase databases. A completed applicant dossier (i.e. all application material indicated in section 1.A., "Application Procedures") will be submitted to GPEC for evaluation. The GPEC will determine if the student's qualifications warrant a Departmental interview. If a simple majority of GPEC support further consideration of the applicant, interviews will be arranged by the Director of Graduate Admissions. The applicant will be interviewed by:

1. At least one member of the GPEC
2. The Department Chair or the Chair's designated representative
3. Two to three members of the GAC.

If the applicant cannot come for an interview, then consideration of the application will proceed without the interview, or in some cases, by telephone interview.

The Director of Graduate Admissions will create a summary of the applicants academic background and interview results (i.e., the GPEC Report). This document and the complete dossier will serve as basis for admission or denial. The GAC considers the GPEC Report and complete dossier and votes on admissibility of each applicant. Student admission will require a simple majority recommendation from GAC. The recommendation of GAC is forwarded to the Director of Graduate Admissions. Completion of the admission process is accomplished by submission of a Referral Form to SIGS and delivery of the GPEC Report and complete dossier on admitted students to the Departmental Office. The Referral Form will initiate an acceptance or denial letter to the student. The GPEC Report and the complete dossier becomes the Department File on the admitted student and are transferred to the Director of Graduate Studies.

When an applicant is accepted into the Department Graduate Program, The Department Chair will send a letter of acceptance. The prospective student must provide a letter indicating their acceptance of admission to the Department Graduate Program.

Curriculum

B. MINIMUM PROGRAM REQUIREMENTS

At least 30 semester hours beyond the Baccalaureate Degree are required for the degree of Master of Science. A maximum of 6 semester credit hours may be credited from post-baccalaureate work in other professional or graduate degree programs.

C. MINIMUM COURSE REQUIREMENTS

The typical M.S. Program must include the following courses taken on a grade basis:

Courses

Systemic Physiology I and II (PHZB 605 and 606 - 8 CH)
Biochemistry (BIOC 645, 647 - 8 CH) or equivalent
Research (PHZB 619 - 8 CH)
Seminar (PHZB 617- 2 CH - first fall and spring semesters)
Experimental Physiology Laboratory (PHZB 625 - 3 CH)
Responsible Conduct of Research (BIOC 640 - 1 CH)

D. ACADEMIC PERFORMANCE

A student must have at least a 3.0 accumulated GPA exclusive of research credit to be graduated with a degree of Master of Science in Physiology and Biophysics. In general, a student with a GPA less than 3.0 at the end of the second semester will require a 2/3 majority vote of the Departmental faculty to continue in the Program. A student may not be graduated with more than 6 CH of “C” grades in their required courses.

E. FINAL EXAMINATION

The M.S. student will take a Final Examination during the last semester of the M.S. Program. The Final Examination shall consist of a written and/or oral presentation of accomplished research. This exam may take the form of an oral presentation of the research experience or a detailed review of a selected topic.

A positive recommendation for the Master of Science Degree shall require a majority vote of the Final Examination Committee (consisting of at least the Principal Advisor who will serve as Chair and two additional members of the Graduate Faculty, one of whom is from outside the Department). The Committee must have been approved by Director of Graduate Studies, the Department Chair, and the Dean of the School of Medicine (or his designee) prior to the Final Examination. This recommendation shall be made at least one week before graduation. In the event of an unfavorable vote of the Final Examination Committee, the student may be considered for re-examination only by a recommendation of a 2/3 majority of the Departmental faculty.

Departmental Faculty

Irving G. Joshua, Ph.D.

Professor & Chair

William B. Wead, Ph.D.

Associate Professor

Gary L. Anderson, Ph.D.

Professor

Stanley D' Souza, Ph.D.

Professor

Patrick D. Harris, Ph.D.

Professor

Sham Kakar, Ph.D.

Professor

John C. Passmore, Ph.D.

Professor

Dale A. Schuschke, Ph.D.

Professor

Richard W. Stremel, Ph.D.

Professor

Suresh C. Tyagi, M. Phil.,

Ph. D., F.A.H.A., F.A.P.S.,

Professor

David L. Wiegman, Ph.D.

Professor

William D. Ehringer, Ph.D.

Associate Professor

Jeff C. Falcone, Ph.D.

Associate Professor

John T. Fleming, Ph.D.

Associate Professor

David Lominadze, Ph.D.

Associate Professor

Claudio Maldonado, Ph.D.

Associate Professor

Gustavio Perez-Abadia,

M.D.

Assistant Professor

Yiming Huang, M.D.

Assistant Professor

Hung Xu, M.D.

Assistant Professor

X. J. Musacchia, Ph.D.

Emeritus/Emerita

Joint Faculty

Roberto Bolli, M.D.

Professor, Medicine,

Cardiology

Richard Neal Garrison,

M.D.

Professor, Surgery

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.

Professor, 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

Syed Jalal Khundmiri

Assistant Professor of

Medicine, Nephrology (Term)

Susan Harkema, Ph.D.

Associate Professor of

Neurological Surgery

Y. James Kang, M.D.

Professor, Pharmacology &

Toxicology

Eleanor D. Lederer, M.D.

Professor, Kidney Disease

Program

Nicholas Mellen, Ph.D.

Assistant Professor,

Pediatrics

Dennis, Molfese, Ph.D.

Professor, Molecular,

Cellular & Craniofacial

Biology

Alexander V. Ovechkin,

M.D., Ph.D.

Assistant Professor,

Neurological Surgery

D. Gregg Rokosh, Ph.D.

Assistant Professor,

Medicine, Cardiology

Jerry Yu, Ph.D.

Professor, Pulmonary

Medicine

Adjunct Faculty

Zixi (Jack) Cheng, Ph.D.

Assistant Professor,

Biomolecular Science Center

University of Central Florida

Patricia Gillette, Ph.D.

*Associate Professor, Physical
Therapy*

Bellarmino University

Alex Lentsch, Ph.D.

*Associate Professor, Surgery
University of Cincinnati*

**Andreas S. Luebke, M.D.,
Ph.D.**

*Associate Professor,
Palliative Care and Symptom
Bad Lippspringe, Germany*

Peipei Ping, Ph.D.

*Associate Professor,
Cardiology
University of California, Los
Angeles*

Dirk Slaaf, Ph.D.

*Professor, Biophysics
Maastricht, Netherlands*

Nancy Urbscheit, Ph.D.

*Professor, Physical Therapy
Bellarmino University*

Doctor of Philosophy in Physiology and Biophysics

Major: PHZB

Degree Awarded: Ph.D.

Unit: GM

Program Webpage: <http://www.louisville.edu/medschool/physiology/>

Program Information

PROGRAM OVERVIEW AND OBJECTIVES

The Department of Physiology and Biophysics is located in the Health Sciences Center of the University of Louisville, which provides an active and intellectually stimulating environment and a wide variety of course options. The graduate program permits studies in related disciplines, such as anatomy, neurobiology, pharmacology, toxicology, biochemistry, microbiology, immunology, and molecular biology.

The doctoral program of the Department of Physiology and Biophysics is offered through the School of Medicine at the University of Louisville. As such, one major goal of the Department is to provide students with advanced training, which leads to the Ph.D. Degree in Physiology and Biophysics. The research interests of the Department are broad enough 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.

I. ADMISSION

A. APPLICATION PROCEDURES

The University of Louisville School of Interdisciplinary and Graduate Studies (SIGS) catalog gives a general description of admission procedures. Application information can be found on the SIGS website (www.graduate.louisville.edu). The following application items must be submitted to the Graduate School Admissions Office at the University of Louisville:

1. One official transcript of the applicant's previous work for each college or university that has been previously attended.
2. Two letters of recommendation from people who are well acquainted with the applicant's previous academic work.

3. Applicants must forward scores from the Analytical, Verbal and Quantitative portions of the Graduate Record Examination (GRE). In the case of students with professional degrees (for example, M.D., D.D.S. or D.V.M.) the aptitude test taken for admission into that professional program or National Board scores may be substituted for the GRE after approval by the Departmental Graduate Admissions Committee and the Department Chair.
4. TOEFL Examination scores for foreign students from non-English speaking countries.
5. A non-returnable application fee to the University of Louisville.
6. Applicants must state in a letter to the Department but submitted to the SIGS (referred to as the Personal Statement in the application materials), why they desire a Ph.D. degree in this Department of Physiology and Biophysics.
7. Applicants for combined degrees (Ph.D.- M.D. or Ph.D.- D.M.D.) must apply and be accepted by the appropriate professional school (e.g., School of Medicine or Dentistry) before final action will be taken on the Departmental doctoral application.

B. ADMISSION REQUIREMENTS

Admission to the Ph.D. program in the Department of Physiology and Biophysics requires:

1. A genuine interest in graduate work and the desire for a significant research career in the health sciences,
2. A cumulative undergraduate grade point average that is usually 3.00 or higher on a scale of 4.0 (A=4, B=3, C=2, D=1),
3. A graduate record exam score (or equivalent) which is usually 50th percentile or higher as an average of the verbal, quantitative, and analytical sections; verbal + quantitative combined score above 1000 is required for admission to School of Medicine graduate programs, and in addition,
4. International students for whom English is not their primary language must show English language proficiency by demonstration of proficiency on the TOEFL examination (defined as 213 or higher on the computer-based test; 550 or higher on the paper-based test; or 79 or higher on the internet-based test) or by successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville or by demonstration of a degree award from an acceptable English language institution.

C. ADMISSION PROCEDURES

The Department attempts to hold a personal interview with all qualified applicants. Typically, this interview will be with two to four Department faculty members. If the applicant cannot come for an interview, then consideration of the application without the interview or, in some cases, a telephone interview will be conducted.

Two committees will manage student admission into the Department Graduate Programs: the Graduate Program Executive Committee (GPEC) and the Graduate Admission Committee (GAC). (Refer to Appendix B for details of composition and function.)

II. FACULTY ADVISING

A. FIRST YEAR TEMPORARY ADVISOR AND RESEARCH EXPERIENCE

The Director of Graduate Studies will meet with the new student to discuss the student's academic and research interests. The Director of Graduate Studies will serve as a Temporary Advisor until a Permanent Advisor is selected.

B. SELECTION OF PRINCIPAL ADVISOR

During the first semester, beginning graduate students will visit research laboratories in which they have an interest. First-year students must select a Principal Advisor within the first 5 months of their graduate study. The selection process involves approval by the student, the Principal Advisor, the Director of Graduate Studies, and the Department Chair. The Principal Advisor must be a Senior Member of the School of Medicine graduate faculty.

C. ADVISORY COMMITTEE

The Advisory Committee in this Department is an integral part of the graduate student's training. This Committee is to be extremely proactive in planning the student's curriculum and providing an appropriate breadth in the student's research experience. To that end, not only does the mentor provide guidance in developing the dissertation research plan, but the Advisory Committee has the additional responsibility to assure the research design will provide appropriate results for the proposed hypotheses.

After selection of the Principal Advisor, the student's Advisory Committee will be determined. This Committee must have at least five members, and will contain; the Principal Advisor, as Chair, at least three Departmental faculty members, and at least one Graduate Faculty member from outside the Department. All must be appointed as Members of the School of Medicine graduate faculty. In cases where the Principal Advisor holds a primary appointment in a department other than the Department of Physiology and Biophysics, a Departmental faculty member must be selected as Co-Advisor by the Principal Advisor and the student. The Co-Advisor will also serve on the student's Advisory Committee and serve as the Second Reader of the Dissertation Reading Committee. Approval of the Committee membership by the Director of Graduate Studies and the Chair will be contingent upon the potential role of each Committee member in the training, or in the career plans of the student. The Dissertation Defense Committee, selected by the Principal Advisor, must be approved by the Director of Graduate Studies, the Department Chair, and by the Dean of School of Medicine (or his/her designee).

III. MINIMAL REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY DEGREE IN PHYSIOLOGY AND BIOPHYSICS

A. GENERAL

The Ph.D. degree is designed for the student who wishes 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 reach a high level of creativity and expertise. Therefore, mere completion of a prescribed number of courses is not adequate for receipt of the doctoral degree. All Ph.D. students are expected to make steady and satisfactory progress toward the completion of the degree.

To document the satisfactory progress of the Ph.D. students, each Advisory Committee must hold at least two mandatory meetings (one each semester) to receive a report on the student's progress (presentations, publications, grades and research progress). The mentor will submit a written report to the Director of Graduate Studies who will collate and distribute these reports to the faculty. Twice a year, the Chair of the dissertation committee will lead a Departmental faculty discussion of these reports to determine the student's progress.

B. MINIMAL PROGRAM REQUIREMENTS

The University of Louisville Ph.D. degree does not require a specific number of hours of academic credit. However, the Department requires that a minimum of two consecutive semesters (9 credit hours in the Fall or Spring semesters and/or 6 credit hours in the Summer) shall be taken to fulfill the full time one-year doctoral residency requirement at the University of Louisville. With the approval of the Dean of the School of Medicine (or his/her designee), a maximum of 12 semester hours of this requirement may

be credited for post-baccalaureate work from other professional or graduate degree programs. By the end of the Program, the student must demonstrate the ability to conduct independent research.

C. MINIMUM COURSE REQUIREMENTS

The required program of academic studies 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
- Biochemistry (BIOC 645 and 647), or equivalent
- Advanced Physiology (PHZB 611) or equivalent
- Cell Biology (MBIO 667) or equivalent
- Experimental Physiology Laboratory (PHZB 625) or equivalent
- Integrated Systemic Physiology (PHZB 609)
- Seminar (PHZB 617) four semesters
- Applied Physiology Statistics (PHZB 616.02) or equivalent
- Responsible Conduct of Research (BIOC 630)

D. ACADEMIC PERFORMANCE

A student must have at least a 3.00 accumulated GPA (on a 4.0 scale) in order to take the Ph.D. Qualifying Examination and to qualify for the Ph.D. degree. In general, a student with a GPA of less than 3.00 after two consecutive semesters (excluding summer sessions) will require a 2/3 majority vote of the Departmental faculty to continue in the Ph.D. Program. The student must not have received more than 6 credit hours of a grade of "C" on their permanent academic record. For Departmental purposes, pass grades will not be included in the GPA calculation; however, a failing grade in a pass/fail-graded course will be included in the GPA calculation at zero quality points per credit hour. Students will not be allowed to graduate with failing grades on their transcript.

E. THE PH.D. QUALIFYING EXAMINATION

Before the Ph.D. Qualifying Examination may be taken, the student must have completed the Minimum Course Requirements listed above with a GPA of at least a 3.0. It would normally be expected that the student would take the Ph.D. Qualifying Examination by the end of five semesters of graduate studies. If the student has not taken the Ph.D. Qualifying Examination by the end of the second year, a letter of justification for the delay must be submitted by the Principal Advisor to the Department Chair.

A Ph.D. Qualifying Examination must be passed by the applicant in order to be admitted to Ph.D. candidacy. The Qualifying Examination Committee will be comprised of members of the student's Advisory Committee. The membership must be approved by the Director of Graduate Studies and the Department Chair. A passing recommendation shall not involve more than one negative vote of this Committee. If the student does not pass the Qualifying Examination, one additional retake will be allowed if approved by a majority vote of the Departmental faculty.

The purpose of the Ph.D. Qualifying Examination is to test the student's use and depth of core physiology through its application to the student's proposed research. This examination shall consist of a written research proposal outlining the dissertation research and an oral examination of the student's depth of current understanding of the basic physiological concepts underlying the proposed research. The student will receive the Master of Science Degree in Physiology and Biophysics, upon satisfactory completion of the Qualifying Exam.

F. MAINTENANCE OF GRADUATE STATUS

A candidate for the Ph.D. degree who has completed all residency requirements, all of the approved required program of academic studies, and passed the Qualifying Examination may register for "DOCT" to maintain doctoral candidacy until the degree is awarded. Continuous registration in this status is required. Semiannual progress meetings will continue to be expected. To complete the Ph.D. degree, the student must continue to make satisfactory progress during the candidacy period. In order to be eligible to receive the Ph.D. degree, the student must have been admitted to candidacy and registered for doctoral candidacy for the two consecutive semesters prior to the awarding of the degree.

G. DISSERTATION

The dissertation shall represent a scholarly achievement which embodies results of independent research and which demonstrates a thorough understanding of research concepts in the field of inquiry. The completed dissertation must be in the appropriate format as required by the SIGS and must be approved by a Dissertation Reading Committee (the Candidate's Advisory Committee). Then, at least two weeks before the scheduled dissertation defense and at least 30 days before the expected date of graduation, the dissertation shall be submitted to the Dissertation Defense Committee. The Dissertation Defense Committee, selected by the Principal Advisor, must have been approved previously by the Director of Graduate Studies, the Department Chair, and by the Dean of School of Medicine (or his designee) (see section IIC) . Two unbound copies of the accepted dissertation, signed by the Dissertation Defense Committee, must be deposited with the Dean of the SIGS and one copy must be given to the Department Chair before graduation.

H. DISSERTATION DEFENSE

The dissertation defense is an oral defense of the dissertation and a demonstration of mastery of the candidate's research field. The defense is administered by the Dissertation Defense Committee. The defense of the dissertation is a public examination and the SIGS will notify all faculty members that they are invited to the Dissertation Defense, but only members of the Dissertation Defense Committee will vote on the student's performance. For the student to pass the Dissertation Defense, the vote of the Dissertation Defense Committee may not include more than one negative vote. The Dissertation Defense must take place at least 14 days before the end of the semester in which the degree is anticipated.

I. The Department will not approve the granting of the Ph.D. degree until the student has submitted at least one first-authored manuscript on the dissertation research and one co-authored manuscript for publication in a refereed journal. The manuscript and the choice of journal must be approved by the Principal Advisor before manuscript submission.

J. In any case where the Departmental requirements are less restrictive than those described in the School of Medicine Minimal Guidelines for Graduate Education, the School of Medicine guidelines will apply.

IV. EXCEPTIONS

A. The above are statements of minimum Departmental requirements. However, it is recognized that there could be special and unusual cases in which rare exceptions should be allowed. The student and advisor should consult with the Department Chair if an exception is desired.

B. In the above guidelines, the Director of Graduate Studies has considerable responsibility for program quality. To avoid any possibility of a potential conflict of interest, the Department Chair (or designee) will fulfill the role of Director of Graduate Studies for any Ph.D. or M.S. student who has the Director of Graduate Studies as their Principal Advisor.

V. APPENDIX A

A. TYPICAL DOCTORAL PROGRAMS

1. Traditional Doctoral Program

First Semester (1st FALL)

Graduate level Biochemistry (BIOC 645 – 4 CH)
Systemic Physiology I (PHZB 605 – 4 CH)
Seminar (PHZB 617.01 – 1 CH)
Experimental Physiology Lab (PHZB 625 – 3 CH)
Research (PHZB 619 – 1 CH)

Second Semester (1st SPRING)

Graduate level Biochemistry (BIOC 647 – 4 CH)
Systemic Physiology II (PHZB 606 – 4 CH)
Seminar (PHZB 617.01 – 1 CH)
Cell Biology (MBIO 667 – 3 CH)
Responsible Conduct of Research (BIOC 630 – 1 CH)
Research (PHZB 619 – 1 CH)

Third Semester (1st SUMMER)

Research (PHZB 619 – 9 CH)

Fourth Semester (2nd FALL)

Advanced Human Physiology (PHZB 611 – 4 CH)
Research (PHZB 619 – 5 CH)

Fifth Semester (2nd SPRING)

Integrated Systemic Physiology (PHZB 609 – 3 CH)

Research (PHZB 619 – 5 CH)

Statistics (PHZB 616.02 – 3 CH)

M.S. Final Exam (Ph.D. Qualifying Exam)

Master of Science Degree and Ph.D. Candidacy program

Sixth Semester (2nd SUMMER) DOCT

Seventh Semester (3rd FALL) DOCT

Eighth Semester (3rd SPRING) DOCT

Ninth Semester (3rd SUMMER) DOCT

Tenth Semester (4th FALL) DOCT

Eleventh Semester (4th SPRING) DOCT

Dissertation Defense

If more research/dissertation time is needed, the student will continue to register as DOCT (“Active Status”), until completed.

2. Doctoral Program for Residents/Fellows

This sequence is based on the premise that the clinician will be given the equivalent of two full calendar years (“Research Leave”) free to complete research without clinical duties. The Director of Graduate Studies will see that the Graduate School is notified of the transfer of the preclinical courses applicable to

the Departmental doctoral requirements. The clinician will take: a) Advanced Human Physiology, b) Integrated Systemic Physiology, (c) Statistics, d) two semesters of Seminar, and e) complete initial research (PHY 619) to define a doctoral research problem.

First Semester (1st FALL)

Advanced Human Physiology (PHZB 611 – 4 CH)

Research (PHZB 619 – 7 CH)

Seminar (PHZB 617.01 – 1 CH)

Second Semester (1st SPRING)

Integrated Systemic Physiology (PHZB 609 – 3 CH)

Research (PHZB 619 – 5 CH)

Statistics (PHZB 616.02 – 3 CH)

Third Semester (1st SUMMER)

Research (PHZB 619 – 6 CH)

Fourth Semester (2nd FALL)

Research (PHZB 619 – 9 CH)

Master of Science Degree (Ph.D. Qualifying Exam)

Fifth Semester (2nd SPRING) DOCT

Sixth Semester (2nd SUMMER) DOCT

Dissertation Defense

If more research/dissertation time is needed, the clinician will continue to register as DOCT (“Active Status”), until completed, and dissertation defended.

APPENDIX B

ADMISSION

Two committees will control student admission into the Department Graduate Programs: The Graduate Program Executive Committee (GPEC) and the Graduate Admission Committee (GAC). The GPEC will recommend students to be interviewed based upon a dossier of information obtained from the Admission Office of the School of Interdisciplinary and Graduate Studies (SIGS). The GAC will conduct student interviews and vote on admission as representatives of the entire faculty of the Department

A. Structure of Admission Committees:

The GPEC will consist of the Director of Graduate Admissions, the Director of Graduate Studies, and one other Departmental faculty member, all of whom are appointed by the Departmental Chair for staggered five-year terms.

The GAC will be composed of three tenured or tenure-track Department faculty members and members of GPEC, for a total membership of six. The full-time faculty of the Department will elect the three faculty representatives to GAC for staggered three-year terms.

B. Functions of the Admission Committees:

The GPEC evaluates all requests for admission into the Program. The Director of Admissions will create a dossier of information on applicants that complete the application process. This dossier will be derived from PeopleSoft and OnBase databases. A completed applicant dossier (i.e. all application material indicated in section 1.A., “Application Procedures”) will be submitted to GPEC for evaluation. The GPEC will determine if the student’s qualifications warrant a Departmental interview. If a simple

majority of GPEC support further consideration of the applicant, interviews will be arranged by the Director of Graduate Admissions. The applicant will be interviewed by:

- At least one member of the GPEC
- The Department Chair or the Chair's designated representative
- Two to three members of the GAC.
- If the applicant cannot come for an interview, then consideration of the application will proceed without the interview, or in some cases, by telephone interview.

The Director of Graduate Admissions will create a summary of the applicants academic background and interview results (i.e., the GPEC Report). This document and the complete dossier will serve as basis for admission or denial. The GAC considers the GPEC Report and complete dossier and votes on admissibility of each applicant. Student admission will require a simple majority recommendation from GAC. The recommendation of GAC is forwarded to the Director of Graduate Admissions. Completion of the admission process is accomplished by submission of a Referral Form to SIGS and delivery of the GPEC Report and complete dossier on admitted students to the Departmental Office. The Referral Form will initiate an acceptance or denial letter to the student. The GPEC Report and the complete dossier becomes the Department File on the admitted student and are transferred to the Director of Graduate Studies.

When an applicant is accepted into the Department Graduate Program, The Department Chair will send a letter of acceptance. The prospective student must provide a letter indicating their acceptance of admission to the Department Graduate Program. The Department will submit credentials to the Graduate Affairs for approval by the Associate Dean for Graduate and Postdoctoral Studies.

Curriculum

MINIMUM COURSE REQUIREMENTS

The required program of academic studies 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
Biochemistry (BIOC 645 and 647), or equivalent
Advanced Physiology (PHZB 611) or equivalent
Cell Biology (MBIO 667) or equivalent
Experimental Physiology Laboratory (PHZB 625) or equivalent
Integrated Systemic Physiology (PHZB 609)
Seminar (PHZB 617) four semesters
Applied Physiology Statistics (PHZB 616.02) or equivalent
Responsible Conduct of Research (BIOC 630)

V. APPENDIX A

A. TYPICAL DOCTORAL PROGRAMS

1. Traditional Doctoral Program

First Semester (1st FALL)

Graduate level Biochemistry (BIOC 645 – 4 CH)
Systemic Physiology I (PHZB 605 – 4 CH)
Seminar (PHZB 617.01 – 1 CH)

Experimental Physiology Lab (PHZB 625 – 3 CH)
Research (PHZB 619 – 1 CH)

Second Semester (1st SPRING)

Graduate level Biochemistry (BIOC 647 – 4 CH)
Systemic Physiology II (PHZB 606 – 4 CH)
Seminar (PHZB 617.01 – 1 CH)
Cell Biology (MBIO 667 – 3 CH)
Responsible Conduct of Research (BIOC 630) – 1 CH
Research (PHZB 619 – 1 CH)

Third Semester (1st SUMMER)

Research (PHZB 619 – 9 CH)

Fourth Semester (2nd FALL)

Advanced Human Physiology (PHZB 611 – 4 CH)
Research (PHZB 619 – 5 CH)

Fifth Semester (2nd SPRING)

Integrated Systemic Physiology (PHZB 609 – 3 CH)
Research (PHZB 619 – 5 CH)
Statistics (PHZB 616.02 – 3 CH)

M.S. Final Exam (Ph.D. Qualifying Exam)

Master of Science Degree and Ph.D. Candidacy program

Sixth Semester (2nd SUMMER) DOCT

Seventh Semester (3rd FALL) DOCT

Eighth Semester (3rd SPRING) DOCT

Ninth Semester (3rd SUMMER) DOCT

Tenth Semester (4th FALL) DOCT

Eleventh Semester (4th SPRING) DOCT

Dissertation Defense

If more research/dissertation time is needed, the student will continue to register as DOCT (“Active Status”), until completed.

2. Doctoral Program for Residents/Fellows

This sequence is based on the premise that the clinician will be given the equivalent of two full calendar years (“Research Leave”) free to complete research without clinical duties. The Director of Graduate Studies will see that the Graduate School is notified of the transfer of the preclinical courses applicable to the Departmental doctoral requirements. The clinician will take: a) Advanced Human Physiology, b) Integrated Systemic Physiology, (c) Statistics, d) two semesters of Seminar, and e) complete initial research (PHY 619) to define a doctoral research problem.

First Semester (1st FALL)

Advanced Human Physiology (PHZB 611 – 4 CH)
Research (PHZB 619 – 7 CH)
Seminar (PHZB 617.01 – 1 CH)

Second Semester (1st SPRING)

Integrated Systemic Physiology (PHZB 609 – 3 CH)

Research (PHZB 619 – 5 CH)

Statistics (PHZB 616.02 – 3 CH)

Third Semester (1st SUMMER)

Research (PHZB 619 – 6 CH)

Fourth Semester (2nd FALL)

Research (PHZB 619 – 9 CH)

Master of Science Degree (Ph.D. Qualifying Exam)

Fifth Semester (2nd SPRING) DOCT**Sixth Semester (2nd SUMMER) DOCT**

Dissertation Defense

If more research/dissertation time is needed, the clinician will continue to register as DOCT (“Active Status”), until completed, and dissertation defended.

Departmental Faculty

Irving G. Joshua, Ph.D.

Professor & Chair

William B. Wead, Ph.D.

Associate Professor

Vice-Chair

Gary L. Anderson, Ph.D.

Professor

Stanley D' Souza, Ph.D.

Professor

Patrick D. Harris, Ph.D.

Professor

Sham Kakar, Ph.D.

Professor

John C. Passmore, Ph.D.

Professor

Dale A. Schuschke, Ph.D.

Professor

Richard W. Stremel, Ph.D.

Professor

Suresh C. Tyagi, M. Phil.,

Ph. D., F.A.H.A., F.A.P.S.,

Professor

David L. Wiegman, Ph.D.

Professor

William D. Ehringer, Ph.D.

Associate Professor

Jeff C. Falcone, Ph.D.

Associate Professor

John T. Fleming, Ph.D.

Associate Professor

David Lominadze, Ph.D.

Associate Professor

Claudio Maldonado, Ph.D.

Associate Professor

Gustavio Perez-Abadia,
M.D.

Assistant Professor

Yiming Huang, M.D.

Assistant Professor

Hung Xu, M.D.

Assistant Professor

X. J. Musacchia, Ph.D.

Emeritus/Emerita

Joint Faculty

Roberto Bolli, M.D.

Professor, Medicine,

Cardiology

Richard Neal Garrison,
M.D.

Professor, Surgery

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.

Professor, 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
Syed Jalal Khundmiri
Assistant Professor of
Medicine, Nephrology (Term)
Susan Harkema, Ph.D.
Associate Professor of
Neurological Surgery
Y. James Kang, M.D.
Professor, Pharmacology &
Toxicology
Eleanor D. Lederer, M.D.
Professor, Kidney Disease
Program
Nicholas Mellen, Ph.D.
Assistant Professor,
Pediatrics
Dennis, Molfese, Ph.D.
Professor, Molecular,
Cellular & Craniofacial
Biology

Alexander V. Ovechkin,
M.D., Ph.D.
Assistant Professor,
Neurological Surgery
D. Gregg Rokosh, Ph.D.
Assistant Professor,
Medicine, Cardiology
Jerry Yu, Ph.D.
Professor, Pulmonary
Medicine

Adjunct Faculty
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 Lippspringe, Germany
Peipei Ping, Ph.D.
Associate Professor,
Cardiology
University of California, Los
Angeles
Dirk Slaaf, Ph.D.
Professor, Biophysics
Maastricht, Netherlands
Nancy Urbscheit, Ph.D.
Professor, Physical Therapy
Bellarmine University

Master of Music in Music Composition

Major: COMP

Degree Awarded: MM

Unit: GU

Program Webpage: <http://www.louisville.edu/music/>

Program Information

The School of Music offers training toward two specific graduate degrees in music: Master of Music requiring a minimum of 36 hours of graduate credit, and Master of Music Education requiring 30 hours. All programs require a minimum of 24 hours of residence at the University of Louisville. Major subjects in the Master of Music curriculum are music performance with concentrations in choral, wind or orchestral conducting, instrumental or vocal performance, jazz performance or jazz composition and arranging, piano pedagogy, music history, music theory, and music composition. The Master of Music Education program allows an applied music minor in an instrument, voice, or conducting. Each degree program has specific prerequisites, entrance requirements, and programmatic expectations that are described in the relevant section of the catalog.

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1. Applications for admission to a graduate program require the following:
 - (a) A completed application;
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- (c) Official transcripts for all previous post-secondary course work (all transcripts not in English must be certified as authentic and translated verbatim into English);
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- (a) In performance, an acceptable audition;
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5. Applicants must have a minimum cumulative undergraduate grade point average of 2.75 on a 4-point scale.
6. Applicants who meet the requirements listed in items 1-5 will be considered for conditional admission for graduate study at the School of Music. For additional entrance requirements specific to the degree of interest, consult the section relevant to the degree program below.
7. Entrance examinations in music history, theory and, if appropriate, jazz, will be administered before the first term of study. The School of Music provides guidelines to assist in preparing for the entrance examinations.
8. Any exception to the above expectations will be evaluated individually and will require a statement indicating criteria to be met in a specified time frame with provisions for monitoring progress and performance. Justification must be provided in writing and must be accepted by the faculty of the student's proposed program, the Director of Graduate Studies, and the Dean of the School of Music.
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2. Students will be required to address any deficiencies revealed by entrance examinations in courses taken within the first two semesters of study. Credit toward the degree is not granted for review course work.
3. All students are required to complete Bibliography and Research Methods (MUS 607) by the end of the second semester of study (part-time students by the completion of 15 hours of graduate study). Upon satisfactory completion of requirements stated in B.2 and B.3, students will be considered in good standing.
4. Students will complete a project appropriate to the field of study as defined by the faculty of their program. The completion of this project (public recital, thesis, professional paper) normally takes place in the last semester of graduate study. Preparation and presentation of a recital must follow the guidelines in the *Handbook for Graduate Studies in Music* and the preparation of a thesis must follow the “Guidelines for the Preparation and Processing of Theses” issued by the School of Interdisciplinary and Graduate Studies (SIGS). The preparation of a thesis in music composition must also follow the “School of Music Thesis Formatting Guidelines for M.M. in Composition” available at <http://louisville.edu/music/composition/ULCompThesisGuidelines.pdf>.
5. In order to graduate, a student must be in good standing with a minimum cumulative grade point average of 3.0. 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 for a course in the student’s major subject area. Hours earned beyond the minimum in any curricular areas apply only to that area and cannot be assigned to another area in order to satisfy required credit. At least one-half of the total hours in graduate courses must be at the 600 level. Any exceptions to the program of study must be approved by the Graduate Studies Committee. A student whose cumulative GPA falls below 3.0, or who fails to satisfy the published performance criteria, will be placed on probation. Students are ordinarily not permitted to continue on probation for more than one semester.
6. When all course work and projects have been satisfactorily completed, the student becomes a candidate for the degree and is approved to take the graduate oral examination. A candidate who fails the oral examination at the end of one semester may not be given a second one before the end of the following semester. A candidate who fails the second oral examination will not be granted the degree of M.M. or M.M.E. from the University of Louisville.
7. Upon request, a maximum of six (6) hours of earned graduate credit with a minimum grade of “B” may be transferred from accredited institutions that offer advanced degrees. Credit for applied music will not be transferred, but advanced standing may be awarded at a jury. Ensemble credits appropriate to the student’s degree program may be considered for transfer, but not to exceed one (1) hour per semester. Music history and music theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Transfer of more than six (6) hours may be requested provided that they are not earned by extension, or as thesis or practicum hours, and that the residency requirement of 24 semester hours is maintained by the addition of University of Louisville credits to the total program. Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested provided that the minimum residence requirement of 24 hours is maintained.
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9. Part-time students (with the exception of those in the M.M.E. degree program) must participate in one ensemble for each 18 hours of completed course work. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.

Curriculum

Prerequisites

1. Bachelor of Music degree or equivalent.

Demonstration, by examination, of skills and capacities in the following fields:

2. written, aural, and keyboard harmony;
3. melodic, harmonic, and rhythmic dictation;
4. elementary counterpoint; and
5. history and literature of music, and analytic understanding of musical forms and genres.

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.

GRE scores.

Core Curriculum

MUS 500 - Music History Review*	0
MUS 400- Music Theory Review*	0
MUS 600 - Graduate Oral Exam Preparation	0
MUS 607 - Bibliography and Research Methods	3
Music History Seminar (600 level)	3
Music Theory**	4
Additional Music Theory or Music History Seminar (500 or 600 level)	3
MUS 647, 648, 651, or 653 - Analysis	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

MUS 643, 644, 645 - Advanced Composition***	9
MUS 669 - Graduate Composition Seminar (Co-requisite for MUS 643-645)	0
MUS 659/660 - Applied Music ****	4
Total	13
Minimum Total	36

Notes:

* These courses may be satisfied by passing the entrance examinations in these areas.

** Students should take Introduction to Electronic and Computer Music (MUS 667) and Advanced Topics in Computer Music (MUS 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.

****500 level or above; minimum of 2 semesters; may include Conducting or Seminar in Conducting (section designated for students who are not conducting majors), but excludes additional semesters of Applied Composition

Departmental Faculty

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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 Music Education in Music Education

Major: MUED

Degree Awarded: MME

Unit: GU

Program Webpage: <http://www.louisville.edu/music/>

Program Information

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satisfactory completion of requirements stated in B.2 and B.3, students will be considered in good standing.

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8. Students receiving a graduate assistantship (teaching, research, or service) will be provided adequate training and will be required to adhere to university policies. Performance of duties in research and service by graduate assistants will be periodically evaluated. Students with teaching assistantships will be evaluated each semester.

9. Part-time students (with the exception of those in the M.M.E. degree program) must participate in one ensemble for each 18 hours of completed course work. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.

Admission Requirements

1. Applications for admission to a graduate program require the following:

- (a) A completed application;

- (b) An application fee;
 - (c) Official transcripts for all previous post-secondary course work (all transcripts not in English must be certified as authentic and translated verbatim into English);
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3. Applicants whose primary language is not English must show English language proficiency in one of the following ways:
- (a) A minimum TOEFL examination score of 550 on the paper-based test, 213 on the computer-based test, or 79-80 on the internet-based test;
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5. Applicants must have a minimum cumulative undergraduate grade point average of 2.75 on a 4-point scale.
6. Applicants who meet the requirements listed in items 1-5 will be considered for conditional admission for graduate study at the School of Music. For additional entrance requirements specific to the degree of interest, consult the section relevant to the degree program below.
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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.

Courses

MUS 500 - Music History Review *	0
MUS 400 - Music Theory Review *	0
MUS 600 - Graduate Oral Exam Preparation	0
MUS 607 - Bibliography and Research Methods	3
MUED 628 - Qualitative Research Methods	2
MUED 629 - Foundations of Music Education	2
MUED 630 - Quantitative Research Methods	2
MUED 639 - Learning Theories in Music Education	2
Music Education and Related Courses	2
Applied Music (chosen from major or minor performance fields, including Conducting)	5-6
Music History (500 or 600 level)	3
Music Theory (500 or 600 level)	3
Thesis**	2-3
Minimum Total	30

Other Requirements

It is recommended that full-time MME 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.

Departmental Faculty

PROFESSORS

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Acton Ostling

Professor Emeritus

Richard Spalding

Professor Emeritus

Robert Weaver

Professor Emeritus

Loren Waa

Professor Emeritus

Master of Music in Music History and Literature

Major: MUHM

Degree Awarded: MM

Unit: GU

Program Webpage: <http://www.louisville.edu/music/>

Program Information

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4. Students will complete a project appropriate to the field of study as defined by the faculty of their program. The completion of this project (public recital, thesis, professional paper) normally takes place in the last semester of graduate study. Preparation and presentation of a recital must follow the guidelines in the *Handbook for Graduate Studies in Music* and the preparation of a thesis must follow the "Guidelines for the Preparation and Processing of Theses" issued by the School of Interdisciplinary and Graduate Studies (SIGS). The preparation of a thesis in music composition must also follow the "School of Music

Thesis Formatting Guidelines for M.M. in Composition" available at <http://louisville.edu/music/composition/ULCompThesisGuidelines.pdf>.

5. In order to graduate, a student must be in good standing with a minimum cumulative grade point average of 3.0. 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 for a course in the student's major subject area. Hours earned beyond the minimum in any curricular areas apply only to that area and cannot be assigned to another area in order to satisfy required credit. At least one-half of the total hours in graduate courses must be at the 600 level. Any exceptions to the program of study must be approved by the Graduate Studies Committee. A student whose cumulative GPA falls below 3.0, or who fails to satisfy the published performance criteria, will be placed on probation. Students are ordinarily not permitted to continue on probation for more than one semester.
6. When all course work and projects have been satisfactorily completed, the student becomes a candidate for the degree and is approved to take the graduate oral examination. A candidate who fails the oral examination at the end of one semester may not be given a second one before the end of the following semester. A candidate who fails the second oral examination will not be granted the degree of M.M. or M.M.E. from the University of Louisville.
7. Upon request, a maximum of six (6) hours of earned graduate credit with a minimum grade of "B" may be transferred from accredited institutions that offer advanced degrees. Credit for applied music will not be transferred, but advanced standing may be awarded at a jury. Ensemble credits appropriate to the student's degree program may be considered for transfer, but not to exceed one (1) hour per semester. Music history and music theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Transfer of more than six (6) hours may be requested provided that they are not earned by extension, or as thesis or practicum hours, and that the residency requirement of 24 semester hours is maintained by the addition of University of Louisville credits to the total program. Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested provided that the minimum residence requirement of 24 hours is maintained.
8. Students receiving a graduate assistantship (teaching, research, or service) will be provided adequate training and will be required to adhere to university policies. Performance of duties in research and service by graduate assistants will be periodically evaluated. Students with teaching assistantships will be evaluated each semester.
9. Part-time students (with the exception of those in the M.M.E. degree program) must participate in one ensemble for each 18 hours of completed course work. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.

Curriculum

Prerequisites

1. Bachelor of Music degree or equivalent.

Demonstration, by examination, of skills and capacities in the following fields:

2. written, aural, and keyboard harmony;
3. melodic, harmonic, and rhythmic dictation;
4. elementary counterpoint; and
5. history and literature of music, and analytic understanding of musical forms and genres.

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.
- GRE scores.

Core Curriculum

MUS 500 - Music History Review*	0
MUS 400 - Music Theory Review*	0
MUS 600 - Graduate Oral Exam Preparation	0
MUS 607 - Bibliography and Research Methods	3
Music History Seminar (600 level)	3
Music Theory	4
Additional Music Theory or Music History Seminar (500 or 600 level)	3
MUS 647, 648, 651, or 653 - Analysis	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.

Departmental Faculty

PROFESSORS

Robert Amchin

Professor

Division Head-Music

Education and Music

Therapy

Distinguished Teaching
Professor

Jack Ashworth

Professor

Director of Early Music

Ensemble

Distinguished Teaching
Professor

Greg Byrne

Professor

Anne Marie de Zeeuw

Professor

Director of Undergraduate
Studies
Distinguished Teaching
Professor
Christopher Doane
Professor and Dean
Kent Hatteberg
Professor
Director of Choral Activities
University Scholar
D. Bruce Heim
Professor
Division Head-Applied
Music Studies
University Scholar
Herbert Koerselman
Professor
John LaBarbera
Professor
Naomi Oliphant
Professor
Associate Dean
Distinguished Teaching
Professor
Seow-Chin Ong
Professor
J. Patrick Rafferty
Professor
Steve Rouse
Professor
Marc Satterwhite
Professor
Division Head-Music Theory
and Composition
Frederick Speck
Professor
Division Head-Ensembles
and Conducting
Director of Bands

Dallas Tidwell
Professor
Edith Davis Tidwell
Professor
Distinguished Teaching
Professor
Gerald Tolson
Professor
Michael Tracy
Professor
Division Head-Jazz Studies
Michael Tunnell
Professor
Distinguished Teaching
Professor
Paul York
Professor

**ASSOCIATE
PROFESSORS**
John Jones
Associate Professor
Kimcherie Lloyd
Associate Professor
Director of Orchestral
Studies and Opera
Brett Shuster
Associate Professor
Krista Wallace-Boaz
Associate Professor

**ASSISTANT
PROFESSORS**
Amy Acklin
Assistant Professor
Director of Marching Band
Anslyn Banks
Assistant Professor

Dror Biran
Assistant Professor
Daniel Weeks
Assistant Professor
University Scholar
Krzysztof Wolek
Assistant Professor

PROFESSOR EMERITI
Jerry W. Ball
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Jean Christensen
Professor Emeritus
Melvin Dickinson
Professor Emeritus
Francis Fuge
Professor Emeritus
Donn Everette Graham
Professor Emeritus
Karl-Werner Guempel
Professor Emeritus
Brenda E. Kee
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 Music in Music Performance

Major: MUSP

Degree Awarded: MM

Unit: GU

Program Webpage: <http://www.louisville.edu/music/>

Program Information

The School of Music offers training toward two specific graduate degrees in music: Master of Music requiring a minimum of 36 hours of graduate credit, and Master of Music Education requiring 30 hours. All programs require a minimum of 24 hours of residence at the University of Louisville. Major subjects in the Master of Music curriculum are music performance with concentrations in choral, wind or orchestral conducting, instrumental or vocal performance, jazz performance or jazz composition and arranging, piano pedagogy, music history, music theory, and music composition. The Master of Music Education program allows an applied music minor in an instrument, voice, or conducting. Each degree program has specific prerequisites, entrance requirements, and programmatic expectations that are described in the relevant section of the catalog.

Admission Requirements

1. Applications for admission to a graduate program require the following:
 - (a) A completed application;
 - (b) An application fee;
 - (c) Official transcripts for all previous post-secondary course work (all transcripts not in English must be certified as authentic and translated verbatim into English);
 - (d) At least two letters of recommendation;
 - (e) Scores from the General Test Section of the Graduate Record Examination (GRE) that must be submitted prior to the beginning of study.
2. Applications to specific degree programs require evidence of preparation for advanced study as follows:
 - (a) In performance, an acceptable audition;
 - (b) In academic specializations (music composition, music history, music theory), a portfolio of work appropriate to the field of study;
 - (c) In music education, evidence of classroom teaching experience.
3. Applicants whose primary language is not English must show English language proficiency in one of the following ways:
 - (a) A minimum TOEFL examination score of 550 on the paper-based test, 213 on the computer-based test, or 79-80 on the internet-based test;
 - (b) Successful completion of the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville;
 - (c) Documentation of the award of a degree from a recognized English language institution.
4. Applicants must possess a baccalaureate degree from an accredited institution in the area to be pursued in advanced studies, or they must present evidence of equivalent preparation.
5. Applicants must have a minimum cumulative undergraduate grade point average of 2.75 on a 4-point scale.

6. Applicants who meet the requirements listed in items 1-5 will be considered for conditional admission for graduate study at the School of Music. For additional entrance requirements specific to the degree of interest, consult the section relevant to the degree program below.
7. Entrance examinations in music history, theory and, if appropriate, jazz, will be administered before the first term of study. The School of Music provides guidelines to assist in preparing for the entrance examinations.
8. Any exception to the above expectations will be evaluated individually and will require a statement indicating criteria to be met in a specified time frame with provisions for monitoring progress and performance. Justification must be provided in writing and must be accepted by the faculty of the student's proposed program, the Director of Graduate Studies, and the Dean of the School of Music.
9. Students who fail to meet performance standards or who do not meet other requirements as outlined in the letter of admission, program of study, or the catalog of the University of Louisville are subject to dismissal from their programs.

General Information Regarding Academic Policies

1. Detailed curricular and program offerings, including specific requirements and provisions for degree programs, are published in the university catalog at <http://louisville.edu/graduatecatalog>. Students will be provided with copies of the *Handbook for Graduate Studies in Music*, the "Guidelines for Preparation for the Graduate Music History Entrance Examination," and "Guidelines for Preparation for the Graduate Music Theory Entrance Examination." These documents are also available on the School of Music website at <http://louisville.edu/music/>.
2. Students will be required to address any deficiencies revealed by entrance examinations in courses taken within the first two semesters of study. Credit toward the degree is not granted for review course work.
3. All students are required to complete Bibliography and Research Methods (MUS 607) by the end of the second semester of study (part-time students by the completion of 15 hours of graduate study). Upon satisfactory completion of requirements stated in B.2 and B.3, students will be considered in good standing.
4. Students will complete a project appropriate to the field of study as defined by the faculty of their program. The completion of this project (public recital, thesis, professional paper) normally takes place in the last semester of graduate study. Preparation and presentation of a recital must follow the guidelines in the *Handbook for Graduate Studies in Music* and the preparation of a thesis must follow the "Guidelines for the Preparation and Processing of Theses" issued by the School of Interdisciplinary and Graduate Studies (SIGS). The preparation of a thesis in music composition must also follow the "School of Music Thesis Formatting Guidelines for M.M. in Composition" available at <http://louisville.edu/music/composition/ULCompThesisGuidelines.pdf>.
5. In order to graduate, a student must be in good standing with a minimum cumulative grade point average of 3.0. 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 for a course in the student's major subject area. Hours earned beyond the minimum in any curricular areas apply only to that area and cannot be assigned to another area in order to satisfy required credit. At least one-half of the total hours in graduate courses must be at the 600 level. Any exceptions to the program of study must be approved by the Graduate Studies Committee. A student whose cumulative GPA falls below 3.0, or who fails to satisfy the published performance criteria, will be placed on probation. Students are ordinarily not permitted to continue on probation for more than one semester.

6. When all course work and projects have been satisfactorily completed, the student becomes a candidate for the degree and is approved to take the graduate oral examination. A candidate who fails the oral examination at the end of one semester may not be given a second one before the end of the following semester. A candidate who fails the second oral examination will not be granted the degree of M.M. or M.M.E. from the University of Louisville.

7. Upon request, a maximum of six (6) hours of earned graduate credit with a minimum grade of “B” may be transferred from accredited institutions that offer advanced degrees. Credit for applied music will not be transferred, but advanced standing may be awarded at a jury. Ensemble credits appropriate to the student’s degree program may be considered for transfer, but not to exceed one (1) hour per semester. Music history and music theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Transfer of more than six (6) hours may be requested provided that they are not earned by extension, or as thesis or practicum hours, and that the residency requirement of 24 semester hours is maintained by the addition of University of Louisville credits to the total program. Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested provided that the minimum residence requirement of 24 hours is maintained.

8. Students receiving a graduate assistantship (teaching, research, or service) will be provided adequate training and will be required to adhere to university policies. Performance of duties in research and service by graduate assistants will be periodically evaluated. Students with teaching assistantships will be evaluated each semester.

9. Part-time students (with the exception of those in the M.M.E. degree program) must participate in one ensemble for each 18 hours of completed course work. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.

Curriculum

Prerequisites

1. Bachelor of Music degree or equivalent.

Demonstration, by examination, of skills and capacities in the following fields:

1. written, aural, and keyboard harmony;
2. melodic, harmonic, and rhythmic dictation;
3. elementary counterpoint; and
4. history and literature of music, and analytic understanding of musical forms and genres.
5. 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.
6. 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.
7. GRE scores.

Core Curriculum

MUS 500 - Music History Review*	0
MUS 400 - Music Theory Review*	0
MUS 600 - Graduate Oral Exam Preparation	0

MUS 607 - Bibliography and Research Methods	3
Music History Seminar (500 or 600 level)	3
Music Theory (500 or 600 level)**	4
Applied Study (600 level)***	8
MUS 697 - Graduate Recital****	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. For students in the Concentration in Jazz Composition and Arranging, Advanced Jazz Compositional Theory (MUS 654) is required and 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 enrolled for applied jazz composition and arranging may not also get credit for Advanced Jazz Arranging (MUS 656) or Film/TV Scoring (MUS 657). Instrumental/Organ/ Piano/Vocal Performance: MUS 603, 604.

**** Taken concurrently with final semester of applied study. Performance and pedagogy degree recitals are expected to show a performer's musical maturity and versatility. A degree recital program must be approved by the student's applied instructor. Minimum recital lengths will be determined by the appropriate area faculty and indicated on all applied syllabi.

Concentration in Choral Conducting

MUS 611 - Additional Applied Study*	2
MUS 530, 531 - Choral Literature I & II	4
MUS 559 - Instrumental Conducting and Score Reading	2
Ensemble (one per semester)	4
Music Electives** 6	18
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

MUS 659, 660 - Seminar in Conducting-Instrumental	4
MUS 659, 660 - Seminar in Conducting-Choral	4
MUS 686, 687 - Orchestral Literature I & II	4
Ensemble (two semesters of major ensemble)	2

Music Electives * 4	18
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

MUS 659, 660 - Seminar in Conducting-Instrumental	4
MUS 559 - Instrumental Conducting and Score Reading	2
Band Literature (MUS 561)	2
Ensemble (one per semester)	4
Music Electives * 6	18
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

MUS 613, 614 - Additional Applied Study	8
Ensemble*	4
Music Electives** 6	18
Total	36

Notes:

* 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

MUS 539-01 - Jazz Style and Analysis	2
MUS 539-03 - Standard Jazz Repertoire	2
MUS 655 - Advanced Jazz Improvisation	2
Jazz Combo (one per semester)	2
Jazz Ensemble or Jazz Repertory Ensemble (one per sem)*	4
Music Electives**	6
Concentration Total	18
Total	36

Notes:

* A student may substitute two additional Jazz Combo courses for one of the Jazz Ensemble courses.

** Applied Jazz or Ensemble will not meet this requirement; applied study in a secondary area is acceptable.

Concentration in Jazz Composition and Arranging

MUS 539-01 - Jazz Style and Analysis	2
MUS 539-03 - Standard Jazz Repertoire	2
MUS 655 - Advanced Jazz Improvisation	2
MUS 539-01 - Jazz Style and Analysis	2
Jazz Combo (one per semester)	2
Jazz Ensemble or Jazz Repertory Ensemble (one per sem)*	4
Music Electives**	6
Concentration Total	18
Total	36

Notes:

* A student may substitute two additional Jazz Combo courses for one of the Jazz Ensemble courses.

** Ensemble will not meet this requirement; jazz applied study is acceptable.

Concentration in Organ Performance

MUS 613-614 - Additional Applied Study	8
Ensemble	2
Major Subject and Music Electives* 8	18
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

MUS 671, 672, 673, 674 - Piano Pedagogy	8
MUS 561, 562 - Piano Literature	4
Ensemble *	2
Music Electives** 4	18
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 required to present a sixty minute lecture-demonstration recital that focuses on pedagogical aspects of selected works, includes a minimum of thirty minutes of memorized solo repertoire, and follows the guidelines governing public recitals.

Concentration in Piano Performance

MUS 613, 614 - Additional Applied Study	8
MUS 561, 562 - Piano Literature	4
Piano Pedagogy (500 or 600 level)	2
Ensemble *	2
Music Electives ** 2	18
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

MUS 613, 614 - Additional Applied Study	8
MUS 561, 562 - Vocal Literature	4
MUS 640-01 - Advanced Vocal Pedagogy	2
Ensemble *	2
Music Electives** 2	18
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.

Departmental Faculty

PROFESSORS

Robert Amchin

Professor

Division Head-Music

Education and Music

Therapy

Distinguished Teaching

Professor

Jack Ashworth

Professor

Director of Early Music

Ensemble

Distinguished Teaching

Professor

Greg Byrne

Professor

Anne Marie de Zeeuw
Professor
Director of Undergraduate Studies
Distinguished Teaching Professor
Christopher Doane
Professor
Dean
Kent Hatteberg
Professor
Director of Choral Activities
University Scholar
D. Bruce Heim
Professor
Division Head-Applied Music Studies
University Scholar
Herbert Koerselman
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John LaBarbera
Professor
Naomi Oliphant
Professor
Associate Dean
Distinguished Teaching Professor
Seow-Chin Ong
Professor
J. Patrick Rafferty
Professor
Steve Rouse
Professor
Marc Satterwhite
Professor
Division Head-Music Theory and Composition
Frederick Speck
Professor
Division Head-Ensembles

and Conducting
Director of Bands
Dallas Tidwell
Professor
Edith Davis Tidwell
Professor
Distinguished Teaching Professor
Gerald Tolson
Professor
Michael Tracy
Professor
Division Head-Jazz Studies
Michael Tunnell
Professor
Distinguished Teaching Professor
Paul York
Professor

ASSOCIATE PROFESSORS
John Jones
Associate Professor
Kimcherie Lloyd
Associate Professor
Director of Orchestral Studies and Opera
Brett Shuster
Associate Professor
Krista Wallace-Boaz
Associate Professor

ASSISTANT PROFESSORS
Amy Acklin
Assistant Professor
Director of Marching Band
Anslyn Banks
Assistant Professor

Dror Biran
Assistant Professor
Daniel Weeks
Assistant Professor
University Scholar
Krzysztof Wolek
Assistant Professor

PROFESSOR EMERITI
Jerry W. Ball
Professor Emeritus
Paul R. Brink
Professor Emeritus
Jean Christensen
Professor Emeritus
Melvin Dickinson
Professor Emeritus
Francis Fuge
Professor Emeritus
Donn Everette Graham
Professor Emeritus
Karl-Werner Guempel
Professor Emeritus
Brenda E. Kee
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 Music in Music Theory

Major: MUST

Degree Awarded: MM

Unit: GU

Program Webpage: <http://www.louisville.edu/music/>

Program Information

The School of Music offers training toward two specific graduate degrees in music: Master of Music requiring a minimum of 36 hours of graduate credit, and Master of Music Education requiring 30 hours. All programs require a minimum of 24 hours of residence at the University of Louisville. Major subjects in the Master of Music curriculum are music performance with concentrations in choral, wind or orchestral conducting, instrumental or vocal performance, jazz performance or jazz composition and arranging, piano pedagogy, music history, music theory, and music composition. The Master of Music Education program allows an applied music minor in an instrument, voice, or conducting. Each degree program has specific prerequisites, entrance requirements, and programmatic expectations that are described in the relevant section of the catalog.

Admission Requirements

1. Applications for admission to a graduate program require the following:
 - (a) A completed application;
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2. Applications to specific degree programs require evidence of preparation for advanced study as follows:
 - (a) In performance, an acceptable audition;
 - (b) In academic specializations (music composition, music history, music theory), a portfolio of work appropriate to the field of study;
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3. Applicants whose primary language is not English must show English language proficiency in one of the following ways:
 - (a) A minimum TOEFL examination score of 550 on the paper-based test, 213 on the computer-based test, or 79-80 on the internet-based test;
 - (b) Successful completion of the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville;
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4. Applicants must possess a baccalaureate degree from an accredited institution in the area to be pursued in advanced studies, or they must present evidence of equivalent preparation.
5. Applicants must have a minimum cumulative undergraduate grade point average of 2.75 on a 4-point scale.

6. Applicants who meet the requirements listed in items 1-5 will be considered for conditional admission for graduate study at the School of Music. For additional entrance requirements specific to the degree of interest, consult the section relevant to the degree program below.
7. Entrance examinations in music history, theory and, if appropriate, jazz, will be administered before the first term of study. The School of Music provides guidelines to assist in preparing for the entrance examinations.
8. Any exception to the above expectations will be evaluated individually and will require a statement indicating criteria to be met in a specified time frame with provisions for monitoring progress and performance. Justification must be provided in writing and must be accepted by the faculty of the student's proposed program, the Director of Graduate Studies, and the Dean of the School of Music.
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1. Detailed curricular and program offerings, including specific requirements and provisions for degree programs, are published in the university catalog at <http://louisville.edu/graduatecatalog>. Students will be provided with copies of the *Handbook for Graduate Studies in Music*, the "Guidelines for Preparation for the Graduate Music History Entrance Examination," and "Guidelines for Preparation for the Graduate Music Theory Entrance Examination." These documents are also available on the School of Music website at <http://louisville.edu/music/>.
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6. When all course work and projects have been satisfactorily completed, the student becomes a candidate for the degree and is approved to take the graduate oral examination. A candidate who fails the oral examination at the end of one semester may not be given a second one before the end of the following semester. A candidate who fails the second oral examination will not be granted the degree of M.M. or M.M.E. from the University of Louisville.

7. Upon request, a maximum of six (6) hours of earned graduate credit with a minimum grade of “B” may be transferred from accredited institutions that offer advanced degrees. Credit for applied music will not be transferred, but advanced standing may be awarded at a jury. Ensemble credits appropriate to the student’s degree program may be considered for transfer, but not to exceed one (1) hour per semester. Music history and music theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Transfer of more than six (6) hours may be requested provided that they are not earned by extension, or as thesis or practicum hours, and that the residency requirement of 24 semester hours is maintained by the addition of University of Louisville credits to the total program. Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested provided that the minimum residence requirement of 24 hours is maintained.

8. Students receiving a graduate assistantship (teaching, research, or service) will be provided adequate training and will be required to adhere to university policies. Performance of duties in research and service by graduate assistants will be periodically evaluated. Students with teaching assistantships will be evaluated each semester.

9. Part-time students (with the exception of those in the M.M.E. degree program) must participate in one ensemble for each 18 hours of completed course work. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.

Curriculum

Prerequisites

1. Bachelor of Music degree or equivalent.

Demonstration, by examination, of skills and capacities in the following fields:

1. written, aural, and keyboard harmony;
2. melodic, harmonic, and rhythmic dictation;
3. elementary counterpoint; and
4. history and literature of music, and analytic understanding of musical forms and genres.

Evidence of preparation for advanced work in the area, as follows:

1. 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.
2. GRE scores.

Core Curriculum

MUS 500 - Music History Review*	0
MUS 400 - Music Theory Review*	0
MUS 600 - Graduate Oral Exam Preparation	0
MUS 607 - Bibliography and Research Methods	3
Music History Seminar (600 level)**	3

Music Theory	4
Additional Music Theory or Music History Seminar (500 or 600 level)	3
MUS 647, 648, 651, or 653 - Analysis	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

MUS 641 - Pedagogy of Theory	2
Additional Music Theory	1
Advanced Composition***	6
MUS 669 - Graduate Composition Seminar (Co-requisite for Advanced Composition)	0
MUS 667 - Introduction to Electronic and Computer Music	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

PROFESSORS

Robert Amchin

Professor

Division Head-Music

Education and Music

Therapy

Distinguished Teaching

Professor

Jack Ashworth

Professor

Director of Early Music

Ensemble

Distinguished Teaching

Professor

Greg Byrne

Professor

Anne Marie de Zeeuw

Professor

Director of Undergraduate

Studies

Distinguished Teaching

Professor

Christopher Doane

Professor and Dean

Kent Hatteberg

Professor

Director of Choral Activities

University Scholar

D. Bruce Heim

Professor

Division Head-Applied

Music Studies

University Scholar

Herbert Koerselman

Professor

John LaBarbera

Professor

Naomi Oliphant

Professor

Associate Dean

Distinguished Teaching

Professor

Seow-Chin Ong

Professor

J. Patrick Rafferty

Professor

Steve Rouse

Professor

Marc Satterwhite

Professor

Division Head-Music Theory
and Composition

Frederick Speck

Professor

Division Head-Ensembles
and Conducting

Director of Bands

Dallas Tidwell

Professor

Edith Davis Tidwell

Professor

Distinguished Teaching

Professor

Gerald Tolson

Professor

Michael Tracy

Professor

Division Head-Jazz Studies

Michael Tunnell

Professor

Distinguished Teaching

Professor

Paul York

Professor

ASSOCIATE

PROFESSORS

John Jones

Associate Professor

Kimcherie Lloyd

Associate Professor

Director of Orchestral
Studies and Opera

Brett Shuster

Associate Professor

Krista Wallace-Boaz

Associate Professor

ASSISTANT

PROFESSORS

Amy Acklin

Assistant Professor

Director of Marching Band

Anslyn Banks

Assistant Professor

Dror Biran

Assistant Professor

Daniel Weeks

Assistant Professor

University Scholar

Krzysztof Wolek

Assistant Professor

PROFESSOR EMERITI

Jerry W. Ball

Professor Emeritus

Paul R. Brink

Professor Emeritus

Jean Christensen

Professor Emeritus

Melvin Dickinson

Professor Emeritus

Francis Fuge

Professor Emeritus

Donn Everette Graham

Professor Emeritus

Karl-Werner Guempel

Professor Emeritus

Brenda E. Kee

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 Science in Nursing

Major: NURS

Degree Awarded: MSN

Unit: GN

Program Webpage: <http://www.louisville.edu/nursing>

Program Information

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.

Marcia Hern, EdD, RN, CNS, Dean

The School of Nursing offers the following degrees:

Nursing - PhD

Nursing - MSN

Post-Masters Certificates are available in the following programs:

Adult Nurse Practitioner

Family Nurse Practitioner

Neonatal Nurse Practitioner

Psychiatric, Mental Health Nurse Practitioner

MSN Admissions Policies - School of Nursing

Students may be admitted to the program for the summer or fall semester. Summer is preferable and will allow for a full time program of study to be completed in two years. 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:

Summer Semester: April 1

Fall Semester: April 1

Criteria for Admission to the Master of Science 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: <http://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.

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 take effect August 2011. Recommended scores will change based on revisions. The new scores will be reported on a 130-170 point scale.

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: <http://graduate.louisville.edu/students/apply.html/>).

Verification of licensure will be obtained from the Kentucky Board of Nursing.

To the School of Nursing, Office of Student Services:

Completed Graduate Applicant Data Sheet (available online at: <http://www.louisville.edu/nursing>)

Criminal background check submitted through Certified Background.com

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 MSN Degree Program:

Students who do not meet these admission requirements **may** be considered for admission in **conditional** status.

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.

Provisional Admission to MSN Degree Program:

Graduating BSN students: Students completing the final semester of their BSN program with a 3.0 or better grade point average may apply for provisional degree status. (Refer to admission statuses in the General Information Section of this catalog.)

Post-Masters Certificate Admissions Requirements:

Admissions Deadlines:

Summer Semester, April 1

Fall Semester, April 1

The following materials must be submitted for review by the Graduate Student Affairs Committee:

To Graduate Admissions Office:

Official transcripts of all college course work including ones verifying completion of accredited **BSN and MSN** programs. Applicants whose prior degree(s) was from U of L do not need to send official transcripts. However, if the last degree earned was NOT from U of L, those transcripts must be submitted. All applicants are required to submit transcripts for all college work completed.

Completed U of L Graduate School Application, including \$50 application fee (application available online at: www.graduate.louisville.edu)

Two completed letters of recommendation for Graduate School (see U of L Graduate School Application) which address academic and professional competence. References should be chosen from former faculty member, current or immediate past employer, or other nursing/health professional. At least one reference should be from a nurse. These letters should accompany the reference form required by the Graduate School.

- Proof of graduation from a master's program in nursing.
- A minimum grade point average of 3.0 on a 4.0 scale from MSN program.
- Copy of current valid Kentucky registered nurse license without restrictions.

To the School of Nursing:

- Completed Applicant Data Sheet available on line at www.louisville.edu/nursing
- A personal interview with faculty may be required.
- Criminal Background Check. Instructions on School of Nursing website. Cost \$40.

Criteria for Admission in Visiting Student Status to the Graduate Nursing Program:

Students admitted as visiting students are non-degree. Students admitted in non-degree status may not be eligible for some financial aid sources.

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 Note:

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 MSN applicants regardless of where the BSN 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 a clinical area or research setting is subject to academic action including dismissal from the program.

Transfer of Credit

Students who desire to transfer graduate credit from other academic institutions shall discuss this option 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 of L credits to the total program. Credit earned more than six years prior to the student's application to the School of Interdisciplinary and Graduate Studies 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 evaluated 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 Graduate Programs and Research. Hours earned toward a project or thesis shall not be transferable to the second master's degree. 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.

Health Services Fee

Every HSC student will be assessed the Campus 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 Campus 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 clinical fees of \$300. A \$100.00 fee will be assessed at the time of enrollment in NURS 656 Advanced Clinical Assessment or NURS 629 Assessment of the Neonate. A \$200.00 fee will be assessed upon registration in the appropriate track course (NURS 624, 633, 645, or 661).

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.

Course Offerings

Classes are taught on a single week day, traditionally on Thursdays. These courses may be taught during the day or in the evening. Some courses are offered every semester, once per year, or every two years based on demand and/or resources. Some courses are online. Course offerings are subject to cancellation due to insufficient enrollment. Preceptorship/clinical experiences are scheduled on any day of the week 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 Graduate Programs and Research is responsible for student placement with preceptors, in collaboration with the Clinical Placement Coordinator and course faculty.

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 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 Graduate Programs and Research. 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 Graduate Programs and Research. 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 MSN program, students must be in compliance with the following clinical requirements:

- Verification of a valid Kentucky Registered Nurse License
- Submit documentation of CPR certification (Adult, Child and Infant)
- Submit proof of successful completion of UofL HIPAA Training
- Submit proof of student nurse practitioner liability insurance coverage
- Submit required immunization records and proof of health insurance coverage to the Campus Health Services (call 852-6446 for additional current information on requirements).
- Submit proof of successful completion of Bloodborne Pathogen training.
- Additional information on clinical requirements is published in the Graduate Student Handbook.

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) if not already covered. 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 Graduate Student Affairs Committee and the Associate Dean for Graduate

Programs and Research 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 at Another Institution

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 with 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

The Master of Science in Nursing Curriculum

The MSN curriculum has just undergone a revision for the following reasons:

- To address the continuing needs of health care partners in the community.
- To eliminate summer graduation (all students will graduate in May).
- To lay the foundation for a Doctor of Nursing Practice degree.
- To better serve the people of Kentucky, the nation, and abroad.

Statistics has been eliminated as a prerequisite and is now part of the program. Prerequisite for several other courses have been eliminated to allow more flexibility in student schedules. Several courses will be online.

The goal of the graduate faculty is to prepare Advanced Practice Nurses that can function in a variety of settings and will have all of the foundational course work in place for a Doctorate of Nursing Practice.

The faculty have moved to decrease barriers, provide a climate responsive to individual student needs, and to move towards graduating the most well-prepared practitioners in the Kentuckiana area. With the University of Louisville mission directed toward research, teaching, practice, and service, the School of Nursing is well situated to be the premier graduate program in the metropolitan area.

MSN, Adult Nurse Practitioner Specialty

Core Classes			Credit Hrs.
NURS	600	Genetics	2

NURS	605	Foundations for Advanced Practice	3
NURS	606	Health Care Systems	3
NURS	609	Research Design and Professional Writing	3
NURS	611	Nursing Pharmacology	3
NURS	652	Statistics	3
NURS	653	Advanced Practice Roles	2
NURS	654	Informatics in Healthcare	3
NURS	655	Pathophysiology: Clinical Decision Making	3
NURS	657	Health Promotion and Illness Prevention Across the Lifespan	3
TOTAL CORE CREDIT HOURS			28

Specialty Classes			Credit Hrs.
NURS	601	Primary Care I	3
NURS	656	Adv. Clinical Assessment	3
NURS	624	Adv. Clinical Practice Adult NPI	4
NURS	602	Primary Care II	3
NURS	651	Evidence Based Nursing for Advanced Practice	3
NURS	625	Adv. Clinical Practice Adult NP II	5
NURS	604	Transition to Practice	2
TOTAL SPECIALTY CREDIT HOURS			23
TOTAL CREDIT HOURS			51

Clinical Hours Required: 630

MSN, Family Nurse Practitioner Specialty

Core Classes			Credit Hrs.
NURS	600	Genetics	2
NURS	605	Foundations for Advanced Practice	3
NURS	606	Health Care Systems	3
NURS	609	Research Design and Professional Writing	3
NURS	611	Nursing Pharmacology	3
NURS	652	Statistics	3
NURS	653	Advanced Practice Roles	2
NURS	654	Informatics in Healthcare	3
NURS	655	Pathophysiology: Clinical Decision Making	3
NURS	657	Health Promotion and Illness Prevention Across the Lifespan	3
TOTAL CORE CREDIT HOURS			28

Specialty Classes			Credit Hrs.
NURS	601	Primary Care I	3
NURS	656	Adv. Clinical Assessment	3

NURS 661	Adv. Clinical Practice: FNP Clinical I	4
NURS 602	Primary Care II	3
NURS 651	Evidence Based Nursing for Advanced Practice	3
NURS 660	Adv. Clinical Practice FNP Seminar I	2
NURS 604	Transition to Practice	2
NURS 664	Common Health Problems of the Pediatric Client	1
NURS 662	Advanced Clinical Practice: FNP Clinical II	6
TOTAL SPECIALTY CREDIT HOURS		27
TOTAL CREDIT HOURS		55

Clinical Hours Required: 700

MSN, Neonatal Nurse Practitioner Specialty

Core Classes		Credit Hrs.
NURS 600	Genetics	2
NURS 605	Foundations for Advanced Practice	3
NURS 606	Health Care Systems	3
NURS 609	Research Design and Professional Writing	3
NURS 611	Nursing Pharmacology	3
NURS 652	Statistics	3
NURS 653	Advanced Practice Roles	2
NURS 654	Informatics in Healthcare	3
NURS 630	Neonatal Pathophysiology	2
NURS 657	Health Promotion and Illness Prevention Across the Lifespan	3
NURS 659	Lifespan Pathophysiology	1
TOTAL CORE CREDIT HOURS		28

Specialty Classes		Credit Hrs.
NURS 658	Neonatal Pharmacology	1
NURS 633	Adv. Clinical Practice NNP I	3
NURS 629	Adv. Health Assessment of the Neonate	3
NURS 636	High Risk Clinical: NNP	4
NURS 634	Adv. Clinical Practice: NNP II	2
NURS 651	Evidence Based Nursing for Advanced Practice	3
NURS 637	Adv. High Risk Clinical: NNP	4
NURS 635	Advanced Clinical Practice: NNP III	2
NURS 604	Transition to Practice	2
TOTAL SPECIALTY CREDIT HOURS		24
TOTAL CREDIT HOURS		52

Clinical Hours Required: 600

MSN, Psych/Mental Health Nurse Practitioner Specialty

Core Classes			Credit Hrs.
NURS	600	Genetics	2
NURS	605	Foundations for Advanced Practice	3
NURS	606	Health Care Systems	3
NURS	609	Research Design and Professional Writing	3
NURS	611	Nursing Pharmacology	3
NURS	652	Statistics	3
NURS	653	Advanced Practice Roles	2
NURS	654	Informatics in Healthcare	3
NURS	647	Clinical Decision Making: Psychopathology Across the Lifespan	2
NURS	657	Health Promotion and Illness Prevention Across the Lifespan	3
NURS	659	Lifespan Pathophysiology	1
TOTAL CORE CREDIT HOURS			28

Specialty Classes			Credit Hrs.
NURS	638	Adv. Psychiatric Assessment & Clinical Interview Tech.	1
NURS	649	Psychopharmacology	2
NURS	656	Adv. Clinical Assessment	3
NURS	641	Adv. PMH Practice I: Psychiatric Mental Health Nursing of Individuals, Families, Groups	3
NURS	645	Adv. Clinical PMH Practice I: Psychiatric Mental Health Nursing of Individuals, Families	3
NURS	651	Evidence Based Nursing for Advanced Practice	3
NURS	646	Adv. Clinical Practice II: PSYCH Nursing with Groups and Communities	4
NURS	642	Advanced PMH Practice II: PMH Nursing of Individuals, Families, Groups and Communities	3
NURS	604	Transition to Practice	2
TOTAL SPECIALTY CREDIT HOURS			24
TOTAL CREDIT HOURS			52

Clinical Hours Required: 500

Departmental Faculty

Marcia Hern, EdD, RN,
CNS

Dean and Professor

Paulette Adams, EdD, RN

Professor, Emerita

Said Abusalem, PhD, RN

Assistant Professor

Ruth B. Craddock, DNS,
RN

Professor, Emerita

Linda Freeman, DNS, RN

Professor, Emerita

Cynthia McCurren, PhD,
RN

Professor, Emerita

Kay Roberts, EdD, FAAN,
FNP

Professor, Emerita

Marianne Hutti, DNS,
ARNP

Professor

M. Cynthia Logsdon, DNS,
ARNP, FAAN

Professor

Karen Robinson, DNS,
APRN, BC, FAAN

Professor

Deborah Armstrong, PhD,
RN

Associate Professor

Carla Hermann, PhD, RN
Professor
Vicki Hines-Martin, PhD, RN, CS
Professor
Ermalyn Kiehl, PhD, ARNP, CNS
Associate Professor
Rosalie O. Mainous, PhD, APRN, NNP-BC
Associate Professor
Associate Dean for Graduate Programs and Research

S. Lee Ridner, PhD, ARNP, FNP-BC
Associate Professor
Barbara Speck, PhD, RN
Associate Professor
Deborah V. Thomas, EdD ARNP, PMHCNS-BC
Associate Professor
Mary Beth Coty, PhD, APRN, BC
Assistant Professor
Sandra Holmes, PhD, RN-BC

Assistant Professor
Sara Kowalczyk, MSN, FNP
Assistant Professor
Celeste Shawler, PhD, RN, CS
Assistant Professor
Whitney Nash, PhD, ARNP, ANP-BC
Assistant Professor
Myra Goldman, PhD(c), ARNP, FNP-BC
Instructor

Doctor of Philosophy in Nursing

Major: NURS

Degree Awarded: Ph.D.

Unit: GN

Program Webpage: <http://www.louisville.edu/nursing>

Program Information

Marcia Hern, EdD, RN, CNS, Dean

The School of Nursing offers the following degree programs:

Nursing - Ph.D.

Nursing - M.S.N.

Vision

The University of Louisville, School of Nursing affirms and builds upon our strengths and accomplishments as we move forward to meet the challenges of excellence. We will be recognized as a nursing program of national stature for the integration of teaching, research, practice and service. Our purpose is to enrich lives through the improvement of health care. We will be guided by the mission of our metropolitan 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.

Doctor of Philosophy in Nursing

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 are offered: (1) BSN to PhD and (2) MSN to PhD. The BSN to PhD 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 MSN to PhD students will enter directly into the doctoral coursework.

The PhD in Nursing consists of at least 64 credit hours of coursework beyond the baccalaureate degree or 46 credit hours beyond a master's degree plus 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

U of L Graduate Application and application fee (**Online submission is preferred**. Complete online at <http://graduate.louisville.edu/apply>)

The online version of the Graduate Application lists codes for the Nursing PhD program. If you are submitting a hard copy application form, please use the following codes:

NURSPHDMSN- for students who have completed Masters of Nursing degrees

NURSPHDBSN- for students who have completed only the Bachelor of Science in Nursing Degrees.

Transcripts

If BSN 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 MSN 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 BSN applicant, BSN program must have been accredited by CCNE or NLN.

If a MSN applicant, MSN program must have been accredited by CCNE or NLN.

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 are optimal. (Revisions of the GRE test format and scoring will take affect August 2011. Recommended score will change based on revisions.)

TOEFL Examination

Foreign student applicants must review the Graduate Catalog TOEFL requirement guidelines. TOEFL scores required in the School of Nursing are:

1. Computer-based test minimum score of 220; Written Essay score of 4.0
2. Paper-based test minimum score of 560; Written Essay score of 4.0
3. Letters of Recommendation

Submit 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. This is done through the U of L Graduate School recommendation form (available online at: <https://graduate.louisville.edu/sigs/admissions/application.html>)

1. Recommendation forms must have been completed within the last year.
2. At least two recommendations should be from nurses.

Registered Nurse License

Applicants must be licensed as a registered nurse in the state of Kentucky (without restrictions). If applicant is not currently licensed as a registered nurse in Kentucky, the applicant must be eligible to apply for licensure and obtain the license within one year. Verification of licensure will be obtained from the Kentucky Board of Nursing. Licensure may be waived for international students.

Criminal background check required. Information is available on web-site and through the School of Nursing, Office of Student Services.

Submit the following items to:

Office of Student Services, School of Nursing, University of Louisville, Louisville, KY 40292

School of Nursing PhD Applicant Data Sheet (**Online submission preferred**. Applicant Data Sheet is available at <http://www.louisville.edu/nursing>).

1. A current curriculum vitae or resume.
2. A sample of scholarly or professional writing completed within the past 5 years.
3. A written statement of career goals, area(s) of expertise, research interests, and reasons for pursuing doctoral studies (no more than three pages).
4. Personal interviews with School of Nursing faculty will be required.

Application deadline for fall admission is February 15th. Completed applications received after February 15th may be considered on a space available basis.

Please note:

Applicants accepted into the MSN-PhD 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 wish to take a refresher course will be advised of available statistics courses to take in the summer prior to beginning fall PhD 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 PhD Graduate Student Assistantship is a financial award to a full-time PhD student for the period of one year. To be eligible for the award the student must be admitted to the PhD degree program or be a continuing PhD 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 a Research Assistant or Teaching Assistant role in the School of Nursing. These activities serve to augment and enrich the student's academic program. The student will be assigned by the Associate Dean for Graduate Programs and Research to either research or teaching and will coordinate their experience. Descriptions of activities are available for each type of assistantship. Assistantships are awarded on a competitive basis. Applications are due by February 15th and may be submitted with an initial application.

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 unsafe in clinical or a research setting is subject to academic action including dismissal 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 Graduate Programs and Research. Credit earned more than six years prior to the student's application to the School of Interdisciplinary and Graduate Studies will not normally be considered for transfer.

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. 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 Graduate Programs and Research. 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 Graduate Programs and Research. 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 research subjects. 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 Public Health & Information Sciences, in recognition of a responsibility to provide for your safety, both in the classroom and in clinical settings, and for the safety of patients/research subjects 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 Campus Health Services. More detail is available in the student handbooks or on the Campus Health Services website: <https://louisville.edu/campushealth/>

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 Campus Services Fee each semester.

For more information about what the fee covers, please see the Campus Health Services website: <https://louisville.edu/campushealth/>

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.

Residency Requirement

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 open 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 18, or more, credit hours in a 12 month period.

Curriculum

PhD in Nursing: Required Courses

BSN Students will complete 18 hours of required masters level courses.

NURS 605: Foundations for Advanced Practice (3 credit hours)

NURS 606: Health Care Systems (3 credit hours)

NURS 609: Research Design and Professional Writing (3 credit hours)

NURS 652: Statistics (3 credit hours) OR PHST 500: Introduction to Biostatistics (3 credit hours) or equivalent

NURS 657: Health Promotion and Illness Prevention Across the Lifespan (3 credit hours)

NURS 654: Introduction to Health Informatics (3 credit hours)

BSN and MSN Students will complete the following required doctoral level courses, qualifying exam and dissertation:

Advanced Statistics (9 credit hours)

NURS 612: Philosophy of Science (3 credit hours)

NURS 700: Theoretical Basis of Nursing (3 credit hours)

NURS 710: Research Methodology I: Qualitative Research Methods (3 credit hours)

NURS 711: Research Methodology II: Quantitative Design (3 credit hours)

NURS 712: Research Methodology III: Nursing Measurement (3 credit hours)

NURS 713: Research Methods Practicum (2 credit hours)
 NURS 720: Seminar in Advanced Leadership (3 credit hours)
 NURS 721: Leadership Practicum (1 credit hour)
 NURS 730: Health Policy: An Evidence-Based Approach (3 credit hours)
 NURS 731: Health Policy Practicum (1 credit hour)
 NURS 740: Doctoral Seminars (2 credit hours)
 DOCT 600: Doctoral Candidacy** (2 credit hours)
 Electives (9 credit hours)

**Pre-requisite: Completion of course work and successful completion of qualifying exam.

Departmental Faculty

Marcia Hern, EdD, RN,
CNS

Dean and Professor

Paulette Adams, EdD, RN
Professor, Emerita

Said Abusalem, PhD, RN
Assistant Professor

Ruth B. Craddock, DNS,
RN

Professor, Emerita

Linda Freeman, DNS, RN
Professor, Emerita

Cynthia McCurren, PhD,
RN

Professor, Emerita

Kay Roberts, EdD, FAAN,
FNP

Professor, Emerita

Marianne Hutti, DNS,
ARNP

Professor

M. Cynthia Logsdon, DNS,
ARNP, FAAN

Professor

Karen Robinson, DNS,
APRN, BC, FAAN

Professor

Deborah Armstrong, PhD,
RN

Associate Professor

Carla Hermann, PhD, RN
Associate Professor

Vicki Hines-Martin, PhD,
RN, CS

Associate Professor

Ermalyn Kiehl, PhD,
ARNP, CNS

Associate Professor

Rosalie O. Mainous, PhD,
ARNP, NNP-BC

Associate Professor

Associate Dean for Graduate
Programs and Research

S. Lee Ridner, PhD, ARNP,
FNP-BC

Associate Professor

Barbara Speck, PhD, RN

Associate Professor

Deborah V. Thomas, EdD
ARNP, PMHCNS-BC

Associate Professor

Mary Beth Coty, PhD,
APRN, BC

Assistant Professor

Sandra Holmes, PhD, RN-
BC

Assistant Professor

Sara Kowalczyk, MSN,
FNP

Assistant Professor

Celeste Shawler, PhD, RN,
CS

Assistant Professor

Whitney Nash, PhD,
ARNP, ANP-BC

Assistant Professor

Myra Goldman, PhD(c),
ARNP, FNP-BC

Instructor

Master of Science in Biostatistics-Decision Science

Major: BDSCMSBIO

Degree Awarded: MS

Unit: GH

Program Webpage: <http://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:

1. Graduate application (see <https://graduate.louisville.edu/apply>) submitted to the School of Interdisciplinary and Graduate Studies (SIGS).
2. Non-refundable application fee.
3. At least two letters of recommendation written within past twelve months (can be submitted with form at <https://graduate.louisville.edu/apply>).
4. Submission of GRE scores to SIGS (85th percentile or better on Quantitative section is preferred).
5. All postsecondary transcripts (may require foreign credential evaluation if not from accredited U.S. institution).
6. Statement of goals submitted to the department office (must include desired academic and degree program).
7. Foreign credential evaluation is required for each degree not from an accredited U.S. institution. This requirement may be waived, with approval by the dean, for degrees not considered to be relevant to evaluation of the applicant or whose transcript requires no foreign credential evaluation.
8. A baccalaureate degree or its equivalent from an accredited institution is required for admission.
9. A minimum undergraduate grade point average of 2.75 is required for unconditional admission.
10. International students for whom English is not their primary language must show English language proficiency by one of:
11. Award of a degree from an accredited U.S. institution
12. Official TOEFL score of 100 or higher (iBT, or Internet-Based Test), 250 or higher (CBT, or Computer-Based Test), or 600 or higher (PBT, or Paper-Based Test)
13. Official documentation of passing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville

Curriculum

Coursework

36 total credit-hours of required coursework
 24 credit-hours of core coursework
 3-6 credit-hours of concentration coursework
 6-9 credit-hours of thesis research

<i>Required Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
Fall I	PHEP-618	Epidemiologic Methods II	3

	PHST-661	Probability	3
	PHST-680	Biostatistical Methods I	3
	Semester Total		9
Spring I	PHST-662	Mathematical Statistics	3
	PHST-681	Biostatistical Methods II	3
		Elective course	3
	Semester Total		9
Fall II	PHST-602	Biostatistics-Decision Science Seminar	1
	PHCI-624	Clinical Trials I	2
		Concentration course	3
		Concentration course	3
	Semester Total		9
Spring II	PHST-602	Biostatistics-Decision Science Seminar	1
	PHDA-603	Public Health Practicum I	2
		Concentration course(s)	6
	Semester Total		9
Degree Total			36

Electives

An elective course must be chosen from the following list or as approved by student's faculty advisor.

<i>Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
MATH-566	Nonparametric Statistics	3
MATH-567	Sampling Techniques	3

<i>Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
MATH-568	Mathematical Models in Molecular Biology	3
MATH-667	Methods of Classification	3
PHBI-750	Statistical Methods for Bioinformatics	3
PHEH-500	Introduction to Environmental Health	3

Biostatistics Concentration

Coursework

<i>Biostatistics Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
Fall II	PHST-683	Survival Analysis	3
	PHDA-666	Master’s Thesis Research	3
	Semester Total		6
Spring II	PHST-684	Categorical Data Analysis	3
	PHDA-666	Master’s Thesis Research	3
	Semester Total		6
Concentration Total			12

Decision Science Concentration

Coursework

<i>Decision Science Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
Fall II	PHDA-663	Analysis for Decision Making (cross-listed with IE-643)	3
	PHDA-666	Master's Thesis Research	3

	Semester Total		6
Spring II	PHDA-666	Master’s Thesis Research	6
Concentration Total			12

Thesis

To successfully complete the M.S. degree, each student must successfully defend a master's thesis on a topic approved by his or her major professor and thesis committee.

Departmental Faculty

Guy Brock, Ph.D.

Assistant Professor

Somnath Datta, Ph.D.

Professor

Susmita Datta, Ph.D.

Associate Professor

Robert J. Esterhay, M.D.

Acting Chair

L. Jane Goldsmith, Ph.D.

Associate Professor

Seongho Kim, Ph.D.

Assistant Professor

Maiying Kong, Ph.D.

Assistant Professor

Steven J. McCabe, M.D.,

M.Sc.

Assistant Professor

John A. Myers, Ph.D.

Assistant Professor

Rudolph S. Parrish, Ph.D.

Professor

Shesh Rai, Ph.D.

Associate Professor

Dongfeng Wu, Ph.D.

Associate Professor

Doctor of Philosophy in Biostatistics-Decision Science

Major: BDSCPHDBIO

Degree Awarded: Ph.D.

Unit: GH

Program Webpage: <http://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.

The following are required for admission:

1. Graduate application (see www.graduate.louisville.edu) submitted to the School of Interdisciplinary and Graduate Studies (SIGS).

2. Non-refundable application fee.
3. At least two letters of recommendation written within past twelve months (can be submitted with form at <http://graduate.louisville.edu>).
4. Submission of GRE scores to SIGS (85th percentile or better on Quantitative section is preferred).
5. All postsecondary transcripts (may require foreign credential evaluation if not from accredited U.S. institution).
6. Statement of goals submitted to the department office (must include desired academic and degree program).
7. Foreign credential evaluation is required for each degree not from an accredited U.S. institution. This requirement may be waived, with approval by the dean, for degrees not considered to be relevant to evaluation of the applicant or whose transcript requires no foreign credential evaluation.
8. A baccalaureate degree or its equivalent from an accredited institution is required for admission.
9. A minimum undergraduate grade point average of 2.75 is required for unconditional admission.
10. International students for whom English is not their primary language must show English language proficiency by one of:
11. Award of a degree from an accredited U.S. institution
12. Official TOEFL score of 100 or higher (iBT, or Internet-Based Test), 250 or higher (CBT, or Computer-Based Test), or 600 or higher (PBT, or Paper-Based Test)
13. Official documentation of passing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville

Curriculum

Faculty Advisor

Upon admission to the Ph.D. program, each student is assigned to the graduate coordinator of the Ph.D. program for course advising. The graduate coordinator assumes the role of faculty advisor until the student chooses a dissertation advisor at which point this responsibility shifts to the dissertation advisor. If it becomes clear that a Ph.D. student will be working with a given faculty member prior to forming a dissertation committee, the student may request a change in course advisor by completing the form “Request to Change Academic Advisor.”

Program of Study

Upon admission to the Ph.D. program, a program of study is developed for each student by the faculty advisor and approved by the program director and department chair. Students who did not complete the M.S. program in biostatistics with the Department of Bioinformatics and Biostatistics may be required to complete additional coursework normally offered in the M.S. program. Decisions regarding additional coursework are made by the student’s assigned faculty advisor and such courses become part of the program of study. This approach gives maximum flexibility for addressing differing student qualifications and interests.

Degree Requirements

Completion of the coursework is the prelude to sitting for the qualifying examination. Successful completion of the qualifying examination allows the student to enter doctoral candidacy. A doctoral candidate must then develop and successfully defend a dissertation proposal that describes an original and

independent research project. Upon successful defense of the proposal, a student may then proceed to continue 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. program in biostatistics is a 34 credit-hour program (minimum beyond a master's degree) including the dissertation. Additional hours may be needed for completion of the program.

Coursework

34 total credit-hours

25 credit-hours of required coursework

9 credit-hours of elective courses

Required Coursework			
Emphasis (if any)	Course #	Course Title	Credit-Hours
All	PHST-710	Advanced Statistical Computing I	3
	PHST-762	Advanced Statistical Inference	3
	PHST-781	Advanced Linear Models	3
	various	Electives	9
	PHST-703	Doctoral Practicum in Consulting	1
	Subtotal		19
No emphasis	PHST-691	Bayesian Statistics	3
	PHST-724	Advanced Clinical Trials	3
	PHST-780	Advanced Nonparametrics	3
	PHST-782	Generalized Linear Models	3
	PHST-783	Advanced Survival Analysis	3
	Subtotal		15

Emphasis on decision science	PHDA-690	Utility Theory and Assessment	3
	PHST-691	Bayesian Statistics	3
	PHDA-701	Advanced Medical Decision Making	3
	PHDA-663	Decision Analysis	3
	PHDA-705	Statistical Methods for Cost-Effectiveness Analysis	3
	Subtotal		15
Emphasis on bioinformatics	PHBI-751	High-Throughput Data Analysis	3
	CECS-660	Introduction to Bioinformatics	3
	BIOC-545	Advanced Biochemistry I	3
	-OR- MBIO-667	Graduate Cell Biology	3
	PHBI-750	Statistics for Bioinformatics	3
	PHBI-752	Statistical Genetics	3
	Subtotal		15
Degree Total			34

The student may be required to take one or more prerequisite courses for a required course if the student does not meet the prerequisites. These prerequisite courses become part of the program of study but are in addition to the number of coursework credit-hours presented above.

Electives

The student must take electives from the following list. The student's program of study specifies the particular courses to be taken.

Electives					
Emphasis*			Course #	Course Title	Credit-Hours
--	D	B			
x	x		PHBI-750	Statistics for Bioinformatics	3
x	x		PHBI-751	High-Throughput Data Analysis	3
x	x	x	PHST-682	Multivariate Analysis	3
x	x	x	PHST-711	Advanced Statistical Computing II	3
x	x	x	PHST-725	Design of Experiments	3
x	x	x	PHST-785	Nonlinear Regression	3
x	x	x	PHST-675	Independent Study in Biostatistics	1-3
x	x		PHBI-752	Statistical Genetics	3
x			PHDA-705	Statistical Methods for Cost-Effectiveness Analysis	3
	x		PHST-724	Advanced Clinical Trials	3
	x	x	PHST-782	Generalized Linear Models	3
		x	PHST-691	Bayesian Statistics	3
		x	PHST-780	Advanced Nonparametrics	3
x	x	x	PHST-704	Mixed Effect Models and Longitudinal Data Analysis	3
		x	CECS-632	Data Mining	3

*Key for emphasis: -- = no emphasis

D = emphasis on decision science

B = emphasis on bioinformatics

The student may be required to take one or more prerequisite courses for an elective course if the student does not meet the prerequisites. These prerequisite courses become part of the program of study but are in addition to the number of coursework credit-hours presented above.

Qualifying Examination

Upon completion of the required coursework for the Ph.D. degree, a student is eligible to sit for the doctoral qualifying examinations. Each student must take two qualifying exams.

Exam 1 covers the following topics:

- Statistical inference
- Linear models

Exam 2 covers the following topics, depending on the student's emphasis, if any:

- No emphasis

Student choice of any two of the following:

- Statistical computing
- Clinical trials
- Generalized linear models
- Survival analysis

Emphasis on decision Science

- Utility theory, assessment, and medical decision making
- Student choice of one of the following:
 - Bayesian analysis
 - Cost-effectiveness analysis

Emphasis on bioinformatics

- Statistical methods in bioinformatics (including high-throughput methods) and statistical genetics
- Student choice of one of the following:
 - Bayesian analysis
 - Statistical computing

Dissertation

In order to complete the degree, a candidate must submit and successfully defend a dissertation on a topic approved by his or her major professor and the dissertation committee. Dissertation work may be started following successful completion of doctoral qualifying examinations.

Dissertation Committee

The dissertation committee is formed by the candidate's proposing a major professor (or principal advisor) and at least three other committee members. One member of the dissertation committee must be external to the Department of Bioinformatics and Biostatistics. The committee is appointed by the dean of the school upon the recommendation of the program director and chair of the department.

Dissertation Proposal (Pre-Dissertation Essay)

A dissertation proposal or pre-dissertation essay is submitted to the major professor and the dissertation committee. The proposal must be approved by a majority vote of the dissertation committee before the candidate undertakes further work on the dissertation.

The dissertation proposal is a typed document not exceeding 25 pages in length excluding topics (v) to (viii), below. The following formatting is used: Times New Roman 12-point font, margins of 1 inch on all sides and 1.5-line spacing throughout the body of the document. The

School of Interdisciplinary and Graduate Studies dissertation guidelines for citing references must be followed. The document is divided into the following sections and in the following sequence:

- (i) Introduction and Literature Reviews – general introduction to the area of proposed research and relevant literature reviews

- (ii) Specific Aims and Significance – short section describing the specific aims of the proposed research and their potential importance in the field
- (iii) Preliminary Results – summary of the research findings the student already has (e.g., simulation results) towards one or more of the specific aims. This is an important component of the proposal that demonstrates the feasibility of the proposed research by the student.
- (iv) Research Plan – detailed description of the research towards the specific aims to be undertaken during the rest of the doctoral study period
- (v) References – complete references to all the cited literature. Journal names should not be abbreviated
- (vi) Tables – including table headings
- (vii) Figures – one figure per page
- (viii) Appendix – copies (in PDF format) of published articles and preprints that are most relevant to the proposed research

Dissertation Preparation

The dissertation is to be prepared in format and binding according to the guidelines established by the School of Interdisciplinary and Graduate Studies.

Departmental Faculty

Guy Brock, Ph.D.

Assistant Professor

Somnath Datta, Ph.D.

Professor

Susmita Datta, Ph.D.

Associate Professor

Robert J. Esterhay, M.D.

Acting Chair

L. Jane Goldsmith, Ph.D.

Associate Professor

Seongho Kim, Ph.D.

Assistant Professor

Maiying Kong, Ph.D.

Assistant Professor

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Assistant Professor

John A. Myers, Ph.D.

Assistant Professor

Rudolph S. Parrish, Ph.D.

Professor

Shesh Rai, Ph.D.

Associate Professor

Dongfeng Wu, Ph.D.

Associate Professor

Master of Science in Epidemiology

Major: EPIDMSE

Degree Awarded: MS

Unit: GH

Program Webpage: <http://www.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. The M.S. in epidemiology is offered by the Department of Epidemiology and Population Health.

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:

1. Graduate application (see <http://graduate.louisville.edu/apply>) submitted to the School of Interdisciplinary and Graduate Studies (SIGS).

Non-refundable application fee.

2. At least two letters of recommendation on letterhead written within past twelve months (can be submitted with form at <http://graduate.louisville.edu/apply>).
3. Official GRE scores taken within the past five years. Score greater than the 50th percentile on each of the quantitative and verbal sections is recommended.
4. All postsecondary transcripts (may require foreign credential evaluation if not from accredited U.S. institution).
5. Statement of goals submitted to the department office (must include desired academic and degree program).
6. Foreign credential evaluation is required for each degree not from an accredited U.S. institution. This requirement may be waived, with approval by the dean, for degrees not considered to be relevant to evaluation of the applicant or whose transcript requires no foreign credential evaluation.
7. A baccalaureate degree or its equivalent from an accredited institution is required for admission.
8. A minimum undergraduate grade point average of 3.0 is required

International students for whom English is not their primary language must show English language proficiency by one of:

- * Award of a degree from an accredited U.S. institution
- * Official TOEFL score of 100 or higher (iBT, or Internet-Based Test), 250 or higher (CBT, or Computer-Based Test), or 600 or higher (PBT, or Paper-Based Test) - score must be in at least the 60th percentile
- * Official documentation of passing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville

Curriculum

The program is designed as a two-year program of coursework and thesis research and preparation. The student is expected to develop and plan his or her thesis research prior to the final semester in which the majority of the actual research is done.

Faculty Advisor

Upon admission to the M.S. program, each student is assigned a faculty advisor by the department chair or program director. Students and/or advisors who wish to change their assigned relationship must make a written request to the department chair or program director.

Program of Study

The student and his or her faculty advisor work together to develop a program of study that recognizes the student's research interests and core elements of modern epidemiology and its breadth and multidisciplinary nature.

Degree Requirements

Degree requirements include required coursework in epidemiology, elective coursework in biostatistics and in public health sciences, and a thesis.

Coursework

38 total credit-hours:

20 credit-hours of required coursework

6 credit-hours of elective coursework in biostatistics

6 credit-hours of elective coursework in public health

6 credit-hours of thesis research

Required Coursework			
Semester	Course #	Course Title	Credit Hours
Fall I	PHEP-618	Epidemiologic Methods II	3
	PHEP-619	Biology of Disease in Populations	3
	PHEP-648	Data Management and Analysis for Epidemiology I	1
	PHxx-xxx	Elective course	3
	Semester Total		10
Spring I	PHEP-702	Epidemiologic Research Management I	3
	PHEP-701	Advanced Epidemiologic Methods	3
	PHEP-649	Data Management and Analysis for Epidemiology II	1
	PHxx-xxx	Elective course	3
	Semester Total		10
Fall II	PHEP-xxx	Epidemiology elective course	3

	PHxx-xxx	Elective course	3
	PHEP-666	Thesis Research in Epidemiology	3
	Semester Total		9
Spring II	PHxx-xxx	Elective course	3
	PHEP-666	Thesis Research in Epidemiology	6
	Semester Total		9
Degree Total			38

Electives

Program requirements include one elective course in epidemiology and four in a public health area. Elective courses can be selected from offerings within SPHIS with instructor and program permission. Elective courses in epidemiology (PHEP) and biostatistics (PHST) are strongly encouraged.

Selection of electives for both requirements is done by the student and his or her faculty advisor with approval of the program director or chair of the department.

Students may petition to take courses not on these lists with approval of the instructor, the student's faculty advisor, and the program director or chair of the department or his or her designee.

<i>Approved Public Health Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
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
PHCI-671	Preventive Medicine I	3
PHCI-672	Preventive Medicine II	3
PHCI-605	Survey Research Methods	3
PHCI-611	Introduction to Clinical Epidemiology	3

<i>Approved Public Health Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
PHEH-650	Adv Topics in Environmental and Occupational Health	3
PHPB-650	Adv Topics in Health Promotion and Behavioral Sciences	3
PHMS-650	Adv Topics in Health Management and Systems Sciences	3
PHST-624	Clinical Trials I	3
PHST-650	Advanced Topics in Biostatistics	3
PHST-680	Biostatistical Methods I	3
PHST-681	Biostatistical Methods II	3
PHST-661	Probability	3
PHST-662	Mathematical Statistics	3
PHST-683	Survival Analysis	3
PHST-684	Categorical Data Analysis	3
PHST-682	Multivariate Analysis	3
<i>Approved Epidemiology Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
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

Thesis

A thesis is required of a candidate for the degree of master of science in epidemiology. It is to be an original work of professional quality and the basis for one or more potentially publishable papers.

Departmental Faculty

Rose Devasia Anderson,
M.D., MPH

Assistant Professor

Kathy B. Baumgartner,
Ph.D.

Associate Professor
Richard N. Baumgartner, Ph.D.
Professor and Chair
Frank Groves, M.D.
Assistant Professor

Carlton A. Hornung, Ph.D., MPH
Professor
Richard A. Kerber, Ph.D.
Associate Professor
Susan B. Muldoon, Ph.D., MPH

Assistant Professor
Elizabeth O'Brien, Ph.D.
Assistant Professor
Katrina Zierold, Ph.D.
Assistant Professor

Doctor of Philosophy in Public Health Sciences

Major: PHSCPHDENV

Degree Awarded: Ph.D.

Unit: GH

Program Webpage: <http://louisville.edu/sphis/academics/academics.html>

Program Information

Introduction

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

The following are general admission requirements. Additional requirements may be outlined within each concentration.

Graduate application (see <http://graduate.louisville.edu/apply>) submitted to the School of Interdisciplinary and Graduate Studies (SIGS).

Non-refundable application fee.

At least two letters of recommendation written within past twelve months (can be submitted with form at <http://graduate.louisville.edu/apply>).

Submission of GRE scores to SIGS (no minimum score required).

All postsecondary transcripts (may require foreign credential evaluation if not from accredited U.S. institution).

Statement of goals submitted to the department office (must include desired academic and degree program).

Foreign credential evaluation is required for each degree not from an accredited U.S. institution. This requirement may be waived, with approval by the dean, for degrees not considered to be relevant to evaluation of the applicant or whose transcript requires no foreign credential evaluation.

A baccalaureate degree or its equivalent from an accredited institution is required for admission.

A minimum undergraduate grade point average of 2.75 is required for unconditional admission.

International students for whom English is not their primary language must show English language proficiency by one of:

- Award of a degree from an accredited U.S. institution
- Official TOEFL score of 100 or higher (iBT, or Internet-Based Test), 250 or higher (CBT, or Computer-Based Test), or 600 or higher (PBT, or Paper-Based Test)
- Official documentation of passing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville

Curriculum

Introduction

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 also prepares 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 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 and is part of the Ph.D. program in public health sciences in the School of Public Health and Information Sciences.

Admission

An applicant who has satisfactorily completed an appropriate M.S. degree or MPH with a concentration in environmental health is 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 34 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

Faculty Advisor

Upon admission to the Ph.D. concentration, each student is assigned a faculty advisor who works 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 requires 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.

Program of Study

Each doctoral student, in consultation with his or her academic advisor and the department chair, plans a program 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.

Degree Requirements

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 the qualifying examination 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 listed below, a student is awarded the Ph.D. degree.

The Ph.D. concentration in environmental health is designed as a 37 credit-hour program (minimum beyond a master's degree) including the dissertation. Additional hours may be needed for completion of the concentration program.

Coursework

37 total credit-hours

34 credit-hours of required coursework

3 credit-hours of environmental health seminars

Required Coursework			
Semester	Course #	Course Title	Credit Hours
Fall I	PHST-620	Introduction to Statistical Computing	3
	PHEP-602	Epidemiological Methods	3
	BIOC-668	Molecular Biology	4
	Semester Total		10
Spring I	PHEP-620	Environmental and Occupational Epidemiology	3
	MBIO-658	Cellular and Molecular Immunology	3
		Elective course	3
	PHEH-750	Seminar 1 in Environmental and Occupational Health	1
	Semester Total		10

Summer I	PHEH-751	Seminar 2 in Environmental and Occupational Health	1
		Elective course	3
		Elective course	3
	Semester Total		7
Fall II	PHTX-661	Molecular Mechanisms in Toxicology	3
	PHEH-601	Environmental Risk Assessment	3
		Elective course	3
	PHEH-752	Seminar 3 in Environmental and Occupational Health	1
	Semester Total		10
Degree Total			37

PHEH-750, -751, -752 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 are 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.

Electives

As a part of the approved program of study, a student has the option to select nine credit-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, and health promotion 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 program and dean.

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 utilizes electives to provide the student with the courses needed in his or her particular case.

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.

<i>Approved Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>

<i>Approved Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
PHEH-753	Independent Study in Environmental and Occupational Health	1-3
PHST-650	Advanced Topics in Biostatistics	3
PHST-680	Biostatistical Methods I	3
PHST-681	Biostatistical Methods II	3
PHPB-650	Advanced Topics in Health Promotion and Behavioral Sciences	3
PHMS-650	Advanced Topics in Health Management and Systems Sciences	3
GEOG-657	Geographic Information Systems	3
GEOG-656	Spatial Statistics	3
PHTX-601	Principles of Medical Pharmacology	3
PHTX-630	Toxicology: Principles and Application	3
PHTX-618	Topics in Pharmacology & Toxicology	3
PHTX-607	Seminar in Genetics and Molecular Medicine	3
BIOC-611	Biochemical and Molecular Methods	3
BIOC-640	Principles of Biochemistry	3
BIOC-670	Protein Structure and Function	3
BIOC-660	Molecular Endocrinology	3
BIOC-641	Advanced Eukaryotic Genetics	3
BIOC-668	Molecular Biology	3
BIOC-675	Cancer Biology	3
BIOL-522	Aquatic Ecology	3
BIOL-563	Population and Community Ecology	3
BIOL-562	Ecosystem Ecology	3
BIOL-584	Interdisciplinary Frameworks in Environmental Science and Technology	3
BIOL-608	Ecological Instrumentation	3
BIOL-660	Advanced Ecology of Urban and Suburban Landscapes	3
BIOL-657	Advanced Industrial and Food Microbiology	3
CEE-509	Environmental Processes and Systems	3

<i>Approved Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
CEE-534	Industrial Waste Management	3
CEE-535	Solid Waste Management	3
CEE-574	Water and Wastewater Treatment	3
CEE-581	Environmental Impact Analysis	3
CEE-674	Water Resources Systems	3
CEE-675	Surface Water Quality Modeling	3
CHE-509	Environmental Processes and Systems	3
CHE-533	Chemical Engineering Safety and Health	3
CHE-534	Industrial Waste Management	3
CHE-535	Pollution Prevention	3
EXP-600	Physiology of Exercise	3
EXP-605	Human Physiology	3
GEOG-522	GIS and Public Health	3
GEOG-531	GIS and Urban Demographic Analysis	3
GEOG-561	Urban Environmental Quality	3
GEOS-564	Hydrology	3
GEOS-565	Natural Hazards	3
MBIO-601	Molecular Microbiology (Introductory to Infectious Diseases)	3
MBIO-602	Introduction to Immunology	3
MBIO-670	Molecular Virology	3
MBIO-685	Microbial Physiology	3
MBIO-687	Microbial Pathogenesis	3
MBIO-618	Topics in Advanced Microbiology	3
MBIO-680	Genetics of Infectious Diseases	3
MBIO-667	Cell Biology	3
PHZB-605	Systemic Physiology I	3
PHZB-611	Advanced Human Physiology	3
IE-530	Industrial Safety Engineering	3

<i>Approved Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
UPA-678	Land Use and Planning Law	3
UPA-679	Environmental Policy	3
UPA-687	Environmental Policy and Natural Hazards	3

Qualifying Examination

Upon completion of the majority of the required coursework for the Ph.D., the student is eligible to sit for the doctoral qualifying examination. The timing and eligibility for the qualifying examination is determined by the student's faculty advisor and department chair. Successful completion of the examination admits the student to doctoral candidacy. A student who does not successfully complete the exam may be required to take additional or remedial coursework and is allowed one opportunity to retake the exam.

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.

Doctor of Philosophy (Ph.D.) in Public Health Sciences

Concentration in Epidemiology

Introduction

The concentration in epidemiology in the Ph.D. program in public health sciences is designed to develop academic researchers in population-based epidemiology.

Admission

Students who have satisfactorily completed the M.S. degree in epidemiology are eligible for the Ph.D. concentration in epidemiology. Students with a master's degree in a related discipline or an advanced degree (for example, 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 MPH with an epidemiology concentration may be required to complete additional coursework to be accepted into the epidemiology Ph.D. concentration.

Curriculum

Faculty Advisor

Upon admission to the concentration, each student is assigned a faculty advisor who works with the student to develop a program of study.

Program of Study

The program of study recognizes core elements of modern epidemiology as well as its breadth and multidisciplinary nature. This requires the selection of a minor field of concentration, such as biostatistics, environmental science, molecular genetics, behavioral science, health management and systems sciences, clinical research, or another relevant area of study, and the completion of at least 6 credit-hours of coursework in this field.

Degree Requirements

The emphasis in doctoral training goes beyond accumulating course credit. The coursework is organized into two blocks of 24 credit-hours each. Completion of the first block of coursework is prerequisite for sitting for the proficiency examination. After passing the proficiency examination, the student can proceed with the second block of coursework. Successful completion of the second block is prerequisite to sitting for the candidacy examination. After passing the candidacy examination, the student is admitted to 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, the student may then proceed to dissertation research. Upon successful completion of the research, oral defense of the dissertation, and demonstration of the required competencies listed above, the student is awarded the Ph.D. degree.

The Ph.D. concentration in epidemiology is designed to consist of 50 credit-hours of coursework over a minimum of two years plus one to four years for completion of the dissertation. The coursework outlined below represents an ideal sequence for a full-time student. A part-time student may need to deviate from this sequence. As part of the first block, a student is expected to complete required courses in basic and advanced epidemiologic methods that cover core areas including study design, research management, and statistical analysis; the survey course in disease biology and pathophysiology; and a minimum of 6 credit-hours of epidemiology seminars. The student must pass the proficiency examination before proceeding to minor electives and individual studies in the second block, which must include an additional 3 credit-hours of epidemiology seminars. Exceptions may be granted upon approval by the student's advisor and the department chair.

Coursework

50 total credit hours (beyond admission requirements) consisting of the following:

- 11 credit-hours of required courses
- 9 credit-hours of seminars in epidemiology
- 18-21 credit hours of epidemiology and biostatistics electives
- 6 credit hours of minor electives (outside of epidemiology)
- 3-6 credit-hours of mentored readings and research in epidemiology

<i>Required Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Block 1			

Fall I	PHEP-618 -OR- PHEP-xxx	Epidemiologic Methods II -OR if already taken - Epidemiology elective	3
	PHEP-648	Data Management and Analysis for Epidemiology I ^{B1}	1
	PHEP-619	Biology of Disease in Populations ^{B1}	3
	PHEP-xxx -OR- PHST-xxx	Epidemiology elective -OR- Biostatistics elective	3
	PHEP-750	Seminars in Epidemiology ^{B1}	3
	Semester total		13
Spring I	PHEP-701	Advanced Epidemiologic Methods ^{B1}	3
	PHEP-649	Data Management and Analysis for Epidemiology II ^{B1}	1
	PHEP-702	Epidemiologic Research Management ^{B1}	3
	PHEP-xxx -OR- PHST-xxx	Epidemiology elective -OR- Biostatistics elective	3
	PHEP-750	Seminars in Epidemiology ^{B1}	3
	Semester total		13
Block 1 total			26

Required Coursework

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Block 2			
Fall II	PHEP-xxx	Epidemiology elective	3
	PHEP-xxx -OR- various	Epidemiology elective -OR- Minor elective	3
	various	Minor elective	3
	PHEP-750	Seminars in Epidemiology ^{B2}	3
	Semester total		12

Key: ^{B1} = required in Block 1

^{B2} = required in Block 2

Minor Elective Requirement

As a part of the approved program of study, the student is required to complete 6 credit-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 management, health promotion and behavioral science, and clinical research. These courses may be selected from ones offered within the school, other departments within the university, or from sources outside the university with permission and acceptance of credit by the school and university.

Minor courses should be chosen by the student in consultation with his or her advisor and the respective course directors. Students may petition to take courses not on this list with approval of the instructor, program director, and the chair of the Department of Epidemiology and Population Health. The student must provide a written rationale for the choice of minor coursework in the program of study. The following is a partial list of approved minor courses. Some courses may have prerequisites, and the student is expected to either meet these or obtain permission from the instructor before registering.

<i>Approved Electives for Minor Requirement</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
BIOC-641	Advanced Eukaryotic Genetics	3
BIOC-660	Molecular Endocrinology	3
BIOC 661	Molecular Mechanisms of Toxicology (cross-listed as PHTX-661)	3
BIOC-668	Molecular Biology	3
BIOC-675	Cancer Biology	3
EXP-600	Physiology of Exercise	3
EXP-605	Human Physiology	3
GEOG-656	Spatial Statistics	3
GEOG-657	Geographic Information Systems	3
MBIO-687	Microbial Pathogenesis	3
MBIO-618	Topics in Advanced Microbiology	3
MBIO-680	Genetics of Infectious Diseases	3
NURS-670	Cancer Epidemiology and Pathophysiology	3
PHBI-750	Statistical Methods for Bioinformatics	3

<i>Approved Electives for Minor Requirement</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
PHBI-751	High-throughput Data Analysis	3
PHCI-501	Bench to Bedside	1
PHCI-602	Health Services and Outcomes Research	2
PHCI-610	New Drug and Device Development	2
PHCI-624	Clinical Trials I: Planning and Design	2
PHCI-625	Clinical Trials II	2
PHCI-632	Ethical Conduct of Healthcare Research	2
PHCI-650	Medical Decision Analysis	2
PHEH-650	Advanced Topics in Environmental and Occupational Health	3
PHMS-650	Advanced Topics in Health Management and Systems Science	3
PHPB-650	Advanced Topics in Health Promotion and Behavioral Science	1-3
PHST-650	Advanced Topics in Biostatistics	3
PHST-680	Biostatistical Methods I	3
PHST-681	Biostatistical Methods II	3
PHST-661	Probability	3
PHST-662	Mathematical Statistics	3
PHST-683	Survival Analysis	3
PHST-682	Multivariate Analysis	3
PHST-684	Categorical Data Analysis	3
PHST-785	Nonlinear Regression	3
PHTX-607	Seminar in Genetics and Molecular Medicine	3
PHTX-618	Topics in Pharmacology & Toxicology	3
PHTX-630	Toxicology: Principles and Application	3
PHTX-661	Molecular Mechanisms of Toxicology (cross-listed as BIOC 661)	3
PHZB-605	Systemic Physiology I	3
PHZB-611	Advanced Human Physiology	3

Proficiency Examination

Upon successful completion of the first block of required coursework, the student is eligible to sit for the written proficiency examination, which is administered by a committee of departmental faculty appointed by the chair. The timing of the proficiency examination is determined by the student's faculty advisor and the department chair. The subject matter includes basic knowledge of disease biology and pathophysiology; theory and skills in epidemiologic research methods, including study design and management; and quantitative analytic methods. A student who does not successfully pass the proficiency examination is allowed a second opportunity to pass the exam. Failing the proficiency examination the second time results in dismissal from the program.

Candidacy Examination

After passing the proficiency examination and upon completion of the second block of coursework, the student is eligible to sit for the written and oral candidacy examination, which is administered by a committee appointed by the department chair and composed of graduate faculty. The subject matter includes knowledge of advanced epidemiologic methods; specialized knowledge pertaining to the minor field of concentration; disease biology and pathophysiology, which may be tailored to the student's special area of interest; and knowledge of the research process. Successful passage of the candidacy examination admits the student to doctoral candidacy. A student who does not successfully pass the candidacy examination may be required to take additional or remedial coursework and is allowed a second opportunity to pass the exam. Failing the candidacy examination the second time results in dismissal from the program.

Dissertation

A dissertation is required of every candidate for the degree of doctor of philosophy in public health sciences with a concentration in epidemiology. The dissertation is a scholarly achievement in research and presents an original contribution to knowledge and should demonstrate a thorough understanding of research techniques in epidemiology and the ability to conduct independent research. The following sections summarize the basic requirements for the dissertation committee, dissertation proposal, and defense. Additional details are available in the department's document "Student Advising, Thesis and Dissertation Committees."

Doctor of Philosophy (Ph.D.) in Public Health Sciences

Concentration in Health Management

Introduction

The Ph.D. concentration in health management in the Department of Health Management and Systems Sciences 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 provides 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.

Admission

An applicant who has satisfactorily completed a master of public health degree, or another relevant master degree or a health professional degree is considered for admission to the health management concentration. Applicants already holding an advanced degree are evaluated on the basis of appropriateness of previous coursework, training and experience. The graduate work by such applicants 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 48 credit hours required for post-master's doctoral work.

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 or professional work experience.
- Official TOEFL score if applicant's native language is not English and applicant has no degree from accredited U.S. institution.
- Foreign credential evaluation for each degree not from an accredited U.S. institution

The following are recommended criteria for admission:

- Undergraduate and graduate GPA each ≥ 3.0 on 4.0 scale
- GRE performance in 50th percentile or above for verbal and quantitative scores (Comparable scores on the MCAT or DAT are considered.)
- If applicable, Test of English as a Foreign Language (TOEFL) score in 60th percentile or above

Curriculum

Each doctoral student, in consultation with his or her academic advisor, program director, and department chair, plans 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 qualifying examination allows the student to enter 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 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) and the dissertation. Depending on the student's previous educational experience, additional hours may be needed for completion of the concentration program.

Faculty Advisor

Upon admission to the Ph.D. concentration, each student is assigned a faculty advisor who works with the student to develop a program of study.

Program of Study

The program of study incorporates a foundation of core courses intricate to health management as well as addresses its multidisciplinary nature. At the Ph.D. level, this requires the selection of courses directly relevant to health management, such as organizational theory, management and administrative processes, health policy, leadership, systems and 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, is a focal point of emphasis within the Ph.D. concentration.

Degree Requirements

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 the qualifying examination 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 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) and the dissertation. Additional hours may be needed for completion of the concentration program.

Coursework

- 48 total credit hours
- 30 credit hours of required coursework
- 15 credit hours of elective coursework
- 3 credit hours of public health management seminars

Some required or elective courses may require additional credit hours in prerequisite courses not already taken by the student.

Seminars in Public Health Management - A student in the Ph.D. concentration in health management is required to complete at least three credit hours of seminars in Public Health Management (PHMS-751, -752, -753). These group courses are 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, brain-storm about research ideas, and acquire professional skills in scientific manuscript and grant writing, oral and poster presentations, grantsmanship, and peer review.

Electives

As a part of the approved program of study, a student is able to select fifteen 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, other schools or colleges within the university, or from sources outside the university with permission and acceptance of credit by the school and university.

A student may petition to take courses not on this list with approval of the course instructor, the student's advisor, program director, and 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 Examination

Upon completion of the required coursework for the Ph.D., the student is eligible to sit for the qualifying examination. The components of the qualifying exam 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 are determined by the student's faculty advisor, program director, and department chair. Successful completion of the exam admits the student to doctoral candidacy. A student who does not successfully complete the exam may be required to take additional or remedial coursework and is allowed one opportunity to retake the exam.

Dissertation

A dissertation is required of a candidate for the degree of doctor of philosophy in public health sciences with a concentration in health management. It is to be a scholarly achievement in research, and should demonstrate a thorough understanding of research techniques in health management and the ability to conduct independent research.

Doctor of Philosophy (Ph.D.) in Public Health Sciences

Concentration in Health Promotion

Introduction

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 also achieve competency as independent researchers.

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 is in addition to the outlined curriculum, and is 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 which discusses the student's background in health promotion, why the student is attracted to the field, and how the degree helps 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 is also considered as a factor in acceptance into the program. International students are 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.

Curriculum

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

Faculty Advisor

The Department of Health Promotion and Behavioral Sciences appoints a director of the Ph.D. concentration program each year. The director assigns advisors for each doctoral student. The assignment process is negotiated with the student who has the option of requesting a specific advisor. The student's choice is contingent on the agreement of the desired advisor, his or her availability, and the overall faculty resources of the department.

Program of Study

Upon matriculation in the program, each student meets with his or her assigned advisor and develops a program of study that includes 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 is required to take a course in epidemiology as part of the program of study. In addition the program of study includes development of competencies in other areas of public health knowledge that are relevant to the student's are of interest.

Degree Requirements

Coursework

The Health Promotion concentration of the Ph.D. in Public Health Sciences consists of a minimum of 39 credit-hours, including the following requirements:

39 total credit-hours:

- 21 credit-hours of required coursework:
 - 12 credit-hours of coursework in health promotion theory and principles
 - 3 credit-hours of cognate coursework
 - 3 credit-hours of research design and statistics
 - 3 credit-hours of ELFH-683 College Teaching
- 18 credit-hours of elective coursework:
 - 9 credit-hours of cognate coursework
 - 9 credit-hours of research design and statistics

<i>Required Coursework</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
PHPB-701	Theoretical Basis of Health Promotion	3
PHPB-704	Psycho-Social Foundations of Health Decision Making	3
PHPB-705	Community Organization and Health Policy Advocacy	3
PHPB-710	Community-Based Participatory Research	3
PHPB-722	Health Risk Communication	3
PHPB-724	Dissertation Methods Seminar	3
	Research design and statistics electives (with approval of advisor)	9
	Cognate electives (with approval of advisor)	9
ELFH-683 or ELFH-661 or other course	College Teaching or Adult Development and Learning or equivalent course (with approval of advisor)	3
Total		39

Research Design and Statistics Electives

Students work with their advisors to select appropriate courses to complete the twelve credit-hours required in this category. Selections are 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.

<i>Approved Research Design and Statistics Elective Courses</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
PHEP-602	Epidemiological Methods	3
PHPB-615	Advanced Program Evaluation	3
PHEP-710	Community-based Participatory Research	3
PHPB-711	Qualitative Research Methods in Public Health	3

PHPB-724	Dissertation Methods Seminar	3
PHST-630	Applied Statistical Methods	3
PHST-640	Statistical Methods for Research Design in Human Studies	3
PHST-680	Biostatistical Methods I	3
PHST-681	Biostatistical Methods II	3
PHST-682	Multivariate Statistical Analysis	3
PHST-684	Categorical Data Analysis	3
PHST-725	Design of Experiments	3
PSYC-610	Advanced Statistics I	3
PSYC-611	Advanced Statistics II	3
PSYC-612	Advanced Statistics III	3
ECPY-793	Reviewing Scientific Literature [course in meta-analysis]	3
SOC-609	Seminar in Statistics I	3
SOC-609	Seminar in Statistics II	3
SOC-618	Qualitative Field Research Methods	3

Cognate Electives

Students work with their advisors to select appropriate courses to complete the twelve credit-hours required in this category. Selections are 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.

<i>Approved Cognate Elective Courses</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
PHPB-604	Health Decision and Risk Analysis	3
PHPB-612	Health Communication Campaigns	3
PHPB-650	Advanced Topics in Health Promotion and Behavioral Sciences	3
PHMS-655	Systems Thinking and Dynamic Modeling in Public Health	3
PHPB-721	Health Promotion and Healthcare-Associated Infection	3

<i>Approved Cognate Elective Courses</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
PHPB-727	Culture and Public Health	3
PHPB-753	Independent Study in Health Promotion and Behavioral Sciences	3
GEOG-657	Geographic Information Systems	3
HSS-669	Administering Health Promotion and Disease Prevention Programs	3
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
NURS-657	Health Promotion and Illness Prevention Across the Lifespan	3
PHCI-631	Social and Behavioral Sciences in Health Care	3
PHEH-620	Global Issues	3
PHMS-604	Legal and Bioethical Aspects of Public Health	3
PHPH-630	Geographic Information Systems in Public Health	3
PSYC-581	Introduction to Health Psychology	3

Qualifying Examination

Upon completion of all formal course work, typically at the end of the second year, students take a written qualifying exam to demonstrate their ability to synthesize and apply concepts from those courses. The exam is evaluated on a pass/fail basis; students who don't pass the exam at the first administration are given time to prepare to sit for the exam one additional time. Once the qualifying exam is successfully completed, students are 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.

Departmental Faculty

Guy Brock, Ph.D.
Assistant Professor

Somnath Datta, Ph.D.
Professor

Susmita Datta, Ph.D.
Associate Professor

Robert J. Esterhay, M.D.
Acting Chair
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Assistant Professor
John A. Myers, Ph.D.
Assistant Professor
Rudolph S. Parrish, Ph.D.

Professor
Shesh Rai, Ph.D.
Associate Professor
Dongfeng Wu, Ph.D.
Associate Professor

Master of Science in Clinical Investigation Sciences

Major: CISCMS

Degree Awarded: MSc.

Unit: GH

Program Webpage: <http://louisville.edu/sphis/academics/academics.html>

Program Information

The M.Sc. in Clinical Investigation Sciences is offered in the School's Clinical Research, Epidemiology and Statistics Training (CREST) Program. The M.Sc. degree program provides physicians, dentists, nurses and other health professionals an opportunity to acquire the clinical research skills necessary for a career in an academic health center. The M.Sc. is offered also as a joint degree with the M.D..

The CREST curriculum integrates biostatistical and epidemiologic methods in a problem-based learning format with additional instruction in bioethics, health economics, health services and outcomes research and social and behavioral science. Students pursuing the master degree take didactic courses while they engage in mentored and independent research that culminates in the preparation of a professional paper.

Admission

Applicants should have a minimum of 3.0 on a 4.0 scale and, in most cases, should have completed a professional doctoral degree (e.g., DM.D., D.O., M.D.) or academic degree from an accredited institution or its equivalent. Other applicants with research experience may be considered (e.g., research coordinator).

The following are additionally required for admission:

1. Graduate application (see <https://graduate.louisville.edu/apply>) submitted to the School of Interdisciplinary and Graduate Studies (SIGS).
2. Non-refundable application fee.
3. At least two letters of recommendation written within past twelve months (can be submitted with form at <https://graduate.louisville.edu/apply>).
4. Submission of GRE score to SIGS (no minimum score required). This is not required if you have an M.D. degree or other terminal degree.
5. All postsecondary transcripts (may require foreign credential evaluation if not from accredited U.S. institution).

6. Statement of goals submitted to the department office (must include desired academic and degree program).
7. Foreign credential evaluation is required for each degree not from an accredited U.S. institution. This requirement may be waived, with approval by the dean, for degrees not considered to be relevant to evaluation of the applicant or whose transcript requires no foreign credential evaluation.
8. International students for whom English is not their primary language must show English language proficiency by one of:
9. Award of a degree from an accredited U.S. institution
10. Official TOEFL score of 100 or higher (iBT, or Internet-Based Test), 250 or higher (CBT, or Computer-Based Test), or 600 or higher (PBT, or Paper-Based Test)
11. Official documentation of passing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville

Curriculum

Degree Requirements

Coursework

Epidemiology	7
Research design and statistics	11
Effectiveness and outcomes	7
Mentored research	6
Electives	3
Total credit hours of required coursework	31

Required Coursework			
Semester	Course #	Course Title	Credit-Hours
Summer I		Elective (optional)	0 or 1
	Semester Total		0 or 1
Fall I	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
	Semester Total		9
Spring I	PHEP-602	Epidemiological Methods	3

	PHCI-629	Special Topics: Epidemiological Methods	1
	PHCI-624	Clinical Trials I	2
	PHCI-632	Ethical Conduct of Research	2
	Semester Total		8
Summer II	PHCI-601	Evaluating Health Care Literature	1
	Semester Total		1
Fall II	PHCI-625	Clinical Trials II	2
	PHCI-650	Medical Decision Analysis	2
		Elective	3 or 2
	Semester Total		7 or 6
Spring II	PHCI-699	Mentored Research	6
	Semester Total		6
Degree Total			31

Electives

There are two options for the three elective credit-hours, given in the following table. The choice of elective option and courses must be approved by the faculty advisor and program director.

<i>Elective Options</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
Summer I	PHCI-501	From Bench to Bedside	1
Fall II	PHCI-602	Health Services and Outcomes Research	2
Total			3
-- OR --			
Fall II		Elective	3
Total			3

Thesis or Professional Paper

A thesis or professional paper, based on original research conducted by the student, is required of a candidate for the degree of Master of Science in clinical investigation sciences. It is to be an original work of professional quality and a scholarly achievement that demonstrates the student's thorough understanding of research techniques in clinical research and the ability to conduct independent research.

Dual Doctor of Medicine (M.D.) and Master of Science (M.Sc.) in Clinical Investigation Sciences

Students admitted to the University of Louisville School of Medicine can enroll in the dual M.D.- M.Sc. program with only one additional year of study beyond the traditional four-year medical school curriculum. Medical students in the dual M.D.-M.Sc. program begin the M.Sc. course work after completing one year of clinical training (i.e., the third year of medical school). Dual-degree students spend the fall and spring semesters of their fourth year and the summer and fall semesters of their fifth year completing the M.Sc. course work. They complete their professional paper or thesis for the M.Sc. degree and their clinical rotations for the M.D. degree in the spring semester of their fifth year. Graduates of the program can expect to be highly competitive for residency and fellowship positions at prestigious institutions.

<i>Required Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
Fall IV	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
	Semester Total		9
Spring IV	PHEP-602	Epidemiological Methods	3
	PHCI-629	Special Topics: Epidemiological Methods	1
	PHCI-624	Clinical Trials I	2
	PHCI-632	Ethical Conduct of Research	2
		M.D. clinical elective(s) (2-10 credit-hours)	
	Semester Total		8
Fall V	PHCI-625	Clinical Trials II	2
	PHCI-601	Evaluating Health Care Literature	1

	PHCI-650	Medical Decision Analysis	2
		Elective	3
		M.D. clinical rotation(s)	
	Semester Total		8
Spring V	PHCI-699	Mentored Research	6
		M.D. clinical rotation(s)	
	Semester Total		6
Degree Total (for M.Sc.)			31

Electives

There are two options for the three elective credit-hours, given in the following table. The choice of elective option and courses must be approved by the faculty advisor and program director.

<i>Elective Options</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit-Hours</i>
Fall V	PHCI-501	From Bench to Bedside	1
	PHCI-602	Health Services and Outcomes Research	2
Total			3
-- OR --			
Fall V		Elective	3
Total			3

PHCI-699 Mentored Research

The student has the choice of when to take these credit-hours based on how he or she arranges financial assistance. Options are take all of the credit-hours in Fall V, take all in Spring V, or split the credit-hours between the two semesters. If all credit-hours are taken in Fall V, the student must register for one credit-hour of master's candidacy in Spring V.

Departmental Faculty

Guy Brock, Ph.D.
Assistant Professor

Somnath Datta, Ph.D.
Professor

Susmita Datta, Ph.D.
Associate Professor

Robert J. Esterhay, M.D.
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Maiying Kong, Ph.D.
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**Steven J. McCabe, M.D.,
M.Sc.**
Assistant Professor
John A. Myers, Ph.D.
Assistant Professor

Rudolph S. Parrish, Ph.D.
Professor
Shesh Rai, Ph.D.
Associate Professor
Dongfeng Wu, Ph.D.
Associate Professor

Graduate Certificate in Clinical Investigation Sciences

Major: CISCCCI

Degree Awarded: CERT

Unit: GH

Program Webpage: <http://louisville.edu/sphis/academics/certificate-in-clinical-investigation-sciences.html>

Program Information

Introduction

The Certificate in Clinical Investigation Sciences is offered in the School's Clinical Research, Epidemiology and Statistics Training (CREST) Program.

The Certificate in Clinical Investigation Sciences provides individuals with skills required for a career in a clinical research setting. The CREST curriculum integrates biostatistical and epidemiologic methods in a problem-based learning format with additional instruction in health services and outcomes research and social and behavioral science.

Admission

Applicants should have a minimum of 3.0 on a 4.0 scale and, in most cases, should have completed a professional doctoral degree (e.g., DMD, D.O., M.D.) or academic degree from an accredited institution or its equivalent. Other applicants with research experience may be considered (e.g., research coordinator).

The following are additional requirements for admission:

1. Graduate application (see <https://graduate.louisville.edu/apply>) submitted to the School of Interdisciplinary and Graduate Studies (SIGS).
2. Non-refundable application fee.
3. At least two letters of recommendation written within past twelve months (can be submitted with form at <https://graduate.louisville.edu/apply>)
4. Curriculum vitae/resume
5. Submission of GRE score to SIGS (no minimum score required) if applicant does not have a doctoral degree.
6. All postsecondary transcripts (may require foreign credential evaluation if not from accredited U.S. institution).

7. Statement of goals submitted to the department office (must include desired academic and degree program). Personal statement, a one-page essay that discusses the student's background and his or her long-term goals in clinical research
8. Foreign credential evaluation is required for each degree not from an accredited U.S. institution. This requirement may be waived, with approval by the dean, for degrees not considered to be relevant to evaluation of the applicant or whose transcript requires no foreign credential evaluation.
9. A baccalaureate degree or its equivalent from an accredited institution is required for admission.
10. A minimum undergraduate grade point average of 2.75 is required for unconditional admission.
11. International students for whom English is not their primary language must show English language proficiency by one of:
12. *Award of a degree from an accredited U.S. institution
13. *Official TOEFL score of 100 or higher (iBT, or Internet-Based Test), 250 or higher (CBT, or Computer-Based Test), or 600 or higher (PBT, or Paper-Based Test)
14. *Official documentation of passing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville

Curriculum

The typical progression through the Certificate curriculum is:

Program of Study (Year 1)

Complete research paper (Summer, Year 1)

Advisor/Program of Study

Upon matriculation in the program, each student will meet with the CREST Program Coordinator and develop a program of study based on the selection of the Certificate program curriculum. The program of study may be modified as the student's needs change or course availability is altered.

Certificate Requirements

Coursework

- 17 total credit-hours of required coursework
- 5 credit-hours of epidemiology coursework
- 7 credit-hours of coursework in research design and statistics
- 4 credit-hours of coursework in outcomes and ethics
- 1 credit-hours of mentored research

<i>Required Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit-</i>
Fall I	PHCI-611	Introduction to Clinical Epidemiology	2
	PHST-500	Introduction to Biostatistics	3
		Elective	2
	Semester Total		7
Spring I	PHEP-602	Epidemiological Methods	3
	PHCI 629	Special Topics: Epidemiological Methods	2
	PHCI 624	Clinical Trials I	2

	PHCI 632	Ethical Conduct of Research	2
	Semester total		8
Summer I	PHCI 601	Evaluating Health Care Literature	1
	PHCI 699	Mentored Research	1
	Semester total		2
Certificate Total			17

PHCI-699 Mentored Research

Each student in the Certificate Program is required to prepare a research paper as part of the mentored research course. The research paper can be a literature review or a research project. Data collection is not required. The paper is to be submitted in completed form to the program coordinator at least two weeks before the end of the semester in which the candidate expects to graduate.

Electives

<i>Required Coursework</i>		
<i>Semester</i>	<i>Course Title</i>	<i>Credit-Hours</i>
PHCI 631	Social and Behavioral Science in Health Care	2
PHCI 610	New Drug and Device Development	2
PHCI 602	Health Services and Outcomes Research	2

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Professor

Shesh Rai, Ph.D.

Associate Professor

Dongfeng Wu, Ph.D.

Associate Professor

Master of Public Health

Major: PH MPH

Degree Awarded: MPH

Unit: GH

Program Webpage: <http://louisville.edu/sphis/academics/master-of-public-health.html>

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 promotion and behavior, 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.

The dual M.D.-MPH degree program is a five-year program. In addition, a Dual Bachelor-MPH degree is available.

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 candidate's primary language is not English, one of the following:

- Test of English as a Foreign Language (TOEFL) exam with a minimum score of 250 (after conversion for test type)
- Passing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville
- Degree from an accredited U.S. institution (requires provisional admission with evaluation of English language competency and potential requirement to pass the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville)

An application is considered once all of the following requirements have been received:

1. Graduate application and payment of application fee.
2. Three letters of recommendation written within the last twelve months.
3. Official transcripts of all degrees.

4. Resume or curriculum vitae.
5. One-page personal statement written by the application that is a clear, substantive description of his or her goals in public health, noting any professional or research experience.
6. 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-U.S. institutions. Please contact the MPH program prior to completing this requirement.

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.

<i>Concentration</i>	<i>Department</i>
Biostatistics	Bioinformatics and Biostatistics
Environmental and Occupational Health	Environmental and Occupational Health Sciences
Epidemiology	Epidemiology and Population Health
Health Management	Health Management and Systems Sciences
Health Promotion and Behavior	Health Promotion and Behavioral Sciences

Requirements for acceptance to the concentrations in the MPH program are:

<i>Concentration</i>	<i>Concentration Acceptance Requirements</i>
All	Student in good standing in MPH program Successful completion of core courses
Biostatistics	Grade from PHST-500 Introduction to Biostatistics

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.
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Concentration

Epidemiology

Concentration Acceptance Requirements

Grade from PHEP-501 Introduction to Epidemiology

Grade from PHST-500 Introduction to Biostatistics

Exceptions may be granted.

Health management

No additional requirements.

Health promotion and behavior

No additional requirements.

Individual Track Option

A student may complete an individual track in place of completing a concentration. The individual track option is designed for students who meet the requirements and wish to study areas of public health that are not directly addressed by one of the available concentrations or who are enrolled in a dual master's degree program with the MPH. A student's program of study in an individual track is established as part of admission to the individual track option.

Requirements for admission to the individual track option are the following:

GPA of 3.25 or higher in required first-year MPH program courses

One of:

1. Enrollment in a dual master's degree program with the MPH
2. Personal statement of purpose and reasons for an individual track
3. Program director approval of a faculty member to serve as the student's advisor for the track application process and, if admitted, for the track and practicum
4. An acceptable program of study for an individual track recommended by the student's advisor
5. Competitive selection of student's application using rankings of the above requirements among all applicants for an individual track at that time

The program may limit the number of admissions to the individual track option in any one year based on the total number of MPH students and dual degree students. In addition the program director may seek review and advice from the MPH Advisory Committee on some or all of the applications. If a student is not admitted to the individual track option, he or she must choose and be admitted to an existing concentration.

Curriculum

The curriculum consists of courses in four areas: core (6 courses), concentration or individual track (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 either identifies his or her area of concentration and is admitted to the department offering the concentration or applies and is admitted to the individual track option. Once admitted into the concentration or individual track option, the student takes concentration courses or course in his or her individual track program of study, completes the practicum experience, and takes the remaining integrating experience course, which includes a comprehensive written examination focused on the program'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 requested to meet at least twice each semester with his or her advisor. 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 or the individual track option.

After admission into a concentration, each student is assigned a faculty advisor who serves as academic practicum advisor, academic mentor, and counselor on career and employment opportunities, professional development, and opportunities beyond graduate school. The faculty advisor for a student in the individual track option is assigned as part of admission to the option.

Program of Study

The program of study is predetermined for courses in core, practicum experience, and integrating experience areas and in the majority of the concentration area. Concentrations have one or two elective courses. The program of study for an individual track is established as part of admission to the individual track option.

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

Minimum score of 80% on either of two tries of a comprehensive examination on MPH competencies (part of PHPH-697 Integrating Learning and Experience in Public Health) or successful completion of remediation project (part of PHPH-601)

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 or individual track coursework

<i>Required Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title (and Area, as needed)</i>	<i>Credit Hours</i>
Fall I	PHMS-501	Introduction to Public Health Practice and Administration (core)	3
	PHST-500	Introduction to Biostatistics (core)	3
	PHEP-501	Introduction to Epidemiology (core)	3

	PHPH-696	Issues in Public Health (integrating experience)	2
	Semester Total		11
Spring I	PHEH-500	Introduction to Environmental Health Sciences (core)	3
	PHPB-501	Introduction to Health Behavior (core)	3
	PHMS-618	Introduction to Public Health Informatics (core)	3
	PHPH-614	Critical Thinking and Program Evaluation (integrating experience)	3
	Semester Total		12

Required Coursework			
Semester	Course #	Course Title (and Area, as needed)	Credit hours
Fall II		Concentration or individual track course	3
		Concentration or individual track course	3
		Concentration or individual track course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring II		Concentration or individual track course	3
		Concentration or individual track course	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-697	Integrating Learning and Experience in Public Health	3
	Semester Total		12
Degree Total			47

Biostatistics Concentration

Coursework

<i>Biostatistics Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit hours</i>

<i>Biostatistics Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit hours</i>
Fall II	PHST-680	Biostatistical Methods I	3
	PHST-620	Introduction to Statistical Computing	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring II	PHST-640	Statistical Methods for Research Design in Health Studies	3
	PHST-681	Biostatistical Methods II	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-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 three-credit hour, graduate-level course in the University with approval of the student's faculty advisor and the program director.

Environmental and Occupational Health Concentration

Coursework

<i>Environmental and Occupational Health Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall II	PHEH-610	Occupational Health and Safety	3
	PHEH-651	Advanced Environmental Health Sciences	3
	PHPH-630	Geographic Information Systems in Public Health	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12

<i>Environmental and Occupational Health Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Spring II	PHEH-620	Global Issues on Environmental and Occupational Health	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-697	Integrating Learning and Experience in Public Health	3
	Semester Total		12
Concentration Total			24

Electives

The elective course in the environmental and occupational health concentration may be selected from any three-credit hour, graduate-level course in the University with approval of the student's faculty advisor and the program director.

Epidemiology Concentration

Coursework

<i>Epidemiology Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall II	PHEP-602	Epidemiologic Methods	3
	PHEP-616	Disease Surveillance and Health Statistics	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring II	PHEP-617	Field Epidemiology	3
	PHEP-655	Emerging Issues in Epidemiology	3
	PHPH-679	Public Health Practicum Experience	3

<i>Epidemiology Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
	PHPH-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 three-credit hour, graduate-level course in the University with approval of the student's faculty advisor and the program director

Health Management Concentration

Coursework

Health Management Concentration Coursework			
Semester	Course #	Course Title	Credit Hours
Fall II	PHMS-603	Legal and Bioethical Aspects of Public Health	3
	PHMS-615	Introduction to Health Systems	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring II	PHMS-605	Governance and Management of Healthcare Organizations	3
	PHMS-607	Managing Healthy Communities	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-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 three-credit hour, graduate-level course in the University with approval of the student's faculty advisor and the program director.

Health Promotion and Behavior Concentration

Coursework

Health Promotion and Behavior Concentration Coursework			
Semester	Course #	Course Title	Credit Hours
Fall II	PHPB-604	Health Decision and Risk Analysis	3
	PHPB-615	Public Health Program Evaluation	3
	or	or	
	PHPB-650-04	Advanced Topics in Health Promotion and Behavioral Sciences: Health Promotion Interventions	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring II	PHMS-607	Managing Healthy Communities	3
	PHPB-612	Health Communication Campaigns	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-697	Integrating Learning and Experience in Public Health	3
		Semester Total	12
Concentration Total			24

Electives

The elective course in the health promotion and behavior concentration may be selected from any three-credit hour, graduate-level course in the University with approval of the student's faculty advisor and the program director.

Individual Track Option

Coursework

Individual Track Option Coursework			
Semester	Course #	Course Title	Credit Hours
Fall II		Individual track course	3
		Individual track course	3
		Individual track course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring II		Individual track course	3
		Individual track course	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-697	Integrating Learning and Experience in Public Health	3
	Semester Total		12
Concentration Total			24

The five individual track courses are determined as part of admission to the individual track option and may be selected from any three-credit hour, graduate-level course in the University with approval of the student's faculty advisor and the program director.

MD-MPH Program

The dual M.D.-MPH degree program is a five year program.

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.

<i>Concentration</i>	<i>Department</i>
Biostatistics	Bioinformatics and Biostatistics
Environmental and Occupational Health	Environmental and Occupational Health Sciences

Epidemiology	Epidemiology and Population Health
Health Management	Health Management and Systems Sciences
Health Promotion and Behavior	Health Promotion and Behavioral Sciences

Requirements for acceptance to the concentrations in the MPH program are:

<i>Concentration</i>	<i>Concentration Acceptance Requirements</i>
All	<input type="checkbox"/> Student in good standing in MPH program <input type="checkbox"/> Successful completion of core courses
Biostatistics	<input type="checkbox"/> Grade from PHST-500 Introduction to Biostatistics <input type="checkbox"/> Other evidence of analytic ability, for example: <ul style="list-style-type: none"> - 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 <input type="checkbox"/> Exceptions may be granted.
Environmental and occupational health	No additional requirements.
Epidemiology	<input type="checkbox"/> Grade from PHEH-501 Introduction to Epidemiology <input type="checkbox"/> Grade from PHST-500 Introduction to Biostatistics <input type="checkbox"/> Exceptions may be granted.
Health management	No additional requirements.
Health promotion and behavior	No additional requirements.

Individual Track Option

A student may complete an individual track in place of completing a concentration. The individual track option is designed for students who meet the requirements and wish to study areas of public health that are not directly addressed by one of the available concentrations or who are enrolled in a dual master's degree program with the MPH. A student's program of study in an individual track is established as part of admission to the individual track option.

Requirements for admission to the individual track option are the following:

- GPA of 3.25 or higher in required first-year MPH program courses
- One of:
 - Enrollment in a dual master's degree program with the MPH
 - Personal statement of purpose and reasons for an individual track
 - Program director approval of a faculty member to serve as the student's advisor for the track application process and, if admitted, for the track and practicum
 - An acceptable program of study for an individual track recommended by the student's advisor
 - Competitive selection of student's application using rankings of the above requirements among all applicants for an individual track at that time

The program may limit the number of admissions to the individual track option in any one year based on the total number of MPH students and dual degree students. In addition the program director may seek review and advice from the MPH Advisory Committee on some or all of the applications. If a student is not admitted to the individual track option, he or she must choose and be admitted to an existing concentration.

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.

M.D.-MPH students are expected to complete the dual degree program in five years.

M.D.1-MPH Schedule Option

<i>M.D.1-MPH Program Schedule by Semester</i>		
<i>Year 1</i>	<i>Summer</i>	May – early Aug: open
		early Aug: medical school orientation
	<i>Fall</i>	Medical school first year
	<i>Spring</i>	
<i>Year 2</i>	<i>Summer</i>	mid-May – late-Jun: MPH first semester
		late-Jun – mid-Aug: open
	<i>Fall</i>	Medical school second year
	<i>Spring</i>	

Year 3	Summer	M.D. Part 1 Board Exams (done by Jun 15)
		late-Jun – early-Aug: MPH second semester
	Fall	MPH third and fourth semesters
	Spring	
Year 4	Summer	May – late Jun: open/refresh clinical skills
		late Jun: Medical school third year begins
	Fall	Medical school third year
	Spring	
Year 5	Summer	Medical school fourth year
	Fall	
	Spring	

M.D.1-MPH Program Schedule by Month												
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Yr 1	open				Medical school first year							
Yr 2		MPH 1 st	open	Medical school second year								
Yr 3	Boards, Pt 1		MPH 2 nd	MPH third semester					MPH fourth semester			
Yr 4	refresher		Medical school third year									
Yr 5			Medical school fourth year									

M.D.1-MPH students who successfully complete the first three years are eligible to receive their MPH degree in May of their third year.

The content of the first two semesters of the MPH program is covered in two 6½-week sessions in successive summers. These sessions are not limited to M.D.-MPH students.

M.D.3-MPH Schedule Option

<i>M.D.3-MPH Program Schedule by Semester</i>		
<i>Year 1</i>	<i>Summer</i>	May – early Aug: open
		early Aug: medical school orientation
	<i>Fall</i>	Medical school first year
	<i>Spring</i>	
<i>Year 2</i>	<i>Summer</i>	mid-May – mid-Aug: open
	<i>Fall</i>	Medical school second year
	<i>Spring</i>	
<i>Year 3</i>	<i>Summer</i>	M.D. Part 1 Board Exams (done by Jun 15)
		Late Jun – mid-Aug: open
	<i>Fall</i>	Medical school third year (less last 6-week rotation, either family medicine or psychiatry)
	<i>Spring</i>	
<i>Year 4</i>	<i>Summer</i>	mid-May – late Jun: MPH first semester
		late Jun – early Aug: MPH second semester
	<i>Fall</i>	MPH third and fourth semesters
	<i>Spring</i>	
<i>Year 5</i>	<i>Summer</i>	May – late Jun: last 6-week rotation postponed from medical school third year
		Medical school fourth year
	<i>Fall</i>	
	<i>Spring</i>	

<i>M.D.3-MPH Program Schedule by Month</i>												
	<i>May</i>	<i>Jun</i>	<i>Jul</i>	<i>Aug</i>	<i>Sep</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Jan</i>	<i>Feb</i>	<i>Mar</i>	<i>Apr</i>
<i>Yr</i>	open				Medical school first year							

<i>1</i>					
<i>Yr 2</i>		open			Medical school second year
<i>Yr 3</i>		Boards, Pt 1	open		Medical school third year
<i>Yr 4</i>		MPH 1 st	MPH 2 nd	MPH third semester	MPH fourth semester
<i>Yr 5</i>		MD 3 rd yr			Medical school fourth year

M.D.3-MPH students who successfully complete the first four years are eligible to receive their MPH degree in May of their fourth year.

The content of the first two semesters of the MPH program is covered in two 6½-week sessions in a single summer. These sessions are not limited to M.D.-MPH students.

M.D.-MPH Summer Schedules

MPH summer schedules by week															
	May		Jun					Jul					Aug		
Wk	1	2	3	4	5	6	7	8	9	10	11	12	13		
1 st sem	C	C	C	C	C	C	F								
2 nd sem								C	C	C	C	C	C	C	F

Key: C = Classes, F= Finals

<i>MPH first semester summer schedules by day</i>					
	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>
<i>Morning[†]</i>	Issues 696	PHI 618	Issues 696	PHI 618	varies [†]
<i>Afternoon[†]</i>	HMgmt 501		HMgmt 501		varies [†]

Courses (11 credit hours):

HMgmt 501: PHMS-501 Introduction to Public Health Practice and Administration (3)

Biostat 500*: PHST-500 Introduction to Biostatistics (3)

PHI 618: PHMS-618 Introduction to Public Health Informatics (3)

Issues 696: PHPH-696 Issues in Public Health (2)

<i>MPH second semester summer schedules by day</i>					
	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>
<i>Morning</i>[†]	CTPE 614	HBehav 501	HBehav 614	HBehav 501	varies [†]
<i>Afternoon</i>[†]	EOH 500		EOH 500		varies [†]

Courses (12 credit hours):

Epi 501*: PHEP-501 Introduction to Epidemiology (3 credit hours)

HBehav 501: PHPB-501 Introduction to Health Behavior (3 credit hours)

EOH 500: PHEH-500 Introduction to Environmental Health Sciences (3)

CTPE 614: PHPH-614 Critical Thinking and Program Evaluation (3)

* Course is online.

[†] Days and times for courses are examples. Each course has two classes (or online equivalent) per week except two weeks with three classes (14 classes over 6 weeks). Three of the six Fridays have classes in the morning and afternoon.

Faculty Advisor

On admission to the M.D.-MPH program, each student is assigned an MPH faculty advisor and is required to meet at least twice each semester with his or her advisor. 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 an MPH faculty advisor from the concentration department who serves as academic practicum advisor, academic mentor, 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
- Minimum score of 80% on either of two tries of a comprehensive examination on MPH competencies (part of PHPH-697 Integrating Learning and Experience in Public Health) or successful completion of remediation project (part of PHPH-601)

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			
Semester	Course #	Course Title (and Area, as needed)	Credit Hours
I (summer session)	PHEP-501	Introduction to Epidemiology (core)	3
	PHST-500	Introduction to Biostatistics (core)	3
	PHMS-618	Introduction to Public Health Informatics (core)	3
	PHPH-696	Issues in Public Health (integrating experience)	2
	Semester Total		11
II (summer session)	PHEH-500	Introduction to Environmental Health Sciences (core)	3
	PHPB-501	Introduction to Health Behavior (core)	3
	PHEP-501	Introduction to Epidemiology (core)	3
	PHPH-614	Critical Thinking and Program Evaluation (integrating experience)	3
	Semester Total		12
III		Concentration course	3
		Concentration course	3
		Concentration course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
IV		Concentration course	3
		Concentration course	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-697	Integrating Learning and Experience in Public Health	3
	Semester Total		12

Required Coursework			
Semester	Course #	Course Title (and Area, as needed)	Credit Hours
MPH Degree Total			47

Biostatistics Concentration

Coursework

<i>Biostatistics Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
III	PHCI-624	Clinical Trials I	2
	PHST-726	Clinical Trials Statistics Laboratory	1
	PHST-620	Introduction to Statistical Computing	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
IV	PHST-640	Statistical Methods for Research Design in Health Studies	3
	PHST-681	Biostatistical Methods II	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-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 program director.

Environmental and Occupational Health Concentration

Coursework

<i>Environmental and Occupational Health Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
III	PHEH-610	Occupational Health and Safety	3
	PHEH-651	Advanced Environmental Health Sciences	3
	PHPH-630	Geographic Information Systems in Public Health	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
IV	PHEH-620	Global Issues on Environmental and Occupational Health	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-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 program director.

Epidemiology Concentration

Coursework

<i>Epidemiology Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
III	PHEP-602	Epidemiologic Methods	3
	PHEP-616	Disease Surveillance and Health Statistics	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3

<i>Epidemiology Concentration Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
	Semester Total		12
IV	PHEP-617	Field Epidemiology	3
	PHEP-655	Emerging Issues in Epidemiology	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-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 program director.

Health Management Concentration

Coursework

Health Management Concentration Coursework			
Semester	Course #	Course Title	Credit Hours
III	PHMS-603	Legal and Bioethical Aspects of Public Health	3
	PHMS-615	Introduction to Health Systems	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
IV	PHMS-605	Governance and Management of Healthcare Organizations	3
	PHMS-607	Managing Healthy Communities	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-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 program director.

Health Promotion and Behavior Concentration

Coursework

Health Promotion and Behavior Concentration Coursework			
Semester	Course #	Course Title	Credit Hours
III	PHPB-604	Health Decision and Risk Analysis	3
	PHPB-615	Public Health Program Evaluation	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
IV	PHMS-607	Managing Healthy Communities	3
	PHPB-612	Health Communication Campaigns	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-697	Integrating Learning and Experience in Public Health	3
	Semester Total		12
Concentration Total			24

Electives

The elective course in the health promotion and behavior 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 program director.

Individual Track Option

Coursework

Individual Track Option Coursework			
Semester	Course #	Course Title	Credit Hours
Fall II		Individual track course	3
		Individual track course	3
		Individual track course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring II		Individual track course	3
		Individual track course	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-697	Integrating Learning and Experience in Public Health	3
	Semester Total		12
Concentration Total			24

The five individual track courses are determined as part of admission to the individual track option and may be selected from any three-credit hour, graduate-level course in the University with approval of the student's faculty advisor and the program director.

Dual Bachelor-MPH

Introduction

The dual bachelor-MPH degree program is a five-year program. The first four years are undergraduate studies, including five core public health courses. An undergraduate student in the bachelor-MPH program is already or will soon become enrolled in an undergraduate program culminating in either the bachelor of science (B.S.) or bachelor of arts (B.A.) degree in the student's chosen major field and academic unit

The fifth year, including the summer following graduation with a bachelor degree, is graduate studies in public health, leading to the master of public health (MPH) degree. The master of public health (MPH) degree program is a school-based program designed to graduate students with core competencies in public health and specialized competencies in one of the following concentrations: biostatistics, environmental and occupational health, epidemiology, health management, and health promotion and behavior.

Graduates of the bachelor-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.

Admission

Admission criteria for the undergraduate component of the bachelor-MPH program are:

- Undergraduate student in good standing in the University of Louisville
- Completion of at least 45 credit hours of undergraduate studies
- GPA of 3.3 or higher
- Permission of the director of the undergraduate program (“major field”) in which the student is or becomes enrolled.
- The major field is not required to be related to the health sciences.

Application requirements for the undergraduate component are:

- Completed program application
- The application includes name, contact information, and grant of permission for the school to access the applicant’s university records.

To continue in the undergraduate component, a student must:

- Maintain student status in the university
- Earn a B- or higher in each of the five required public health courses

Criteria for admission to the MPH component are:

- Bachelor degree from the University of Louisville
- GPA of 3.25 or higher for unconditional admission, or 3.0 to 3.2499 for conditional admission
- Grade average of 3.0 in the five required public health courses with no grade below B-

Application requirements for the MPH component are:

Completed graduate application and \$50 application fee

MPH 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. Bachelor-MPH students select their concentrations soon after admission to the MPH component of the program following graduation with their bachelor degrees.

<i>MPH Concentration</i>	<i>Department</i>
Biostatistics	Bioinformatics and Biostatistics
Environmental and Occupational Health	Environmental and Occupational Health Sciences
Epidemiology	Epidemiology and Population Health
Health Management	Health Management and Systems Sciences

Health Promotion and Behavior	Health Promotion and Behavioral Sciences
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Requirements for acceptance to the MPH concentrations in the MPH program are:

<i>MPH Concentration</i>	<i>Acceptance Requirements</i>
All	<input type="checkbox"/> Student in good standing in MPH program <input type="checkbox"/> Successful completion of core courses
Biostatistics	<input type="checkbox"/> Grade from PHST-500 Introduction to Biostatistics <input type="checkbox"/> Other evidence of analytic ability, for example: <ul style="list-style-type: none"> - 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 <input type="checkbox"/> Exceptions may be granted.
Environmental and occupational health	No additional requirements.
Epidemiology	<input type="checkbox"/> Grade from PHEH-501 Introduction to Epidemiology <input type="checkbox"/> Grade from PHST-500 Introduction to Biostatistics <input type="checkbox"/> Exceptions may be granted.
Health management	No additional requirements.
Health promotion and behavior	No additional requirements.

Individual Track Option

A student may complete an individual track in place of completing a concentration. The individual track option is designed for students who meet the requirements and wish to study areas of public health that are not directly addressed by one of the available concentrations or who are enrolled in a dual master's degree program with the MPH. A student's program of study in an individual track is established as part of admission to the individual track option.

Requirements for admission to the individual track option are the following:

- GPA of 3.25 or higher in required first-year MPH program courses
- One of:
- Enrollment in a dual master's degree program with the MPH

- Personal statement of purpose and reasons for an individual track
- Program director approval of a faculty member to serve as the student's advisor for the track application process and, if admitted, for the track and practicum
- An acceptable program of study for an individual track recommended by the student's advisor
- Competitive selection of student's application using rankings of the above requirements among all applicants for an individual track at that time

The program may limit the number of admissions to the individual track option in any one year based on the total number of MPH students and dual degree students. In addition the program director may seek review and advice from the MPH Advisory Committee on some or all of the applications. If a student is not admitted to the individual track option, he or she must choose and be admitted to an existing concentration.

MPH 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 courses, 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.

Faculty Advisor

On admission to the bachelor-MPH program, the student is assigned an program advisor and is required to meet at least twice each semester with his or her advisor. Advisors are available to address questions about program requirements and extra-curricular opportunities in public health.

On admission to the MPH component, each student is assigned an MPH faculty advisor and is required to meet at least twice each semester with his or her advisor. 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 an MPH faculty advisor from the concentration department who serves as academic mentor and counselor on career and employment opportunities, professional development, and opportunities beyond graduate school.

MPH Program of Study

The MPH program of study is predetermined for courses in core, practicum experience, and integrating experience areas and the majority of the concentration area. Concentrations may have one or two elective courses.

MPH 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
- Minimum score of 80% on either of two tries of a comprehensive examination on MPH competencies (part of PHPH-697 Integrating Learning and Experience in Public Health) or successful completion of remediation project (part of PHPH-601)

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			
Timing	Course #	Course Title (and Area, as needed)	Credit Hours
Under-graduate (Yrs 3-4)	PHEP-501	Introduction to Epidemiology (core)	3
	PHST-500	Introduction to Biostatistics (core)	3
	PHMS-501	Introduction to Public Health Practice and Administration (core)	3
	PHEH-500	Introduction to Environmental Health Sciences (core)	3
	PHPB-501	Introduction to Health Behavior (core)	3
	Undergraduate subtotal		15
Summer (Yr 5)	PHPH-696	Issues in Public Health (integrating experience)	2
	PHMS-618	Introduction to Public Health Informatics (core)	3
	PHPB-614	Critical Thinking and Program Evaluation (integrating experience)	3
	Summer subtotal		8
Fall (Yr 5)		Concentration course	3
		Concentration course	3
		Concentration course	3
	PHPH-679	Practicum Experience	3
	Fall subtotal		12
Spring (Yr 5)		Concentration course	3
		Concentration course	3
	PHPH-679	Practicum Experience	3

Required Coursework			
Timing	Course #	Course Title (and Area, as needed)	Credit Hours
	PHPH-697	Integrating Learning and Experience in Public Health	3
	Spring subtotal		12
MPH Degree Total			47

Biostatistics Concentration

Coursework

<i>Biostatistics Concentration Coursework</i>			
<i>Timing</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall (Yr 5)	PHCI-624	Clinical Trials I	2
	PHST-726	Clinical Trials Statistics Laboratory	1
	PHST-620	Introduction to Statistical Computing	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring (Yr 5)	PHST-640	Statistical Methods for Research Design in Health Studies	3
	PHST-681	Biostatistical Methods II	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-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 program director.

Environmental and Occupational Health Concentration

Coursework

<i>Environmental and Occupational Health Concentration Coursework</i>			
<i>Timing</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall (Yr 5)	PHEH-610	Occupational Health and Safety	3
	PHEH-651	Advanced Environmental Health Sciences	3
	PHPH-630	Geographic Information Systems in Public Health	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring (Yr 5)	PHEH-620	Global Issues on Environmental and Occupational Health	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-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 program director.

Epidemiology Concentration

Coursework

<i>Epidemiology Concentration Coursework</i>			
<i>Timing</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall (Yr 5)	PHEP-602	Epidemiologic Methods	3
	PHEP-616	Disease Surveillance and Health Statistics	3
		Concentration elective course	3

<i>Epidemiology Concentration Coursework</i>			
<i>Timing</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring (Yr 5)	PHEP-617	Field Epidemiology	3
	PHEP-655	Emerging Issues in Epidemiology	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-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 program director.

Health Management Concentration

Coursework

<i>Health Management Concentration Coursework</i>			
<i>Timing</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall (Yr 5)	PHMS-603	Legal and Bioethical Aspects of Public Health	3
	PHMS-615	Introduction to Health Systems	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring (Yr 5)	PHMS-605	Governance and Management of Healthcare Organizations	3
	PHMS-607	Managing Healthy Communities	3
	PHPH-679	Public Health Practicum Experience	3

Health Management Concentration Coursework			
Timing	Course #	Course Title	Credit Hours
	PHPH-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 program director.

Health Promotion and Behavior Concentration

Coursework

<i>Health Promotion and Behavior Concentration Coursework</i>			
<i>Timing</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall (Yr 5)	PHPB-604	Health Decision and Risk Analysis	3
	PHPB-615	Public Health Program Evaluation	3
		Concentration elective course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring (Yr 5)	PHMS-607	Managing Healthy Communities	3
	PHPB-612	Health Communication Campaigns	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-697	Integrating Learning and Experience in Public Health	3
	Semester Total		12
Concentration Total			24

Electives

The elective course in the health promotion and behavior 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 program director.

Individual Track Option

Coursework

<i>Individual Track Option Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall II		Individual track course	3
		Individual track course	3
		Individual track course	3
	PHPH-679	Public Health Practicum Experience	3
	Semester Total		12
Spring II		Individual track course	3
		Individual track course	3
	PHPH-679	Public Health Practicum Experience	3
	PHPH-697	Integrating Learning and Experience in Public Health	3
	Semester Total		12
Concentration Total			24

The five individual track courses are determined as part of admission to the individual track option and may be selected from any three-credit hour, graduate-level course in the University with approval of the student's faculty advisor and the program director.

Departmental Faculty

Robert Jacobs, Ph.D.

Program Director

Guy Brock, Ph.D

Assistant Professor

Somnath Datta, Ph.D.

Professor

Susmita Datta, Ph.D.

Associate Professor

Robert J. Esterhay, M.D.

Acting Chair

L. Jane Goldsmith, Ph.D.

Associate Professor

Seongho Kim, Ph.D.

Assistant Professor

Maiying Kong, Ph.D.

Assistant Professor

Steven J. McCabe, M.D.,

M.Sc.

Assistant Professor

John A. Myers, Ph.D.

Assistant Professor

Rudolph S. Parrish, Ph.D.

Professor

Shesh Rai, Ph.D.

Associate Professor

Dongfeng Wu, Ph.D.

Associate Professor

Master of Engineering in Bioengineering

Major: BE

Degree Awarded: MEng.

Unit: SP

Program Webpage: <http://www.louisville.edu/speed/bioengineering/>

Program Information

General Information

The Bachelor of Science in Bioengineering degree will provide a student with the basis to be able to complete the Master of Engineering (M.Eng.) in Bioengineering degree. The Master of Engineering degree is accredited by the Engineering Accreditation Commission of ABET, Inc.

Since the M.Eng. is accredited as part of a five-year program with one-year of co-op experience, it is not typically well-suited for students who have not matriculated through the preceding four years at Speed School. Therefore, almost all students who earn an undergraduate degree at a school or university other than the University of Louisville pursue the M.S. degree instead of the M.Eng. degree.

Master of Engineering Program Educational Objectives

The purpose of the five-year Master of Engineering Program is to bring together the faculty, staff, and capital resources to meet the following program educational objectives:

1. Educate and train MENG graduates with the advanced level academic background and practical engineering experience necessary to function as bioengineering professionals in a modern, ever-changing world
2. Produce graduates who demonstrate competence by being selected for employment by industrial, academic, or government entities or pursue further professional/graduate studies
3. Provide our graduates with the foundation for the development of a successful career and with the understanding that life-long learning is necessary to this development
4. Ensure that our graduates understand the broad social, ethical, and professional issues of contemporary engineering practice

Master of Engineering Student Outcomes

In order to achieve these objectives, the Master of Engineering has the following outcomes set for its graduates. Graduates will demonstrate:

1. an ability to apply knowledge of mathematics, life sciences, sciences and engineering to bioengineering problems
2. an ability to design and conduct experiments, as well as to analyze and interpret data
3. an ability to design a system, component, or process to meet desired needs
4. an ability to function on multi-disciplinary teams
5. an ability to identify, formulate, and solve bioengineering problems
6. an understanding of professional and ethical responsibility
7. an ability to communicate effectively, orally and in writing
8. the broad education necessary to understand the impact of bioengineering solutions in a global, economic, environmental, and societal context
9. a recognition of the need for, and an ability to engage in life-long learning

10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for bioengineering practice

Admission Standards

Students desiring to pursue the Master of Engineering degree must formally apply for admission to Graduate Studies in the School of Engineering. The application form is available from Speed School Academic Affairs and should be returned to the same office. It is also available online at <http://louisville.edu/speed/academics/forms>. The application should be submitted prior to completion of undergraduate Departmental Studies, typically not earlier than one semester before completion of baccalaureate requirements.

The requirements for admission or readmission to Graduate Studies – Master of Engineering are:

Completion of a program of studies equivalent to that obtained through Engineering Fundamentals and Departmental Studies for the field of specialization in which the student desires to receive the Master of Engineering degree;

Recommendation by the faculty and chair of the student's department for admission or readmission to Graduate Studies;

Cumulative baccalaureate grade point average of 2.75 for all prior academic course work completed in the program. However, those students with cumulative baccalaureate grade-point averages from 2.50 to 2.75 may be admitted upon petition and approval of the chair and faculty of the department.

A student becomes a candidate for the Master of Engineering degree upon admission to Graduate Studies and initial registration as a graduate student.

Residency

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. A candidate for the Master of Engineering degree who does not register for credit hours must maintain active registration by paying a fee each semester for M.Eng. residency until the degree is awarded (i.e., the candidate must maintain continuous registration, including summer terms, in Graduate Studies). Failure to pay the M. Eng residency fee will be cause to cancel a student's candidacy. Students who are not enrolled for a period of more than 12 months will be considered to have withdrawn from the program. In order to be restored to candidacy, the student must have the recommendation of the department chair, receive the approval of the Associate Dean and pay the fee for each of the semesters during which the candidacy was void.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

The minimum grade point average requirement for good standing and satisfaction of degree requirements is 2.75 for all academic work completed while in graduate studies.

Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms may be considered for dismissal from the program.

Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.

Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.

Eligibility for Master of Engineering degree graduate honors is based upon the grade point average for the five year degree program and not just courses taken while in Graduate Studies. Speed School has the following distinctions:

Degree with Honors: 3.25
 Degree with High Honors: 3.50
 Degree with Highest Honors: 3.75

Degree Requirements

The following degree requirements are mandatory of all Master of Engineering candidates:

The Program of Study must be completed with a 2.75 GPA or better for all academic work attempted in Graduate Studies.

Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.

Students following the Thesis Option must follow the Procedures and Standards for Master of Engineering Theses". The guidelines are located online at <http://louisville.edu/speed/academics/policies/MEngThesisGuidelines.pdf>.

The total requirements must be completed within six years after admission into Graduate Studies. The time limit imposed by the rule may be extended in individual cases upon recommendation of the department chair and approval of the Associate Dean for Academics.

Curriculum

Graduate Studies – M.Eng.

This Program of Study was approved for students entering Graduate Studies in the Summer 2011 - Spring 2012 catalog year. The Master of Engineering in Bioengineering degree requires the following over and above the Bachelor of Science in Bioengineering Degree.

Courses		Hours
BE 621: Bioinstrumentation		4
BE 654: Advanced Physiology for Engineers		3
IE 563: Experimental Design in Engineering		3
BE Electives ^{1,2}		9
Technical Electives ^{1,3}		6
Thesis Option: BE 697: MEng Thesis ⁴	Non-Thesis Option: BE 691: Biomedical Rotation Technical Elective ^{1,3}	6

Total	31 ⁵
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¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level.

² BE Electives must be chosen from the following approved list:
BE 505, 550, 593, 611, 612, 640, 653, 658, 680, 681, 683, 693

³ The Technical Electives must be chosen from the following approved list. Only three credits from EM and six credits from BIOC or MATH may be used towards degree requirements.

BIOC 545, 547, 602

CECS 535, 619, 628, 632, 641, 643, 660

ECE 520, 521, 530, 533, 543, 544, 618, 620, 635, 641, 643, 655, 675

EM 525, 582, 613, 628, 661

IE 580, 581, 631, 681, 683

MATH 501, 502

ME 512, 548, 555, 565, 606, 612, 638, 644, 650, 651, 652, 653, 654, 656, 657, 658, 659

⁴ For the thesis option, a student is required to select both an approved M.Eng. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in BE 697.

⁵ Candidates for the Master of Engineering degree must have a minimum final cumulative grade point average of 2.75 for all academic course work attempted in Graduate Studies. A maximum of six hours of graduate level courses taken as an undergraduate may be used to satisfy M.Eng. degree requirements; these courses should not have been used to also satisfy B.S. degree requirements.

Total	Hours
Bachelor of Science in Bioengineering	136
Graduate Studies	31
Master of Engineering in Bioengineering	167

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an *Ad hoc* appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

El-Baz, Ayman S.

Ph.D., University of Louisville

Assistant Professor of Bioengineering

Friebos, Hermann B.

Ph.D., University of California-Irvine

Assistant Professor of Bioengineering

Giridharan, Guruprasad A.

Ph.D., University of Utah

Assistant Professor of Bioengineering

Gobin, Andrea S.

Ph.D., Rice University

Assistant Professor of Bioengineering

Gobin, Andre M.

Ph.D., Rice University

Assistant Professor of Bioengineering

Keynton, Robert S.

Ph.D., University of Akron

Professor of Bioengineering
Chair of Bioengineering

Koenig, Steven C.

Ph.D., The University of Texas at Austin

Professor of Bioengineering

Sethu, Palaniappan

Ph.D., University of Michigan

Assistant Professor of Bioengineering

Master of Engineering in Chemical Engineering

Major: CHE

Degree Awarded: MEng.

Unit: GS

Program Webpage: <http://www.louisville.edu/speed/chemical>

Program Information

General Information

The Bachelor of Science in Chemical Engineering degree will provide a student with the basis to be able to complete the Master of Engineering (M.Eng.) in Chemical Engineering degree. The Master of Engineering degree is accredited by the Engineering Accreditation Commission of ABET, Inc.

Since the M.Eng. is accredited as part of a five-year program with one-year of co-op experience, it is not typically well-suited for students who have not matriculated through the preceding four years at Speed School. Therefore, almost all students who earn an undergraduate degree at a school or university other than the University of Louisville pursue the M.S. degree instead of the M.Eng. degree.

Master of Engineering Program Educational Objectives

The purpose of the five-year Master of Engineering Program is to bring together the faculty, staff, and capital resources to meet the following program educational objectives:

1. Educate and train graduates with the academic background and practical experiences necessary to function as chemical engineering professionals in a modern, ever-changing world in accordance with the mission of the department
2. Produce graduates who demonstrate competence by being selected for employment by high level industrial, academic and government entities
3. Provide our graduates with the foundation for the development of a successful career and with the understanding that life-long learning is necessary to this development
4. Ensure that our graduates understand the broad societal, ethical and professional issues of the engineering profession

Master of Engineering Student Outcomes

In order to achieve these objectives, the Master of Engineering has the following outcomes set for its graduates. Graduates will demonstrate:

1. an ability to apply knowledge of mathematics, science and engineering to identify, formulate and solve chemical engineering problems
2. an ability to design and conduct experiments demonstrating chemical engineering principles, as well as to analyze and interpret resulting data
3. an ability to design a system, component, or process relevant to chemical engineering practice to meet desired needs subject to realistic constraints such as economics, environmental compliance and sustainability, health and safety, manufacturability, and social, political, and ethical implications
4. an ability to function on multi-disciplinary or multi-functional teams
5. an ability to identify, formulate, and solve chemical engineering problems
6. an understanding of the professional and ethical responsibility of the practicing chemical engineer
7. an ability to communicate effectively in writing, orally, and via modern computer technology
8. the broad education necessary to understand the impact of chemical engineers and engineering solutions in a global, economic, environmental, and societal context
9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues, especially those pertinent to the practice of chemical engineering
11. an ability to use the techniques, skills, and modern engineering tools necessary for chemical engineering practice

Admission Standards

Students desiring to pursue the Master of Engineering degree must formally apply for admission to Graduate Studies in the School of Engineering. The application form is available from Speed School Academic Affairs and should be returned to the same office. It is also available online at <http://louisville.edu/speed/academics/forms>. The application should be submitted prior to completion of undergraduate Departmental Studies, typically not earlier than one semester before completion of baccalaureate requirements.

The requirements for admission or readmission to Graduate Studies – Master of Engineering are:

1. Completion of a program of studies equivalent to that obtained through Engineering Fundamentals and Departmental Studies for the field of specialization in which the student desires to receive the Master of Engineering degree;
2. Recommendation by the faculty and chair of the student's department for admission or readmission to Graduate Studies;
3. Cumulative baccalaureate grade point average of 2.50 for all prior academic course work completed in the program. However, those students with cumulative baccalaureate grade-point

averages from 2.25 to 2.50 may be admitted upon petition and approval of the chair and faculty of the department.

4. An applicant who has earned more than one D grade in a CHE prefix course will not be admitted to Graduate Studies until any excess D grades have been improved.
5. A student becomes a candidate for the Master of Engineering degree upon admission to Graduate Studies and initial registration as a graduate student.

Residency

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. A candidate for the Master of Engineering degree who does not register for credit hours must maintain active registration by paying a fee each semester for M.Eng. residency until the degree is awarded (i.e., the candidate must maintain continuous registration, including summer terms, in Graduate Studies). Failure to pay the M. Eng residency fee will be cause to cancel a student's candidacy. Students who are not enrolled for a period of more than 12 months will be considered to have withdrawn from the program. In order to be restored to candidacy, the student must have the recommendation of the department chair, receive the approval of the Associate Dean and pay the fee for each of the semesters during which the candidacy was void.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 2.75 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.

Eligibility for Master of Engineering degree graduate honors is based upon the grade point average for the five year degree program and not just courses taken while in Graduate Studies. Speed School has the following distinctions:

Degree with Honors: 3.25

Degree with High Honors: 3.50

Degree with Highest Honors: 3.75

Degree Requirements

The following degree requirements are mandatory of all Master of Engineering candidates:

1. The Program of Study must be completed with a 2.75 GPA or better for all academic work attempted in Graduate Studies.
2. Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.

3. Students following the Thesis Option must follow the Procedures and Standards for Master of Engineering Theses". The guidelines are located online at <http://louisville.edu/speed/academics/policies/MEngThesisGuidelines.pdf>.
4. The total requirements must be completed within six years after admission into Graduate Studies. The time limit imposed by the rule may be extended in individual cases upon recommendation of the department chair and approval of the Associate Dean for Academics.

Curriculum

Graduate Studies – M.Eng.

This Program of Study was approved for students entering Graduate Studies in the Summer 2011 - Spring 2012 catalog year. The Master of Engineering in Chemical Engineering degree requires the following over and above the Bachelor of Science in Chemical Engineering Degree.

Courses		Hours
CHE 595: Seminar in CHE		1
CHE 610: Advanced Thermodynamics		3
CHE 620: Transport Phenomena		3
CHE 641: Advanced Reactor Design		3
CHE 686: CHE Analysis		3
Technical Electives ¹		12
<u>Thesis Alternative:</u> CHE 697: MEng Thesis ²	<u>Non-thesis Alternative:</u> CHE 698: Engr Project I CHE 699: Engr Project II	6
Total		31³

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level. Technical Electives need not necessarily be CHE courses, but the student's research advisor or academic advisor must approve non-CHE courses.

² For the thesis alternative, a student is required to select both an approved M.Eng. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in CHE 697.

³ Candidates for the Master of Engineering degree must have a minimum final cumulative grade point average of 2.75 for all academic work attempted in Graduate Studies. A maximum of six hours of graduate level courses taken as an undergraduate may be used to satisfy M.Eng. degree requirements; these courses should not have been used to also satisfy B.S. degree requirements.

Total	Hours
Bachelor of Science in Chemical Engineering	135
Graduate Studies	31
Master of Engineering in Chemical Engineering	166

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an *Ad hoc* appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Amos, Delaina A.
Ph.D., University of California, Berkeley
 Associate Professor of Chemical Engineering

Berson, R. Eric
Ph.D., University of Louisville

Assistant Professor of Chemical Engineering

Carreon, Moises A.
Ph.D., University of Cincinnati

Assistant Professor of Chemical Engineering

Fu, Xiao-An
Ph.D., Case Western Reserve

University
 Assistant Professor of Chemical Engineering

Kang, Kyung A.
Ph.D., University of California, Davis

Professor of Chemical Engineering

Starr, Thomas L.
Ph.D., University of Louisville

Professor of Chemical Engineering
 Associate Dean of Speed Research Administration

Sunkara, Mahendra K.
Ph.D., Case Western Reserve

University
 Professor of Chemical Engineering
Watters, James Charles
Ph.D., University of Maryland

Professor of Chemical Engineering
 Chair of Chemical Engineering

Willing, Gerold A.
Ph.D., Auburn University
 Associate Professor of Chemical Engineering

Master of Science in Chemical Engineering

Major: CHE

Degree Awarded: MS

Unit: GS

Program Webpage: <http://www.louisville.edu/speed/chemical>

Program Information

Director of Graduate Studies

Dr. Kyung A. Kang, (502)852-2094, kakang01@louisville.edu

General Information

The M.S. 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 MS degree program should consult the Director of Graduate Studies in the Department of Chemical Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award master's degrees.

Admission Standards

The admission standards for the M.S. program in Chemical Engineering are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and
5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 3.00 (on a 4.00 scale).

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1100.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria.

Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.
5. All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

The following degree requirements are mandatory of all Master of Science candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.
3. Students following the Thesis Option must follow the guidelines for the Preparation of a Thesis, which are located on the website of the School of Interdisciplinary and Graduate Studies. <https://graduate.louisville.edu/Programs/theses-dissertations/Guidelines%20for%20the%20Preparation%20and%20Processing%20of%20Theses.pdf>
4. All credit, including transfer credit, must be earned within six years prior to the completion of the degree.

The requirements for the Master of Science degree are discussed in more detail at: [http://louisville.edu/graduatecatalog/toc#Requirements for Graduate Degrees](http://louisville.edu/graduatecatalog/toc#Requirements_for_Graduate_Degrees).

Curriculum

Graduate Studies - M.S.

Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background. The minimum curricular requirements for the master's program are:

Courses		Hours
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
Technical Electives ^{1,2}		12
<u>Thesis Option:</u> CHE 690: MS Thesis ³	<u>Non-thesis Option:</u> Technical Electives ^{1,2}	6
Total		32

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level; at least 15 hours of coursework must be in CHE.

² At least three hours of Technical Electives must be from non-CHE courses, and the student's research advisor or academic advisor must approve non-CHE courses.

³ For the thesis option, a student is required to select both an approved M.S. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in CHE 690.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an Ad hoc appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following departmental faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Amos, Delaina A.

Ph.D., University of California, Berkeley
Associate Professor of Chemical Engineering

Berson, R. Eric

Ph.D., University of Louisville
Associate Professor of Chemical Engineering

Carreon, Moises A.

Ph.D., University of Cincinnati
Assistant Professor of Chemical Engineering

Fu, Xiao-An

Ph.D., Case Western Reserve

University

Assistant Professor of Chemical Engineering

Kang, Kyung A.

Ph.D., University of California, Davis
Professor of Chemical Engineering

Starr, Thomas L.

Ph.D., University of Louisville
Professor of Chemical Engineering
Associate Dean of Speed Research Administration

Sunkara, Mahendra K.

Ph.D., Case Western Reserve

University

Professor of Chemical Engineering

Watters, James Charles

Ph.D., University of Maryland
Professor of Chemical Engineering

Chair of Chemical Engineering

Willing, Gerold A.

Ph.D., Auburn University
Associate Professor of Chemical Engineering

Doctor of Philosophy in Chemical Engineering

Major: CHE

Degree Awarded: Ph.D.

Unit: GS

Program Webpage: <http://www.louisville.edu/speed/chemical>

Program Information

Director of Graduate Studies

Dr. Kyung A. Kang, 502-852-2094, kakang01@louisville.edu

General Information

The Ph.D. 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 Director of Graduate Studies in the Department of Chemical

Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award doctoral degrees.

Admission Standards

The admission standards for the Ph.D. program in Chemical Engineering are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and
5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 3.00 (on a 4.00 scale).

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1100.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria. Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.

3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.
5. All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

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. The following degree requirements are mandatory of all doctoral candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. At least two years of study must be spent at the University of Louisville.
3. One year must be spent in full-time residency (a minimum of 18 hours within a 12-month period or four terms of continuous part-time enrollment).
4. The applicant for a Doctor of Philosophy degree must pass an oral and/or written qualifying examination.
5. Admission to candidacy must not be later than the end of the ninth month prior to the awarding of the degree. Students enter Degree Candidacy upon completion of all course work, qualifying exams, required research credit hours and other co-curricular requirements. Students who are enrolled in Degree Candidacy are considered full-time students. Enrollment in Degree Candidacy status must be continuously maintained year round (i.e. Fall, Spring, and Summer) until the degree is awarded.
6. A dissertation is required of all candidates.
7. All candidates must pass a final oral examination. This is to be a defense of the dissertation and a demonstration of the candidate's mastery of his/her field.
8. Ordinarily the equivalent of three years of full-time graduate study is a minimum. However, the candidate must complete all requirements for the degree within four calendar years after passing the qualifying examination.

The requirements for the Doctor of Philosophy degree are explained in more detail at:

http://louisville.edu/graduatecatalog/toc#Requirements_for_Graduate_Degrees.

Curriculum

Graduate Studies - Ph.D.

The Ph.D. program in Chemical Engineering is comprised of 70 credit hours beyond the baccalaureate degree in Chemical Engineering. A student entering the Ph.D. program who already has a master's degree in Chemical Engineering may have some of the credit hours for that degree counted towards the 70 hours. Remedial work may be specified for applicants who, in the opinion of the faculty, do not have sufficient background.

The normal minimum curricular requirements for the doctoral program are listed below. However, some exceptions are possible at the discretion of the faculty and the Graduate Advisor in unusual situations.

Courses	Hours
CHE 610: Advanced Thermodynamics	3
CHE 620: Transport Phenomena	3
CHE 641: Advanced Reactor Design	3
CHE 686: CHE Analysis	3
CHE 695: CHE Seminar	4
Technical Electives ¹	18
CHE 693: Research in CHE	36
Total	70

¹ At least three hours of Technical Electives must be from non-CHE courses, and the student's research advisor or academic advisor must approve non-CHE courses.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an Ad hoc appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Amos, Delaina A.
Ph.D., University of California, Berkeley
 Associate Professor of Chemical Engineering
Berson, R. Eric
Ph.D., University of

Louisville
 Associate Professor of Chemical Engineering
Carreon, Moises A.
Ph.D., University of Cincinnati

Assistant Professor of Chemical Engineering
Fu, Xiao-An
Ph.D., Case Western Reserve University
 Assistant Professor of Chemical Engineering

Kang, Kyung A.
*Ph.D., University of
California, Davis*
Professor of Chemical
Engineering
Starr, Thomas L.
*Ph.D., University of
Louisville*
Professor of Chemical
Engineering

Associate Dean of Speed
Research Administration
Sunkara, Mahendra K.
*Ph.D., Case Western Reserve
University*
Professor of Chemical
Engineering
Interim Director, Conn
Center for Renewable Energy
Research

Watters, James Charles
*Ph.D., University of
Maryland*
Professor of Chemical
Engineering
Chair of Chemical
Engineering
Willing, Gerold A.
Ph.D., Auburn University
Associate Professor of
Chemical Engineering

Master of Engineering in Civil Engineering

Major: CE

Degree Awarded: MEng.

Unit: SP

Program Webpage: <http://speed.louisville.edu/civil/>

Program Information

General Information

The Bachelor of Science in Civil Engineering degree will provide a student with the basis to be able to complete the Master of Engineering (M.Eng.) in Civil Engineering degree. The Master of Engineering degree is accredited by the Engineering Accreditation Commission of ABET, Inc.

Since the M.Eng. is accredited as part of a five-year program with one-year of co-op experience, it is not typically well-suited for students who have not matriculated through the preceding four years at Speed School. Therefore, almost all students who earn an undergraduate degree at a school or university other than the University of Louisville pursue the M.S. degree instead of the M.Eng. degree.

Master of Engineering Program Educational Objectives

The purpose of the five-year Master of Engineering Program is to bring together the faculty, staff, and capital resources to meet the following program educational objectives:

1. In accordance with our mission statement, provide instruction and associated activities necessary for our graduates to grow from technical competency to professional proficiency
2. Foster an appreciation in our graduates for professional development and life-long learning
3. Provide an educational experience that inspires our graduates to exhibit leadership and team-building skills
4. Promote service by our graduates to the profession, and to society

Master of Engineering Student Outcomes

In order to achieve these objectives, the Master of Engineering has the following outcomes set for its graduates:

1. Develop in students an ability to apply knowledge from math, science and engineering

2. Develop an ability to organize and conduct laboratory and field work
3. Develop an ability to analyze and interpret data
4. Develop student competence in the design of systems, components, and processes to meet specific needs
5. Provide experience and guidance in working on teams, having a diverse technical makeup
6. Train students to identify, formulate, and solve engineering problems
7. Instill in students an understanding of professional and ethical responsibilities, both in education and in practice
8. Develop and practice effective oral communication
9. Develop and practice effective written and graphic communication
10. Provide a breadth of course work and perspectives which create an understanding of the impact of engineering in society, both local and global
11. Create an awareness in students of the need for life-long learning, whether through formal education or via many other means
12. Expose students to contemporary issues pertinent to the practice of civil engineering
13. Through both instruction and practice, develop in students an ability to use the techniques, skills and modern engineering tools commonly used in civil engineering practice

Admission Standards

Students desiring to pursue the Master of Engineering degree must formally apply for admission to Graduate Studies in the School of Engineering. The application form is available from Speed School Academic Affairs and should be returned to the same office. It is also available online at <http://louisville.edu/speed/academics/forms>. The application should be submitted prior to completion of undergraduate Departmental Studies, typically not earlier than one semester before completion of baccalaureate requirements.

The requirements for admission or readmission to Graduate Studies – Master of Engineering are:

1. Completion of a program of studies equivalent to that obtained through Engineering Fundamentals and Departmental Studies for the field of specialization in which the student desires to receive the Master of Engineering degree;
2. Recommendation by the faculty and chair of the student's department for admission or readmission to Graduate Studies;
3. Cumulative baccalaureate grade point average of 2.50 for all prior academic course work completed in the program. There is no petition process for students with cumulative baccalaureate grade-point averages below a 2.50.
4. A student becomes a candidate for the Master of Engineering degree upon admission to Graduate Studies and initial registration as a graduate student.

Residency

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. A candidate for the Master of Engineering degree who does not register for credit hours must maintain active registration by paying a fee each semester for M.Eng. residency until the degree is awarded (i.e., the candidate must maintain continuous registration, including summer terms, in Graduate Studies). Failure to pay the M. Eng residency fee will be cause to cancel a student's candidacy. Students who are not enrolled for a period of more than 12 months will be considered to have withdrawn from the program. In order to be restored to candidacy, the student must have the recommendation of the department chair, receive the approval of the Associate Dean and pay the fee for each of the semesters during which the candidacy was void.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 2.75 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.

Eligibility for Master of Engineering degree graduate honors is based upon the grade point average for the five year degree program and not just courses taken while in Graduate Studies. Speed School has the following distinctions:

Degree with Honors: 3.25

Degree with High Honors: 3.50

Degree with Highest Honors: 3.75

Degree Requirements

The following degree requirements are mandatory of all Master of Engineering candidates:

The Program of Study must be completed with a 2.75 GPA or better for all academic work attempted in Graduate Studies.

Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.

Students following the Thesis Option must follow the Procedures and Standards for Master of Engineering Theses". The guidelines are located online at <http://louisville.edu/speed/academics/policies/MEngThesisGuidelines.pdf>.

The total requirements must be completed within six years after admission into Graduate Studies. The time limit imposed by the rule may be extended in individual cases upon recommendation of the department chair and approval of the Associate Dean for Academics.

Curriculum

Graduate Studies – M.Eng.

This Program of Study was approved for students entering Graduate Studies in the Summer 2011 - Spring 2012 catalog year. The Master of Engineering in Civil Engineering degree requires the following over and above the Bachelor of Science in Civil Engineering Degree.

Courses		Hours
CEE 680: Capstone Design		3
Specialty Area Courses: ¹ Facilities Engineering ² or Public Works Engineering ³		21
<u>Thesis Option:</u> CEE 697: MEng Thesis ⁴	<u>Non-thesis Option:</u> Technical Electives ⁵	6
Total		30⁶

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level.

² Facilities Engineering includes courses in the geotechnical/structural area. The 21 hours must be chosen from the following approved list:

CEE 520, 522, 552, 604, 620, 621, 625, 650, 652, 653, 654

³ Public Works Engineering includes courses in the geotechnical/transportation/water resources area. The 21 hours must be chosen from the following approved list:

CEE 509, 534, 535, 552, 560, 561, 570, 571, 572, 573, 604, 650, 652, 653, 654, 660, 662, 665, 670, 673, 674, 675, 694

⁴ For the thesis option, a student is required to select both an approved M.Eng. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in CEE 697.

⁵ Technical Electives for the non-thesis option must be approved by the CEE department.

Total	Hours
Bachelor of Science in Civil Engineering	135
Graduate Studies	30
Master of Engineering in Civil Engineering	165

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an *Ad hoc* appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Bhaskar, Nageshwar R.

Ph.D., The Ohio State University

Professor of Civil & Environmental Engineering

Cohn, Louis F.

Ph.D., Rensselaer Polytechnic Institute

Professor of Civil & Environmental Engineering

French, Mark N.

Ph.D., University of Iowa

Professor of Civil & Environmental Engineering

Harris, Roswell A.

Ph.D., Vanderbilt University

Professor of Civil & Environmental Engineering

McGinley, W. Mark

Ph.D., University of Alberta, Edmonton

Professor of Civil & Environmental Engineering

Mohsen, Jafar P.

Ph.D., University of Cincinnati

Professor of Civil & Environmental Engineering

Chair of Civil & Environmental Engineering

Parola, Arthur C.

Ph.D., The Pennsylvania State University

Professor of Civil & Environmental Engineering

Rockaway, Thomas D.

Ph.D., Georgia Institute of Technology

Assistant Professor of Civil & Environmental Engineering

Sun, Zhihui

Ph.D., Northwestern University

Assistant Professor of Civil & Environmental Engineering

Ullrich, Charles Robert

Ph.D., University of Illinois

Professor of Civil & Environmental Engineering

Master of Science in Civil Engineering

Major: CE

Degree Awarded: MS

Unit: GS

Program Webpage: <http://speed.louisville.edu/civil/>

Program Information

Director of Graduate Studies

Dr. Mark French, (502)852-0144, mnfren01@louisville.edu

General Information

The M.S. degree program is intended for persons having an accredited baccalaureate degree in civil 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 MS degree program should consult the Director of Graduate Studies in the Department of Civil Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award master's degrees.

Admission Standards

The admission standards for the M.S. program in Civil Engineering are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and
5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (on a 4.00 scale).

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1000.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria. Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to

these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.

4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.
5. All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

The following degree requirements are mandatory of all Master of Science candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.
3. Students following the Thesis Option must follow the guidelines for the Preparation of a Thesis, which are located on the website of the School of Interdisciplinary and Graduate Studies. [https://graduate.louisville.edu/Programs/theses-dissertations/Guidelines for the Preparation and Processing of Theses.pdf](https://graduate.louisville.edu/Programs/theses-dissertations/Guidelines%20for%20the%20Preparation%20and%20Processing%20of%20Theses.pdf)
4. All credit, including transfer credit, must be earned within six years prior to the completion of the degree.

The requirements for the Master of Science degree are discussed in more detail at: [http://louisville.edu/graduatecatalog/toc#Requirements for Graduate Degrees](http://louisville.edu/graduatecatalog/toc#Requirements%20for%20Graduate%20Degrees).

Curriculum

Graduate Work - M.S.

Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background. The minimum curricular requirements for the master's program are:

Courses		Hours
CEE Electives ¹		18
Non-CEE Electives ^{1,2}		6
<u>Thesis Option:</u> CEE 690: MS Thesis ³	<u>Non-thesis Option:</u> Technical Electives ^{1,2}	6
Total		30 ⁴

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level; at least 15 hours of coursework must be in CEE.

² Technical Electives need not necessarily be CEE courses, but the student's research advisor or academic advisor must approve non-CEE courses.

³ For the thesis option, a student is required to select both an approved M.S. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in CEE 690.

⁴ Candidates for the Master of Science degree must have a minimum final cumulative grade point average of 3.00 for all academic work attempted in Graduate Studies.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an Ad hoc appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following departmental faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Bhaskar, Nageshwar R.

Ph.D., The Ohio State University

Professor of Civil & Environmental Engineering

Cohn, Louis F.

Ph.D., Rensselaer Polytechnic Institute

Professor of Civil & Environmental Engineering

French, Mark N.

Ph.D., University of Iowa

Professor of Civil & Environmental Engineering

Harris, Roswell A.

Ph.D., Vanderbilt University
Professor of Civil & Environmental Engineering

McGinley, W. Mark

Ph.D., University of Alberta, Edmonton

Professor of Civil & Environmental Engineering

Mohsen, Jafar P.

Ph.D., University of Cincinnati

Professor of Civil & Environmental Engineering
Chair of Civil & Environmental Engineering

Parola, Arthur C.

Ph.D., The Pennsylvania State University
Professor of Civil & Environmental Engineering

Rockaway, Thomas D.

Ph.D., Georgia Institute of Technology

Assistant Professor of Civil & Environmental Engineering

Sun, Zhihui

Ph.D., Northwestern University

Assistant Professor of Civil & Environmental Engineering

Ullrich, Charles Robert

Ph.D., University of Illinois
Professor of Civil & Environmental Engineering

Doctor of Philosophy in Civil Engineering

Major: CE

Degree Awarded: Ph.D.

Unit: GS

Program Webpage: <http://speed.louisville.edu/civil/>

Program Information

Director of Graduate Studies

Dr. Mark French, (502)852-6276, mnfren01@louisville.edu

General Information

The Ph.D. degree program is intended for persons having an accredited masters and/or baccalaureate degree in civil 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 Director of Graduate Studies in the Department of Civil Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award doctoral degrees.

Admission Standards

The admission standards for the Ph.D. program in Civil Engineering are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and
5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (on a 4.00 scale).

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1000.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria.

Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background in civil engineering.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.
5. All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

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. The following degree requirements are mandatory of all doctoral candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. At least two years of study must be spent at the University of Louisville.
3. One year must be spent in full-time residency (a minimum of 18 hours within a 12-month period or four terms of continuous part-time enrollment).
4. The applicant for a Doctor of Philosophy degree must pass an oral and/or written qualifying examination.
5. Admission to candidacy must not be later than the end of the ninth month prior to the awarding of the degree. Students enter Degree Candidacy upon completion of all course work, qualifying exams, required research credit hours and other co-curricular requirements. Students who are enrolled in Degree Candidacy are considered full-time students. Enrollment in Degree Candidacy

status must be continuously maintained year round (i.e. Fall, Spring, and Summer) until the degree is awarded.

6. A dissertation is required of all candidates.
7. All candidates must pass a final oral examination. This is to be a defense of the dissertation and a demonstration of the candidate's mastery of his/her field.
8. Ordinarily the equivalent of three years of full-time graduate study is a minimum. However, the candidate must complete all requirements for the degree within four calendar years after passing the qualifying examination.

The requirements for the Doctor of Philosophy degree are explained in more detail at:
http://louisville.edu/graduatecatalog/toc#Requirements_for_Graduate_Degrees.

Curriculum

Graduate Studies - Ph.D.

Normally, it is expected that the student will complete a Master's degree before being admitted to the Ph.D. Program. However, 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 department's Director of Graduate Studies. Also, remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background.

The minimum curricular requirements for the doctoral program are:

Courses – Post Bac	Hours
Approved Master's Level Course Work	30
CEE Electives ¹	27
CEE 698: CE PhD Seminar	3
CEE 699: CE PhD Research	18
Total	78 ²

¹ Electives may include up to 6 hours credit in approved mathematics courses.

² Candidates for the Doctor of Philosophy degree must have a minimum final cumulative grade point average of 3.00 for all academic work attempted in Graduate Studies.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for

the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an Ad hoc appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

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Professor of Civil & Environmental Engineering

McGinley, W. Mark

Ph.D., University of Alberta, Edmonton

Professor of Civil & Environmental Engineering

Mohsen, Jafar P.

Ph.D., University of Cincinnati

Professor of Civil & Environmental Engineering

Chair of Civil & Environmental Engineering

Parola, Arthur C.

Ph.D., The Pennsylvania State University

Professor of Civil & Environmental Engineering

Rockaway, Thomas D.

Ph.D., Georgia Institute of Technology

Assistant Professor of Civil & Environmental Engineering

Sun, Zhihui

Ph.D., Northwestern University

Assistant Professor of Civil & Environmental Engineering

Engineering

Ullrich, Charles Robert

Ph.D., University of Illinois

Professor of Civil & Environmental Engineering

Master of Engineering in Computer Engineering Computer Science

Major: CECS

Degree Awarded: MEng.

Unit: SP

Program Webpage: <http://www.louisville.edu/speed/computer/>

Program Information

General Information

The Bachelor of Science in Computer Engineering and Computer Science degree will provide a student with the basis to be able to complete the Master of Engineering (M.Eng.) in Computer Engineering and Computer Science degree. The Master of Engineering degree is accredited by the Engineering Accreditation Commission of ABET, Inc.

Since the M.Eng. is accredited as part of a five-year program with one-year of co-op experience, it is not typically well-suited for students who have not matriculated through the preceding four years at Speed School. Therefore, almost all students who earn an undergraduate degree at a school or university other than the University of Louisville pursue the M.S. degree instead of the M.Eng. degree.

Master of Engineering Program Educational Objectives

The purpose of the five-year Master of Engineering Program is to bring together the faculty, staff, and capital resources to meet the following program educational objectives:

1. Educate and train MEng graduates with the advanced level academic background and practical engineering experience necessary to function as computer engineering and computer science professionals in a modern, ever-changing world
2. Produce graduates who demonstrate competence by being selected for employment by industrial, academic, or government entities, or pursue further professional/graduate studies
3. Provide our graduates with the foundation for the development of a successful career and with the understanding that life-long learning is necessary to this development
4. Ensure that our graduates understand the broad social, ethical, and professional issues of contemporary engineering practice

Master of Engineering Student Outcomes

In order to achieve these objectives, the Master of Engineering has the following outcomes set for its graduates. Graduates will demonstrate:

1. an ability to apply knowledge of mathematics, science, and engineering in the field of computer engineering and computer science
2. an ability to design and conduct experiments, as well as to analyze and interpret data in the field of computer engineering and computer science
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability in the field of computer engineering and computer science
4. an ability to function on multidisciplinary teams
5. an ability to identify, formulate and solve problems in the field of computer engineering and computer science
6. an understanding of professional and ethical responsibility in the field of computer engineering and computer science
7. an ability to communicate effectively
8. the broad education necessary to understand the impact of computer engineering and computer science in a global, economic, environmental, and societal context
9. a recognition of the need for and an ability to engage in life-long learning in the field of computer engineering and computer science
10. knowledge of contemporary issues in the field of computer engineering and computer science
11. an ability to use the techniques, skills, and engineering tools for the practice of computer engineering and computer science

Admission Standards

Students desiring to pursue the Master of Engineering degree must formally apply for admission to Graduate Studies in the School of Engineering. The application form is available from Speed School Academic Affairs and should be returned to the same office. It is also available online at <http://louisville.edu/speed/academics/forms>. The application should be submitted prior to completion of

undergraduate Departmental Studies, typically not earlier than one semester before completion of baccalaureate requirements.

The requirements for admission or readmission to Graduate Studies – Master of Engineering are:

1. Completion of a program of studies equivalent to that obtained through Engineering Fundamentals and Departmental Studies for the field of specialization in which the student desires to receive the Master of Engineering degree;
2. Recommendation by the faculty and chair of the student's department for admission or readmission to Graduate Studies;
3. Cumulative baccalaureate grade point average of 2.50 for all prior academic course work completed in the program. However, those students with cumulative baccalaureate grade-point averages from 2.25 to 2.50 may be admitted upon petition and approval of the chair and faculty of the department.
4. A student becomes a candidate for the Master of Engineering degree upon admission to Graduate Studies and initial registration as a graduate student.

Residency

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. A candidate for the Master of Engineering degree who does not register for credit hours must maintain active registration by paying a fee each semester for M.Eng. residency until the degree is awarded (i.e., the candidate must maintain continuous registration, including summer terms, in Graduate Studies). Failure to pay the M. Eng residency fee will be cause to cancel a student's candidacy. Students who are not enrolled for a period of more than 12 months will be considered to have withdrawn from the program. In order to be restored to candidacy, the student must have the recommendation of the department chair, receive the approval of the Associate Dean and pay the fee for each of the semesters during which the candidacy was void.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 2.75 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.

Eligibility for Master of Engineering degree graduate honors is based upon the grade point average for the five year degree program and not just courses taken while in Graduate Studies. Speed School has the following distinctions:

Degree with Honors: 3.25
Degree with High Honors: 3.50
Degree with Highest Honors: 3.75

Degree Requirements

The following degree requirements are mandatory of all Master of Engineering candidates:

The Program of Study must be completed with a 2.75 GPA or better for all academic work attempted in Graduate Studies.

Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.

Students following the Thesis Option must follow the Procedures and Standards for Master of Engineering Theses". The guidelines are located online at <http://louisville.edu/speed/academics/policies/MEngThesisGuidelines.pdf>.

The total requirements must be completed within six years after admission into Graduate Studies. The time limit imposed by the rule may be extended in individual cases upon recommendation of the department chair and approval of the Associate Dean for Academics.

Curriculum

Graduate Studies – M.Eng.

This Program of Study was approved for students entering Graduate Studies in the Summer 2011 - Spring 2012 catalog year. The Master of Engineering in Computer Engineering and Computer Science degree requires the following over and above the Bachelor of Science in Computer Engineering and Computer Science Degree.

Courses		Hours
CECS/ECE 510: Computer Design		3
ECE 511: Computer Design Lab		1
CECS 508: Numerical Analysis or CECS/IE 563: Experimental Design		3
CECS 619: Computer Algorithms		3
CECS 622: Discrete Systems		3
CECS Electives ¹		12
<u>Thesis Option:</u> CECS 697: MEng Thesis ²	<u>Non-Thesis Option:</u> CECS 696: Project CECS Elective ¹	6
Total		31 ³

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level. Electives must be approved by the academic advisor.

² For the thesis option, a student is required to select both an approved M.Eng. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in CECS 697.

³ Candidates for the Master of Engineering degree must have a minimum final cumulative grade point average of 2.75 for all academic course work attempted in Graduate Studies. A maximum of six hours of graduate level courses taken as an undergraduate may be used to satisfy M.Eng. degree requirements; these courses should not have been used to also satisfy B.S. degree requirements.

Total	Hours
Bachelor of Science in Computer Engineering and Computer Science	136
Graduate Studies	31
Master of Engineering in Computer Engineering and Computer Science	167

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an *Ad hoc* appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Badia, Antonio E.
Ph.D., Indiana University
 Associate Professor of
 Computer Engineering &
 Computer Science

Chang, Dar-Jen
*Ph.D., University of
 Michigan*
 Associate Professor of
 Computer Engineering &
 Computer Science

Desoky, Ahmed H.
*Ph.D., North Carolina State
 University*
 Associate Professor of

Computer Engineering &
 Computer Science

Elmaghraby, Adel S.
*Ph.D., University of
 Wisconsin*
 Professor of Computer
 Engineering & Computer
 Science
 Chair of Computer
 Engineering & Computer
 Science

Frigui, Hichem
*Ph.D., University of
 Missouri-Columbia*
 Professor of Computer

Engineering & Computer
 Science

Imam, Ibrahim N.
Ph.D., Auburn University
 Professor of Computer
 Engineering & Computer
 Science

Kantardzic, Mehmed
*Ph.D., University of
 Sarajevo, Bosnia*
 Professor of Computer
 Engineering & Computer
 Science

Kumar, Anup
Ph.D., North Carolina State

University
Professor of Computer
Engineering & Computer
Science

Nasraoui, Olfa
*Ph.D., University of
Missouri-Columbia*
Associate Professor of
Computer Engineering &
Computer Science

Ouyang, Ming
Ph.D., Rutgers University
Assistant Professor of
Computer Engineering &
Computer Science

Ragade, Rammohan K.
*Ph.D., Indian Institute of
Technology*
Professor of Computer
Engineering & Computer
Science

Rouchka, Eric Christian
D.Sc., Washington University

Associate Professor of
Computer Engineering &
Computer Science

Yampolskiy, Roman V.
Ph.D., University of Buffalo
Assistant Professor of
Computer Engineering &
Computer Science

Master of Science in Computer Science

Major: CS

Degree Awarded: MS

Unit: GS

Program Webpage: <http://louisville.edu/speed/computer>

Program Information

Director of Graduate Studies

Dr. Mehmed M. Kantardzic, (502)852-3703, mmkant01@louisville.edu

General Information

The M.S. degree program is intended for persons having an accredited baccalaureate degree in computer engineering or computer science, 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 MS degree program should consult the Director of Graduate Studies in the Department of Computer Engineering & Computer Science. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award master's degrees.

Admission Standards

The admission standards for the M.S. program in Computer Science are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and
5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (on a 4.00 scale).

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1000.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria. Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.
5. All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

The following degree requirements are mandatory of all Master of Science candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.

2. Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.
3. Students following the Thesis Option must follow the guidelines for the Preparation of a Thesis, which are located on the website of the School of Interdisciplinary and Graduate Studies.
<https://graduate.louisville.edu/Programs/theses-dissertations/Guidelines%20for%20the%20Preparation%20and%20Processing%20of%20Theses.pdf>
4. All credit, including transfer credit, must be earned within six years prior to the completion of the degree.

Curriculum

Graduate Studies - M.S.

Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background. The minimum curricular requirements for the master's program are:

Courses		Hours
Foundations Course ¹		3
Software Courses ²		6
Analytic Courses ³		6
CECS Electives ⁴		9
<u>Thesis Option:</u> CECS 690: MS Thesis ⁵	<u>Non-thesis Option:</u> CECS 696: Project CECS Elective ⁴	6
Total		30 ⁶

¹ One Foundations Course from the following list is required:

CECS 504: Automata Theory

CECS 619: Algorithms

² Two Software Courses from the following list are required:

CECS 516: Computer Networks

CECS 535: Introduction to Databases

CECS 545: Artificial Intelligence

CECS 550: Software Engineering

CECS 629: Distributed Systems

CECS 630: Advanced Databases & Data Warehousing

CECS 640: Internet Applications

³ Two Analytic Courses from the following list are required:

CECS 506: Modeling & Analysis

CECS 508: Numerical Analysis

CECS 522: Performance Evaluation
CECS 563: Experimental Design
CECS 622: Simulations
CECS 627: Digital Image Processing
CECS 632: Data Mining

⁴ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level; at least 15 hours of coursework must be in CECS.

⁵ For the thesis option, a student is required to select both an approved M.S. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in CECS 690.

⁶ Candidates for the Master of Science degree must have a minimum final cumulative grade point average of 3.00 for all academic work attempted in Graduate Studies.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

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Desoky, Ahmed H.
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Associate Professor of
Computer Engineering &
Computer Science

Elmaghraby, Adel S.
*Ph.D., University of
Wisconsin*
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Engineering & Computer
Science
Chair of Computer
Engineering & Computer
Science

Frigui, Hichem
*Ph.D., University of
Missouri-Columbia*
Professor of Computer
Engineering & Computer
Science

Graham, James H.
Ph.D., Purdue University

Professor of Electrical &
Computer Engineering
Chair of Electrical &
Computer Engineering
Imam, Ibrahim N.
Ph.D., Auburn University
Professor of Computer
Engineering & Computer
Science

Kantardzic, Mehmed
*Ph.D., University of
Sarajevo, Bosnia*
Professor of Computer
Engineering & Computer
Science

Kumar, Anup
Ph.D., North Carolina State

University
Professor of Computer
Engineering & Computer
Science

Nasraoui, Olfa
*Ph.D., University of
Missouri-Columbia*
Associate Professor of
Computer Engineering &
Computer Science

Ouyang, Ming
Ph.D., Rutgers University
Assistant Professor of
Computer Engineering &
Computer Science

Ragade, Rammohan K.
*Ph.D., Indian Institute of
Technology*
Professor of Computer
Engineering & Computer
Science

Rouchka, Eric Christian
D.Sc., Washington University
Associate Professor of
Computer Engineering &
Computer Science

Yampolskiy, Roman V.
Ph.D., University of Buffalo
Assistant Professor of
Computer Engineering &
Computer Science

Graduate Certificate in Data Mining

Major: DTMGCDMNON

Degree Awarded: CERT

Unit: GS

Program Webpage:

http://louisville.edu/speed/cecs/new_web/programs/certificates/datamining/index.shtml

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:

1. Undergraduate Degree in technically related field or technical experience.
2. Knowledge of calculus.
3. Graduate application and \$50 application fee.

For degree status (those who want to continue for MS or Ph.D)

Additional Requirements:

1. GRE scores.
2. Two letters of recommendations

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
Professor

Master of Engineering in Electrical Engineering

Major: EE

Degree Awarded: MEng.

Unit: SP

Program Webpage: <http://louisville.edu/speed/electrical>

Program Information

General Information

The Bachelor of Science in Electrical and Computer Engineering degree will provide a student with the basis to be able to complete the Master of Engineering (M.Eng.) in Electrical and Computer Engineering degree. The Master of Engineering degree is accredited by the Engineering Accreditation Commission of ABET, Inc.

Since the M.Eng. is accredited as part of a five-year program with one-year of co-op experience, it is not typically well-suited for students who have not matriculated through the preceding four years at Speed School. Therefore, almost all students who earn an undergraduate degree at a school or university other than the University of Louisville pursue the M.S. degree instead of the M.Eng. degree.

Master of Engineering Program Educational Objectives

The purpose of the five-year Master of Engineering Program is to bring together the faculty, staff, and capital resources to meet the following program educational objectives:

1. Graduates of the Master of Engineering in Electrical Engineering program shall be prepared for successful and productive engineering careers, possess technical competency, and be effective team members and effective communicators.
2. Graduates of the Master of Engineering in Electrical Engineering program shall be prepared for the successful pursuit of graduate studies and have the ability to engage in lifelong learning in electrical engineering and related fields.
3. Graduates of the Master of Engineering in Electrical Engineering program shall possess a sense of professionalism, with emphasis on professional ethics and an awareness of professional licensing, and shall participate in the affairs of the profession.

Master of Engineering Student Outcomes

In order to achieve these objectives, the Master of Engineering has the following outcomes set for its graduates. Graduates will demonstrate:

1. the ability to apply knowledge of the physical sciences, mathematics, and engineering fundamentals to the solution of electrical engineering problems
2. the ability to design and conduct experiments in electrical engineering, and to analyze and interpret the data generated by those experiments
3. the ability to design components, devices, and systems to meet specific needs in electrical engineering, within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. the ability to function effectively on multi-disciplinary teams which may involve people from diverse backgrounds
5. the ability to identify, formulate, and solve problems in electrical engineering
6. an understanding of professional and ethical responsibilities
7. the ability to demonstrate effective:
 - a. oral communication in the field of electrical engineering
 - b. written communication in the field of electrical engineering
8. attainment of the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. the ability to recognize and respond to the need for life-long learning for a successful career in electrical engineering
10. an understanding of contemporary technical and professional issues in the practice of electrical engineering
11. the ability to use the techniques, skills, and tools of modern engineering effectively in the practice of electrical engineering

Admission Standards

Students desiring to pursue the Master of Engineering degree must formally apply for admission to Graduate Studies in the School of Engineering. The application form is available from Speed School Academic Affairs and should be returned to the same office. It is also available online at <http://louisville.edu/speed/academics/forms>. The application should be submitted prior to completion of

undergraduate Departmental Studies, typically not earlier than one semester before completion of baccalaureate requirements.

The requirements for admission or readmission to Graduate Studies – Master of Engineering are:

1. Completion of a program of studies equivalent to that obtained through Engineering Fundamentals and Departmental Studies for the field of specialization in which the student desires to receive the Master of Engineering degree;
2. Recommendation by the faculty and chair of the student's department for admission or readmission to Graduate Studies;
3. Cumulative baccalaureate grade point average of 2.50 for all prior academic course work completed in the program. However, those students with cumulative baccalaureate grade-point averages from 2.25 to 2.50 may be admitted upon petition and approval of the chair and faculty of the department.

A student becomes a candidate for the Master of Engineering degree upon admission to Graduate Studies and initial registration as a graduate student.

Residency

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. A candidate for the Master of Engineering degree who does not register for credit hours must maintain active registration by paying a fee each semester for M.Eng. residency until the degree is awarded (i.e., the candidate must maintain continuous registration, including summer terms, in Graduate Studies). Failure to pay the M. Eng residency fee will be cause to cancel a student's candidacy. Students who are not enrolled for a period of more than 12 months will be considered to have withdrawn from the program. In order to be restored to candidacy, the student must have the recommendation of the department chair, receive the approval of the Associate Dean and pay the fee for each of the semesters during which the candidacy was void.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 2.75 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.

Eligibility for Master of Engineering degree graduate honors is based upon the grade point average for the five year degree program and not just courses taken while in Graduate Studies. Speed School has the following distinctions:

Degree with Honors: 3.25
Degree with High Honors: 3.50
Degree with Highest Honors: 3.75

Degree Requirements

The following degree requirements are mandatory of all Master of Engineering candidates:

1. The Program of Study must be completed with a 2.75 GPA or better for all academic work attempted in Graduate Studies.
2. Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.
3. Students following the Thesis Option must follow the Procedures and Standards for Master of Engineering Theses². The guidelines are located online at <http://louisville.edu/speed/academics/policies/MEngThesisGuidelines.pdf>
4. The total requirements must be completed within six years after admission into Graduate Studies. The time limit imposed by the rule may be extended in individual cases upon recommendation of the department chair and approval of the Associate Dean for Academics.

Curriculum

Graduate Studies – M.Eng.

This Program of Study was approved for students entering Graduate Studies in the Summer 2011 - Spring 2012 catalog year. The Master of Engineering in Electrical & Computer Engineering degree requires the following over and above the Bachelor of Science in Electrical & Computer Engineering Degree.

Courses			Hours
ECE Electives ^{1,2,3}			18
Technical Electives ^{1,2,3,4}			6
<u>Thesis/Paper Option:</u> ^{2,3,5} ECE 697: MEng Thesis or ECE 698: MEng Paper	<u>Project Option:</u> ^{2,3} ECE 699: MEng Project ¹ ECE Electives ^{1,3}	<u>Course Option:</u> ^{2,3} Research/Project Course/ECE 696 ^{1,6} ECE Electives ^{1,3}	8
Total			32⁷

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis or paper, are 600-level.

² A minimum of nine hours must be classified as Design Electives. Design Electives must be chosen from an approved list of regular courses (available online <https://louisville.edu/speed/electrical/students/application-information/ece-master-of-engineering-m-eng/ece-master-of-engineering-department-approved-design-electives.html>) and may include certain selected topics, project, and independent study courses, as well as a portion of the hours from thesis/paper, with the approval of the ECE Director of Undergraduate and Professional Programs.

³ Requires approval of the student's faculty advisor.

- ⁴ Technical Electives may be taken within or outside the Department. All selections require the approval of the student's faculty advisor; courses outside the Department also require approval of the Director of Undergraduate and Professional Programs of the ECE Department. Only three hours may be at the 500-level.
- ⁵ For the thesis/paper option, a student is urged to select both an approved M.Eng. thesis/paper topic and the director and members of the thesis/paper committee during the first term of Graduate Studies. The thesis/paper director must give approval for enrollment in ECE 697/698.
- ⁶ A list of approved research/project courses is maintained by the Department.
- ⁷ Candidates for the Master of Engineering degree must have a minimum final cumulative grade point average of 2.75 for all academic course work attempted in Graduate Studies. A maximum of six hours of graduate level courses taken as an undergraduate may be used to satisfy M.Eng. degree requirements; these courses should not have been used to also satisfy B.S. degree requirements.

Total	Hours
Bachelor of Science in Electrical Engineering	136
Graduate Studies	32
Master of Engineering in Electrical Engineering	168

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an Ad hoc appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Alphenaar, Bruce William

*Ph.D., Yale University
Professor of Electrical &
Computer Engineering*

Amini, Amir

*Ph.D., University of
Michigan
Professor of Electrical &
Computer Engineering*

Cohn, Robert W.

*Ph.D., Southern Methodist
University*

*Professor of Electrical &
Computer Engineering*

Cox, Hollace L.

*D.M.D., University of
Kentucky
Associate Professor of
Electrical & Computer
Engineering*

Farag, Aly A.

*Ph.D., Purdue University
Professor of Electrical &
Computer Engineering*

Graham, James H.

*Ph.D., Purdue University
Professor of Electrical &
Computer Engineering
Chair of Electrical &
Computer Engineering*

Harnett, Cindy K.

Ph.D., Cornell University

*Assistant Professor of
Electrical & Computer
Engineering*

Horowitz, Barry

*Ph.D., Polytechnic Institute
of Brooklyn*

*Professor of Electrical &
Computer Engineering*

Inanc, Tamer; Ph.D.

*The Pennsylvania State
University*

*Associate Professor of
Electrical & Computer
Engineering*

Lilly, John H.

Ph.D., Rensselaer

Polytechnic Institute

*Professor of Electrical &
Computer Engineering*

McNamara, Shamus

Ph.D., University of

Wisconsin-Madison

*Assistant Professor of
Electrical & Computer
Engineering*

Naber, John F.

Ph.D., Virginia Tech

University

*Professor of Electrical &
Computer Engineering*

Walsh, Kevin M.

*Ph.D., University of
Cincinnati*

*Professor of Electrical &
Computer Engineering*

Welch, Karla Conn

Ph.D., Vanderbilt University

*Assistant Professor of
Electrical & Computer
Engineering*

Zurada, Jacek M.

*Ph.D., Technical University
of Gdansk*

*Professor of Electrical &
Computer Engineering*

Doctor of Philosophy in Computer Science and Engineering

Major: CSE

Degree Awarded: Ph.D.

Unit: GS

Program Webpage: <http://louisville.edu/speed/computer>

Program Information

Director of Graduate Studies

Dr. Mehmed M. Kantardzic, (502) 852-3703, mmkant01@louisville.edu

General Information

The Computer Engineering & Computer Science Department (CECS) and the Electrical & Computer Engineering Department (ECE) jointly offer the Ph.D. degree in Computer Science & Engineering (CSE). The Ph.D. degree program is intended for persons having an accredited masters and/or baccalaureate degree in computer engineering, computer science, or electrical 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 Director of Graduate Studies in the Department of Computer Engineering and Computer Science. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award doctoral degrees.

Admission Standards

The admission standards for the Ph.D. program in Computer Science and Engineering are as follows:

1. All admission applications for the program shall include:

- a. a completed [application](#) for University of Louisville graduate admission,
 - b. an application fee,
 - c. results from the Graduate Record Examination (GRE),
 - d. at least two letters of recommendation, and
 - e. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.
2. The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.
3. The minimum undergraduate and graduate grade point average that will be considered for unconditional acceptance and admission to the program is 3.00 (on a 4.00 scale).
4. The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1000.
5. Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.
6. Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria. Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.
7. International students whose primary language is not English must show English language proficiency by either:
 - a. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
 - b. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
 - c. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

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. The following degree requirements are mandatory of all doctoral candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. At least two years of study must be spent at the University of Louisville.
3. One year must be spent in full-time residency (a minimum of 18 hours within a 12-month period or four terms of continuous part-time enrollment).
4. The applicant for a Doctor of Philosophy degree must pass an oral and/or written qualifying examination.
5. Admission to candidacy must not be later than the end of the ninth month prior to the awarding of the degree. Students enter Degree Candidacy upon completion of all course work, qualifying exams, required research credit hours and other co-curricular requirements. Students who are enrolled in Degree Candidacy are considered full-time students. Enrollment in Degree Candidacy status must be continuously maintained year round (i.e. Fall, Spring, and Summer) until the degree is awarded.
6. A dissertation is required of all candidates.
7. All candidates must pass a final oral examination. This is to be a defense of the dissertation and a demonstration of the candidate's mastery of his/her field.
8. Ordinarily the equivalent of three years of full-time graduate study is a minimum. However, the candidate must complete all requirements for the degree within four calendar years after passing the qualifying examination.

The requirements for the Doctor of Philosophy degree are explained in more detail at:
http://louisville.edu/graduatecatalog/toc#Requirements_for_Graduate_Degrees.

Curriculum

Graduate Studies - Ph.D.

Normally, it is expected that the student will complete a Master's degree before being admitted to the Ph.D. Program. However, 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 department's Director of Graduate Studies. Also, remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background.

The minimum curricular requirements for the doctoral program are:

Courses – Post Bac	Hours
Approved Master's Level Course Work	30
CECS Electives ¹	18

CSE 693: Dissertation Research	24
CSE 695: Seminar in CSE	2
Total	74¹

¹ Master's Level Course Work and/or CECS Electives must be chosen so that 18 hours of courses are taken in the core areas. Two courses are required in each of two core areas and one course in each of the remaining two core areas. The approved courses for the four core areas are listed below.

Approved Computer Software Engineering Core Courses:

CECS 504: Automata Theory
CECS 516: Computer Networks
CECS 530: Design of Compilers
CECS 545: Artificial Intelligence
CECS 550: Software Engineering
CECS 608: Operating Systems
CECS 619: Algorithms
CECS 630: Advanced Databases & Data Warehousing

Approved Computer Hardware Engineering Core Courses:

CECS/ECE 510: Computer Design
CECS 525/ECE 516: Microcomputer Design
CECS 611: Computer Architecture
ECE 515: VLSI Systems
ECE 630: Pulse & Digital Waveforms

Approved Computationally Intensive Applications Core Courses:

CECS 522: Performance Evaluation
CECS 564: Cryptology
CECS 609: Hypertext & Multimedia Processing
CECS 622: Simulation & Modeling
CECS 628: Computer Graphics
ECE 520: Digital Signal Processing
ECE 550: Communication & Modulation
ECE 560: Control Systems
ECE 614: Artificial Neural Systems
ECE 618/CECS 627: Digital Image Processing
ECE 619/CECS 633: Computer Vision
ECE 620: Pattern Recognition
ECE 653: Digital Communications
ECE 661: Sampled-Data Control Systems

Approved Advanced Mathematics Core Courses:

CECS 508: Numerical Analysis
CECS 632: Data Mining
MATH 501: Analysis I
MATH 560: Probability
MATH 660: Probability Theory
MATH 662: Advanced Mathematical Statistics

MATH 667:Methods of Classification
MATH 681: Combinatorics & Graph Theory

² Candidates for the Doctor of Philosophy degree must have a minimum final cumulative grade point average of 3.00 for all academic work attempted in Graduate Studies.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an Ad hoc appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following departmental faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Badia, Antonio E.
Ph.D., Indiana University
Associate Professor of
Computer Engineering &
Computer Science

Chang, Dar-Jen
*Ph.D., University of
Michigan*
Associate Professor of
Computer Engineering &
Computer Science

Cohn, Robert W.
*Ph.D., Southern Methodist
University*
Professor of Electrical &
Computer Engineering

Desoky, Ahmed H.
*Ph.D., North Carolina State
University*
Associate Professor of
Computer Engineering &
Computer Science

Elmaghraby, Adel S.
*Ph.D., University of
Wisconsin*
Professor of Computer

Engineering & Computer
Science
Chair of Computer
Engineering & Computer
Science

Frag, Aly A.
Ph.D., Purdue University
Professor of Electrical &
Computer Engineering
Frigui, Hichem
*Ph.D., University of
Missouri-Columbia*

Professor of Computer
Engineering & Computer
Science

Graham, James H.
Ph.D., Purdue University
Professor of Electrical &
Computer Engineering
Chair of Electrical &
Computer Engineering

Horowitz, Barry
*Ph.D., Polytechnic Institute
of Brooklyn*
Professor of Electrical &
Computer Engineering

Imam, Ibrahim N.
Ph.D., Auburn University
Professor of Computer
Engineering & Computer
Science

Kantardzic, Mehmed
*Ph.D., University of
Sarajevo, Bosnia*
Professor of Computer
Engineering & Computer
Science

Kumar, Anup
*Ph.D., North Carolina State
University*
Professor of Computer
Engineering & Computer
Science

Lilly, John H.
*Ph.D., Rensselaer
Polytechnic Institute*
Professor of Electrical &
Computer Engineering

Nasraoui, Olfa
*Ph.D., University of
Missouri-Columbia*
Associate Professor of

Computer Engineering &
Computer Science
Ouyang, Ming
Ph.D., Rutgers University
Assistant Professor of
Computer Engineering &
Computer Science
Ragade, Rammohan K.
*Ph.D., Indian Institute of
Technology*
Professor of Computer

Engineering & Computer
Science
Rouchka, Eric Christian
D.Sc., Washington University
Associate Professor of
Computer Engineering &
Computer Science
Walsh, Kevin M.
*Ph.D., University of
Cincinnati*
Professor of Electrical &
Computer Engineering

Yampolskiy, Roman V.
Ph.D., University of Buffalo
Assistant Professor of
Computer Engineering &
Computer Science
Zurada, Jacek M.
*Ph.D., Technical University
of Gdansk*
Professor of Electrical &
Computer Engineering

Master of Science in Electrical Engineering

Major: EE

Degree Awarded: MS

Unit: GS

Program Webpage: <http://louisville.edu/speed/electrical>

Program Information

Director of Graduate Studies

Dr. John F. Naber, (502)852-7910, jfnabe01@louisville.edu

General Information

The M.S. degree program is intended for persons having an accredited baccalaureate degree in electrical 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 MS degree program should consult the Director of Graduate Studies in the Department of Electrical & Computer Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award master's degrees.

Admission Standards

The admission standards for the M.S. program in Electrical Engineering are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and
5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (on a 4.00 scale).

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1000.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria. Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.

Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.

Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.

Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

The following degree requirements are mandatory of all Master of Science candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.
3. Students following the Thesis Option must follow the guidelines for the Preparation of a Thesis, which are located on the website of the School of Interdisciplinary and Graduate Studies. <https://graduate.louisville.edu/Programs/theses-dissertations/Guidelines%20for%20the%20Preparation%20and%20Processing%20of%20Theses.pdf>
4. All credit, including transfer credit, must be earned within six years prior to the completion of the degree.

Curriculum

Graduate Studies - M.S.

Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background. The minimum curricular requirements for the master's program are:

Courses			Hours
ECE Electives ^{1,2}			15
Technical Electives ^{1,3}			9
<u>Thesis Option:</u> ECE 690: MS Thesis ⁴	<u>Paper Option:</u> ECE 691: MS Paper ⁴	<u>Project Option:</u> ECE 692: MS Project or Project Course/ECE 696 ⁵ ECE Electives ^{1,3}	6
Total			30 ⁶

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level; at least 15 hours of coursework must be in ECE.

² At least two ECE Electives must be chosen from two different core groups:

Group 1: ECE 510/511; ECE 516

Group 2: ECE 514/515; ECE 533/534; ECE 540/541; ECE 542; ECE 543; ECE 569

Group 3: ECE 520/521; ECE 530; ECE 550/551; ECE 560/561; ECE 625

³ Technical Electives need not necessarily be ECE courses, but the student's research advisor or academic advisor must approve non-ECE courses.

⁴ For the thesis/paper option, a student is required to select both an approved M.S. thesis/paper topic and the director and members of the thesis/paper committee during the first term of Graduate Studies. The thesis/paper director must give approval for enrollment in ECE 690/691.

⁵ Must include ECE 699 or a course from a list of approved research/project courses, maintained by the Department, and ECE 696.

⁶ Candidates for the Master of Science degree must have a minimum final cumulative grade point average of 3.00 for all academic work attempted in Graduate Studies.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an Ad hoc appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following departmental faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Alphenaar, Bruce William

Ph.D., Yale University

Professor of Electrical &
Computer Engineering

Amini, Amir

*Ph.D., University of
Michigan*

Professor of Electrical &
Computer Engineering

Cohn, Robert W.

*Ph.D., Southern Methodist
University*

Professor of Electrical &
Computer Engineering

Farag, Aly A.

Ph.D., Purdue University

Professor of Electrical &
Computer Engineering

Graham, James H.

Ph.D., Purdue University

Professor of Electrical &
Computer Engineering
Chair of Electrical &
Computer Engineering

Harnett, Cindy K.

Ph.D., Cornell University
Assistant Professor of

Electrical & Computer
Engineering

Horowitz, Barry

*Ph.D., Polytechnic Institute
of Brooklyn*

Professor of Electrical &
Computer Engineering

Inanc, Tamer

*Ph.D., The Pennsylvania
State University*

Associate Professor of
Electrical & Computer
Engineering

Li, Hongxiang

*Ph.D., University of
Washington*

Assistant Professor of
Electrical & Computer
Engineering

Lilly, John H.

*Ph.D., Rensselaer
Polytechnic Institute*

Professor of Electrical &
Computer Engineering

McIntyre, Michael

Ph.D., Clemson University
Assistant Professor of

Electrical & Computer
Engineering

McNamara, Shamus

*Ph.D., University of
Wisconsin-Madison*

Associate Professor of
Electrical & Computer
Engineering

Naber, John F.

*Ph.D., Virginia Tech
University*

Professor of Electrical &
Computer Engineering

Walsh, Kevin M.

*Ph.D., University of
Cincinnati*

Professor of Electrical &
Computer Engineering

Welch, Karla Conn

Ph.D., Vanderbilt University

Assistant Professor of
Electrical & Computer
Engineering

Zurada, Jacek M.

*Ph.D., Technical University
of Gdansk*

Professor of Electrical &
Computer Engineering

Doctor of Philosophy in Electrical Engineering

Major: EE

Degree Awarded: Ph.D.

Unit: GS

Program Webpage: <http://louisville.edu/speed/electrical>

Program Information

Director of Graduate Studies

Dr. John F. Naber, (502) 852-7910, jfnabe01@louisville.edu

General Information

The Ph.D. degree program is intended for persons having an accredited masters and/or baccalaureate degree in electrical 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 Director of Graduate Studies in the Department of Electrical & Computer Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award doctoral degrees.

Admission Standards

The admission standards for the Ph.D. program in Electrical Engineering are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and
5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 3.00 (on a 4.00 scale).

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1000.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria. Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.
5. All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

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. The following degree requirements are mandatory of all doctoral candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. At least two years of study must be spent at the University of Louisville.
3. One year must be spent in full-time residency (a minimum of 18 hours within a 12-month period or four terms of continuous part-time enrollment).
4. The applicant for a Doctor of Philosophy degree must pass an oral and/or written qualifying examination.
5. Admission to candidacy must not be later than the end of the ninth month prior to the awarding of the degree. Students enter Degree Candidacy upon completion of all course work, qualifying exams, required research credit hours and other co-curricular requirements. Students who are enrolled in Degree Candidacy are considered full-time students. Enrollment in Degree Candidacy

status must be continuously maintained year round (i.e. Fall, Spring, and Summer) until the degree is awarded.

6. A dissertation is required of all candidates.
7. All candidates must pass a final oral examination. This is to be a defense of the dissertation and a demonstration of the candidate's mastery of his/her field.

Ordinarily the equivalent of three years of full-time graduate study is a minimum. However, the candidate must complete all requirements for the degree within four calendar years after passing the qualifying examination.

Curriculum

Graduate Studies - Ph.D.

Normally, it is expected that the student will complete a Master's degree before being admitted to the Ph.D. Program. However, 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 department's Director of Graduate Studies. Also, remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background.

The minimum curricular requirements for the doctoral program are:

Courses – Post Bac	Hours
Approved Master's Level Course Work	30
Mathematics Electives ¹	6
ECE Electives ¹	15
Technical Electives ¹	9
ECE 700: Dissertation Research in EE	18
Total	78 ²

¹ At least 15 hours of Electives must be completed at the 600-level.

² Candidates for the Doctor of Philosophy degree must have a minimum final cumulative grade point average of 3.00 for all academic work attempted in Graduate Studies.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external

members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an Ad hoc appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following departmental faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Alphenaar, Bruce William

Ph.D., Yale University

Professor of Electrical &
Computer Engineering

Amini, Amir

*Ph.D., University of
Michigan*

Professor of Electrical &
Computer Engineering

Cohn, Robert W.

*Ph.D., Southern Methodist
University*

Professor of Electrical &
Computer Engineering

Farag, Aly A.

Ph.D., Purdue University

Professor of Electrical &
Computer Engineering

Graham, James H.

Ph.D., Purdue University

Professor of Electrical &
Computer Engineering
Chair of Electrical &
Computer Engineering

Harnett, Cindy K.

Ph.D., Cornell University
Assistant Professor of

Electrical & Computer
Engineering

Horowitz, Barry

*Ph.D., Polytechnic Institute
of Brooklyn*

Professor of Electrical &
Computer Engineering

Inanc, Tamer

*Ph.D., The Pennsylvania
State University*

Associate Professor of
Electrical & Computer
Engineering

Li, Hongxiang

*Ph.D., University of
Washington*

Assistant Professor of
Electrical & Computer
Engineering

Lilly, John H.

Ph.D., Rensselaer

Polytechnic Institute
Professor of Electrical &
Computer Engineering

McIntyre, Michael

Ph.D., Clemson University
Assistant Professor of

Electrical & Computer
Engineering

McNamara, Shamus

*Ph.D., University of
Wisconsin-Madison*

Associate Professor of
Electrical & Computer
Engineering

Naber, John F.

*Ph.D., Virginia Tech
University*

Professor of Electrical &
Computer Engineering

Walsh, Kevin M.

*Ph.D., University of
Cincinnati*

Professor of Electrical &
Computer Engineering

Welch, Karla Conn

Ph.D., Vanderbilt University

Assistant Professor of
Electrical & Computer
Engineering

Zurada, Jacek M.

*Ph.D., Technical University
of Gdansk*

Professor of Electrical &
Computer Engineering

Master of Engineering in Engineering Management

Major: EM

Degree Awarded: MEng.

Unit: SP

Program Webpage: <http://louisville.edu/speed/industrial/>

Program Information

General Information

The Department of Industrial Engineering of the J. B. Speed School of Engineering offers an evening program in Engineering Management that has been developed to meet the needs of practicing engineers who find themselves performing line or staff managerial functions in technological enterprises. The program is designed to build upon the mathematical and analytical expertise gained from prior engineering education as well as upon his or her professional experience gained in the course of active engineering employment.

Admission Standards

Students desiring to pursue the Master of Engineering in Engineering Management degree must formally apply for admission to Graduate Studies in the School of Engineering. The application form is available online at <http://graduate.louisville.edu/apply>. Admission into the Engineering Management program does not require the Graduate Record Examination or letters of recommendation. However, an application fee and official transcripts are required.

The requirements for admission or readmission to Graduate Studies – Master of Engineering are:

1. Baccalaureate degree in engineering or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program; 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;
2. Recommendation by the faculty and chair of the student's department for admission or readmission to Graduate Studies;
3. Cumulative baccalaureate grade point average of 2.50. However, those students with cumulative baccalaureate grade-point averages from 2.25 to 2.50 may be admitted upon petition and approval of the chair and faculty of the department.

A student becomes a candidate for the Master of Engineering degree upon admission to Graduate Studies and initial registration as a graduate student.

Residency

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. A candidate for the Master of Engineering degree who does not register for credit hours must maintain active registration by paying a fee each semester for M.Eng. residency until the degree is awarded (i.e., the candidate must maintain continuous registration, including summer terms, in Graduate Studies). Failure to pay the M. Eng residency fee will be cause to cancel a student's candidacy. Students who are not enrolled for a period of more than 12 months will be considered to have withdrawn from the program. In order to be restored to candidacy, the student must have the recommendation of the department chair, receive the approval of the Associate Dean and pay the fee for each of the semesters during which the candidacy was void.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 2.75 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.

Degree Requirements

The following degree requirements are mandatory of all Master of Engineering candidates:

1. The Program of Study must be completed with a 2.75 GPA or better for all academic work attempted in Graduate Studies.
2. Masters students must take at least 24 hours of course work from the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.
3. Students following the Thesis Option must follow the Procedures and Standards for Master of Engineering Theses". The guidelines are located online at <http://louisville.edu/speed/academics/policies/MEngThesisGuidelines.pdf>.
4. The total requirements must be completed within six years after admission into Graduate Studies. The time limit imposed by the rule may be extended in individual cases upon recommendation of the department chair and approval of the Associate Dean for Academics.

Curriculum

Graduate Studies – M.Eng.

This Program of Study was approved for students entering Graduate Studies in the Summer 2011 - Spring 2012 catalog year. The Master of Engineering in Engineering Management degree requires the following courses.

Courses	Hours
EM 525: Project Management	3
EM 561: Engineering Statistics ¹	3
EM 582: Human Systems	3
EM 613: Operations Management	3
EM 628: Engineering Management	3
EM 670: Financial Management	3

6XX Technical Elective ²		3
Technical Elective ²		3
<u>Thesis Option:</u> EM 697: MEng Thesis ³	<u>Non-Thesis Option:</u> EM 699: MEng Project ⁴ Technical Elective ²	6
Total		30 ⁵

¹ Depending on previous course credit for Probability and Statistics, student will take either EM 561 or 661.

² Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level. Technical Electives may be taken within or outside the Department and up to 6 hours may be from Business Administration programs. All selections require the approval of the student's faculty advisor.

³ For the thesis option, a student is required to select both an approved M.Eng. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in EM 697.

⁴ For the non-thesis option, a student is required to select both an approved M.Eng project topic and project advisor during the first term of Graduate Studies.

⁵ Candidates for the Master of Engineering degree must have a minimum final cumulative grade point average of 2.75 for all academic course work attempted in Graduate Studies. A maximum of six hours of graduate level courses taken as an undergraduate may be used to satisfy M.Eng. degree requirements; these courses should not have been used to also satisfy B.S. degree requirements.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an *Ad hoc* appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Alexander, Suraj M.
*Ph.D., Virginia Polytechnic
 Institute & State University
 Professor of Industrial
 Engineering*

Biles, William E.
*Ph.D., Virginia Polytechnic
 Institute & State University
 Professor of Industrial
 Engineering*

Chen, Lijian
*Ph.D., The Ohio State
 University
 Assistant Professor of
 Industrial Engineering*

Depuy, Gail W.
Ph.D., Georgia Institute of

*Technology
 Professor of Industrial
 Engineering*

Evans, Gerald W.
*Ph.D., Purdue University
 Professor of Industrial
 Engineering*

Heragu, Sunderesh S.
*Ph.D., University of
 Manitoba
 Professor of Industrial
 Engineering*

Holman, G. Talley
*Ph.D., Auburn University
 Assistant Professor of
 Industrial Engineering*

Stucker, Brent
*Ph.D., Texas A&M
 University
 Professor of Industrial
 Engineering*

Usher, John S.
*Ph.D., North Carolina State
 Professor of Industrial
 Engineering
 of Industrial Engineering
 Chair*

Wilhelm, Mickey R.
*Ph.D., University of Alabama
 Professor of Industrial
 Engineering
 Dean of J.B. Speed School of
 Engineering*

Graduate Certificate in Environmental Engineering

Major: CENVNON
Degree Awarded: CERT
Unit: GS
Program Webpage: <http://speed.louisville.edu/civil/academics/degree/>

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 <http://louisville.edu/speed/civil/academic/EnvironEngCertApp.pdf>

Curriculum

	Semester Hours	Total
Environmental Engineering Electives (500-level)	0-6	

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.).

Departmental Faculty

J. P. Mohsen

Professor and Chair

N. R. Bhaskar

Professor

L. F. Cohn

Professor

M. N. French

Professor

R. A. Harris

Professor

W. M. McGinley

Professor

A. C. Parola

Professor

T. D. Rockaway

Associate Professor

Z. Sun

Associate Professor

C. R. Ullrich

Professor

Master of Engineering in Industrial Engineering

Major: IE

Degree Awarded: MEng.

Unit: SP

Program Webpage: <http://louisville.edu/speed/industrial/>

Program Information

General Information

The Bachelor of Science in Industrial Engineering degree will provide a student with the basis to be able to complete the Master of Engineering (M.Eng.) in Industrial Engineering degree. The Master of Engineering degree is accredited by the Engineering Accreditation Commission of ABET, Inc.

Since the M.Eng. is accredited as part of a five-year program with one-year of co-op experience, it is not typically well-suited for students who have not matriculated through the preceding four years at Speed School. Therefore, almost all students who earn an undergraduate degree at a school or university other than the University of Louisville pursue the M.S. degree instead of the M.Eng. degree.

Master of Engineering Program Educational Objectives

The objectives of the five-year Master of Engineering Program are to produce ethically responsible graduates who are:

1. successful in the professional practice of industrial engineering
2. effective communicators and team players, and, involved in professional service and lifelong learning

Master of Engineering Student Outcomes

In order to achieve these objectives, the Master of Engineering has the following outcomes set for its graduates. Graduates will demonstrate:

1. an ability to apply knowledge of mathematics, science, and engineering
2. an ability to design and conduct experiments, as well as to analyze and interpret data
3. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability
4. an ability to function on multi-disciplinary teams
5. an ability to identify, formulate, and solve engineering problems
6. an understanding of professional and ethical responsibility
7. an ability to communicate effectively
8. the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context
9. a recognition of the need for, and an ability to engage in life-long learning
10. a knowledge of contemporary issues
11. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

12. an ability to design, develop, implement, and improve integrated systems that include people, materials, information, equipment and energy.

Admission Standards

Students desiring to pursue the Master of Engineering degree must formally apply for admission to Graduate Studies in the School of Engineering. The application form is available from Speed School Academic Affairs and should be returned to the same office. It is also available online at <http://louisville.edu/speed/academics/forms>. The application should be submitted prior to completion of undergraduate Departmental Studies, typically not earlier than one semester before completion of baccalaureate requirements.

The requirements for admission or readmission to Graduate Studies – Master of Engineering are:

1. Completion of a program of studies equivalent to that obtained through Engineering Fundamentals and Departmental Studies for the field of specialization in which the student desires to receive the Master of Engineering degree;
2. Recommendation by the faculty and chair of the student's department for admission or readmission to Graduate Studies;
3. Cumulative baccalaureate grade point average of 2.50 for all prior academic course work completed in the program. However, those students with cumulative baccalaureate grade-point averages from 2.25 to 2.50 may be admitted upon petition and approval of the chair and faculty of the department.
4. A student becomes a candidate for the Master of Engineering degree upon admission to Graduate Studies and initial registration as a graduate student.

Residency

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. A candidate for the Master of Engineering degree who does not register for credit hours must maintain active registration by paying a fee each semester for M.Eng. residency until the degree is awarded (i.e., the candidate must maintain continuous registration, including summer terms, in Graduate Studies). Failure to pay the M. Eng residency fee will be cause to cancel a student's candidacy. Students who are not enrolled for a period of more than 12 months will be considered to have withdrawn from the program. In order to be restored to candidacy, the student must have the recommendation of the department chair, receive the approval of the Associate Dean and pay the fee for each of the semesters during which the candidacy was void.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 2.75 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.

Eligibility for Master of Engineering degree graduate honors is based upon the grade point average for the five year degree program and not just courses taken while in Graduate Studies. Speed School has the following distinctions:

Degree with Honors: 3.25
 Degree with High Honors: 3.50
 Degree with Highest Honors: 3.75

Degree Requirements

The following degree requirements are mandatory of all Master of Engineering candidates:

1. The Program of Study must be completed with a 2.75 GPA or better for all academic work attempted in Graduate Studies.
2. Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.
3. Students following the Thesis Option must follow the Procedures and Standards for Master of Engineering Theses". The guidelines are located online at <http://louisville.edu/speed/academics/policies/MEngThesisGuidelines.pdf>.
4. The total requirements must be completed within six years after admission into Graduate Studies. The time limit imposed by the rule may be extended in individual cases upon recommendation of the department chair and approval of the Associate Dean for Academics.

Curriculum

Graduate Studies – M.Eng.

This Program of Study was approved for students entering Graduate Studies in the Summer 2011 - Spring 2012 catalog year. The Master of Engineering in Industrial Engineering degree requires the following over and above the Bachelor of Science in Industrial Engineering Degree.

Courses		Hours
IE 581: Ergonomics		3
IE 630: Production Systems		3
IE 650: Material Flow		3
IE 657: Logistical Systems		3
6XX Technical Elective ¹		3
Technical Electives ¹		9
<u>Thesis Option:</u> IE 697: MEng Thesis ²	<u>Non-Thesis Option:</u> IE 699: Masters Project ³ Technical Elective ¹	6

Total	30 ⁴
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¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level. All electives must be approved by the department.

² For the thesis option, a student is required to select both an approved M.Eng. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in IE 697.

³ For the non-thesis option, a student is required to select both an approved M.Eng project topic and project advisor during the first term of Graduate Studies.

⁴ Candidates for the Master of Engineering degree must have a minimum final cumulative grade point average of 2.75 for all academic course work attempted in Graduate Studies. A maximum of six hours of graduate level courses taken as an undergraduate may be used to satisfy M.Eng. degree requirements; these courses should not have been used to also satisfy B.S. degree requirements.

Total	Hours
Bachelor of Science in Industrial Engineering	132
Graduate Studies	30
Master of Engineering in Industrial Engineering	162

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an *Ad hoc* appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Alexander, Suraj M.
Ph.D.; Virginia Polytechnic Institute & State University
 Professor of Industrial Engineering

Biles, William E.
Ph.D., Virginia Polytechnic Institute & State University
 Professor of Industrial Engineering

Chen, Lijian
Ph.D., The Ohio State University
 Assistant Professor of Industrial Engineering

Depuy, Gail W.
Ph.D., Georgia Institute of Technology
Professor of Industrial Engineering
Evans, Gerald W.
Ph.D., Purdue University
Professor of Industrial Engineering
Heragu, Sunderesh S.
Ph.D., University of Manitoba

Professor of Industrial Engineering
Holman, G. Talley
Ph.D., Auburn University
Assistant Professor of Industrial Engineering
Stucker, Brent
Ph.D., Texas A&M University
Professor of Industrial Engineering

Usher, John S.
Ph.D., North Carolina State
Professor of Industrial Engineering; Chair
Wilhelm, Mickey R.
Ph.D., University of Alabama
Professor of Industrial Engineering
Dean of J.B. Speed School of Engineering

Master of Science in Industrial Engineering

Major: IE

Degree Awarded: MS

Unit: GS

Program Webpage: <http://louisville.edu/speed/industrial/>

Program Information

Director of Graduate Studies

Dr. Gail DePuy, (502)852-0115, gwdepu01@louisville.edu

General Information

The M.S. degree program is intended for persons having an accredited baccalaureate degree in industrial 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 MS degree program should consult the Director of Graduate Studies in the Department of Industrial Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award master's degrees.

Admission Standards

The admission standards for the M.S. program in Industrial Engineering are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and
5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (on a 4.00 scale).

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1100.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria. Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.
5. All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

The following degree requirements are mandatory of all Master of Science candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.

2. Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.
3. Students following the Thesis Option must follow the guidelines for the Preparation of a Thesis, which are located on the website of the School of Interdisciplinary and Graduate Studies. <https://graduate.louisville.edu/Programs/theses-dissertations/Guidelines%20for%20the%20Preparation%20and%20Processing%20of%20Theses.pdf>
4. All credit, including transfer credit, must be earned within six years prior to the completion of the degree.

The requirements for the Master of Science degree are discussed in more detail at: http://louisville.edu/graduatecatalog/toc#Requirements_for_Graduate_Degrees.

Curriculum

Graduate Studies - M.S.

Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background. The minimum curricular requirements for the master's program are:

Courses		Hours
IE 515: Operations Research Methods		3
IE 541: Simulation		3
IE 561: Engineering Statistics		3
IE 580: Occupational Ergonomics		3
IE 630: Production Systems		3
IE 657: Logistical Systems		3
6XX Technical Electives ^{1,2}		6
<u>Thesis Option:</u> IE 690: MS Thesis ³	<u>Non-Thesis Option:</u> IE 699: Masters Project ⁴ 6XX Technical Elective ¹	6
Total		30 ⁵

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level; at least 15 hours of coursework must be in IE.

² For students who do not have a previous degree in industrial engineering, one of the electives must be EM 613.

³ For the thesis option, a student is required to select both an approved M.S. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in IE 690.

⁴ For the non-thesis option, a student is required to select both an approved M.S. project topic and project advisor during the first term of Graduate Studies.

⁵ Candidates for the Master of Science degree must have a minimum final cumulative grade point average of 3.00 for all academic work attempted in Graduate Studies.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an *Ad hoc* appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following departmental faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Alexander, Suraj M.
*Ph.D.; Virginia Polytechnic
Institute & State University*
Professor of Industrial
Engineering
Biles, William E.
*Ph.D., Virginia Polytechnic
Institute & State University*
Professor of Industrial
Engineering
Chen, Lijian
*Ph.D., The Ohio State
University*
Assistant Professor of
Industrial Engineering
Depuy, Gail W.
Ph.D., Georgia Institute of

Technology
Professor of Industrial
Engineering
Evans, Gerald W.
Ph.D., Purdue University
Professor of Industrial
Engineering
Heragu, Sunderesh S.
*Ph.D., University of
Manitoba*
Professor of Industrial
Engineering
Holman, G. Talley
Ph.D., Auburn University
Assistant Professor of
Industrial Engineering

Stucker, Brent
*Ph.D., Texas A&M
University*
Professor of Industrial
Engineering
Usher, John S.
Ph.D., North Carolina State
Professor of Industrial
Engineering
Chair of Industrial
Engineering
Wilhelm, Mickey R.
Ph.D., University of Alabama
Professor of Industrial
Engineering
Dean of J.B. Speed School of
Engineering

Doctor of Philosophy in Industrial Engineering

Major: IE

Degree Awarded: Ph.D.

Unit: GS

Program Webpage: <http://louisville.edu/speed/industrial/>

Program Information

Director of Graduate Studies

Dr. Gail W. DePuy, (502)852-0115, gwdepu01@louisville.edu

General Information

The Ph.D. degree program is intended for persons having an accredited masters and/or baccalaureate degree in industrial 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 Director of Graduate Studies in the Department of Industrial Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award doctoral degrees.

Admission Standards

The admission standards for the Ph.D. program in Industrial Engineering are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and
5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 3.00 (on a 4.00 scale).

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1200.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria. Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.
5. All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

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. The following degree requirements are mandatory of all doctoral candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. At least two years of study must be spent at the University of Louisville.
3. One year must be spent in full-time residency (a minimum of 18 hours within a 12-month period or four terms of continuous part-time enrollment).
4. The applicant for a Doctor of Philosophy degree must pass an oral and/or written qualifying examination.
5. Admission to candidacy must not be later than the end of the ninth month prior to the awarding of the degree. Students enter Degree Candidacy upon completion of all course work, qualifying exams, required research credit hours and other co-curricular requirements. Students who are enrolled in Degree Candidacy are considered full-time students. Enrollment in Degree Candidacy

status must be continuously maintained year round (i.e. Fall, Spring, and Summer) until the degree is awarded.

6. A dissertation is required of all candidates.
7. All candidates must pass a final oral examination. This is to be a defense of the dissertation and a demonstration of the candidate's mastery of his/her field.
8. Ordinarily the equivalent of three years of full-time graduate study is a minimum. However, the candidate must complete all requirements for the degree within four calendar years after passing the qualifying examination.

The requirements for the Doctor of Philosophy degree are outlined in more detail at:
http://louisville.edu/graduatecatalog/toc#Requirements_for_Graduate_Degrees.

Curriculum

Graduate Studies - Ph.D.

Normally, it is expected that the student will complete a Master's degree before being admitted to the Ph.D. Program. However, 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 department's Director of Graduate Studies. Also, remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background.

The minimum curricular requirements for the doctoral program are:

Courses – Post Bac	Hours
Approved Master's Level Course Work ¹	30
Technical Electives ^{1,2}	31
IE 700: Dissertation Research in IE	17
Total	78 ³

¹ Master's Level Course Work and/or IE Electives must be chosen so that 18 hours of core courses are taken. The core courses are listed below.

IE 515: Operations Research Methods **or** IE 610: Foundations of Optimization
IE 541: Simulation **or** IE 642: Statistical Methodology in Simulation
IE 563: Experimental Design in Engineering **or** EM 661: Engineering Statistics II
IE 580: Occupational Ergonomics **or** IE 581: Ergonomic Techniques
IE 600: Advanced Manufacturing Methods **or** IE 630: Advanced Production Systems Design
IE 650: Material Flow Systems Design **or** IE 657: Logistical Systems

² For students who do not have a previous degree in industrial engineering, one of the electives must be EM 613. All electives must be approved by the department.

³ Candidates for the Doctor of Philosophy degree must have a minimum final cumulative grade point average of 3.00 for all academic course work attempted in Graduate Studies.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

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University*

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Industrial Engineering*

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Ph.D., Georgia Institute of

Technology

*Professor of Industrial
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Evans, Gerald W.

*Ph.D., Purdue University
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Engineering*

Heragu, Sunderesh S.

*Ph.D., University of
Manitoba
Professor of Industrial
Engineering*

Holman, G. Talley

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Assistant Professor of
Industrial Engineering*

Stucker, Brent

*Ph.D., Texas A&M
University
Professor of Industrial
Engineering*

Usher, John S.

*Ph.D., North Carolina State
Professor of Industrial
Engineering
Chair of Industrial
Engineering*

Wilhelm, Mickey R

*Ph.D., University of Alabama
Professor of Industrial
Engineering
Dean of J.B. Speed School of
Engineering*

Graduate Certificate in Logistics and Distribution

Major: LADCLDNON

Degree Awarded: CERT

Unit: GE

Program Webpage: <http://louisville.edu/org/lodi/certificateframes.htm>

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:

1. Submission of a University of Louisville Graduate School Application,
2. At least two letters of recommendation,
3. The possession of at least a baccalaureate degree,
4. The submission of an official transcript for each prior degree earned,
5. A minimum 2.75/4.0 undergraduate cumulative grade point average, and
6. 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 hours)
MATH 588	Discrete Mathematics for Logistics and Distribution Applications (3 hours)
ACCT 526	Finance and Accounting Applications in Logistics and Distribution (3 hours)
IE 621	Facilities Planning (3 hours)
IE 651	Warehousing and Transportation (3 hours)
MKT 527	Logistics Management (3 hours)

Departmental Faculty

Sunderesh S. Heragu

Professor

Thomas Riedel

Professor

Craig Anthony (Tony)

Arnold

Professor

Lihui Bai

Assistant Professor

Beth R. Davis-Sramek

Assistant Professor

Robert W. Forbes

Director, Center for GIS

Anup Kumar

Professor

Olfa Nasraoui

Associate Professor

Wei Song

Assistant Professor

John S. Usher

Professor

Master of Engineering in Mechanical Engineering

Major: ME

Degree Awarded: MEng.

Unit: SP

Program Webpage: <http://www.louisville.edu/speed/mechanical/>

Program Information

General Information

The Bachelor of Science in Mechanical Engineering degree will provide a student with the basis to be able to complete the Master of Engineering (M.Eng.) in Mechanical Engineering degree. The Master of Engineering degree is accredited by the Engineering Accreditation Commission of ABET, Inc.

Since the M.Eng. is accredited as part of a five-year program with one-year of co-op experience, it is not typically well-suited for students who have not matriculated through the preceding four years at Speed School. Therefore, almost all students who earn an undergraduate degree at a school or university other than the University of Louisville pursue the M.S. degree instead of the M.Eng. degree.

Master of Engineering Program Educational Objectives

The purpose of the five-year Master of Engineering Program is to bring together the faculty, staff, and capital resources to meet the following program educational objectives:

1. Succeed as practicing mechanical engineers in government, industry, academia, and other economic sectors
2. Use their knowledge and skills in mathematics, science, engineering, and other disciplines to identify, define, and solve problems, and to anticipate the global, societal, and environmental impact of their solutions
3. Understand the importance of professional licensure, and act upon that understanding by pursuing registration
4. Comply with professional ethics codes, practice sustainable engineering, undertake professional development, and engage in life-long technical learning
5. Display skills in teamwork, communication, critical thinking, and leadership
6. Demonstrate an engineering knowledge base of greater depth and breadth than that expected of baccalaureate-only graduates, helping them understand and influence contemporary technological issues as engineering innovators and managers

Master of Engineering Student Outcomes

In order to achieve these objectives, the Master of Engineering has the following outcomes set for its graduates. Graduates will demonstrate:

1. the ability to apply knowledge of mathematics, science, and engineering to the solution of problems encountered in mechanical engineering practice
2. an ability to design and conduct experiments assessing phenomena encountered during mechanical engineering practice, along with the ability to analyze and interpret the resulting data

3. an ability to design mechanical engineering systems, components, or processes that meet specified requirements
4. an ability to function on multidisciplinary teams in both leadership roles and as an individual contributor
5. the ability to identify and describe mechanical engineering problems, formulate constraints, devise and assess alternative approaches, and implement an optimal solution that satisfies specified performance, cost, time, and safety requirements
6. a solid understanding of professional and ethical responsibility in the field of mechanical engineering, as well as a record of adherence to those standards during academic coursework and cooperative education internships
7. the ability to communicate effectively in writing, during interpersonal discussions, and through formal multi-media presentations, along with the ability to use these skills within the context of mechanical engineering practice
8. an understanding of the impact of mechanical engineering solutions in a global and societal context.
9. an understanding of the need for, and an ability to engage in lifelong learning
10. a knowledge of contemporary issues, along with a knowledge of how such issues influence technology evolution and implementation
11. an ability to use the techniques, skills, and modern engineering tools necessary for the practice of mechanical engineering
12. an ability to apply masters-level knowledge in a specialized area related to mechanical engineering

Admission Standards

Students desiring to pursue the Master of Engineering degree must formally apply for admission to Graduate Studies in the School of Engineering. The application form is available from Speed School Academic Affairs and should be returned to the same office. It is also available online at <http://louisville.edu/speed/academics/forms>. The application should be submitted prior to completion of undergraduate Departmental Studies, typically not earlier than one semester before completion of baccalaureate requirements.

The requirements for admission or readmission to Graduate Studies – Master of Engineering are:

1. Completion of a program of studies equivalent to that obtained through Engineering Fundamentals and Departmental Studies for the field of specialization in which the student desires to receive the Master of Engineering degree;
2. Recommendation by the faculty and chair of the student's department for admission or readmission to Graduate Studies;
3. Cumulative baccalaureate grade point average of 2.50 for all prior academic course work completed in the program. However, those students with cumulative baccalaureate grade-point averages from 2.25 to 2.50 may be admitted upon petition and approval of the chair and faculty of the department.
4. A student becomes a candidate for the Master of Engineering degree upon admission to Graduate Studies and initial registration as a graduate student.

Residency

All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. A candidate for the Master of Engineering degree who does not register for credit hours must maintain active registration by paying a fee each semester for M.Eng. residency until the degree is awarded (i.e., the candidate must maintain continuous registration, including summer terms, in Graduate Studies). Failure to pay the M. Eng residency fee will be cause to cancel a student's candidacy. Students

who are not enrolled for a period of more than 12 months will be considered to have withdrawn from the program. In order to be restored to candidacy, the student must have the recommendation of the department chair, receive the approval of the Associate Dean and pay the fee for each of the semesters during which the candidacy was void.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 2.75 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.

Eligibility for Master of Engineering degree graduate honors is based upon the grade point average for the five year degree program and not just courses taken while in Graduate Studies. Speed School has the following distinctions:

Degree with Honors: 3.25

Degree with High Honors: 3.50

Degree with Highest Honors: 3.75

Degree Requirements

The following degree requirements are mandatory of all Master of Engineering candidates:

The Program of Study must be completed with a 2.75 GPA or better for all academic work attempted in Graduate Studies.

Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.

Students following the Thesis Option must follow the Procedures and Standards for Master of Engineering Theses". The guidelines are located online at <http://louisville.edu/speed/academics/policies/MEngThesisGuidelines.pdf>.

The total requirements must be completed within six years after admission into Graduate Studies. The time limit imposed by the rule may be extended in individual cases upon recommendation of the department chair and approval of the Associate Dean for Academics.

Curriculum

Graduate Studies – M.Eng.

This Program of Study was approved for students entering Graduate Studies in the Summer 2011 - Spring 2012 catalog year. The Master of Engineering in Mechanical Engineering degree requires the following over and above the Bachelor of Science in Mechanical Engineering Degree.

Courses		Hours
ME 644: Mechatronics		3
ME Electives ¹		12
Technical Electives ^{1,2}		9
<u>Thesis Option:</u> ME 697: MEng Thesis ³	<u>Non-Thesis Option:</u> ME 645: MEng Project ME Elective ¹	6
Total		30 ⁴

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level. Electives are selected with the assistance of the student's academic advisor.

² Technical Electives can be non-mechanical engineering courses; these must be approved by the student's academic advisor.

³ For the thesis option, a student is required to select both an approved M.Eng. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in ME 697.

⁴ Candidates for the Master of Engineering degree must have a minimum final cumulative grade point average of 2.75 for all academic course work attempted in Graduate Studies. A maximum of six hours of graduate level courses taken as an undergraduate may be used to satisfy M.Eng. degree requirements; these courses should not have been used to also satisfy B.S. degree requirements.

Total	Hours
Bachelor of Science in Mechanical Engineering	133
Graduate Studies	30
Master of Engineering in Mechanical Engineering	163

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an

advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an *Ad hoc* appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Berfield, Thomas A.
Ph.D., University of Illinois at Urbana-Champaign
Assistant Professor of Mechanical Engineering

Bertocci, Gina E.
Ph.D.; University of Pittsburgh
Professor of Mechanical Engineering

Bradshaw, Roger D.
Ph.D., Northwestern University
Associate Professor of Mechanical Engineering

Brehob, Ellen G.
Ph.D., The Pennsylvania State University
Associate Professor of Mechanical Engineering

Cobourn, W. Geoffrey
D.Sc., Washington University
Professor of Mechanical Engineering

Day, Michael L.
Ph.D., Purdue University

Professor of Mechanical Engineering
Associate Dean of Academic Affairs

Hnat, William P.
Ph.D., University of Akron
Professor of Mechanical Engineering

Lian, Yongsheng
Ph.D., University of Florida
Assistant Professor of Mechanical Engineering

Mann, Ronald A.
Ph.D., University of Cincinnati
Professor of Mechanical Engineering

Panchapakesan, Balaji
Ph.D., University of Maryland
Associate Professor of Mechanical Engineering

Prater, Glen
Ph.D., The Ohio State University
Professor of Mechanical

Engineering
Chair of Mechanical Engineering

Quesada, Peter M.
Ph.D., University of California, Berkeley
Professor of Mechanical Engineering

Richards, Christopher
Ph.D., The Ohio State University
Associate Professor of Mechanical Engineering

Sharp, M. Keith
Sc.D., Massachusetts Institute of Technology
Professor of Mechanical Engineering

Williams, Stuart J.
Ph.D., Purdue University
Assistant Professor of Mechanical Engineering

Master of Science in Mechanical Engineering

Major: ME

Degree Awarded: MS

Unit: GS

Program Webpage: <http://www.louisville.edu/speed/mechanical/>

Program Information

Director of Graduate Studies

Dr. Peter M. Quesada, (502)852-5981, pmques01@louisville.edu

General Information

The M.S. degree program is intended for persons having an accredited baccalaureate degree in mechanical 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 MS degree program should consult the Director of Graduate Studies in the Department of Mechanical Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award master's degrees.

Admission Standards

The admission standards for the M.S. program in Mechanical Engineering are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and
5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (on a 4.00 scale).

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1100.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria. Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.
5. All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

The following degree requirements are mandatory of all Master of Science candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. Masters students must take at least 24 hours of course work at the University of Louisville to satisfy the residency requirement for the master's degree. A maximum of six hours of graduate credit may be transferred from accredited institutions.
3. Students following the Thesis Option must follow the guidelines for the Preparation of a Thesis, which are located on the website of the School of Interdisciplinary and Graduate Studies. <https://graduate.louisville.edu/Programs/theses-dissertations/Guidelines%20for%20the%20Preparation%20and%20Processing%20of%20Theses.pdf>
4. All credit, including transfer credit, must be earned within six years prior to the completion of the degree.

The requirements for the Master of Science degree are discussed in more detail at: http://louisville.edu/graduatecatalog/toc#Requirements_for_Graduate_Degrees.

Curriculum

Graduate Studies - M.S.

Remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background. The minimum curricular requirements for the master's program are:

Courses	Hours
ME Electives ¹	15

Technical Electives ^{1,2}		9
<u>Thesis Option:</u> ME 690: MS Thesis ³	<u>Non-Thesis Option:</u> ME Electives ¹	6
Total		30 ⁴

¹ Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level; at least 15 hours of coursework must be in ME.

² Technical Electives can be non-mechanical engineering courses; these must be approved by the student's research advisor or academic advisor.

³ For the thesis option, a student is required to select both an approved M.S. thesis topic and the director and members of the thesis committee during the first term of Graduate Studies. The thesis director must give approval for enrollment in ME 690.

⁴ Candidates for the Master of Science degree must have a minimum final cumulative grade point average of 3.00 for all academic work attempted in Graduate Studies.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an Ad hoc appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

The following departmental faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

Berfield, Thomas A.

*Ph.D., University of Illinois
at Urbana-Champaign*

Assistant Professor of
Mechanical Engineering

Bertocci, Gina E.

*Ph.D.; University of
Pittsburgh*

Professor of Mechanical
Engineering

Bradshaw, Roger D.

Ph.D., Northwestern

University

Associate Professor of
Mechanical Engineering

Brehob, Ellen G.

*Ph.D., The Pennsylvania
State University*

Associate Professor of
Mechanical Engineering

Cobourn, W. Geoffrey

D.Sc., Washington University

Professor of Mechanical
Engineering

Day, Michael L.

Ph.D., Purdue University

Professor of Mechanical
Engineering, Associate Dean
of Academic Affairs

Hnat, William P.

Ph.D., University of Akron

Professor of Mechanical
Engineering

Lian, Yongsheng

Ph.D., University of Florida

Assistant Professor of
Mechanical Engineering
Mann, Ronald A.
*Ph.D., University of
Cincinnati*
Professor of Mechanical
Engineering
Panchapakesan, Balaji
*Ph.D., University of
Maryland*
Associate Professor of
Mechanical Engineering
Prater, Glen
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Quesada, Peter M.
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*Ph.D., The Ohio State
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Associate Professor of
Mechanical Engineering
Sharp, M. Keith
*Sc.D., Massachusetts
Institute of Technology*
Professor of Mechanical
Engineering
Williams, Stuart J.
Ph.D., Purdue University
Assistant Professor of
Mechanical Engineering

Doctor of Philosophy in Mechanical Engineering

Major: ME

Degree Awarded: Ph.D.

Unit: GS

Program Webpage: <http://louisville.edu/speed/mechanical/>

Program Information

Director of Graduate Studies

Dr. Peter M. Quesada, (502)852-5981, pmques01@louisville.edu

General Information

The Ph.D. degree program is intended for persons having an accredited masters and/or baccalaureate degree in mechanical 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 Director of Graduate Studies in the Department of Mechanical Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award doctoral degrees.

Admission Standards

The admission standards for the Ph.D. program in Mechanical Engineering are as follows:

All admission applications for the program shall include:

1. a completed [application](#) for University of Louisville graduate admission,
2. an application fee,
3. results from the Graduate Record Examination (GRE),
4. at least two letters of recommendation, and

5. official transcript(s) for all previous post-secondary coursework. All transcripts not in English must be certified as authentic and translated verbatim into English.

The minimum requirement for admission is the baccalaureate degree or its equivalent from an accredited institution or current enrollment in an undergraduate Speed School program.

The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 3.00 (on a 4.00 scale). A minimum graduate grade point average of 3.25 is also required for unconditional admission.

The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 1100.

Admission in good standing shall be made only if all admission credentials have been received, evaluated and approved and all academic requirements met. A student may be admitted provisionally if academic requirements are met but application materials are incomplete (usually missing letters of recommendation or official transcripts and/or official score reports). Students have one semester to furnish any credentials missing at the time of admission and may not enroll for a second consecutive term in provisional status.

Any conditional acceptance shall be made on an individual basis and shall require a statement of the rationale for the exception, plans for monitoring progress and performance and stated success criteria. Such justification must be provided in writing and must be accepted by the program chair and the Speed School Associate Dean for Academic Affairs. This will allow consideration of special circumstances in which the potential for acceptable graduate performance has been clearly demonstrated by other means.

International students whose primary language is not English must show English language proficiency by either:

1. total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test, or
2. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
3. demonstration of a degree award from an acceptable English language institution.

Academic Performance

The J.B. Speed School of Engineering has established the following performance policies:

1. The minimum grade point average requirement for good standing and satisfaction of degree requirements is 3.00 for all academic work completed while in graduate studies.
2. Any student who does not satisfy the published performance criteria shall be placed in probationary status. Any student who remains in probationary status for two consecutive terms status may be considered for dismissal from the program.
3. Students receiving graduate assistantships (teaching, research or service) shall be provided adequate training and shall be required to understand and adhere to University policies related to these areas. The performance of teaching, research and service duties by such students shall be periodically evaluated. Students with teaching assistantships shall be evaluated annually.
4. Students who fail to meet performance goals or who do not meet other requirements as outlined in the admission letter, program requirements or the university catalog may be subject to academic dismissal from their programs.
5. All graduate students are expected to make steady and satisfactory progress toward the completion of degrees. Students who are not enrolled 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 must contact the graduate program director.

Degree Requirements

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. The following degree requirements are mandatory of all doctoral candidates:

1. The Program of Study must be completed with a 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. At least two years of study must be spent at the University of Louisville.
3. One year must be spent in full-time residency (a minimum of 18 hours within a 12-month period or four terms of continuous part-time enrollment).
4. The applicant for a Doctor of Philosophy degree must pass an oral and/or written qualifying examination.
5. Admission to candidacy must not be later than the end of the ninth month prior to the awarding of the degree. Students enter Degree Candidacy upon completion of all course work, qualifying exams, required research credit hours and other co-curricular requirements. Students who are enrolled in Degree Candidacy are considered full-time students. Enrollment in Degree Candidacy status must be continuously maintained year round (i.e. Fall, Spring, and Summer) until the degree is awarded.
6. A dissertation is required of all candidates.
7. All candidates must pass a final oral examination. This is to be a defense of the dissertation and a demonstration of the candidate's mastery of his/her field.
8. Ordinarily the equivalent of three years of full-time graduate study is a minimum. However, the candidate must complete all requirements for the degree within four calendar years after passing the qualifying examination.

The requirements for the Doctor of Philosophy degree are explained in more detail at:
http://louisville.edu/graduatecatalog/toc#Requirements_for_Graduate_Degrees.

Curriculum

Graduate Studies - Ph.D.

Normally, it is expected that the student will complete a Master's degree before being admitted to the Ph.D. Program. However, 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 department's Director of Graduate Studies. Also, remedial work may be specified for those applicants who, in the opinion of the faculty, do not have a sufficient background.

The minimum curricular requirements for the doctoral program are:

Courses – Post Bac	Hours
Approved Master's Level Course Work	30
Advanced Mathematics ^{1,2}	6
ME Electives ²	12
Technical Electives ²	12

ME 700: Dissertation Research ³	18
Total	78 ⁴

¹ ME 565 and ME 566 or other 500-600 level courses with mathematics content with approval of the Director of Graduate Studies.

² At least one half of the total required 30 hours of Ph.D. coursework must be completed at the 600-level. The Advanced Mathematics, ME Electives and Technical 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 course plans. Students are allowed to take at most (6) hours of Independent Study (ME 588/688) as part of the 30 hours of coursework..

³ Upon completion of course and dissertation hours the student must register for DOCT 600 (Doctoral Candidacy) in order to stay active in the ME Program.

⁴ Candidates for the Doctor of Philosophy degree must have a minimum final cumulative grade point average of 3.00 for all academic work attempted in Graduate Studies.

Departmental Faculty

The Graduate Faculty of the J.B. Speed School of Engineering will be responsible for the teaching, training, and mentoring of graduate students and postdoctoral students within the Speed School. Membership in the Graduate Faculty shall be required to teach a course for which graduate credit is available and will be required to serve on a graduate student's thesis or dissertation committee in either an advisory or chairmanship capacity. The Graduate Faculty of other units may serve as external members of the committees. Additionally, membership in the Graduate Faculty will be required to act as mentors for the supervision of research by students working toward degrees authorized through the Graduate Program within the J.B. Speed School of Engineering.

Members of the Graduate Faculty with an Ad hoc appointment can be approved by the Associate Dean of Academic Affairs to teach a graduate course or serve as an advisor or chair (mentor) on a graduate thesis or dissertation committee for a limited and specified period of time upon request from the Departmental Chair.

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 Professor of Mechanical Engineering
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Ph.D., Northwestern University

Associate Professor of Mechanical Engineering
Brehob, Ellen G.
Ph.D., Pennsylvania State University
 Associate Professor of Mechanical Engineering
Cobourn, W. Geoffrey
D.Sc., Washington University
 Professor of Mechanical Engineering
Day, Michael L.
Ph.D., Purdue University

Professor of Mechanical Engineering
 Associate Dean of Academic Affairs
Hnat, William P.
Ph.D., University of Akron
 Professor of Mechanical Engineering
Lian, Yongsheng
Ph.D., University of Florida
 Assistant Professor of Mechanical Engineering

Mann, Ronald A.
Ph.D., University of Cincinnati
Professor of Mechanical Engineering
Panchapakesan, Balaji
Ph.D., University of Maryland
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Professor of Mechanical Engineering
Richards, Christopher
Ph.D., Ohio State University

Associate Professor of Mechanical Engineering
Sharp, M. Keith
Sc.D., Massachusetts Institute of Technology
Professor of Mechanical Engineering
Williams, Stuart J.
Ph.D., Purdue University
Assistant Professor of Mechanical Engineering

Graduate Certificate in Network and Information Security

Major: NUPR

Degree Awarded: CERT

Unit: GS

Program Webpage: <http://louisville.edu/speed/computer/programs/certificates/nis>

Program Information

The Network and Information Security graduate certificate program consists of 12 hours with two required courses from Computer Engineering and Computer Science department and two elective courses selected from a list of relevant elective courses in CECS department.

An undergraduate degree is required. Students enrolling in these courses will need to have sufficient background to be successful. Therefore, they will need to have completed the required course prerequisites, or have equivalent knowledge from courses taken at other universities, or from work experience. The student specifically should have taken equivalent to CECS 311, CECS 420, and CECS 310 courses. The work experience in the industry can be used as substitute if it uses or provides experience in area of operating systems, networking and legal and ethical issues.

Students will need to supply all documentation required for admission to the University either as student or as non-degree seeking status. Students will need to supply documentation demonstrating background knowledge sufficient to satisfy course prerequisites. This may include transcripts of the courses taken, course catalogue description and documentation from work regarding the experience in the particular areas as outlined above.

Curriculum

Required Courses:

Total of 12 credit hours are required with 2 required courses and 2 elective courses. The two required CECS courses are:

CECS 564 Introduction to Cryptology
CECS 566 Information Security

The two elective courses can be chosen from the following list of courses:

CECS 568 Computer Forensic
CECS 613 Network Security
CECS 694 Information Assurance
CECS 617 Mobile Computing
CECS 632 Data Mining
CECS 694-75 Advanced Cryptography
CECS 694 Database Security

Departmental Faculty

Dr. Mehmed Kantardzic
CECS Graduate Coordinator

Dr. Anup Kumar
Certificate program Coordinator