The University of Louisville is accredited by the Southern Association of Colleges and Schools Commission on Colleges 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, 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 http://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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Letter from the Dean

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.

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

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

Beth A. Boehm, Ph.D.

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

Mission Statement of the University of Louisville

The University of Louisville pursues excellence and inclusiveness in its work to educate and serve its community through 1) teaching diverse undergraduate, graduate, and professional students in order to develop engaged citizens, leaders, and scholars, 2) practicing and applying research, scholarship and creative activity, and 3) providing engaged service and outreach that improve the quality of life for local and global communities. The University is committed to achieving preeminence as a nationally recognized metropolitan research university.

As adopted by the Board of Trustees of the University of Louisville, January 14, 2016

History of the University

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. Because of its location in a major metropolitan area, the University is very much aware of both the research opportunities and the obligations in
teaching and public service that such a location presents.

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 establishes minimum guidelines and policies that maintain high standards for administering graduate education at the University of Louisville. 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 Association (http://louisville.edu/graduate/gsc/), to which all graduate students belong and its executive committee the Graduate Student Council, which consists of one elected representative from each graduate program. A representative of the Graduate Student Council serves as a voting member of the Graduate Council. Graduate 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.

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.

Mission Statement of the School of Interdisciplinary and Graduate Studies

The mission of The School of Interdisciplinary and Graduate Studies is to advocate and provide support for graduate education, graduate students, and interdisciplinary programs, and to promote the advancement of knowledge through the teaching and training of post-baccalaureate students. 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. It also partners with the academic units to support graduate students, financially and professionally, and help those units recruit, retain, and prepare students for successful careers.
Application and Admission

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.

Minimum 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 louisville.edu/graduate/apply

Credentials should be sent to the address below:

University of Louisville
School of Interdisciplinary and Graduate Studies
Graduate Admissions
2211 South Brook Street, Houchens Bldg., Ste. 105
Louisville, KY 40292

Programs have different deadlines and may require additional credentials or materials. Applicants should consult the pertinent program section of this catalog and check directly with the department.

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 School of Interdisciplinary and Graduate Studies for two years.

Application Fee

A $60.00 (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).

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.

Transcripts

Official transcripts showing all degrees awarded and all undergraduate and graduate work completed at every accredited college/university previously attended must be furnished by the degree-seeking applicant. Transcripts must be sent directly from the college/university. Transcripts sent by applicants will be considered unofficial. The minimum requirement for admission is the baccalaureate degree or its equivalent from a regionally accredited institution*. Students applying with a baccalaureate or an advanced degree from a nationally accredited institution
will be considered at the discretion of the admitting unit with approval via a variance request to the Vice Provost for Graduate Affairs.

*Regional accrediting agencies include: Middle States Association of Colleges and Schools (MSA), North Central Association of Colleges and Schools (NCA-HLC), Northwest Commission on Colleges and Universities (NWCCU), New England Association of Schools and Colleges (NEASC-CIHE), Southern Association of Colleges and Schools (SACS), The Western Association of Schools and Colleges (WASC-ACSCU, WASC-ACCJC)

All transcripts that are not in English must be translated verbatim into English and must be notarized. Some programs may require international applicants to have transcripts evaluated by a credential evaluation service such as World Education Services (www.wes.org) or Educational Credential Evaluators (www.ece.org) prior to admission or matriculation.

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.

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 demonstration of level of proficiency, specified by the program, on the TOEFL examination (www.toefl.org) or IELTS examination (www.ielts.org), or demonstration of an accredited degree awarded by an acceptable institution which uses English as the primary language of instruction, or 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/

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 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/international-graduate-teaching-assistants.

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 graduate program or the enrollment unit Dean or 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.

Graduate Admissions Hold

Graduate students admitted Provisional/Special Condition status will have a “Graduate Admissions Hold” placed on their academic record. This hold will be placed approximately one week prior to the beginning of registration on all current students whose status has not been changed to good standing. The hold will be
placed by the School of Interdisciplinary and Graduate Studies.

Returning students who were admitted Provisionally, and/or with Special Conditions who wish to re-enroll will be evaluated to determine if their conditions were met. Upon submitting a request to re-enroll form to the Registrar’s office, the Registrar’s office will forward for review by the School of Interdisciplinary and Graduate Studies. If the student is not eligible to be changed to good standing, a “Graduate Admissions Hold” will be placed on the student’s academic record prior to the processing of the re-enrollment form.

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 call and ask that their enrollment date be changed to a future term. In some cases, applicants may be asked 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 a masters or doctoral program. Students who take courses as post-baccalaureate non-degree students, may not receive graduate credit for them.

**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 [http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm](http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm).

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**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](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

Full-time study is defined as enrollment in:

1. Nine (9) credit hours during the Fall semester, OR
2. Nine (9) credit hours during the Spring semester, OR
3. Six (6) credit hours during the Summer semester, OR
4. 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 credit hours that may be taken in a regular semester is 12. The maximum number of credit 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 credit 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 (6). Up to six (6) 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 (6) credit 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. Upon approval of the graduate program, students may apply the coursework from no more than one certificate program towards a graduate degree program.

**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 students must complete all required courses before entering Degree Candidacy, they 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.

Degree Programs 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 initially enrolls in Degree Candidacy, the Registrar will automatically enroll the student in Degree Candidacy until the student applies to graduate. 1.) Failure to pay the candidacy fee will cancel a student’s enrollment. 2.) If a student has any type of hold on the account, the student will no longer be enrolled automatically in Degree Candidacy. To reestablish enrollment in Degree Candidacy, students will be required to pay the candidacy fee for each semester during which candidacy was voided and/or not maintained. To restore Degree Candidacy, the student must contact the Director of Graduate Studies in their degree program.
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 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 semester grade point average (GPA) below 3.0 will receive an academic warning from the School of Interdisciplinary and Graduate Studies. A notification will be sent to the student as well the student’s graduate program. Should a student’s cumulative GPA fall below 3.0, the student will be placed on probation until the student regains a 3.0 average (which is required to graduate). Ordinarily students are not permitted to continue on academic probation for more than one semester, but upon request of the student’s graduate program, the unit dean may submit a variance request to the Vice Provost for Graduate Affairs to approve continuation of academic probation beyond a single semester. Students on academic probation for more than one semester risk dismissal from the graduate program. Graduate programs have the prerogative to establish more stringent criteria for which students may be placed on academic probation.

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 http://louisville.edu/dos/students/studentrightsandresponsibilities. 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 500 level courses at
the graduate level, or in 600 level graduate courses. 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 (6) 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 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.

**Accelerated Bachelors/Masters Option**

Undergraduate students enrolled in accelerated programs are eligible to register for graduate-level coursework. Students must apply for admission to the program no later than the end of the junior year to be eligible enroll in graduate coursework in their final year of the program.

The student may take a maximum of nine (9) credit hours for graduate credit, which will also apply to the requirements for the baccalaureate degree. Those nine (9) credit hours of graduate credit must be transferred to the student’s graduate record after the student completes one semester as a graduate student. See actual degree program for further requirements.

**Continuing Studies and Post-baccalaureate Students**

Students enrolled through Continuing Studies are not eligible to enroll in graduate level courses.

Post-baccalaureate students who wish to take only graduate level courses should seek admission as a non-degree graduate student by applying through the School of Interdisciplinary and Graduate Studies. Students who wish to transfer coursework to a graduate degree must take the coursework as a non-degree graduate student or be admitted to a graduate degree program at the time of the request.

**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 academic standing. The GPA will be based upon all courses taken while the student is enrolled as a graduate student, including undergraduate courses. Courses taken at the 500-level and above will be counted as graduate courses. While possibly including undergraduate coursework, this transcript will determine the overall Graduate GPA. The program faculty and unit dean will monitor this Graduate GPA to ensure students maintain at least a 3.0 to remain in good standing.

**Grading System**

Graduate programs at University of Louisville utilize a plus/minus grading system.

The following is the grading scale:

<table>
<thead>
<tr>
<th>Grades</th>
<th>Quality Points</th>
</tr>
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<tbody>
<tr>
<td>A+</td>
<td>4.0</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
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<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>D-</td>
<td>0.7</td>
</tr>
</tbody>
</table>
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 Vice Provost for Graduate Affairs 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 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.

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.
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 enrollment in degree 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 as a variance request submitted to the department for their review and recommendation to the unit dean; the final decision rests with the Vice Provost for Graduate Affairs.

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 Doctoral 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 doctoral degree programs.

The award of a doctoral 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 doctoral degree 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 Vice Provost for Graduate Affairs, indicating how they ensure that such students have access to an intensive and immersive educational experience. The rationale must be approved by the Vice Provost for Graduate Affairs and be on file in the School of Interdisciplinary and Graduate Studies.

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 or Doctor of Education 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 doctoral degree 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 or Doctor of Education. 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.

The final manuscript is submitted electronically to the School of Interdisciplinary and Graduate Studies through the Electronic Thesis or Dissertation Submission form. The final copy is submitted as a PDF. Along with the PDF the student is required to submit a hard copy of the signature page, which should be on white paper with original signatures and the student is required to complete and submit the Non-Exclusive License form.

Some programs may require students to submit a copy of the dissertation or signature page to the department; please check with your program director.

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 be composed of a minimum of four qualified graduate faculty members, one of whom must come from outside the student’s program. The major professor and the remaining Committee members must be qualified to serve 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 credit hours of graduate credit is required for the master's degree. At least 15 credit 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 Master's Students

Masters students must take at least 24 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master's 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, unit dean 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.

The final manuscript is submitted electronically to the School of Interdisciplinary and Graduate Studies through the Electronic Thesis or Dissertation Submission form. The final copy is submitted as a PDF. Along with the PDF the student is required to submit a hard copy of the signature page, which should be on white paper with original signatures and the student is required to complete and submit the Non-Exclusive License form.
Graduate Student completing a thesis in the J. B. Speed School of Engineering Civil Engineering are requested to submit an extra copy to the department. Students in Industrial Engineering must submit an extra copy of the signature page to the department.

The thesis normally carries 3-6 credit hours of graduate credit, which is in addition to the 15 credit hour minimum taken within the major department. In certain departments, a professional paper or portfolio may be required in lieu of a thesis. For procedures in these instances, consult the Director of Graduate Studies or 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 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. The examination must be taken at least fourteen days before the end of the semester in which the degree is to be granted.

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

**Application for Degree**

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

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

**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 masters and doctoral 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 graduate program 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. Nominations may be submitted to
the Vice Provost for Graduate Affairs for the December and May commencements.

**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 School of Interdisciplinary and Graduate Studies 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. All students nominated for the Alice Eaves Barns award are automatically considered for a Graduate Dean’s Citation. Nominations may be submitted to the Vice Provost for Graduate Affairs for the December and May commencements.

**The Virginia “Jenny” Madden Award for Graduate Student Leadership and Service:** This award is named in honor of Virginia “Jenny” Madden for her many years of service to the former Graduate School, the School of Interdisciplinary and Graduate Studies, the Staff Senate, and the University of Louisville community. This award recognizes a master degree recipient who exhibits leadership through service to the recipient’s program, college, discipline, the University as a whole, and/or the community. The nomination letter must reference the student’s contributions and the impact of those contributions on the communities served. All students nominated for the Virginia “Jenny” Madden award are automatically considered for a Graduate Dean’s Citation. Nominations may be submitted to the Vice Provost for Graduate Affairs for the December and May commencements.

**Guy Stevenson Award:** The Guy Stevenson Award for Excellence in Graduate Studies honors a former dean of the School of Interdisciplinary and Graduate Studies. 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 School of Interdisciplinary and Graduate Studies 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. All students nominated for the Guy Stevenson award are automatically considered for a Graduate Dean’s Citation. Nominations may be submitted to the Vice Provost for Graduate Affairs for the December and May commencements.

**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. All students nominated for the John Richard Binford Memorial award are automatically considered for a Graduate Dean’s Citation. Nominations may be submitted to the Vice Provost for Graduate Affairs for the December and May commencements.

**John M. Houchens Prize:** The John M. Houchens Prize honors a former Registrar of the University. In the fall and spring 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. All students nominated for the John M. Houchens prize are automatically considered for a Graduate Dean’s Citation. Nominations may be submitted to the Vice Provost for Graduate Affairs for the December and May commencements.

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

**Outstanding Mentor of a Doctoral Student**

**Outstanding Mentor of a Masters Student**

Mentor 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.

**Provost’s Award for an Exemplary Director of Graduate Studies**

This award honors those who have graduate or professional student advising and/or administrative duties (as DGS) designated on their annual workload assignments and who excel at the work of advising graduate students regarding program requirements, career prospects, funding possibilities, and so on.

**Scholarships and University Fellowships**

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

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

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

**Diversity Assistantships/ Scholarships**

The School of Interdisciplinary and Graduate Studies is committed to providing financial support for the recruitment and retention of qualified, under-represented students. An award candidate must be admitted to the degree program (M.S. or Ph.D.) and be nominated by the Department Chair. These assistantships include a monthly stipend, tuition remission and health insurance.

**Resigning an Offer of Financial Support**

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
the School of Interdisciplinary and Graduate Studies 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 School of Interdisciplinary and Graduate Studies by the chairs of departments granting the doctorates. Students do not directly apply to the School of Interdisciplinary and Graduate Studies for these awards. Students who wish to be considered for fellowships should abide by the graduate program’s deadline for submitting application materials.

Duration of Support

Graduate assistantships are awarded on an individual basis according to the needs of the department, professor or project. The number of years or semesters for which these appointments are renewable depends on the department. The university wide official maximums for this type of university sponsored financial support are typically six years for doctoral students, three for master’s students and four for master of fine arts students.

Workload Limitations for Graduate Assistants

Graduate assistants who are receiving a stipend, whether in the form of a University Fellowship, Externally Funded Fellowship, Graduate Research, Teaching or other Assistantship are limited to working 20 hours per week work on the projects designated by the stipend award. However, students may be eligible to work an additional 9 hours per week, with the possibility to earn income for the work, if certain conditions apply. The maximum additional time commitment is 9 hours per week, in addition to the work performed for the GA stipend. However, international students who have a F1 VISA are not eligible for this waiver, and are limited to working no more than 20 hours per week.

The Dean of the School of Interdisciplinary and Graduate Studies must approve requests for students to perform additional work. The Chair of the student’s department or the Graduate Program director must complete the 20 hour waiver form, which can be found at: http://louisville.edu/graduate/forms/ga-waiver-request/. This form will be forwarded automatically to the School of Interdisciplinary and Graduate Studies. If the request is approved, the Office of Payroll and the person who initiated the request will be notified.

University Policies and Procedures

Academic Freedom at the University

Academic institutions in a democratic society exist for the pursuit of truth, the development and conservation of knowledge, the transmission
of learning, and the enhancement of the general well-being of such society. Free inquiry and free expression are indispensable to the attainment of these goals. The University of Louisville is, therefore, committed to protecting the academic freedom of all members of the University community.

Freedom to learn and freedom to teach are inseparable facets of academic freedom. Students have a right to their own views on matters of opinion, rather than fact, and a right to express those views in appropriate ways without fear of arbitrary reaction or improper disclosure of such opinions outside the classroom.

Teachers are entitled to full freedom in research, publication, academic evaluation, and classroom expression. Academic freedom carries the corresponding responsibilities to be thoroughly prepared and well informed in their fields of knowledge and to be scrupulous in distinguishing between personal and professional judgments and between fact and opinion.

Membership in the academic community imposes on students, faculty, staff, administrators, and trustees of the University an obligation to adhere to standards of academic honesty, to respect the dignity of others, to acknowledge their right to express differing opinions, and to foster and defend intellectual honesty, freedom of inquiry and instruction, and free expression both on and off the campus.

Source: University of Louisville Redbook, Section 2.5.1, approved July 1979.

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.

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

6. The Affirmative Action Office shall maintain the files and records relating to the complaints filed.

7. 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.

8. 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.

9. 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

The University’s Code of Student Conduct is the University’s policy regarding non-academic discipline of students and student organizations. Academic discipline of students is not covered by this Code, but rather falls within the authority of the individual academic units of the University.

The Code can be found at http://louisville.edu/dos/students/codeofconduct or contact the Dean of Students Office, SAC W301, (502)852-5787

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.

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 (502)852-6293 but e-mail (jlhart01@louisville.edu) is the preferred method of contact.

**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.

**Policy on Work-Restricted Religious Holy Days**

Federal law and University policy prohibit discrimination on the basis of religious belief. It is the policy of the University of Louisville to accommodate students, faculty, and staff who observe religious work-restricted holy days. Students who observe work-restricted religious holy days must be allowed to do so without jeopardizing their academic standing in any course. Faculty are obliged to accommodate students’ request(s) for adjustments in course
work on the grounds of religious observance, provided that the student(s) make such request(s) in writing during the first two (2) weeks of term.

Deans and department chairs must investigate and resolve student complaints arising from alleged faculty failure to make reasonable accommodation under these guidelines.

A calendar of typical work-restricted holy days is available through the Office of Diversity.

Information about specific holidays is also available by phone from the Office of the Provost at (502) 852-6153.

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/university/stupriv.

Special Facilities and Services

University Libraries

The university offers an extensive library system designed to support undergraduate and graduate research. The University Libraries consist of the Ekstrom (Main) Library, Archives and Special Collections, the Art Library, the Law Library, the Music Library, and the Health Sciences Library.

Total library holdings number more than 2.3 million printed volumes; subscriptions to both print and electronic journals number more than 70,000. E-books, microfilm, and other formats such as DVDs are also included in the collection. Most of these materials can be found using the library catalog available at http://louisville.edu/library. In addition, the Libraries subscribe to over 200 online information databases in a wide variety of subject areas.

Interlibrary loan services of the Ekstrom, Health Sciences, and Music libraries specialize in obtaining study and research materials not owned by the University of Louisville Libraries from collections of other libraries worldwide. For more extensive information regarding The University of Louisville Libraries visit their website: http://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.

**Information Technology Services**

UofL'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 Health Insurance Plan to meet student health care needs. This Health Insurance 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 Health Insurance Plan provides coverage for physician visits at the Health Services Office (HSO) which has two clinical locations.

To be eligible for coverage under the Student Health 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 Health Insurance 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.

The Health Service Offices operate 12 months of the year and is located at Cardinal Station Center, 215 Central Avenue - Suite 110, Louisville, KY 40208.

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 Campus (Cardinal Station Center) at
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 School of Interdisciplinary and Graduate Studies 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 the established semester deadlines may be subject to financial penalties. Students with unpaid account balances will have a Bursar Registration Hold placed on their student account. Students that have a Bursar Registration Hold become ineligible for further registration and transcripts will not be released until the student account is paid in full. Effective Spring 2015 a late payment fee of $100.00 may be assessed when student accounts are not paid by the last day to drop/add for the semester.

A return payment fee of $25.00 may be assessed when payment is not honored by the bank on which it was drawn. If restitution is not made within 10 days of notification, the student may be subject to financial penalties and/or legal action.

Debtors who do not make satisfactory payment arrangements on their past due accounts may have their accounts placed with a billing service. If not paid through the billing service, the unpaid account may be forwarded to 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. Any E-check or Paper Check payment that is remitted on a Past Due by a previously enrolled student will be subject to a 21 day delay on having their Bursar Registration Hold lifted.

**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: [http://louisville.edu/financialaid/](http://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: [ulink.louisville.edu](http://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](mailto:bursar@louisville.edu))

**Student Financial Aid Office**

The University of Louisville’s (UofL) Student Financial Aid Office’s staff is dedicated to providing students and their families with courteous and efficient financial services while complying with all federal, state and university policies. Our goal is to help students explore funding options and make their academic goals more affordable.

Website: [http://louisville.edu/financialaid/](http://louisville.edu/financialaid/)
E-mail: [finaid@louisville.edu](mailto:finaid@louisville.edu)
Call center: (502)852-5511
Fax: (502)852-0182
Campus location: 110 Houchens Building, Belknap Campus

Website

Please visit the Student Financial Aid Office’s website (http://louisville.edu/financialaid/) for information regarding the entire financial aid process at UofL, including but not limited to important announcements, award sources, Satisfactory Academic Progress, and Consumer Information.

Office Hours

The Student Financial Aid Office provides walk-in and by appointment counseling to current and prospective students Mondays, Tuesdays, Wednesdays, and Fridays from 9:00 a.m. until 5:00 p.m. On Thursdays during non-peak processing times, the office and call center are open from 12:30 p.m. until 5:00 p.m. Check the Student Financial Aid Office’s website for special hours during the August and January class registration periods.

E-Mail Service Account

Send your e-mail questions to finaid@louisville.edu. For specific account information, current students must e-mail the office from their UofL e-mail account. E-mail responses typically occur within 3 business days.

Call Center

This service is intended to assist prospective students, current students, and parents with their general financial aid questions. We ensure students’ privacy by not disclosing account-specific information. Current students should have their student ID number ready when calling. Contact the call center at (502)852-5511.

Financial Aid Recipients’ Credit Balances and Loan Cancellations

Determinations regarding refunds of resulting credit balances will be based on regulations governing the financial aid awarded to the student. Federal regulations mandate students have the right to cancel all or a portion of an EFT of a federal loan. To request cancellation of all or a portion of your federal loan(s), contact the Financial Aid Office in writing (Student Financial Aid, University of Louisville, Louisville, KY 40292).

Residency Policy and Fees


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 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, such as serious personal illness or injury, or illness or death of a parent.

(3) "Degree level" means enrollment in a course or program that 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) "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 for independence established in Section 5 of this administrative regulation.

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

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

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

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

(9) "Institution" means an entity defined by KRS 164.001(12) 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.

(10) "Kentucky resident" means a person determined by an institution for tuition purposes to be domiciled in, and a resident of, Kentucky as determined by this administrative regulation.

(11) "Nonresident" means a person who:
   (a) Is domiciled outside Kentucky;
   (b) Currently maintains legal residence outside Kentucky; or
   (c) Is not a Kentucky resident as determined by this administrative regulation.

(12) "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.

(13) "Preponderance of the evidence" means the greater weight of evidence or evidence that is more credible and convincing to the mind.

(14) "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.

(15) "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, and includes student employment by the institution or a graduate assistantship.

(16) "Sustenance" means:
   (a) Living expenses, such as room, board, maintenance, and transportation; and
   (b) Educational expenses, such as 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 a qualified individual who is domiciled in Kentucky and who is a resident of Kentucky.

(2) In accordance with the duties established in KRS 164.020, 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) Unless otherwise indicated, this administrative regulation shall apply to all student residency determinations, regardless of circumstances, including residency determinations made by:

(a) The state-supported institutions for prospective and currently-enrolled students;
(b) The Southern Regional Education Board for contract spaces;
(c) Reciprocity agreements, if appropriate;
(d) The Kentucky Virtual University;
(e) Academic common market programs;
(f) The Kentucky Educational Excellence Scholarship Program; and
(g) 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:
   1. During the admission process;
   2. Upon enrollment in an institution for a specific academic term; or
   3. For admission into a specific academic program;
(b) A reconsideration of a determination of residency status by an institution based upon a changed circumstance; or
(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) If applicable, other materials required by an institution and consistent with this administrative regulation; and
(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 or sanction 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 when the student applied 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;
   (e) A person has a continuous absence of one (1) year from Kentucky; or
   (f) A person attended an out-of-state higher education institution during the past academic year and paid in-state tuition at that institution.

(2) A presumption arising from subsection (1) of this section shall only be overcome by preponderance of evidence 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 shall be 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. A determination that a student is independent shall be one (1) step in the overall determination of whether a student is or is not a resident of Kentucky.

(2) In determining the dependent or independent status of a person, the following information shall be considered, as well as other relevant information available when the determination is made:
   (a)1. Whether the person has been claimed as a dependent on the federal or state tax returns of a parent or other person for the year preceding the date of application for a determination of residency status; or
   2. Whether the person is no longer claimed by a parent or other person as a dependent or as an exemption for federal and state tax purposes; and
   (b) Whether the person has financial earnings and resources independent of a person other than an independent spouse necessary to provide for the person's own sustenance.

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

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

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

(6) Financial assistance from, or a loan made by, a parent or family member other than an independent spouse, if used for sustenance of the student:
   (a) Shall not be considered in establishing a student as independent; and
   (b) Shall be a factor in establishing that a student is dependent.

Section 6. Effect of a Determination of Dependent Status on a Determination of Residency Status. (1) The effect of a
determination that a person is dependent shall be:

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

(2) If the parent or parents of a dependent person are Kentucky residents and are domiciled in Kentucky, but subsequently move from the state:

(a) The dependent person shall be considered a resident of Kentucky while in continuous enrollment at the degree level in which currently enrolled; and
(b) The dependent person's residency status shall be reassessed if continuous enrollment is broken or the current degree level is completed.

Section 7. Member or Former 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 when inducted 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 member's time of active service; or
(b) If the member returns to this state within six (6) months of the date of the member's discharge from active duty.

(2)(a) A member of the armed services on active duty for more than thirty (30) days and who has a permanent duty station in Kentucky shall be classified as a Kentucky resident and shall be entitled to in-state tuition, as shall the spouse or a dependent child of the member.

(b) A member, spouse, or dependent of a member shall not lose Kentucky residency status if the member is 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. If a member of the Kentucky National Guard is on active duty status for a period of not less than thirty (30) days, the member shall be considered a Kentucky resident, as shall the spouse or a dependent child of the member.

(4) A person eligible for benefits under the federal Post-9/11 Veterans Educational Assistance Act of 2008, 38 U.S.C. 3301-3325, or any other educational benefits provided under Title 38 of the United States Code shall be entitled to Kentucky resident status for purposes of tuition charged at state-supported institutions.

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

Section 8. Status of Nonresident Aliens; Visas and Immigration. (1)(a) A person holding a permanent residency visa or classified as a political refugee shall establish domicile and residency in the same manner as another person.

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

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

(3)(a) An independent person holding a nonimmigrant visa with designation B, C, D, F, H-2, H-3, H-4 if accompanying a person with an
H-2 or H-3 visa, J, M, O, P, Q, S, TD, or TN shall not be classified as a Kentucky resident because that person does not have the capacity to remain in Kentucky indefinitely and therefore cannot form the requisite intent necessary to establish domicile as defined in Section 1(6) of this administrative regulation.

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

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

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

(a) Is an undocumented alien;

(b) Holds a visa listed in subsections (2) or (3)(a) of this section; or

c) Is a dependent of a person who holds a visa listed in subsections (2) or (3)(a) of this section.

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

(b) A person who has petitioned the federal government to reclassify his or her visa status based on 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) A determination of Kentucky domicile and residency shall be based upon verifiable circumstances or actions,

(b) 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.

c) A person shall not be determined to be a Kentucky resident by the performance of an act that is incidental to fulfilling an educational purpose or by an act performed as a matter of convenience.

(d) Mere physical presence in Kentucky, including living with a relative or friend, shall not be sufficient evidence of domicile and residency.

(e) A student or prospective student shall respond to all requests for information regarding domicile or residency requested by an institution.

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

2. Payment of Kentucky withholding taxes while employed during the calendar year for which a change in classification is sought;
(d) Full-time employment of at least one (1) year while living in Kentucky;
(e) Attendance as a full-time, nonresident student at an out-of-state institution based on a determination by that school that the person is a resident of Kentucky;
(f) Abandonment of a former domicile or residence and establishing domicile and residency in Kentucky with application to or attendance at an institution following and incidental to the change in domicile and residency;
(g) Obtaining licensing or certification for a professional and occupational purpose in Kentucky;
(h) Payment of real property taxes in Kentucky;
(i) Ownership of real property in Kentucky, if the property was used by the student as a residence preceding the date of application for a determination of residency status;
(j) Marriage of an independent student to a person who was domiciled in and a resident of Kentucky prior to the marriage; and
(k) 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;
(c) Registration as a Kentucky voter;
(d) Long-term lease of at least twelve (12) consecutive months of non-collegiate housing; and
(e) Continued presence in Kentucky during academic breaks.

(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.

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 concerning residency classification;
(b) Making application for change of residency classification with the designated office or person at the institution; and
(c) Notifying the designated office or person at the institution immediately upon a change in residency.

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

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

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

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

(4)(a) The formal hearing conducted by an institution and the final recommended order shall be a final administrative action with no appeal to the Council on Postsecondary Education.

(b) A formal administrative hearing conducted by the Council on
Postsecondary Education for residency determinations related to eligibility for the Academic Common Market and Regional Contract Programs shall be conducted pursuant to the provisions of KRS Chapter 13B and 13 KAR 2:070. The recommended order issued by the President of the Council shall be a final administrative action.

(5) 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; 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

(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 shall:
   (a) Be a person not involved in determinations of residency at an institution except for formal hearings; and
   (b) 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
   (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. 4-5-1991; Am. 22 Ky.R. 1656; 1988; eff. 5-16-1996; 23 Ky.R. 3380; 3797; 4099; eff. 6-16-1997; 24
Ky.R. 2136; 2705; 25 Ky.R. 51; eff. 7-13-1998; 25 Ky.R. 2177; 2577; 2827; eff. 6-7-1999; 749; 1238; eff. 11-12-2002; 36 Ky.R. 1083; 1951; 2033-M; eff. 4-2-2010; TAm eff. 11-20-2014; 41 Ky.R. 2108; 42 Ky.R. 9; eff. 7-13-2015; TAm 7-13-2015).
## Academic Calendar

### Summer 2016 Term I
- Classes start: May 9, Monday
- Last day of registration: May 9, Monday
- Last day to drop/add: May 10, Tuesday
- Last day to withdraw: May 20, Friday
- Last day of classes: May 27, Friday
- Last day to apply for degree: June 24, Friday
- Degree date: Aug. 9, Tuesday

### Summer 2016 Term II
- Classes start: May 31, Tuesday
- Last day of registration: May 31, Tuesday
- Last day to drop/add: June 2, Thursday
- Last day to apply for degree: June 24, Friday
- Last day to withdraw: June 21, Tuesday
- Independence Day holiday: July 4, Monday
- Last day of classes: July 5, Tuesday
- Degree date: Aug. 9, Tuesday

### Summer 2016 Ten-Week Term
- Classes start: May 31, Tuesday
- Last day of registration: May 31, Tuesday
- Last day to drop/add: June 3, Friday
- Last day to apply for degree: June 24, Friday
- Independence Day holiday: July 4, Monday
- Last day to withdraw: July 13, Wednesday
- Last day of classes/degree date: Aug. 9, Tuesday

### Summer 2016 Term III
- Classes start: July 6, Wednesday
- Last day of registration: July 6, Wednesday
- Last day to drop/add: July 8, Friday
- Last day to withdraw: July 27, Wednesday
- Last day of classes/degree date: Aug. 9, Tuesday

### Speed Summer 2016 Term
- Classes start: May 9, Monday
- Last day of registration: May 9, Monday
- Last day to drop/add: May 12, Thursday
- Memorial Day: May 30, Monday
- Last day to apply for degree: June 24, Friday
- Last day to withdraw: June 20, Monday
- Independence Day holiday: July 4, Monday
- Last day of classes: July 15, Friday
- Final exam period: July 18-21, Mon-Thurs
- Degree date: Aug. 9, Tuesday

### Kent Summer 2016 Term
- Classes start: May 9, Monday
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<td>Last day of registration</td>
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<td>Monday</td>
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<tr>
<td>Last day to drop/add</td>
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<td>Thursday</td>
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<tr>
<td>Memorial Day</td>
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<td>Last day to apply for degree</td>
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<td>Last day to withdraw</td>
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<td>Thursday</td>
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<tr>
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<td>Monday</td>
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<td>Last day of classes</td>
<td>July 23</td>
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### Nursing Summer 2016 Term

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### Fall 2016

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<td>Last day to apply for degree</td>
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<td>Mid-Term Break</td>
<td>October 3-4</td>
<td>Monday, Tuesday</td>
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<tr>
<td>Last day to withdraw</td>
<td>October 24</td>
<td>Monday</td>
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<td>Presidential Election</td>
<td>November 8</td>
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<td>Reading day</td>
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<td>Final examinations</td>
<td>December 8-14</td>
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<td>Degree date</td>
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<td>December commencement</td>
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### Spring 2017

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<td>Classes start</td>
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<td>Last day of registration</td>
<td>January 9</td>
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<td>Last day to add/drop a course</td>
<td>January 13</td>
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<td>Martin Luther King, Jr. holiday</td>
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<td>Last day to apply for degree</td>
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<td>Last day to withdraw</td>
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<td>Spring break</td>
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<td>Last day of classes</td>
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**Note:** The University reserves the right to change the announced academic calendar without prior notice.
Institutional and Professional Accreditations

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 current list of university accreditations is available at: [http://louisville.edu/accreditation](http://louisville.edu/accreditation)

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 (on probation) - [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 (BS degree only)]
Clinical Chemistry - [Commission on Accreditation in Clinical Chemistry (COMACC)]
Clinical Psychology - [American Psychological Association]
Clinical and Mental Health Counseling (M.Ed. degree) - [Council for Accreditation of Counseling and Related Educational Programs (CACREP)]
Computer Engineering and Computer Science - [Computing Accreditation Commission of ABET, Inc. (BS 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]
Early Learning Center - [National Association for the Education of Young Children (NAEYC)]
Education - [Education Professional Standards Board, Commonwealth of Kentucky and National Council for Accreditation of Teacher Education (NCATE)]
Engineering - [(Bioengineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Industrial Engineering, Mechanical Engineering, Computer Engineering and Computer Science programs)] Engineering Accreditation Commission of ABET, Inc. (B.S. and M.Eng. degrees)
Exercise Physiology/Exercise Science - [Committee on Accreditation for the Exercise Sciences (CoAES)]
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 (on probation) - [Council for Interior Design Accreditation (CIDA)]
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 - [Section on Paralegal Education of the American Bar Association]
Pathology and Laboratory Medicine - [Post Doctoral] Accreditation Council for Graduate Medical Education (ACGME)
Public Administration - [National Association of Schools of Public Affairs and Administration]
Public Health - [Council on Education for Public Health (CEPH)]
School Counseling (M.Ed. degree) - Council for Accreditation of Counseling and Related Educational Programs (CACREP)
Social Work - Commission on Accreditation of the Council on Social Work Education
Sports Administration - Commission on Sports Management
Theatre Arts - National Association of Schools of Theatre (NAST)
Urban Planning - Planning Accreditation Board (PAB) - Master’s degree

OTHER ACCREDITATIONS
Cooperative Education - American Council for Cooperative Education (ACCE)
Continuing Medical Education - Accreditation Council for Continuing Medical Education
Fort Knox Education Center - Military Installation Education Review (2009)
Human Subjects Protection Program - Association for the Accreditation of Human Research Protection Programs, Inc. (AAHRPP)
Research Resource Center - Association for Assessment and Accreditation of Laboratory Animal Care, International (AAALAC)
Strength Conditioning - NSCA Education Recognition Program (ERP)

Administration and Faculty

Administrative Officers of the University

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Acting President

Dale Billingsly, Ph.D.
Acting Executive Vice President and
University Provost

Gregory Postel, M.D.
Interim Executive Vice President for Health Affairs

William Pierce, Ph.D.
Executive Vice President for Research and Innovation

Michael Mardis, Ph.D.
Vice Provost for Student Affairs and Dean of Students

Keith Inman
Vice President for University Advancement

Daniel Hall, J.D.
Vice President for Community Engagement

Thomas M. Jurich
Vice President for Athletics

Harlan Sands, J.D.
Senior Vice President for Finance and Administration and Chief Operating Officer
Administrative Officers of the School of Interdisciplinary and Graduate Studies (SIGS)

Beth Boehm, Ph.D.
Dean of the School of Interdisciplinary and Graduate Studies and Vice Provost of Graduate Affairs

Paul DeMarco, Ph.D.
Associate Dean of the School of Interdisciplinary and Graduate Studies

Deans

Beth Boehm, Ph.D.
School of Interdisciplinary and Graduate Studies

Kimberly Kempf-Leonard, Ph.D.
College of Arts and Sciences

Alan Attaway, Ph.D.
Interim, College of Business

T. Gerard Bradley, Dr.Med.Dent.
School of Dentistry

Ann Larson, Ph.D.
College of Education and Human Development

David Jenkins, Ph.D.
Kent School of Social Work

Susan Duncan, J.D.
Interim, School of Law

Toni M. Ganzel, M.D.
School of Medicine

Christopher P. Doane, Ph.D.
School of Music

Marcia Hern, Ed.D., C.N.S., R.N.
School of Nursing

Craig H. Blakely, Ph.D.
School of Public Health and Information Sciences

John S. Usher, Ph.D., P.E.
Acting, J. B. Speed School of Engineering

Robert E Fox Jr., MBA, MLS
University Libraries

Graduate Council

Adam King
GSC President
### Graduate Faculty

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Richard Baumgartner
Sidney J. Baxendale
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Eric Bednar
James K. Beggan
Andrea Behrmann
Juliane Beier (Arteel)
Anthony Belak
Allison Bell
Shannon Bell
Richard Benton
Frederick W. Benz
Thomas Berfield
Doug Berg
Matt Bergman
Mark Bernstein
Robert Berson
Simontia Bertacco
Karen Bertocci
Gina Bertocci
Latricia Best
Levi Beverly
Nageshwar R. Bhaskar
Kunwar Bhatnagar
Aruni Bhatnagar
Parimal Bhattacharjee
Matthew Biberman
Martha Bickford
James Bielo
Dale Billingsley
Cathy Binkley
Dror Biran
Csaba Biran
Karen Bishop
Pat B. Blackwell
Craig Blakely
Linda Bledsoe
Mark E. Blum
Lisa M. Blum
Haribabu Bodduluri

John Gibson
Gung-Min Gie
Gail Gigante
John Gilderbloom
Ryan Gill
Keith Gilyard
Rafat Girgis
Guruprasad Girdharan
Jon Glassford
Leila Gobejishvili
Frank Goetzke
Stephan F. Gohmann
Seana Golder
Alan C. Golding
Frances S. Goldsmith
Richard Goldstein
Karen Golemboski
Rangraj Gopalraj
M. Douglas Gossman
Don Gottlieb
Alan R. Gould
Evelyne Gozal
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Kristopher Grady
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James E. Graham
Craig Grapperhaus
Sarah Graves
Karen Gray
Tricia Gray
Brian Greene
John P. Greene
Robert M. Greene
Richard Greenlee
Christopher Greenwell
Ann Greenwell
Henry Greenwell
Gary Gregg
Ron Gregg
Ronald G. Gregg
Susan M. Griffin
Brittany MacWilliams
Ajmani Madan
David Magnuson
Mary Makris
Claudio Maldonado
Stephanie Maloney
Thomas S. Maloney
Julie Manche
Henri Mangeot
John W. Manning
Mike Mansfield
Jennifer Mansfield-Jones
Sheron Mark
Lisa Markowitz
Ra'Chanel Marshall
Gul Marshall
Gary S. Marshall
Robert Martin
Mavin Martin
Robert C. Martin
Likoebe Maruping
Dismas A. Masolo
Scott Massey
Benjamin Mast
M. Gay Masters
Augustus Mastri
Susan Matarese
Jennifer Mather
Nobuyuki Matoba
Mark Mattes
Stephen Mattingly
Muriel Maurer
Gabrielle Mayer
Lee Mayer
Maureen McCall
Clinton McCanless
Justin A. McCarthy
Jessica McCarty
Craig McClain
Eric McCord
Michael McCormack
Michael McCoy
Anibal M. Silveira
Jay Joseph P. Simala
Thomas Simmons
Paul Simmons
David M. Simpson
Rob Sinclair
Terry Singer
Shailiesh Singh
Jackie Singleton
Leah Siskind
Steven Sizemore
Steven Skaggs
Jeffrey Skinner
Mark Slaughter
Chad Sloan
Serban Smadici
Corwin Smidt
Siobhan Smith
Daniel Smith
Patrick Smith
Felicia Smith
Alan Smith
Sandra Smith
Sieglinnda Snapp
Kate Snyder
James W. Snyder
Steve Sohn
Tatjana Soldat-Jaffe
Wei Song
Yujia Song
Inbum Song
Zhao-Hui (Joe) Song
Marie Antoinette Sossou
Patricia Soucy
Garry Sparks
Frederick Speck
Barbara Speck
Gregory Squires
Sanjay Srivastava
Robert St. Clair
Robert H. Staat
Hristomir Stanek
Larry Cook
L. Andrew Cooper
Marilyn Cooper
Justin Cooper
Nigel G. F. Cooper
Richard E. Coppage
Cynthia Corbitt
Mary Beth Coty
Ginevra Courtaude
Tonya Cox
Dave Coyne
Thomas H. Crawford
Timothy Nathaniel Crawford
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Gary Crim
Erin Crites
Geoffrey Cross
A. Glenn Crothers
Philip Crowley
Denise Cumberland
William L. Cunningham
Michael R. Cunningham
Albert Cunningham
David R. Cunningham
Matthieu Dalle
Joseph D'Ambrosio
Caroline Daniels
Judith Danovitch
Udayan B. Darji
Douglas S. Darling
Somnath Datta
Susmita Datta
Per Davidson
Christopher L. Davis
Deborah Winders Davis
Mark Davis
Tammi Davis
Deborah Davis
Keith Davis
Beth Davis-Sramek
Donald Dawes
Buddhadeb Dawn
Alexei Izyumov
Jill Jacobi-Vessels
Robert Jacobs
Aaron Jaffe
Jason Jaggers
Elizabeth Jakob
Venkatakrishna Jala
Susan Jarosi
Chakram Jayanti
Gaetane Jean-Marie
Rebecca Jemian
A. Bennett Jenson
Hwa-Seong Jin
Li Jing
Adam Jobson
R. Michael Johnmann
George R. John
Timothy Johnson
Pearlie Johnson
Mark A. Johnson
B. Edwin Johnson
Paul B. Johnston
Yvonne Jones
Ricky L. Jones
Johnny Jones
Steven P. Jones
Veronne Faye Jones
Jon W., Jr Jones
Colleen Jonsson
Swati Joshi-Barve
Irving G. Joshua
Debra Journet
James E. Jumblatt
Marcia M. Jumblatt
David E. Justus
Pradeep Kachroo
Sham Kakar
Ted Kalbfleisch
Kyung Kang
Y. James Kang
Mehmed Kantardzic
Elizabeth Kantzman
Tommy Parker
Simon Parker
Phyllis Parker
Shawn Parkhurst
Frederick M. Parkins
Arthur C. Parola
Christopher Paterson
William Patterson
David Patterson
Pamela Patton
Elizabeth Patton
Beth Patton
Alexis Paxton
Patricia Payette
Rodger A. Payne
Liz Payne
William D. Pearson
Diane Pecknold
Robert Pennington
Margaret Pentecost
Robelio Pereda
Daniel Perez
Michael H. Perlin
Julie M. Peetet
Susan Peters
Courtney Petrosino
Jeffrey Petruska
Heywood Petry
Wendy Pfeffer
Selene Phillips
Dora Kay Phillips
William M. Pierce
Peipei Ping
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Neville Pinto
M. Michele Pisan
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Patrick Piuma
Barbara Polivka
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Walter M. Williams
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Craig Williamson
Gerard Williger
Gerold Willing
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Richard W. Wilson
Ian M. Windmill
Welby Winstead
Stephen Winters
Norman Wirzba
Elaine O. Wise
Dieter Witt
Richard Wittebort
James Wittliff
B. Cherie Dawson-Edwards
C. Andrew Day
Michael L. Day
William Dean
Douglas Dean
Marci DeCaro
Monica Delano
Lindsay Della
Paul J. DeMarco
Donald R. Demuth
Brendan DePue
Gail W. DePuy
Ahmed Desoky
Jaydev N. Dholakia
Surjit Dhoooper
Phil Diblasi
Pat H. Dickson
Joseph Dien
Julia Dietrich
Randall Dills
Ronald Dimock
Jixiang Ding
Christopher Doane
Christiane Donahue
Carrie Donald
Brian Dos Santos
David J. Doukas
Guy Dove
Timothy Dowling
Steven Drewry
Connie Drisko
Thad Druffel
Margaret L. DSilva
Stanley DSouza
David A. Dubofsky
Jian Du-Caines
Lee Alan Dugatkin
Thomas Dumstorf
Donald B. Dupre
Perri Eason
John Eaton

Victor Kappeler
Julia Karcher
Anoop Karippot
Kathleen Kerr
Matthew Kerr
Dennis Keating
Robert B. Kebric
Deborah G. Keeling
Andrea Kelecy
Lara Kelland
Kenneth Keller
Bradley Keller
Brent Kelly
Baron Kelly
Janet Kelly
Bruce H. Kemelgor
Dru Kemp
Kimberly Kempf-Leonard
Richard N. Kerber
Jelani Kerr
Sharon Kerrick
Robert S. Keynton
Andre E. Kezdy
Zafulla Khan
La Creis Renee Kidd
John F. Kielkopf
Jongwoo Kim
Jon-Lark Kim
Young Hoon Kim
Letitia Kimsey
Shirletta Kinchen
Kristi King
Sidney King
Irina Kirpich
Doris Kistler
Jon B. Klein
Audrey Kline
Carolyn Klinge
Tracy K'Meyer
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Cheryl A. Kolander
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Jennifer Potochnic
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Deborah Potter
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Aleeta Powe
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Glen Prater
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Jill Preminger
Dianne Prenatt
Mark A. Priest
Russell A. Prough
George Purvis
Sathnur Pushpakumar
Meng-sheng Qiu
Peter M. Quesada
Andrew S. Rabin
J. Patrick Rafferty
Shesh Rai
Theresa Rajack-Talley
Puthankurissi S. Raju
Patricia Ralston
Michael Ramach
Allan M. Ramirez
Madhavi J. Rane
Audra Rankin
Ch. V. Rao
Mariusz Ratajczak
Rebecca Redman
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Frederick J. Regennitter
Kenneth H. Reid
Elizabeth Reilly
Susanna Remold
Laurie A. Rhodebeck
Che Rhodes
Christine Rich
Krzysztof Wolek
Jean (Hicks) Wolph
John L. Wong
Hongryun Woo
Janet Woodruff-Borden
Stefanie Wooten-Burnette
Michah Worley
Nathaniel Wright
Andrew L. Wright
Carol Wright
Elaine Wright
Yian Wu
Dongfeng Wu
Zhongjun Jon Wu
Reinhold Wurth
Clarence Wyatt
Marcin Wysoczynski
Bo Xu
Yongzhi (Steve) Xu
Xiao-Ming Xu
Kavitha Yaddanapudi
Lung T. Yam
Roman V. Yampolskiy
Jun Yan
Dongyan Yang
Li Yang
Pamela A. Yankeelov
Stephen Yanoviak
M. Cecilia Yappert
Hong Ye
Mark Yeary
Wendy Yoder
Deborah Yoder-Himes
Tamara Yohannes
Esma Yolcu
Paul York
William W. Young
Sun Youzhong
Ming Yu
Wolfgang Zacharias
Pavel Zahorik
Francis Zamborini
Degree Programs

The School of Interdisciplinary and Graduate Studies currently has more than 149 programs offering approximately 39 doctoral, 89 masters, 3 professional and 18 certificate degrees. Applicants should carefully review the available programs and choose the program that is most appropriate for their academic goals.

Doctoral Programs

Doctor of Audiology – Au.D.
Doctor of Nursing Practice - D.N.P.
Doctor of Education - Ed.D.
  Education Leadership and Organizational Development
Doctor of Philosophy – Ph.D.
  Anatomical Science and Neurobiology
  Applied and Industrial Mathematics
  Applied Sociology
  Art History
  Biochemistry and Molecular Biology
  Biology
  Biostatistics
  Chemical Engineering
  Chemistry
  Civil Engineering
  Clinical Psychology

Computer Science and Engineering
Counseling and Personnel Services
Criminal Justice
Curriculum and Instruction
Educational Leadership and Organizational Development
Electrical Engineering
English Rhetoric and Composition
Entrepreneurship
Experimental Psychology
Humanities
Industrial Engineering
Interdisciplinary Studies
Interdisciplinary Studies: Specialization in Bioinformatics
Interdisciplinary Studies: Specialization in Translational Bioengineering
Interdisciplinary Studies: Specialization in Translational Neuroscience
Mathematics (See Applied and Industrial Mathematics)
Mechanical Engineering
Microbiology and Immunology
Nursing
Pan-African Studies
Pharmacology and Toxicology
Physics
Physiology and Biophysics
Psychology (See Clinical Psychology or Experimental Psychology)
Public Health Sciences
Sociology (See Applied Sociology)
Social Work
Urban and Public Affairs

Specialist Programs

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

Masters Programs

Master of Arts – M.A.
   Anthropology
   Art (Creative) and Art History
   Communication
   English
   French Language and Literature
   Higher Education Administration
   History
   Humanities
   Interdisciplinary Studies
   Interdisciplinary Studies: Concentration in Bioethics and Medical Humanities
   Interdisciplinary Studies: Concentration in Sustainability
   Mathematics
   Pan-African Studies
   Political Science
   Sociology
   Spanish
   Women's and Gender Studies

Master of Accountancy – M.Ac.

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
Secondary Education - Alternative Certification (8-12)
Special Education, Specialization in Moderate/Severe Disabilities

Master of Business Administration – M.B.A.

Master of Education – M.Ed.
   Community Health Education Counseling and Personnel Services with a Concentration in Student Personnel Services
   Instructional Technology
   Literacy
   Special Education (Non-Teaching)
   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
   Teacher Leadership

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

Master of Fine Arts – M.F.A.
   Studio Art and Design
   Theatre Arts

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

Master of Music Education – M.M.E.

Master of Public Administration – M.P.A.
Master of Public Health – M.P.H.
Master of Science – M.S.
    - Anatomical Science and Neurobiology
    - Applied Geography
    - Biochemistry and Molecular Biology
    - Biology
    - Biostatistics
    - Chemical Engineering
    - Chemistry
    - Civil Engineering
    - Communicative Disorders
    - Computer Science
    - Criminal Justice
    - Electrical Engineering
    - Epidemiology
    - Exercise Physiology
    - Geography (See Applied Geography)
    - Human Resources and Organization
    - Development
    - Industrial Engineering
    - Interdisciplinary Studies
    - Interdisciplinary Studies: Concentration in Sustainability
    - 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 Dentistry - M.S.D.
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.

Professional Degree Programs
Doctor of Dental Medicine - D.M.D. (School of Dentistry)
Doctor of Medicine - M.D. (School of Medicine)
Juris Doctor - J.D. (Brandeis School of Law)

Dual Degree Programs
Combined Doctor of Dental Medicine / Master of Science D.M.D./M.S.
Combined Doctor of Dental Medicine / Doctor of Philosophy D.M.D./Ph.D.
Combined Doctor of Medicine and Master of Business Administration M.D./M.B.A.
Combined Doctor of Medicine and Master of Science in Clinical Investigation M.D./M.Sc.
Combined Doctor of Medicine and Master of Public Health M.D./MPH
Combined Doctor of Medicine and Master of Arts in Bioethics and Medical Humanities M.D./M.A.
Combined Doctor of Philosophy in Applied and Industrial Mathematics and Master of Science in Biostatistics-Decision Science Ph.D./M.S.
Combined Doctor of Philosophy and Doctor of Medicine M.D./Ph.D.
Combined Juris Doctor and Master of Arts in Humanities J.D./M.A.
Combined Juris Doctor and Master of Arts in Interdisciplinary Studies w/ a concentration in Bioethics and Medical Humanities J.D./M.A.
Combined Juris Doctor and Master of Arts in Political Science J.D./M.A.
Combined Juris Doctor and Master of Business Administration J.D./M.B.A.
Combined Juris Doctor and Master of Science in Divinity - with Louisville Presbyterian Theological Seminary J.D./M.Div.
Combined Juris Doctor and Master of Science in Social Work J.D./M.S.S.W.
Combined Juris Doctor and Master Urban Planning J.D./M.U.P
Combined Master of Arts in Pan-African Studies and Master of Science in Social Work M.A./M.S.S.W.
Combined Master of Public Administration/Master of Arts Curatorial Studies M.P.A./M.A.
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 Divinity and Master of Science in Social Work M.DIV/M.S.S.W.
Combined Master of Business Administration and Master of Arts M.B.A./M.A.
Combined Master of Business Administration and Master of Engineering M.B.A./M.Eng.
Combined Master of Science in Social Work and MA in Bioethics & Medical Humanities M.A./M.S.S.W.
Combined Master of Public Administration and Master of Urban Planning M.P.A./M.U.P.
Combined Master of Urban Planning and Master of Public Health M.P.H./M.U.P.
Online Degree Programs

Master of Arts - M.A.
  Master of Arts in Higher Education Administration

Master of Education – M.Ed.
  Special Education with Concentration in Assistive Technology
  Special Education with Concentration in Autism (Non-teaching)
  Special Education with Concentration in Moderate and Severe Disabilities (P-12)

Master of Engineering – M.Eng.
  Engineering Management

Master of Science - M.S.
  Civil Engineering
  Computer Science
  Criminal Justice
  Human Resources and Organization Development

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

Graduate Certificates
  Autism and Applied Behavior Analysis
  Data Mining
  Network and Information Security

Graduate Certificate Programs
  African American Theatre
  Asian Studies
  Autism and Applied Behavior Analysis
  Clinical Investigative Sciences
  Data Mining

Diversity Literacy
Environmental Engineering
Health Professions Education
Latin American and Latino Studies
Logistics and Distribution
Medieval and Renaissance Studies
Network and Information Security
Pan-African Studies
Police Executive Leadership Development
Public History
Real Estate Development
Translation and Interpreting
Women's and Gender Studies

Rank I Programs for Certified Teachers

Certified School Counselors
Elementary Education
Instructional Computer Technology (P-12)
Middle Grades Education
Secondary Education
School Social Work
Special Education - Advanced Practitioner (P-12)

Endorsements for Certified Teachers

Elementary Mathematics Specialist (P-5)
Gifted and Talented Education (P-12)
Instructional Computer Technology (P-12)
Teacher Leadership (P-12)
Teaching Classroom Reading (P-12)
Teaching English as a Second Language (P-12)
M.Ed. in Literacy with Literacy Specialist Endorsement (P-12)
Graduate Certificate in African American Theatre

Major: GCAAT  
Degree Awarded: CERT  
Unit: GA  

**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)**  
TA 566  Advanced African American Theatre History  

*One of the following:*

- TA 664  Approaching African American Theatre  
- TA 563  Advanced African American Women in Theatre  
- TA 565  Advanced Theatre of the African World

**Performance/Production (3 credits)**  

*One of the following:*

- TZ 532  Advanced Directing the Black Experience  
- Electives (3 credits)

*One of the following:*

- TA 650  Theatre Internship  
- TA 655  Independent Study in Performance  
- PAS  Approved courses in Pan African Studies  
- TA 654  Community Service in the Arts

**Independent Study (3 credits)**

**Minimum 15 credits**

15
Faculty

Nefertiti Burton  
Associate Professor

Johnnie Jones  
Assistant Professor

Baron Kelly  
Associate Professor

Amy Steiger  
Assistant Professor
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, and an average of the 50th percentile in the verbal and quantitative sections of the GRE.

Applicants must complete/submit:

- Online graduate application for admission.
- A statement of interests covering relevant experience and aspirations. This letter is absolutely critical to your successful application, as it helps us assess where you might find common interests among Department faculty.
- GRE scores.
- Official transcripts.
- Three letters of reference addressing the candidate's readiness for graduate studies, academic abilities, and potential for success. One letter may be from an employer.
- Applicants may choose to submit a writing sample.

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.

In addition to the 9 hours of the 600-level core seminars, students take another 600-level course, 12 hours of topical electives at the 500- or 600-level, and 6 hours of thesis or internship hours.

Students may enroll in up to 9 credit hours in another department. Students may enroll in 500 level courses in another department with the permission of the Anthropology Director of Graduate Studies.

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.
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
- Total: 30 hours

**Non-Thesis** (24 seminar hours plus 6 credit hours of internship)
- Core Seminars: 9 hours
- Topical Electives: 15 hours
- Internship: 6 hours
- Total: 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

**Topical Electives:**
- ANTH 501 American Crossings
- ANTH 502 Anthropology and Europe
- ANTH 503 Central Africa and the Politics of Development
- ANTH 507 Space, Place and Culture
- ANTH 530 Human Impacts on Past Environments
- ANTH 531 Anthropology of Water
- ANTH 540 Human Adaptation
- ANTH 546 Problems in Urban Anthropology
- ANTH 548 Special Topics in Cultural Anthropology
- ANTH 549 Special Topics in Archaeology
- ANTH 601 Special Topics in Biological Anthropology
- ANTH 604 Problems in Social Anthropology
- ANTH 606 Regional Analysis
- ANTH 607 Emergence of Human Culture
- ANTH 621 Anthropology of Identity and Subjectivity
- ANTH 622 Anthropology of Violence
- ANTH 623 The Study of Folklore
ANTH 624  Black Cultural Traditions
ANTH 625  Globalization, Transnationalism, and Anthropology
ANTH 626  Community Food Security
ANTH 627  Political Economy and Culture
ANTH 650  Human Evolution in Health and Disease
ANTH 651  Seminar in Biological Anthropology
ANTH 652  Topics in Nutritional Anthropology
ANTH 653  Human Molecular Evolutionary Genetics
ANTH 654  Evolutionary Medical Genetics
ANTH 655  Analysis of Molecular Data
ANTH 670  Independent Study (reading)
ANTH 671  Independent Study (research)
ANTH 672  Thesis
ANTH 673  Internship

Faculty

**Jennie Burnet**  Associate Professor

**Amanda Coleman**  Lecturer

**Fabian Crespo**  Assistant Professor

**Phil DiBlasi**  Staff Archaeologist

**John Hale**  Professor (Adjunct)

**Jonathan Haws**

**Yvonne Jones**  Associate Professor

**Lisa Markowitz**  Associate Professor

**Kelly O’Connor**  Chair

**Shawn Parkhurst**  Associate Professor

**Frances Purifoy**

**Julie Petiet**  Senior Lecturer

**Russell Reid**  Professor Emeritus

**Gabriela Stocks**  Visiting Assistant Professor

**Jeneen Wiche**  Lecturer

**Jay Stottman**

**Christopher Tillquist**  Associate Professor

**Jianhua Zhao**  Associate Professor

**Edwin Segal**  Professor Emeritus

**Julian Hale**  Professor (Adjunct)
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://louisville.edu/graduate/apply

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

Faculty

John Anderson
Emeritus
Andrea Gaughan
Assistant Professor
Lal Gauri
Emeritus
Jafar Hadizadeh
Professor
Carol Hanchette
Associate Professor

David Howarth
Professor
George Lager
Emeritus
Clara Leuthart
Emeritus
Keith Mountain
Associate Professor
Chair

Wei Song
Associate Professor
Forrest Stevens
Assistant Professor
Margath Walker
Assistant Professor
Haifeng (Charlie)
Zhang
Associate Professor

Don Bierman
Emeritus

Terra Clark
Emeritus

James Conkin
Emeritus
C. Andrew Day
Doctor of Philosophy in Applied 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 Applied 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

Applicants are examined using the following information in the admissions decisions: GRE scores, GPA, quality of the program from which the applicant graduated, two academic letters of recommendation, responses to a questionnaire, and an interview with the candidate.

The Department of Sociology is committed to fostering diversity by considering factors such as race, ethnicity, gender, sexuality, age, and social class in its graduate and undergraduate programs; as such, background factors and circumstances will be considered when reviewing applications.

While the Graduate Admissions Committee does not base admission solely on meeting - or failure to meet - certain criteria, as a guideline, **chances of admission are improved with the following:**

- minimum graduate GPA of 3.0;
- minimum combined verbal/quantitative GRE score of 1000 (if tested prior to August, 2011) or 300 (if tested since August, 2011);
- 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 either (a) a TOEFL score of at least 550 (on the paper-based test), 213 (on computer-based test) or 79-80 (on the internet-based test), or (b) a IELTS score of at least 6.5.

*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 January 5 for the fall semester and October 1 for the spring semester.

Application Materials
Applicants must submit to the Graduate Admissions Office:

- a formal graduate application
- official copies of transcripts from all colleges attended (students with a foreign transcript must submit an evaluation of the transcript from World Education Services (www.WES.org) or Educational Credentials Evaluators (www.ECE.org)
- three references (preferably from former instructors, and in sociology, if possible) in the form of a discursive letter of recommendation (completion of the UofL Letter of Evaluation form may supplement a discursive letter but should not replace it)
- a curriculum vitae
- GRE scores (GRE scores should be no older than five years unless a graduate degree has been earned within the past five years
- and, for international students, TOEFL or IELTS scores.

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

- a writing sample (either the student's thesis or another work of original independent research) and 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?
Curriculum

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

<table>
<thead>
<tr>
<th>Year</th>
<th>Fall</th>
<th>Spring</th>
<th>Summer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Proseminar (SOC 704, 1 credit hour) and Sociology core/elective courses (9 credit hours total)</td>
<td>Sociology core/elective courses (9 credit hours total)</td>
<td>Independent Study (SOC 702, 6 - for doctoral teaching assistants only)</td>
</tr>
<tr>
<td>2</td>
<td>Sociology core/elective courses (9 hours total)</td>
<td>Sociology core/elective courses (3 hours total)</td>
<td>Independent Study (SOC 702, 6 - for doctoral teaching assistants only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SOC 702 Independent Study (3 hours)</td>
<td>*Begin preparing for doctoral exams</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SOC 706 Doctoral Exam Preparation (3 hours)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SOC 708 Internship (9 hours)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Conduct internship, write/defend internship report</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>SOC 706 Doctoral Exam Preparation (6 hours) SOC 707 Internship Preparation (3 hours) *Select internship site, negotiate internship contract; take doctoral exams</td>
<td>SOC 708 Internship (9 hours)</td>
<td>Independent Study (SOC 702, 6 - for doctoral teaching assistants only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Defend dissertation proposal</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>SOC 710 Dissertation Research (9 credit hours)</td>
<td>Dissertation Research/Candidacy *Defend dissertation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Defend dissertation proposal</td>
<td></td>
</tr>
</tbody>
</table>

Although students must meet with the Graduate Coordinator to discuss their individual course schedules and overall time-line, during the first and second year, students will take the following core and electives (as available in the course schedule):

SOC 616 Advanced Multivariate Analysis (3 credit hours)
SOC 617 Program Evaluation & Impact Analysis (3 credit hours)
SOC 618 Qualitative Research Methods (3 credit hours)
SOC 619 Fundamental Assumptions of Sociology (3 credit hours)
SOC 625 Social Policy (3 credit hours)
SOC 720 Contemporary Theory (3 credit hours)
SOC 725 Organizational Theory (3 credit hours)
SOC 600+ Electives (9 credit hours total. Students may wish to take an independent study during the summer, which would count toward the electives requirement.

**NOTE:** Students may be allowed to take and count toward degree requirements (a) up to six hours of course work outside the department, and/or (b) up to three hours of course work at the 500-level, but neither may be done without the prior approval of the Director of Graduate Studies.

**Comprehensive Exams**

Upon completion of all course work, 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.

**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 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.

Dissertation

Upon successful completion of the oral comprehensive exam and internship, 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.

**Faculty**

D. Mark Austin  
Associate Professor  
James K. Beggan  
Professor  
Latrica Best  
Assistant Professor  
Derrick Brooms  
Assistant Professor  
John A. Busch  
Associate Professor  
Robert M. Carini  
Associate Professor  
Karen M. Christopher  
Associate Professor  
Patricia Gagne  
Professor  
Lauren Heberle  
Associate Professor  
Robin Hognas  
Assistant Professor  
Gul Aldikacti  
Marshall  
Associate Professor  
Director of Graduate Studies  
Cynthia Negrey  
Professor  
Deborah A. Potter  
Associate Professor  
Jon H. Rieger  
Professor  
David Roelfs  
Assistant Professor  
Ryan Schroeder  
Associate Professor  
and Chair  
Hiromi Taniguchi  
Associate Professor  
Wayne M. Usui  
Emeritus  
Deborah Warnock  
Assistant Professor  
J. Allen Whitt  
Emeritus
Master of Arts in Art (Creative) and Art History

Major: ART
Degree Awarded: MA
Unit: GA
Program Webpage: http://louisville.edu/art/

Program Information

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

- Application to the School of Interdisciplinary and Graduate Studies
- Transcripts of all colleges attended (undergraduate or graduate)
- Two letters of recommendation specific to the program
- Graduate Record Examination scores

Students may receive a Master of Arts degree in the Department of Fine Arts by completing thirty-one (31) credit 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 Credit Hours

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art History 642 - Theories and Methods in Art History</td>
<td>3</td>
</tr>
<tr>
<td>Art History Elective (500 or 600 level)</td>
<td>3</td>
</tr>
<tr>
<td>Elective - Outside the Department of Fine Arts (500 or 600 level) (with approval of advisor)</td>
<td>3</td>
</tr>
<tr>
<td>Fine Arts Elective (500 or 600 level) (outside the chosen Fine Arts Track)</td>
<td>3</td>
</tr>
<tr>
<td>Thesis Guidance</td>
<td>3</td>
</tr>
<tr>
<td>Graduate Seminar</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

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 credit hours) consisting of Art History 642 - Theories and Methods in Art History, six (6) credit hours of 500 or 600-level electives in the Department of Fine
Arts, three (3) credit hours of 500 or 600-level electives outside the Department, three (3) credit hours of thesis guidance, and a one (1) credit hour graduate seminar.

The concentration in Art History will require fifteen (15) credit hours of 500 or 600-level courses in Art History with a minimum of one course in each of the following areas: Pre 1750, After 1750, Nonwestern, Independent Study (ARTH 643/644) (one independent study course is permitted), 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 twelve (12) credit hours (exclusive of Thesis Guidance) must be at the 600-level, of which at least nine (9) credit hours must be in art history.

**Concentration in Critical & 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 credit hours) consisting of Art History 642 - Theories and Methods in Art History, six (6) credit hours of 500 or 600-level electives in the Department of Fine Arts, three (3) credit hours of 500 or 600-level electives outside the Department, three (3) credit hours of thesis guidance, and a one (1) credit hour graduate seminar (ART/ARTH/CCS 600).

The concentration in Critical & Curatorial Studies will require fifteen (15) credit hours of coursework consisting of ARTH 542: Special Topics (or ARTH 591/691); CCS 547/647: Introduction to Critical and Curatorial Studies I; CCS 648 Critical and Curatorial Studies II; a 600-level Public Administration arts management course (selected from PADM 600, 603, 609, or 612); CCS 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 credit hours, exclusive of Thesis Guidance, must be at the 600 level).

**Concentration**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 542: Special Topics</td>
<td>3</td>
</tr>
<tr>
<td>CCS 547/647: Introduction to Critical and Curatorial Studies I</td>
<td>3</td>
</tr>
<tr>
<td>CCS 648: Critical and Curatorial Studies II</td>
<td>3</td>
</tr>
<tr>
<td>600-level Public Administration Management Course (PADM 600, 603, 609, or 612)</td>
<td>3</td>
</tr>
<tr>
<td>CCS 649: Curatorial Internship</td>
<td>3</td>
</tr>
</tbody>
</table>
Written Thesis with Exhibition or Curatorial Project

**Total Credit Hours**

**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 credit hours) consisting of Art History 642 - Theories and Methods in Art History, six (6) credit hours of 500 or 600-level electives in the Department of Fine Arts, three (3) credit hours of 500 or 600-level electives outside the department, three (3) credit hours of thesis guidance, and a one (1) credit hour graduate seminar.

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

**Concentration Courses**

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

Thesis Exhibition with Thesis Statement.

Total of 15 credit hours.

**Total Program = 31 credit hours**

**Faculty**

<table>
<thead>
<tr>
<th>John Begley</th>
<th>Henry Chodkowski, Jr.</th>
<th>Linda M. Gigante</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant Professor Emeritus</td>
<td>Professor Emeritus</td>
<td>Professor Emerita</td>
</tr>
<tr>
<td>R. Todd Burns</td>
<td>Dario A. Covi</td>
<td>Lida Gordon</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Professor Emeritus</td>
<td>Professor Emerita</td>
</tr>
<tr>
<td>Thomas Buser</td>
<td>Robert L. Douglas, Sr.</td>
<td>James Grubola</td>
</tr>
<tr>
<td>Associate Professor Emeritus</td>
<td>Professor Emeritus</td>
<td>Professor</td>
</tr>
<tr>
<td>Mary Carothers</td>
<td>Mitch Eckert</td>
<td>Barbara L. Hanger</td>
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<tr>
<td>Associate Professor</td>
<td>Associate Professor</td>
<td>Associate Professor</td>
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<tr>
<td>Ying Kit Chan</td>
<td>Christopher B. Fulton</td>
<td>Benjamin Hufbauer</td>
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<tr>
<td>Professor</td>
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<td>Associate Professor</td>
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<td>Susan Jarosi</td>
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<td>Associate Professor</td>
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<td>Jongwoo Kim</td>
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<td>Associate Professor</td>
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<td>Stephanie J. Maloney</td>
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<td>Scott Massey</td>
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<td>Chair</td>
</tr>
</tbody>
</table>
Gabrielle Mayer  
Associate Professor  
Suzanne Mitchell  
Professor Emerita  
William D. Morgan  
Professor Emerita  
Mark A. Priest  
Professor  
Christopher Reitz  
Assistant Professor  
Che Rhodes  
Associate Professor  
Rachel Singel  
Assistant Professor  
Steven Skaggs  
Professor  
John Whitesell  
Professor Emerita
Doctor of Philosophy in Art History

Major: ARTH
Degree Awarded: Ph.D.
Unit: GA
Program Webpage: http://louisville.edu/art/

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, Graduate Admissions
2. Transcripts of all colleges attended (undergraduate or graduate)
3. Three current, substantive letters of recommendation, appended to the recommendation forms
4. Graduate Record Examination scores (a minimum GRE verbal score of 160 is required by the Art History Program for admission)
5. 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
6. A writing sample that can stand as evidence of the applicant's intellectual, investigative, and expository skills
7. International students must meet all criteria, including the TOEFL examination, set forth in the Graduate Catalog

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

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

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

Language proficiency is demonstrated in one of two ways: 1) Taking a proficiency examination administered by the department, scheduled in the fall and spring semesters. The proficiency exam is a one hour translation examination with the use of a dictionary. Students are required to demonstrate intermediate level facility in the language. 2) Completing the intermediate level of the language course at the University of Louisville with a grade of B or better.

Through course work, independent study, and directed readings, each student must prepare her/himself to pass 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.
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 coursework 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 credit hours (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 credit hours (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 four independent study courses)
- 500 or 600-level electives: 6 credit hours 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:**
1. Students are expected to take any courses necessary in preparation for scholarly research.
2. 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. Once enrolled in Doctoral Candidacy, students must maintain enrollment year round (Fall, Spring and Summer) until the completion of the degree.
3. A minimum GPA of 3.5 must be maintained in the Ph.D. program.
4. 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.

**Faculty**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>John Begley</td>
<td>Thomas Buser</td>
<td>Henry Chodkowski, Jr.</td>
<td>Robert L. Douglas, Sr.</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Associate Professor</td>
<td>Professor Emeritus</td>
<td>Professor Emeritus</td>
</tr>
<tr>
<td>R. Todd Burns</td>
<td>Mary Carothers</td>
<td>Dario A. Covi</td>
<td>Mitch Eckert</td>
</tr>
<tr>
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<td>Ying Kit Chan</td>
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<tr>
<td>Professor</td>
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</tbody>
</table>

75 | Page
Christopher B. Fulton
Associate Professor
Linda M. Gigante
Professor Emerita
Lida Gordon
Professor Emerita
James Grubola
Professor
Barbara L. Hanger
Associate Professor
Benjamin Hufbauer
Associate Professor
Susan Jarosi
Associate Professor
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Suzanne Mitchell
Professor Emerita
Mark A. Priest
Professor
Christopher Reitz
Assistant Professor
Che Rhodes
Associate Professor
Rachel Singel
Assistant Professor
Steven Skaggs
Professor
Graduate Certificate in Asian Studies

Major: ASSTCAS
Degree Awarded: CERT
Unit: GA
Program Webpage: http://louisville.edu/asianstudies/graduate-certificate-in-asian-studies

Program Information

The Graduate Certificate in Asian Studies is a graduate-level interdisciplinary program housed in the College of Arts and Sciences. 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

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTH 531/631</td>
<td>Nationalism and Modern Art &amp; Architecture in China and Japan</td>
<td>3</td>
</tr>
<tr>
<td>ARTH 631/531</td>
<td>Modern Cities and Architecture in Asia</td>
<td>3</td>
</tr>
<tr>
<td>AST/POLS 641</td>
<td>Clash of Civilizations in the 21st Century</td>
<td>3</td>
</tr>
<tr>
<td>HIST 561</td>
<td>U.S. and Vietnam -WR</td>
<td>3</td>
</tr>
<tr>
<td>HIST 584</td>
<td>Women in East Asia</td>
<td>3</td>
</tr>
<tr>
<td>HIST 591</td>
<td>Civilizations of Ancient and Medieval India - WR</td>
<td>3</td>
</tr>
<tr>
<td>HIST 592</td>
<td>Civilizations of Modern India - WR</td>
<td>3</td>
</tr>
<tr>
<td>HIST 598</td>
<td>Nationalism and Modernity in East Asia</td>
<td>3</td>
</tr>
<tr>
<td>SOC 520</td>
<td>Sociology of South Asia</td>
<td>3</td>
</tr>
<tr>
<td>TA 567</td>
<td>Asian Theatre</td>
<td>3</td>
</tr>
<tr>
<td>JA 596</td>
<td>Trans Nat’l Cyber Crime</td>
<td>3</td>
</tr>
</tbody>
</table>
Faculty

Jason Abbott
Professor
Moon-he Baik
Associate Professor
Ying Kit Chan
Professor

Margaret D'Silva
Professors
Shiping Hua
Professor
Delin Lai
Assistant Professor
Yuxin Ma
Associate Professor

John McLeod
Professor
Patrick Pranke
Assistant Professor
Wei Song
Associate Professor
Li Zeng
Associate Professor

Jianhua Zhao
Assistant Professor
Haifeng Zhang
Assistant Professor
Charles Ziegler
Professor
Master of Science in Biology

Major: BIOL  
Degree Awarded: MS  
Unit: GA  
Program Webpage: http://louisville.edu/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 http://louisville.edu/biology/. Questions can be addressed to or further information obtained from the Director of Graduate Studies, Dr. Perri K. Eason, at (502) 852-5936 or pkeaso01@louisville.edu.

Program Admission Procedure

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

1. The applicant must have a baccalaureate degree with a major in Biology or an acceptable sub-discipline;
2. The applicant must meet the following admission standards:
   - an undergraduate GPA of 3.0/4.0 or higher,
   - a composite score of at least 300 on the general test (verbal + quantitative sections) and 3.5 on the analytical writing section of the GRE. Composite MCAT or DAT exam scores which indicate the national average or higher are acceptable alternatives,
   - for foreign students, a TOEFL score of 83 on the internet-based exam or 6.5 on the IELTS.
3. Applications will be complete when the following have been received (final action on applications will not be taken until complete):

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

a. a completed application form and fee;
b. one official transcript of all previous undergraduate and graduate coursework;
c. official GRE, MCAT or DAT exam scores;
d. two or more letters of recommendation from persons familiar with your academic performance and capabilities; and

e. official TOEFL or IELTS scores if required.

Send to the Director of Graduate Studies, Department of Biology:

f. a completed Department Application Form, available at http://louisville.edu/biology/(this form is submitted electronically when completed).

**Deadline for Completed Applications**: July 1 for Fall admission, December 1 for Spring admission.

**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:

<table>
<thead>
<tr>
<th>General Background Courses (500 or 600 level)</th>
<th>Thesis Non-Thesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cellular/Physiology</td>
<td>3 - 4</td>
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<tr>
<td>2. Subcellular/Genetics</td>
<td>3 – 4</td>
</tr>
<tr>
<td>3. Evolution or Systematics</td>
<td>3 – 4</td>
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<tr>
<td>4. Population, Community, or Ecosystem Ecology</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>6 – 8</strong></td>
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</tbody>
</table>

**Other Coursework**

- **Statistics (Biology 650)**
  - 4

- **Electives**
  - 11 - 14

- **Thesis Research (600 level)**
  - 6

- **Research Experience (Biology 516, 608, 664 or 691)**
  - 0

**Minimum Total**

<table>
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<tr>
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<th>Thesis Non-Thesis</th>
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<td><strong>Total</strong></td>
<td><strong>30</strong></td>
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</table>

**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.

**Faculty**

<table>
<thead>
<tr>
<th>Ronald M. Atlas</th>
<th>Gary A. Cobbs</th>
<th>Charles V. Covell, Jr.</th>
<th>Lee A. Dugatkin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>Professor</td>
<td>Emeritus</td>
<td>Professor</td>
</tr>
<tr>
<td>Margaret M. Carreiro</td>
<td>Cynthia Corbitt</td>
<td>William S. Davis</td>
<td>Perri K. Eason</td>
</tr>
<tr>
<td>Associate Professor</td>
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<td>Emeritus</td>
<td>Professor</td>
</tr>
</tbody>
</table>
Sarah Emery  
Associate Professor

Paul W. Ewald  
Professor

Ronald D. Fell  
Professor

Chair

Arnold J. Karpoff  
Associate Professor

Roger G. Lambert  
Emeritus

Jennifer  
Mansfield-Jones

Assistant Professor

Tommy Parker  
Assistant Professor

William D.  
Pearson

Professor

Michael H. Perlin  
Professor

Susanna K.  
Remold

Associate Professor

Mark Running  
Assistant Professor

David J. Schultz  
Associate Professor

Joseph M. Steffen  
Professor

Varley E.  
Wiedeman

Emeritus

Micah Worley  
Assistant Professor

Stephen Yanoviak  
Assistant Professor
Doctor of Philosophy in Biology

Major: BIOL
Degree Awarded: Ph.D.
Unit: GA
Program Webpage: http://louisville.edu/biology/

Program Information

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

Students seeking the Ph.D. Degree in Biology traditionally have a master’s degree or its equivalent; however, students may enter the program with only the baccalaureate degree. Generally, the first year or two is spent in course work, research is begun by the second year, and the thesis/dissertation completed in the final year.

Program Admission Procedure

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

1. The applicant must have a baccalaureate degree with a major in biology or an acceptable sub-discipline of biology.

2. The applicant must meet the following admissions standards:
   - an undergraduate GPA of 3.0 or higher;
   - a composite score of at least 300 on the general test (verbal + quantitative) and 3.5 on the analytical writing sections of the GRE. A composite MCAT or DAT indicating scores at or above the national average are also acceptable;
   - for foreign students, a TOEFL score of 83 on the internet-based exam or at least 6.5 on the IELTS exam. 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/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 or IELTS scores.

Send to the Director of Graduate Studies, Department of Biology:
1. a completed Departmental Application Form, found at http://louisville.edu/biology/(this is an
   electronic form sent when completed).

Deadline for completed applications: July 15 for Fall admission and December 1 for Spring 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 School of Interdisciplinary and Graduate
Studies.

Curriculum

Requirements for the Ph.D. degree in Biology

<table>
<thead>
<tr>
<th>Foundations in Biology</th>
<th>Hours</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>One course to be selected by the student’s committee from each category:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Biostatistics</td>
<td>4</td>
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</tr>
<tr>
<td>2. Evolutionary Biology (courses that cover the evolutionary history and/or phylogenetic relationships of molecules or organisms)</td>
<td>4</td>
<td>8</td>
</tr>
</tbody>
</table>

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

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

Faculty

James E. Alexander
Associate Professor

Ronald M. Atlas
Professor

Margaret M. Carreiro
Associate Professor

Gary A. Cobbs
Professor

Cynthia Corbitt
Associate Professor

Charles V. Covell, Jr.
Emeritus

William S. Davis
Emeritus

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Associate Professor

Mark Running
Assistant Professor

David J. Schultz
Associate Professor

Joseph M. Steffen
Professor

Varley E. Wiedeman
Emeritus

Micah Worley
Assistant Professor

Stephen Yanoviak
Assistant Professor
Master of Science in Chemistry

Major: CHEM
Degree Awarded: MS
Unit: GA
Program Webpage: http://louisville.edu/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 School of Interdisciplinary and Graduate Studies, for admission to candidacy, and for the master's degree are stated in the General Information section of this catalog. The following additional provisions apply to the program leading to the Master of Science in Chemistry.

Program Admission Procedure

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

1. A B.A. or B.S. degree in chemistry or in a related field such as physics, engineering, or mathematics. It is expected that students will have obtained a background in chemistry equivalent to 36 hours of undergraduate coursework. Students planning to pursue graduate study in chemical physics may substitute some of the chemistry hours with advanced courses in physics or mathematics beyond those required for a B.A. or B.S. in chemistry. Students with inadequate preparation will be required to register for specific courses in the area of deficiency. Some of these courses, subject to approval by the department, may be accepted for graduate credit. Admission to graduate study in chemical physics is made on the recommendation of the entrance committee for that option.

2. A minimum quality point standing of 3.0 on a 4.0 scale.

3. Submission of Graduate Record Examination scores (quantitative and verbal scores totaling at least 1000 with an analytical score of 2.5 or totaling at least 900 with an analytical score of 3.0).

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

Program Requirements

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

1. The general requirements as stated in the General Information section of this catalog.
2. Completion of course curriculum as described in the section on Candidacy for the Ph.D. degree.
3. Students with a native language other than English must show a proficiency in English. This requirement may be met with a grade of "B" in Eng. 101 (or equivalent) or an acceptable score on a standardized test (such as the TOEFL or Michigan test).

4. Acceptable presentation of a one-hour literature seminar on a topic of current chemical interest. This seminar must be presented no later than the fifth semester of graduate studies.

Early Start Program

The Master of Arts in Teaching program in conjunction with the undergraduate programs in Chemistry, Biology, and Mathematics offers a comprehensive and professionally-focused program leading to the degree of 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

1. Students must have at least 23 credit hours of chemistry (through CHEM 441 and CHEM 470) with a cumulative GPA of 3.0 in those courses.

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

3. Once approved, the student may take a maximum of nine (9) hours for graduate credit while in undergraduate status, which can also apply to the requirements for the BA in Chemistry. All graduate coursework must be approved by the student's MAT faculty advisor.

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

5. All students must submit an application to the College of Education and Human Development (CEHD) MAT program and meet the admission criteria.

Curriculum

General Requirements

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 School of Interdisciplinary and Graduate Studies.
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.

Requirements for Master of Science (non-thesis) in Chemistry

A minimum total 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.

Courses: Students must pass at least 6 graduate lecture courses from at least 3 of 6 divisions with a minimum grade of ‘C’ in any one course. Additional credit hour requirements can be met by research and/or additional graduate level coursework.

Mentor: The research mentor should be selected during the first semester. Students are required to interview a minimum of 5 chemistry faculty, including members of at least 2 divisions, and have them sign the Mentor Selection Form. The student may choose a mentor after obtaining 5 signatures. If the mentor agrees to accept the student, the mentor will again sign the Mentor Selection Form and the student should submit it for approval by the departmental Director of Graduate Studies. Students wishing to change research directors should first consult with the departmental Director of Graduate Studies. Failure to actively participate in a research group is grounds for loss of funding and/or dismissal from the program.

Literature Seminar: Students must enroll in seminar (Chem 695) during their first 3 semesters (excluding summers). Students enrolled in CHEM 695 must attend seminars and make a presentation during their second or third semester. The seminar attendance requirement may be waived after all other candidacy requirements have been achieved.

The literature seminar should be based on a topic under active discussion in the recent literature. The student is responsible for selecting the seminar topic, although consultation with the student’s research advisor is recommended to verify that the independently chosen topic is appropriate. The topic must not be chosen from the student’s immediate area of research and must not be chosen from an area over which a comprehensive review has been published during the previous two years. The topic must be approved by the Seminar coordinator and/or the Seminar Committee. The student must fully develop the topic,
integrating material from at least three primary references and a total of at least eight references into a flowing, well-organized presentation of appropriate length. A passing grade for seminar is B- or above. A student who does not attain this grade will be allowed one attempt to repeat the seminar. The second attempt must be completed prior to the end of the students 4th semester. Failure to receive a B- or higher on the second attempt will result in dismissal from the program. Additional information will be provided on the Chem 695 syllabus.

Proposal: The research proposal serves as the capstone project for the non-thesis M.S. degree. Students must develop, explain, and defend a research proposal. The proposal can be based on recent literature or the student's research project (if applicable). The student should select a mentor from the chemistry graduate faculty to oversee the proposal committee. The committee consists of the mentor plus two additional chemistry faculty selected by the student in consultation with the mentor.

Faculty

Richard P. Baldwin
Professor

John W. Brown
Emeritus

Robert M. Buchanan
Professor

Christopher T. Burns
Assistant Professor

Thomas H. Crawford
Emeritus

Teresa W. M. Fan
Associate Professor

Craig A. Grapperhaus
Associate Professor

Gerald B. Hammond
Professor

Richard M. Higashi
Associate Professor

Pawel M. Kozlowski
Associate Professor

N. Thornton Lipscomb
Emeritus

Jinjun Liu
Assistant Professor

Frederick Luzzio
Associate Professor

Muriel C. Maurer
Associate Professor

Sergio B. Mendes
Associate Professor

Hunter N. Moseley
Assistant Professor

Eugene Mueller
Professor

Michael H. Nantz
Professor

Mark E. Noble
Professor

George R. Pack
Professor

Aleeta M. Powe
Assistant Professor

Christine V. Rich
Assistant Professor

John F. Richardson
Associate Professor

Gradus L. Shoemaker
Emeritus

K. Grant Taylor
Emeritus

Charles A. Trapp
Emeritus

Richard J. Wittebort
Professor

Chair

M. Cecilia Yapert
Professor

Francis P. Zamborini
Assistant Professor
Doctor of Philosophy in Chemistry

Major: CHEM  
Degree Awarded: Ph.D.  
Unit: GA  
Program Webpage: http://louisville.edu/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 School of Interdisciplinary and Graduate Studies, for admission to candidacy, and for the doctoral degree are stated in the General Information section of this catalog. The following additional provisions apply to the programs leading to the Doctor of Philosophy in Chemistry.

Program Admission Procedure

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

1. A B.A. or B.S. degree in chemistry or in a related field such as physics, engineering, or mathematics. It is expected that students will have obtained a background in chemistry equivalent to 36 hours of undergraduate coursework. Students planning to pursue graduate study in chemical physics may substitute some of the chemistry hours with advanced courses in physics or mathematics beyond those required for a B.A. or B.S. in chemistry. Students with inadequate preparation will be required to register for specific courses in the area of deficiency. Some of these courses, subject to approval by the department, may be accepted for graduate credit. Admission to graduate study in chemical physics is made on the recommendation of the entrance committee for that option.

2. A minimum quality point standing of 3.0/4.0.

3. Submission of Graduate Record Examination scores (quantitative and verbal scores totaling at least 1000 with an analytical score of 2.5 or totaling at least 900 with an analytical score of 3.0).

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

General Requirements

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 School of Interdisciplinary and Graduate Studies.

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.

**Faculty**

Richard P. Baldwin
Professor
John W. Brown Emeritus
Robert M. Buchanan Professor
Christopher T. Burns Assistant Professor
Thomas H. Crawford Emeritus
Teresa W. M. Fan Associate Professor
Craig A. Grapperhaus Associate Professor
Gerard B. Hammond Professor
Richard M. Higashi Associate Professor
Pawel M. Kozlowski Associate Professor
N. Thornton Lipscomb Emeritus
Jinjun Liu Assistant Professor
Sergio B. Mendes Associate Professor
Hunter N. Moseley Assistant Professor
Eugene Mueller Professor
Michael H. Nantz Professor
Mark E. Noble Professor
George R. Pack Professor
Aleeta M. Powe Assistant Professor
Richardson
Associate Professor
Gradus L. Shoemaker Emeritus
K. Grant Taylor Emeritus
Charles A. Trapp Emeritus
Richard J. Wittebert Professor
M. Cecilia Yappert Professor
Francis P. Zamborini Assistant Professor
Master of Arts in Communication

Major: COMM  
Degree Awarded: MA  
Unit: GA  
Program Webpage: [http://louisville.edu/communication](http://louisville.edu/communication)

**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 combined GRE score (old scoring system), 282-297 combined (new scoring system). These scores equate to a rank of approximately 50 percent or better on the verbal reasoning section and 30 percent or better on the quantitative reasoning section of 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  
- 616 Qualitative Communication Research  
- 617 Quantitative Methods in Communication  

**Area 1: Interactional Communication (One course)**

- 580 Interpersonal Communication  
- 590 Health Communication  
- 603 Communication Pedagogy  
- 620 Organizational Communication  
- 625 Personality and Communication  

**13 hours**
650 Corporate Communication
675 Risk Communication

**Area 2: Integrated Communication (One course)**
520 Computer-Mediated Communication
530 Science Communication
652 Computer-Mediated Communication in Organizations
653 Integrated Marketing Communication Campaigns
654 Public Relations and Crisis Management
660 Selected Topics in Mass Media

**Area 3: Social Advocacy (One course)**
540 Public Communication Campaigns
555 Persuasive Movements
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.

**Thesis (includes oral defense)**
698 Thesis

**Non-Thesis Option**
600 Practicum
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.

Faculty

Mary Ashlock  
Assistant Professor

Michael Cunningham  
Professor

Lindsay Della  
Associate Professor

Margaret D'Silva  
Professor

Stuart Esrock  
Associate Professor

John Ferré  
Professor

Interim Dean, College of Arts & Sciences

Karen Freberg  
Assistant Professor

Allan Futrell  
Associate Professor

Department Chair

Jennifer Gregg  
Associate Professor

Joy Hart  
Professor

Greg Leichty  
Professor

Selene Phillips  
Assistant Professor

Scott Sanders  
Assistant Professor

Siobhan Smith  
Assistant Professor

Steve Sohn  
Associate Professor

Director of Graduate Studies

Robert St. Clair  
Professor

Kandi Walker  
Professor

Charles Willard  
Professor Emeritus

Shirley Willihnganz  
Professor
Master of Science in Criminal Justice

Major: JA
Degree Awarded: MS
Unit: GA
Program Webpage: http://louisville.edu/justice

Program Information

The goals of the Department of Criminal Justice 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 Criminal Justice 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 Criminal 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 the degree programs and the Southern Police Institute makes the program in Criminal Justice a unique blend of theory and practice. The Southern Police Institute is one of the oldest, most respected, police administration educational programs in the United States.

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 Criminal Justice degree must provide the following:
- Transcripts of all undergraduate and graduate work completed. The minimum requirement for admission is the Baccalaureate degree or its equivalent.
- Two letters of recommendation from individuals who can speak to the applicant's academic or professional capabilities.
- Scores on the General Test Section of the Graduate Record Examination (GRE).
- An original essay identifying the applicant's background, professional interests and goals. The essay should be 300-500 words and should allow the faculty to better understand the applicant's motivation and potential for graduate work.
• Completed application for admission to the School of Interdisciplinary and Graduate Studies, Graduate Admissions, University of Louisville at [http://louisville.edu/graduate/apply/](http://louisville.edu/graduate/apply/).
• $60.00 application fee, check or money order made payable to the University of Louisville.
• Applicants for whom English is a second language, must meet University language proficiency requirements.

The faculty in Criminal Justice 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 3.0 on a 4-point scale and a score of at least 900 (former GRE) or 292 (new GRE) 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 credit hours of graduate course credit prior to application for admission with a minimum of a 3.0 G.P.A. on a 4-point scale and the GRE may 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:
• Grade point average in the applicant's major and/or final 60 credit hours of undergraduate work.
• Amount of time that has transpired between the applicant's undergraduate degree completion and the application to the graduate program in Criminal Justice.
• Applicant's work experience and accomplishments in their profession.
• Grade point average in graduate work at other accredited academic institutions.
• A less than 3.0 grade point average that is "offset" by a combined GRE score greater than 900 (former GRE) or 292 (new GRE) or a combined GRE score less than 900 (former GRE) or 292 (new GRE) that is "offset" by a greater than 3.0 grade point average.

**General Requirements**
The general requirements for the Master of Science degree in Criminal 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 credit 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 credit 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 Criminal Justice core courses prior to electives. Core or specific courses required for graduation total 15 credit 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 Director of Graduate Studies.

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: [http://louisville.edu/justice/graduate-degree-programs](http://louisville.edu/justice/graduate-degree-programs)

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

**Core Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
<th>Thesis Option</th>
<th>Professional Paper Option</th>
</tr>
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<tbody>
<tr>
<td>JA 621</td>
<td>3</td>
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<td>JA 625</td>
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<td>JA 643</td>
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<td>JA 649</td>
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<tr>
<td>JA 650</td>
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<tr>
<td>Electives (to be approved by Director of Graduate Studies)</td>
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<td>Thesis</td>
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<tr>
<td>Professional Paper</td>
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</table>

**Minimum Total Credit Hours**

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<tr>
<th>Thesis Option</th>
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</thead>
<tbody>
<tr>
<td>36</td>
<td>36</td>
</tr>
</tbody>
</table>

## Faculty

### Gennaro F. Vito
Professor
Chair

### George E. Higgins
Professor
Director of Graduate Studies

### Deborah G. Keeling
Professor
Associate Dean for Faculty Affairs, College of Arts and Sciences

### Richard A. Tewksbury
Professor

### Viviana Andreescu
Associate Professor

### Cherie Dawson-Edwards
Associate Professor

### Elizabeth L. Grossi
Associate Professor

### Thomas W. Hughes
Associate Professor

### Bradley A. Campbell
Assistant Professor

### Michael Losavio
Assistant Professor

### Eric S. McCord
Assistant Professor

### Justin Nix
Assistant Professor

### Kristin M. Swartz
Assistant Professor

### Theresa C. Hayden
Adjunct Faculty

### John C. Reed
Lecturer

### Cynthia Shain
Lecturer

### B. Edward Campbell
Emeritus

### J. Price Foster
Emeritus

### Ronald M. Holmes
Emeritus

### William F. Walsh
Emeritus
Doctor of Philosophy in Criminal Justice

Major: ADJ_PHD
Degree Awarded: Ph.D.
Unit: GA
Program Webpage: http://louisville.edu/justice/

Program Information

The Department of Criminal Justice offers a Doctor of Philosophy in Criminal Justice. The Ph.D. in Criminal Justice is a degree that prepares graduates for careers in academic (e.g., teaching and research) as well as public sector (e.g., research, policy analysis and development, planning, program development and evaluation) organizations.

The program consists of a core curriculum and electives that students may use to develop their particular areas of specialization. The core provides a broad orientation and the electives enable students to develop expertise in a particular field. The curriculum includes 54 credit hours: 21 credit hours of core courses, 21 credit hours of specialization courses which includes a 6 credit hour qualifying project, and 12 credit hours of dissertation research. Students qualify for official candidacy to the Ph.D. by satisfactorily completing all course work in the core curriculum and their qualifying project.

Admission requirements include: completed application form, transcripts of previous undergraduate and graduate study, Graduate Record Examination scores, three letters of recommendation, personal statement, writing sample and curriculum vita or resume. Additionally, applicants must show evidence, on their transcript, of the completion of both graduate-level statistics and research methods courses. Minimum GRE scores of 1000 (old system) or 296 (current system) and a minimum graduate GPA of 3.25 are required. 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 80 on the Internet-based test and a minimum of 500 (old system) or 144 (current system) on the quantitative portion of the GRE.

Both full and part-time study is permitted. Part-time students are required to meet residency requirements consisting of 4 continuous semesters of enrollment and participation in departmental activities offered to meet the need for scholarly integration and academic immersion in the program.

Curriculum

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 745 Advanced Criminal Behavior</td>
<td>3</td>
</tr>
<tr>
<td>CJ 748 Seminar: CJ Program Planning and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>CJ 749 Advanced Statistical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CJ 750 Field Research</td>
<td>3</td>
</tr>
<tr>
<td>CJ 751 Computer Applications in Criminal Justice</td>
<td>3</td>
</tr>
<tr>
<td>CJ 752 Advanced Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>CJ 799 Dissertation</td>
<td>12</td>
</tr>
</tbody>
</table>
Electives (To include a 6 hour Criminal Justice qualifying project; electives outside the department must be approved by the Director of Graduate Studies) 24

Minimum total credit hours 54

Criminal Justice Electives (3 credit hours per course)
CJ 602 History of Police in the United States
CJ 605 Police in Our Political and Social Systems
CJ 606 Personnel Management in the CJ System
CJ 607 Law and Justice
CJ 609 Economic Analysis of Crime
CJ 610 Theoretical Foundations of Corrections
CJ 611 Critical Issues in Corrections
CJ 612 Criminal Justice Admin: Police
CJ 613 Advanced Comparative Criminal Justice
CJ 614 Seminar in Policing
CJ 626 Emergency Management
CJ 630 Critical Infrastructure Protection and Resilience
CJ 644 Seminar in Juvenile Justice
CJ 652 Constitutional Issues in Criminal Justice
CJ 653 Communities in Crime
CJ 655 International Perspectives on Violence
CJ 656 Crime Mapping
CJ 665 Special Topics in Criminal Justice/Criminology
CJ 670 Directed Studies/Readings
CJ 690 Practicum
CJ 740 Seminar in Crime Prevention and Social Control
CJ 798 Mentored Research

Faculty

Vivana Andreescu  
Associate Professor
Bradley A. Campbell  
Assistant Professor
Cherie Dawson-Edwards  
Associate Professor
J. Price Foster  
Professor Emeritus
Elizabeth Grossi  
Associate Professor
George E. Higgins  
Professor
Director of Graduate Studies
Thomas Hughes  
Associate Professor
Deborah G. Keeling  
Professor
Associate Dean for Faculty Affairs, College of Arts and Sciences
Eric S. McCord  
Assistant Professor
Justin Nix  
Assistant Professor
Kristin Swartz  
Assistant Professor
Richard Tewksbury  
Professor
Gennaro Vito  
Professor
Chair
William F. Walsh  
Professor Emeritus
Graduate Certificate in Diversity Literacy

Major: DILICDL  
Degree Awarded: CERT  
Unit: GA  
Program Webpage: http://louisville.edu/philosophy/graduate-programs/copy_of_diversity-literacy-certificate

Program Information

The Certificate in Diversity Literacy will provide a unique opportunity for students who have already earned bachelor’s degrees to enhance their knowledge and skills of the theory and practice of inclusion and equity, including what diversity means, what its personal and social effects are, and how it shapes lives, workplaces, and pedagogy. This knowledge base and skill set will allow, for example, educators to become more inclusive in their pedagogy, employees to work more effectively in multicultural teams, and managers to become better supervisors by better understanding their cultural assumptions and those of their employees.

Admission Requirements

Anyone who has earned a baccalaureate degree from an accredited college or university may apply.

The following materials will be necessary to complete an application:

- Official transcripts of prior undergraduate and graduate work;
- Two letters of recommendation;
- A 2-3 page essay describing the applicant’s interest in the program and how it will benefit her or his course of study and/or career path.

Curriculum

Program Requirements:

The curriculum for this certificate consists of 18 total hours, structured as follows:

- PHIL 690 (Fundamentals of Diversity)
- 4 electives in courses with a diversity focus. These electives must include at least three dimensions of diversity (race/ethnicity, gender, class, religion, disability, sexual identity, and language), and at least one must be in the humanities and one in the social sciences.
- Capstone Course in Diversity Literacy

Both the Fundamentals of Diversity and Capstone in Diversity Literacy courses will be offered as blended courses, meaning that 25% of the meeting time will be in the classroom and 75% will be online.

Eligible Electives:

*Special topics courses and courses from outside of A&S may be substituted with the approval of the Director.*

ANTH 503  Central Africa & the Politics of Development  
ANTH 627  Political Economy and Culture
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>ANTH 624</td>
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<td>ENGL 567</td>
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<td>HIST 506</td>
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<td>Women in the 20th Century in Europe and the US</td>
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<td>SPAN 644</td>
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<td>WGST 545/645; PAS 645</td>
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<tr>
<td>WGST 615/SOC 642</td>
<td>Seminar in the Sociology of Disabilities</td>
</tr>
</tbody>
</table>

**Faculty**

**David S. Owen**  
*Associate Professor*  
Director of Diversity Programs for the College of Arts and Sciences  
Director of the Certificate in Diversity Literacy
Master of Arts in English

Major: ENGL
Degree Awarded: MA
Unit: GA
Program Webpage: http://louisville.edu/english/graduate/master-of-arts-in-english.html

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, American, and other literary traditions, and 2) write a thesis or culminating project in which they initiate and complete specialized research addressing a significant question in literary studies or rhetoric and composition, or produce a significant body of creative work.

Admission to the MA Program

DEADLINES:

*Note: Applications must be complete with all supporting materials, official transcripts, and GRE scores by the deadline to be considered for admission.

M.A. admission with application for Graduate Teaching Assistantship: January 5

M.A. without funding: 1 month prior to the first day of classes for the semester in which they wish to enroll.

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

1. Complete official transcripts (transcripts sent directly from the institution to the University of Louisville, transcripts uploaded or sent by the student will not be accepted as official) of previous undergraduate and graduate work;

2. Two academic letters of recommendation (that is, actual letters attached to the evaluation form from faculty members who can address the applicant's academic performance and potential);

3. Score reports on the Graduate Record Examination General Test (from within the last five years);

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 or IELTS examination;

Above documents should be submitted to:

School of Interdisciplinary and Graduate Studies
Office of Graduate Admissions
Houchens Building, Suite 105
Louisville, KY 40292
or submitted via the online application: http://louisville.edu/graduate/apply

7. Any applicant who wishes to be considered for a Graduate Teaching Assistantship must also submit a GTA application (PDF).

GTA application should be submitted to:

Annelise Gray
Department of English
University of Louisville
Bingham Humanities Building RM 315
Louisville, KY 40292
(502) 852-0505

Via Email: Annelise Gray

Successful applicants for M.A. admission typically present the following credentials, though meeting these minimum 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); IELTS scores are also accepted for consideration in lieu of the TOEFL.

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 School of Interdisciplinary and Graduate Studies policies.

All applicants must fulfill the general requirements of the School of Interdisciplinary and Graduate Studies. Apply Now

Curriculum

The Master of Arts in English requires 30 credit 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 credit hours:

1. English 601: Introduction to English Studies
2. English 691: Contemporary Theories of Interpretation OR English 692: Topics in Interpretive Theory
3. One course in literature before 1700
4. One course in literature from 1700-1900
5. One course in literature after 1900

Electives – 9-15 credit hours:
Students may take no more than three 500-level courses. Creative writing courses (including up to six (6) credit hours of thesis guidance) may total no more than 15 credit hours.

Students may count one elective outside the department of English toward their degree.

Language Requirement
Students must demonstrate proficiency in a language other than English. (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 language requirement; they remain master’s degree candidates until they complete a thesis or culminating project.

Thesis Option: 24 credit hours of coursework + 6 credit 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, shows 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 credit 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 credit hours at the University of Louisville.

Faculty

<table>
<thead>
<tr>
<th>David R. Anderson</th>
<th>S. Matthew Biberman</th>
<th>Dale B. Billingsley</th>
<th>Beth Boehm</th>
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<td>Dean of the School of Interdisciplinary Affairs</td>
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</table>
Karen C. Hadley  
Professor  

Dennis R. Hall  
Professor Emeritus  

Suzette A. Henke  
Professor Emerita  

Bruce M. Horner  
Professor  

Endowed Chair in Rhetoric and Composition  

Director of Thomas R. Watson International Conference on Rhetoric and Composition  

Aaron Jaffe  
Professor  

Timothy Johnson  
Assistant Professor  

Debra S. Journet  
Professor Emerita  

Karen Kopelson  
Assistant Professor  

University Distinguished Teaching Professor  

Min-Zhan Lu  
Professor Emerita  

Deborah Lutz  
Professor  

Morton Chair  

Carol J. Mattingly  
Professor Emerita  

Kristi Maxwell  
Assistant Professor  

Fran McDonald  
Assistant Professor  

Robert Miller  
Professor Emeritus  

Karen Mullen  
Associate Professor Emerita  

Andrea Olinger  
Assistant Professor  

Kiki Petrosino  
Associate Professor  

Director of Creative Writing  

Andrew Rabin  
Associate Professor  

Vice Chair  

Harold E. Richardson  
Professor Emeritus  

Mary Ellen Rickey  
Professor Emerita  

Glynis Ridley  
Professor  

Department Chair  

Mary I. Rosner  
Associate Professor  

Susan M. Ryan  
Associate Professor  

Stephen Schneider  
Associate Professor  

Director of Graduate Studies  

Mary P. Sheridan  
Professor  

Jeffrey T. Skinnery  
Professor Emeritus  

Hristomir Stanev  
Assistant Professor  

Ian Stansel  
Assistant Professor  

Joseph Turner  
Assistant Professor  

A. Elizabeth Willey  
Associate Professor  

Director of Undergraduate Studies  

Bronwyn T. Williams  
Professor  

Director of University Writing Center  

Elaine O. Wise  
Assistant Professor  

Thomas A. Van  
Professor Emeritus
Doctor of Philosophy in English Rhetoric and Composition

Major: ERC
Degree Awarded: Ph.D.
Unit: GA

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 literary study; and the relation of rhetoric and composition to allied fields (e.g., critical theory, cultural studies, and linguistics). 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.

Deadlines

*Note Applications must be complete, with all supporting materials, official transcripts, and GRE scores by the deadline to be considered for admission.

December 15: Fall admission only

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 official transcripts (official transcripts must be sent from the institution directly to the University of Louisville. Transcripts uploaded by the student will not count towards completion of this requirement.) of previous undergraduate and graduate work;
2. Three academic letters of recommendation (that is, actual letters attached to the evaluation form from faculty members who can address the applicant's academic performance and 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 (from within the last five years);
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); IELTS scores are also accepted for consideration in lieu of the TOEFL;

Above documents should be submitted to:

School of Interdisciplinary and Graduate Studies
Office of Graduate Admissions
Houchens Building, Suite 105
Louisville, KY 40292

Or submitted via the online application: http://louisville.edu/graduate/apply

7. Application for Graduate Teaching Assistantship:

GTA application should be submitted to:

Annelise Gray
Department of English
University of Louisville
Bingham Humanities Building RM 315
Louisville, KY 40292
or via email: algray03@louisville.edu

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 December 15th for fall admission only.

All applicants must fulfill the general requirements of the Graduate Admissions Office. Apply Now

Curriculum

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

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

**Additional Requirements** (15 credit hours from the following categories):
- Pedagogy and Program Administration 3
- Rhetoric 3

**Literary Studies** (one creative writing course may be used to fulfill the literary studies requirement; students may also take a second theory course--in addition to the required course listed above--in partial fulfillment of the literary studies requirement) 15

**Electives** (12 credit hours):
- Choose from offerings in Rhetoric and Composition. One elective may be taken outside these offerings, including a course outside the department 12

**Dissertation** (690) 12

**Minimum Credit Hours Total** 51

**Ph.D. Language Requirement**

Each doctoral student must demonstrate proficiency in one language other than English. (See the Graduate Program Guidelines for more information.)

**Time Limit and Residency for Ph.D.**

All work for the Ph.D. must be completed within four years of passing the comprehensive exams.
A year of full-time residency is required of all students. A year of full time residency in the English doctoral program consists of the completion of two consecutive semesters of nine (9) credit hours each.

For students holding Graduate Teaching Assistantships, a year of full-time residency in the English doctoral program is 18 credit hours within a single academic year. Students ordinarily take nine (9) credit hours of course work and teach six (6) credit hours in the fall and spring terms.

**Professional Requirements**

Sometime during their tenure in the doctoral program, students must participate in a year-long supervised teaching-intern program. Graduate Teaching Assistants automatically fulfill the professional requirement once they have completed one successful year as a Graduate Teaching Assistant. Other students must make arrangements in consultation with the Director of Graduate Studies to fulfill the year-long supervised teaching requirement.

**Comprehensive Preliminary Examination**

When students have completed coursework and satisfied the language requirement, 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 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.

Guidelines for writing the dissertation prospectus are included in the English department’s Graduate Program Guidelines. The dissertation will be submitted in the form and by the date prescribed by the School of Interdisciplinary and Graduate Studies (see [http://louisville.edu/graduate/current-students/thesis-dissertation-information](http://louisville.edu/graduate/current-students/thesis-dissertation-information) for the current guidelines).

**Final Oral Examination**

The defense of the dissertation will be scheduled by the date listed on the Graduate Program Calendar. The dissertation will then be revised according to the dissertation committee’s recommendations. One copy shall be submitted to the School of Interdisciplinary and Graduate Studies. Along with the dissertation, the candidate shall submit an abstract for publication in Dissertation Abstracts. Candidates may wish to produce a bound copy for the dissertation director, but the department does not require a bound copy.

**Faculty**

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Amy Clukey
Assistant Professor
Geoffrey A. Cross
Professor Emeritus
Julia C. Dietrich
Professor
Lucy M. Freibert
Professor Emerita
Alan C. Golding
Professor
Susan M. Griffin
Professor
Distinguished
University Scholar
Paul F. Griner
Professor
Karen C. Hadley
Professor
Dennis R. Hall
Professor Emeritus
Suzette A. Henke
Professor Emerita
Bruce M. Horner
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Rhetoric and
Composition
Director of Thomas
R. Watson
International
Conference on
Rhetoric and
Composition
Aaron Jaffe
Professor
Timothy Johnson
Assistant Professor
Debra S. Journet
Professor Emerita
Karen Kopelson
Assistant Professor
University
Distinguished
Teaching Professor
Min-Zhan Lu
Professor Emerita
Deborah Lutz
Professor
Morton Chair
Carol J. Mattingly
Professor Emerita
Kristi Maxwell
Assistant Professor
Fran McDonald
Assistant Professor
Robert Miller
Professor Emeritus
Karen Mullen
Associate Professor Emerita
Andrea Olinger
Assistant Professor
Kiki Petrosino
Associate Professor
Director of Creative
Writing
Andrew Rabin
Associate Professor
Vice Chair
Harold E.
Richardson
Professor Emeritus
Mary Ellen Rickey
Professor Emerita
Glynis Ridley
Professor
Department Chair
Mary I. Rosner
Associate Professor
Susan M. Ryan
Associate Professor
Stephen Schneider
Associate Professor
Director of
Graduate Studies
Mary P. Sheridan
Professor
Jeffrey T.
Skinnery
Professor Emeritus
Hristomir Stanev
Assistant Professor
Ian Stansel
Assistant Professor
Joseph Turner
Assistant Professor
A. Elizabeth
Willey
Associate Professor
Director of
Undergraduate
Studies
Bronwyn T.
Williams
Professor
Director of
University Writing
Center
Elaine O. Wise
Assistant Professor
Thomas A. Van
Professor Emeritus
Master of Arts in French, Language and Literature

Major: FREN
Degree Awarded: MA
Unit: GA
Program Webpage: http://louisville.edu/french

Program Information

Mission Statement
The mission of the Master of Arts in French, Language and Literature is to provide students who would like to explore professional opportunities in teaching, translation, international affairs, etc. or pursue their studies at the doctoral level, with an in-depth knowledge of the French language as well as French and francophone cultures as part of a multidisciplinary approach to French Studies grounded in literature, linguistics, cultural studies and media studies.

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 Director of Graduate Studies in French 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 French 611 during their first semester in the program and French 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, which they traditionally do during the summer between their first and second years. Modern Language Fund grants are available to assist students with the cost of their trip. Students can fulfill the requirement by participating in the long-standing summer Work-Exchange Program the University of Louisville has with the city of Montpellier, France. After consultation with the Director of Graduate Studies in French, 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: graduate admission application and application fee, transcripts from all colleges/universities where undergraduate and/or graduate credit was earned, and two letters of recommendation. GRE exam scores are NOT required for admission into the Master of Arts in French, Language and Literature.

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

Students are required to take the following two courses:
French 611: Teaching and Research Methods in French
French 699: Final Research Project

In addition to 611 and 699, students will take a minimum of eight (8) courses when choosing the non-thesis option and a minimum of six (6) courses when choosing the thesis option with at least one course from each of the rubrics below. Students choosing the thesis option must complete between three and six (3-6) hours of thesis credit (French 690). The total number of credits required for the degree is thirty (30) minimum.

Rubrics

Language skills:
French 600: Advanced Stylistics
French 523: Advanced Communication, if appropriate
Approved elective

Linguistics:
French 522: Phonetics
French 524: Translation
French 601: Studies in Linguistics
Approved elective

Culture:
French 531: Special Topics in Literature and Cultural Studies
French 552: French Work-Exchange Research, 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 531: Special Topics in Literature and Cultural Studies
French 604: Studies in Literature
Approved elective French

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

With permission of the Director of Graduate Studies, 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:

1. Prior to applying for admission into the program, students must consult with the French Undergraduate advisor and the Director of Graduate Studies in French. They will then submit their application through the School of Interdisciplinary and Graduate Studies. It is strongly recommended that at least one of the supporting letters submitted with the application be from a French faculty member.

2. 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.

3. Application will be reviewed by the French faculty. A 3.35 overall grade point average will be required for admission to the program.

4. 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.

5. 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.

Faculty

Matthieu Dalle  
Associate Professor

Bonnie Fonseca-Greber  
Assistant Professor

John Greene  
Professor

Mary Greenwood  
Visiting Assistant Professor

Wendy Pfeffer  
Professor

Wendy Yoder  
Visiting Assistant Professor
Master of Arts in History

Major: HIST
Degree Awarded: MA
Unit: GA
Program Webpage: http://louisville.edu/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 on one major and one minor field listed below.

Program Admission

Normally, applicants to the MA program in History must have:

- a minimum undergraduate GPA of 3.0 on a 4.0 point scale (a GPA based on a 3.0 scale will be converted to a 4.0 scale)
- 21 undergraduate credit hours in history, with a minimum GPA of 3.0
- a combined score of at least 300 on the Verbal and Quantitative sections of the Graduate Records Examination (GRE)

Students with an undergraduate GPA of between 2.5 and 2.99 may be accepted conditionally into the program at the discretion of the Director of Graduate Studies, provided they meet all other requirements for admission. Conditional admittance requires that the student maintain a GPA of 3.0 in the first nine (9) credit hours of graduate coursework.

Students with a combined GRE (verbal and quantitative) score of less than 300 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 nine (9) credit hours of graduate coursework.

Students with fewer than 21 undergraduate credit hours in history will be required to take additional, non-degree graduate history courses to bring their total hours in history up to the required number.

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 School of Interdisciplinary and Graduate Studies Office of Graduate Admissions:

- a completed graduate application; $60.00 fee (available online at http://louisville.edu/graduate/apply)
- official transcripts, verifying the receipt of a BA from an accredited institution
- scores from the Graduate Records Examination
- at least two letters of recommendation from individuals familiar with the applicant's academic and/or professional capabilities and potential
- a writing sample of no more than 15 double-spaced pages
- a statement of purpose, not to exceed 500 words, in reasonably specific terms, your academic and career objectives and how they can be advanced through graduate work in our program. The statement should also indicate your intended area(s) of interest, your preparation for this field of study, and, if possible, the departmental faculty with whom you wish to study.

Deadlines:

Applications for Fall semester: February 15 *

Applications for Spring semester: December 01

* February 15 is the deadline for all students who want to be considered for available fellowships, assistantships, and internships (see below under III.). Students who do not intend to apply for these funding sources may submit their applications until May 15.

For a list of the graduate assistantships, scholarships, fellowships and internships, see http://louisville.edu/history/graduate-studies/funding Applications for these awards are normally due on February 15.

Curriculum

Program Requirements

All graduate students are required to take History 605: Research Methods and Materials, offered every Fall semester. Students are strongly encouraged to take History 605 in their first Fall semester of enrollment.

Students with a Major Field in Public History also have to take HIST 697: Introduction to Public History and HIST 608: Practicum

Graduate students in this Department normally take nine (9) credit hours of coursework per semester (three courses). With the approval of the Director of Graduate Studies, a student may take up to 12 credit hours (four courses) in a semester. During a student’s graduate program, a total of six (6) credit 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 six (6) credit hours of directed studies or
independent studies (HIST 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 subject to 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 credit hours of appropriate coursework from outside the University. Up to 9 credit hours of non-degree graduate coursework in History may be transferred into the MA program.

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 of Graduate Studies, normally before the student enrolls for the second semester of work. The areas of emphasis are:

**Major Fields:**

- United States
- Public History
- Europe
- Comparative World (regional or comparative study of a region outside of the United States or Europe, to be designed in consultation with Graduate Director and student’s advisor.)

**Minor Fields:**

- Africa
- Ancient and Medieval World
- Asia
- Europe
- Latin America
- Middle East
- Military History
- Public History
- Religion & Culture
- United States
- Women’s and Gender History

Students may choose to complete the MA by thesis or exam.

**Thesis option:**

Completion of 27 credit hours of course work (including HIST 605 and, if applicable, HIST 697 and HIST 608) and 3 credit hours of thesis work (HIST 603). 15-18 hours of coursework must be in the major area of emphasis, and 6-9 hours in the secondary area; 6 hours may be electives. At least 12 hours of coursework must at the 600 level, with at least nine of these hours in the major area of emphasis. The
thesis must be in the major area of emphasis. Following an oral defense, it must be approved by a thesis committee, which consists of the thesis director and at least two other faculty members, one of them from another department. The committee requires approval by the Department Chair and the Academic Unit.

**Examination option:**

Completion of 30 credit hours of course work (including HIST 605 and, if applicable, HIST 697 and HIST 608) and 3 credit hours of exam preparation (HIST 603). The exam consists of two written examinations and an oral examination. 18-21 hours of coursework must be in the major area of emphasis, and 9-12 in the secondary area; 6 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 and oral examinations on their content and the relevant areas of history. The committee will consist of three faculty members, normally the two faculty members who administer the examinations and a third faculty member who may be in the Department of History. The committee requires approval by the Department Chair and the Academic Unit.

**Accelerated BA/MA**

This program allows a history major to use a maximum of six (6) credit 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:

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

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

In general, students will work with Associate or Full Professors as their academic advisors. To work with an Assistant Professor, students will have to receive approval from the faculty member and the Director of Graduate Studies.

**Faculty**

- **Blake R. Beattie**  
  *Associate Professor*
- **Mark E. Blum**  
  *Professor*
- **Brad Bowman**  
  *Assistant Professor*
- **Genevieve Carlton**  
  *Assistant Professor*
- **A. Glenn Crothers**  
  *Associate Professor*
- **Christine T. Ehrick**  
  *Associate Professor*
- **Tyler Fleming**  
  *Assistant Professor*
- **Robert B. Kebric**  
  *Professor*
- **Theresa Keeley**  
  *Assistant Professor*
- **Lara Kelland**  
  *Assistant Professor*
- **Tracy E. K'Meyer**  
  *Professor*
- **Daniel Krebs**  
  *Associate Professor*
- **Yuxin Ma**  
  *Associate Professor*
- **Thomas C. Mackey**  
  *Professor*
- **Director of Graduate Studies**
Katherine Massoth  
Assistant Professor

Justin A. McCarthy  
Professor

Bruce M. Tyler  
Associate Professor

John E. McLeod  
Professor

Daniel Vivian  
Assistant Professor

Jennifer Westerfeld  
Assistant Professor
Master of Arts in Humanities

Major: HUM  
Degree Awarded: MA  
Unit: GA  
Program Webpage: http://louisville.edu/humanities/

Program Information

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

For the traditional concentration, the applicant will be expected to have an undergraduate background of some depth in at least two of the following disciplines: art history, literature, classical and modern languages, linguistics, music history, philosophy, theatre arts, and religious studies, or in one of the following interdisciplinary cultural studies periods: ancient, medieval-renaissance, early modern (17th and 18th centuries) or modern. Those who do not meet this requirement will be required to take undergraduate courses before admission is granted.

For the concentration in Humanities and Civic Leadership, the applicant will be expected to have worked in a profession for five years (unless the applicant has completed another graduate or professional degree program or is enrolled in the Joint 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):

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

2. A minimum of 15 credit hours must be in courses at the 600 level, excluding thesis or directed study hours.
3. Students who do not have one of the Humanities 591-596 sequence in their undergraduate record will be required to take one of these as part of their electives.

4. Pass a competency exam in French, German, Spanish, or an approved alternate foreign language.

5. An oral examination covering the content of the thesis.

<table>
<thead>
<tr>
<th>Traditional MA with Thesis</th>
<th>Traditional MA: Non Thesis</th>
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<tr>
<td>(minimum of 30 credit hours)</td>
<td>(minimum of 30 credit hours)</td>
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<tr>
<td>12-15 credit hours in 1 discipline/area</td>
<td>12-15 credit hours in 1 discipline/area</td>
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<tr>
<td>9-12 credit hours in 2nd discipline/area</td>
<td>9-12 credit hours in 2nd discipline/area</td>
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<tr>
<td>3 credit hours in Methods</td>
<td>3 credit hours in Methods</td>
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<tr>
<td>6 credit hours in Thesis</td>
<td>3 credit hours of Directed Study Project</td>
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<tr>
<td>Foreign Language Competency**</td>
<td>Foreign Language Competency**</td>
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**Example:**
- 12 credit hours in Philosophy
- 9 credit hours in Art History
- 3 credit hours of HUM 510/610
- 6 credit hours of thesis
- Foreign Language Competency**

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

1. 12 credit hours in one discipline/area
2. 3 credit hours in Methods (609 or 610)
3. 3 credit hours in second discipline/area
4. 6 credit hours in Internship (650)
5. 3 credit hours Direct Study Project (655)
6. 3 credit hours in Interdisciplinary Seminar in Humanities and Civic Leadership (636)
7. No foreign language requirement.
8. Demonstrated writing proficiency is required for admission.

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

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

1. 15 credit hours of Linguistic coursework, three hours in each of the five areas:
   - **Introduction to Linguistics: Required**
     LING 518 Foundations of Language
   - **Language and Culture: Choose1**
     ENG 523 History of the English Language
     LING 621 Sociolinguistics
     LING 623 Culture as the Basis of Foreign Language Teaching
     LING 630 Language and Culture
   - **Language and Structure**
     ENG 522 Structure of Modern American English
LING 535 Applied Linguistics for English Teachers  
LING 603 Syntax  
LING 606 Historical and Comparative Linguistics  
LING 610 Phonetics and Phonology  

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

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

2. 9 credit hours in a second humanities discipline or area  
3. 3 credit hours in methodology: Humanities 609 or 610  
4. 3 credit hours in Directed Study Project: Humanities 655  
5. Foreign Language Competency  
6. An Oral Examination will cover the contents of the Directed Study Project  
7. A minimum of 15 credit 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 [http://louisville.edu/humanities/linguistics/esl-endorsement.html](http://louisville.edu/humanities/linguistics/esl-endorsement.html)  

**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 credit hours of coursework taken for graduate credit. 21 credit 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 credit 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.

Faculty

| Pamela Beattie | Brandon McCormack | Shelley Salamensky | Thomas Stewart |
| Assistant Professor | Assistant Professor | Professor | Assistant Professor |
| Simona Bertacco | Maryam Moazzen | Director of Humanities | Steven Watkins |
| Associate Professor | Assistant Professor | Tatjana Soldat-Jaffe | Assistant Professor |
| Terry Burden | Ranen Omer-Sherman | Assistant Professor | Michael Williams |
| Assistant Professor | Professor | Linguistics and Humanities MA | Associate Professor |
| Michael Hagan | JHFE Endowed Studies | Concentration Advisor | Elaine O. Wise |
| Assistant Professor | Natalie Polzer | Assistant Professor | Assistant Professor |
| Civic Leadership | Associate Professor | English | of English |
| MA Concentration Advisor | Patrick Pranke | Assistant Professor | Chair of Humanities |
| Michael Johnmann | Shelley Salamensky | Assistant Professor | Traditional MA |
| Assistant Professor | Brandon McCormack | Assistant Professor | Concentration Advisor |
| Terry Burden | Maryam Moazzen | Assistant Professor | |
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

Application Instructions

Admission to the Humanities Ph.D. Program is exclusively for the fall semester of each academic year.

All materials must be received by January 15th for the following fall. No late applications will be accepted.

All applicants must have completed an appropriate Master's degree (M.A., M.F.A., M. Div, or other) prior to beginning the program.

All applicants must also have fulfilled all requirements of the School of Interdisciplinary and Graduate Studies.

Required materials are:

1. The School of Interdisciplinary and Graduate Studies application.
2. A statement of intent (750-1000 words) detailing educational and future professional goals.
3. A current academic curriculum vitae.
4. A scholarly or creative writing sample (scholarly, fiction, creative non-fiction: 5000 - 10,000 words; for length guidelines in other genres.
5. Official transcripts of all undergraduate and graduate-level work.
6. Graduate Record Examination (GRE) General test scores.
7. If applicable, proof of English proficiency.
8. Three letters of recommendation from former instructors attesting to capability for doctoral-level work.
9. $60 application fee, paid to the School of Interdisciplinary and Graduate Studies.

Additional Information

For additional information on the Ph.D. program and/or Graduate Teaching Assistantships, see the Humanities Ph.D. website.

For any further questions regarding specifics of the Humanities Ph.D. Program application, please e-mail the PhD Program Administrator.

Faculty

Pamela Beattie  Mark Blum  Director of Hite
Assistant Professor  Professor  Institute
Simona Bertacco  Ying Kit Chan  John Gibson
Associate Professor  Professor  Associate Professor
Aaron Jaffe  Director of
Professor  Commonwealth


<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
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<tbody>
<tr>
<td>Center for Humanities and Social Sciences</td>
<td>Dismas Masolo  Professor Distinguished University Scholar</td>
</tr>
<tr>
<td>Ranen Omer-Sherman</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Natalie Polzer</td>
<td>Associate Professor</td>
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<tr>
<td>Patrick Pranke</td>
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<td>Shelley</td>
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<td>Salamensky</td>
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<tr>
<td>Tatjana Soldat-Jaffe</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Elaine O. Wise</td>
<td>Assistant Professor</td>
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</tbody>
</table>
Graduate Certificate in Latin American and Latino Studies

Major: LALS
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.

Curriculum 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/latinamericastudies](http://louisville.edu/latinamericastudies)

**Anthropology**

ANTH 314: Topics in Old and New World Archaeology  
ANTH 316: Ancient Civilizations of Mesoamerica  
ANTH 325: Modern Latin American Societies  
ANTH 333: Globalizing Inequalities  
ANTH 338: Anthropology of Refugees  
ANTH 548: Special Topics in Cultural Anthropology

**Art History**

ARTH 342/542: Mexican Art and Literature  
ARTH 365: Mexican Art and Architecture  
ARTH 544: Pan-African Art: Form and Content

**Communication**

COMM 440/690: Intercultural Communication  
COMM 510: Health Communication in Belize  
COMM 510/690-01: Mass Media in Latin America  
COMM 690-75: Metaphors of Cultural Communication  
COMM 690-77: Theories of Culture

**English**

ENGL 369: Minority Traditions in American Literature  
ENGL 373: Women in Literature  
ENGL 549: Studies in Post-Colonial and/or Ethnic Literature  
ENGL 554: Women's Personal Narratives  
ENGL 682: Seminar in Linguistics: Cultural Metaphors  
ENGL 682: Seminar in Linguistics: Theories of Culture

**History**

HIST 310: Studies in History  
HIST 331: Colonial Latin America  
HIST 332: Latin America 1820-Present  
HIST 333: Women in Latin American History  
HIST 503: Race, Class, and Identity in Latin America  
HIST 533: Revolution and Reform in Twentieth-Century Latin America  
HIST 534/612: The US and Latin America  
HIST 535: The History of Mexico: Pre-Columbian to the Present  
HIST 535/611: The History of America  
HIST 622: Latin America Since 1945

**Honors**

HON 336: Honors Seminar in Humanities  
HON 436: Honors Seminar in Social Sciences
HON 446: Honors Seminar in Social Sciences (WR)

**Humanities**
HUM 380: Culture of Iberia-Latin America
HUM 382: Native American Cultures
HUM 562: Studies of Hispanic Culture
HUM 682: Seminar in Linguistics: Cultural Metaphors
HUM 682: Seminar in Linguistics: Theories of Culture

**Latin American and Latino Studies**
LAS 310: Introduction to Latin American and Latino Studies
LAS 313: Panamanian Culture
LAS 314: Special Topics in Latino Studies
LAS 400: Latin American Studies Internship
LAS 401: Latino Studies Internship
LAS 680: Issues in Latin American and Latino Studies
LAS 681: Latin American and Latino Studies Graduate Internship

**Law**
LAW 886: International Law
LAW 992: Immigration Law

**Linguistics**
LING 690: Seminar in Linguistics: Theories of Culture
LING 690: Seminar in Linguistics: Cultural Metaphors

**Marketing**
MKT 370/670: Global Marketing

**Modern Languages**
ML 260: Hispanic Contributions to the World
ML 313: Special Topics in Language, Literature, or Culture
ML 356: Masterpieces of Latin American Literature
ML 357: Latin American Literature Today
ML 358: Mexican Literature Today
ML 551: Special Topics
ML 599: Independent Study

**Pan-African Studies**
PAS 206: Introduction to Caribbean Studies
PAS 219 Survey of Brazilian Music
PAS 227: Survey of American Diversity
PAS 247: Language, Protest and Conflict in the Global Community
PAS 329: Slave Trade and Slavery
PAS 346: African Language in Diaspora
PAS 360: African Diaspora in the Caribbean and Latin America
PAS 396: History of the Caribbean
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, Gender
PAS 581: Pan-African Art: Form and Content
PAS 621: Religion in African Diaspora

**Political Science**
POLS 315: Race, Law and Politics
POLS 330: International Relations
POLS 331/506: International Organization
POLS 332: International Law
POLS 337: Law, Diplomacy, and Power: The Foreign Relations of the United States
POLS 370: Comparative Political Development in Latin America
POLS 371: Latin America in the World
POLS 506: Topics in International Relations
POLS 530: International Negotiation
POLS 563: Women in Developing Countries
POLS 647: Seminar on Latin America
POLS 649: Seminar in Comparative Politics

**Sociology**
SOC 210: Race in the US
SOC 323: Diversity and Inequality
SOC 392: Faces of Global Poverty
SOC 454: Social Stratification
SOC 464: Race and Ethnicity
SOC 512/612: Gender, Race, Work, and Welfare
SOC 685: Seminar in Race and Ethnicity

**Spanish**
SPAN 313: Special Topics
SPAN 403: Foundations of Latin America
SPAN 404: Cultural and Literary Perspectives on Modern Latin America
SPAN 499: Special Topics
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 of the Workplace
SPAN 644: Origins and Development of Hispanic Culture
SPAN 648: Contemporary Issues in the Hispanic World
SPAN 670: Special Topics

**Theater Arts**
TA 326: Cultural Diversity in Performance
TA 365: Theater of the African World
TA 555/665: Tools for a Global Theater

**Women's and Gender Studies**
WGST 333: Women in Latin American History
WGST 343: Faces of Global Poverty
WGST 401: Community Internship
WGST 520: Women's Personal Narratives
WGST 558: Women in Developing Countries
WGST 593: Topics in Women's and Gender Studies in Humanities
Faculty

Adrian Archuleta
Assistant Professor

Rhonda L. Buchanan
Professor
Director of Latin American and Latino Studies

Julie Bunck
Associate Professor

Joy Carew
Associate Professor

Fabian Crespo
Assistant Professor

Christine Ehrick
Associate Professor

Christopher Fulton
Associate Professor

Tricia Gray
Visiting Assistant Professor

Joy Hart
Professor

Gregory Hutcheson
Associate Professor

Edgardo Mansilla
Instructor
Executive Director Americana Community Center

Lisa Markowitz
Associate Professor

Robert St. Clair
Professor

Clare Sullivan
Associate Professor

Lisa C. Wagner
Associate Professor

Margath Walker
Assistant Professor

Gabriela Nuñez
Assistant Professor

Theresa Rajack-Talley
Associate Professor

Dennis Menezes
Associate Professor
Master of Arts in Mathematics

Major: MATH
Degree Awarded: MA
Unit: GA
Program Webpage: http://www.math.louisville.edu/graduate/

Program Information

Appropriate preparation for a 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:

1. 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.

2. 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.

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

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 Catalog.

Early Start Program

The Master of Arts in Teaching program in conjunction with the undergraduate programs in Chemistry, Biology, and Mathematics offers a comprehensive and professionally-focused program leading to an additional degree of 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**

1. Students must have at least 21 credit hours of mathematics required for the BA with a cumulative GPA of 3.0 in those courses.
2. Applications will be reviewed by the Graduate Committee of the Mathematics Department and the Secondary MAT Screening Committee, and the applicant must be approved by both committees.
3. Once approved, the student may take a maximum of nine (9) hours for graduate credit while in undergraduate status, which can also apply to the requirements for the BA in Mathematics. All graduate coursework must be approved by the student's MAT faculty advisor.
4. Students enrolling in the accelerated program will be non-thesis students and must adhere to all policies pertaining to Graduate Students.
5. All students must submit an application to the College of Education and Human Development (CEHD) 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.

**Faculty**

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<tr>
<th>Name</th>
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<tr>
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Ewa Kubicka
Professor

Grzegorz Kubicki
Professor

Hamid Kulosman
Associate Professor

Lee Larson
Professor

Kiseop Lee
Associate Professor

Bingtuan Li
Professor

Jianxu Li
Associate Professor

Robert B. McFadden
Emeritus

Alicia Miller
Associate Professor

Robert Powers
Distinguished Teaching Professor Assistant

Thomas Riedel
Professor

Department Chair

Prasanna Sahoo
Professor

Steven Seif
Associate Professor

Daniel Smith-Tone
Assistant Professor

David Swanson
Associate Professor

Undergraduate Director

Cristina Tone
Assistant Professor

David J. Wildstrom
Associate Professor

W. Wiley Williams
Emeritus

Shi-Yu Wu
Emeritus Adjunct Professor

Yongzhi Steve Xu
Professor

Stephen Young
Assistant Professor

Wei-Bin Zeng
Associate Professor
Doctor of Philosophy in Applied and Industrial Mathematics

**Major:** MATH  
**Degree Awarded:** Ph.D.  
**Unit:** GA  
**Program Webpage:** [http://www.math.louisville.edu/graduate](http://www.math.louisville.edu/graduate)

### 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**

1. Two sequences, each of six (6) semester hours, chosen from:
   - Algebra MATH 621-622
   - Combinatorics MATH 681-682
   - Real Analysis MATH 601-602

2. Two sequences, each of six (6) semester hours, chosen from:
   - Mathematical Modeling MATH 635-636
   - Mathematical Statistics MATH 667-668
   - Probability MATH 663-664

**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 Mathematical Modeling, Mathematical Statistics and Probability. 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**

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

**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 Department of Bioinformatics and Biostatistics. 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, as well as their choice of the thesis or non-thesis option for the M.S. in Biostatistics. 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, as well as the course requirements for the M.S. in Biostatistics.

- **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
  - Mathematical Statistics - Mathematics 667 and 668
  - Probability - Mathematics 663 and 664
  - Elective Courses (18 hours) * Application area courses chosen in consultation with a student’s advisory committee. These courses can be outside of the Department of Mathematics.
• Industrial Internship: Each student, with prior approval of the Graduate Studies Director and the Industrial Internship Director, has to complete an internship in an appropriate industrial or governmental setting, or have equivalent experience.

• Other Requirements: Students must pass qualifying examinations, complete an approved computing project, and pass a candidacy examination as detailed in the catalog entry for the Ph.D. in Applied and Industrial Mathematics.

• Dissertation (12-18 hours): 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.

M.S. in Biostatistics

Core course requirements (30 semester hours).

• Probability and Mathematical Statistics, PHST 661-662 or MATH 561-562 (6 hours)**
• Biostatistical Methods I and II, PHST 680-681 (6 hours)*
• Multivariate Statistical Methods, PHST 682 (3 hours)***
• Survival Analysis, PHST 683 (3 hours)
• Categorical Data Analysis, PHST 684 (3 hours)
• Epidemiology Elective, PHEP --- (3 hours): Fulfilled by any advisor-approved course in Epidemiology, including but not limited to PHEP 602, PHEP 618, and PHEP 650
• Clinical Trials I and Clinical Trials Stat Lab, PHCI 624 and PHST 626 (3 hours)
• Biostatistics Seminar PHST 602 (1 hour)
• Independent Study PHST 675 (2 hours)****
• Public Health Background Course, PH --- (0 hours): A course in public health is a requirement for any student graduating with the M.S. degree from the Department of Bioinformatics and Biostatistics. These credit hours are not applied to the M.S. degree. Course number varies from year to year.

• Additional Requirements – Optional Thesis (6 hours)

Thesis, PHST 666 (6 hours). To be completed in accordance with the guidelines written in the catalog entry for the M.S. in Bioinformatics and Biostatistics Degree.

* Courses taken to satisfy the Biostatistics 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.

** The PHST 661-662/MATH 561-562 requirement is waived if the student takes MATH 663 and MATH 667. The PHST 681-682 requirement is waived if the student takes MATH 667-668. Both requirements (PHST 661-662/MATH 561-562 and PHST 681-682) are waived only if the student completes both the MATH 663-664 and MATH 667-668 sequences.

*** Can be replaced by an advisor-approved graduate-level course in Bioinformatics and Biostatistics (PHST 691, PHST 704, etc.)

**** This is a project completed under the supervision of a faculty member

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

The Industrial Internship required by the Department of Mathematics and the Master’s Project or 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 biostatistics so that it satisfies the Project or Thesis, and contain advanced mathematical content, so that it satisfies the Industrial Internship. Likewise, the technical report must meet two requirements: it must satisfy the requirements for a Master’s Project report or Master’s Thesis for the M.S. degree and it must be written at
an advanced mathematical level expected Industrial Internship. Students should enroll in the Master’s Project (PHST 675) or Master’s Thesis (PHST 666) courses during or shortly after completion of the Industrial Internship to take advantage of the combined Industrial Internship and Master’s Project/Thesis.

Students will not be permitted to enroll in the Master’s Project (PHST 675) or Master’s Thesis (PHST 666) courses until at least 2 qualifying examinations toward the Ph.D. in Applied and Industrial Mathematics have been 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.

Students Currently Enrolled in the Ph.D. in Applied and Industrial Mathematics Program

Students currently enrolled in the Ph.D. in Applied and Industrial Mathematics program will need to submit complete application materials to the Department of Bioinformatics and Biostatistics for admission to the M.S. component of the dual degree, as well as notify his/her advisor in the Department of Mathematics of the intention to enter into the dual degree program. Letters of recommendation for admission to the M.S. program can be taken from the letters of recommendation written for admission to the Ph.D. program, provided they have been written sufficiently recently.

Faculty

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<td>Ewa Kubicka</td>
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<td>Grzegorz Kubicki</td>
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<td>Hamid Kulosman</td>
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<td>Lee Larson</td>
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<tr>
<td>Alicia Miller</td>
<td>Associate Professor</td>
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<tr>
<td>Robert Powers</td>
<td>Distinguished Teaching Professor</td>
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<td>Thomas Riedel</td>
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<tr>
<td>Prasanna Sahoo</td>
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<td>Steven Seif</td>
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<tr>
<td>Daniel Smith-Tone</td>
<td>Assistant Professor</td>
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<tr>
<td>David Swanson</td>
<td>Associate Professor</td>
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<tr>
<td>Undergraduate Director</td>
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<td>Mathematics</td>
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</tbody>
</table>
Cristina Tone
Assistant Professor

David J.
Wildstrom
Associate Professor

W. Wiley Williams
Emeritus

Shi-Yu Wu
Emeritus Adjunct Professor

Yongzhi Steve Xu
Professor

Stephen Young
Assistant Professor

Wei-Bin Zeng
Associate Professor
Graduate Certificate of Medieval and Renaissance Studies

Major: MRSTCMR
Degree Awarded: CERT
Unit: GA
Program Webpage: http://louisville.edu/humanities/

Program Information

Requirements for the Graduate Certificate in Medieval and Renaissance Studies

1. A total of eighteen (18) hours in courses approved for graduate credit in accordance with the policies of the School of Interdisciplinary and Graduate Studies.
2. 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.
3. 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.
4. Attendance at lectures and participation in workshops conducted each semester by visiting faculty selected by the Graduate Programs Committee.
5. 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.
6. At least six (6) hours must be at the 600 level.
7. A single course may fulfill more than one of these requirements.
8. Independent Studies may not count towards the fulfillment of these requirements.
9. 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.
10. 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.
Faculty

Jack Ashworth  
Professor Emeritus of Music

Blake Beattie  
Associate Professor of History

Pamela Beattie  
Assistant Professor of Humanities

Matthew Biberman  
Professor of English

Dale Billingsley  
Professor of English

Vice Provost of Undergraduate Affairs

Genevieve Carlton  
Assistant Professor of History

Julia Dietrich  
Professor of English

Christopher Fulton  
Assistant Professor of Fine Arts

Carmen Hardin  
Assistant Professor of Modern Languages

Gregory Hutcheson  
Associate Professor of Modern Languages

Tom Maloney  
Professor of Philosophy

Wendy Pfeffer  
Professor of Modern Languages

Andrew Rabin  
Professor of English

Hristomir Stanev  
Assistant Professor of English

Jennifer Westerfeld  
Assistant Professor of History

Elaine Wise  
Chair of Humanities
Graduate Certificate in Pan-African Studies

Major: PAS
Degree Awarded: CERT
Unit: GA
Program Webpage: http://louisville.edu/panafricanstudies

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 School of Interdisciplinary and Graduate Studies. These requirements include the submission of:

- An official transcript reflecting previous degrees earned;
- At least two letters of recommendation; and
- Graduate Record Examination (GRE) scores of the General Test Section.

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.

Curriculum

Requirements for the Graduate Certificate in Pan-African Studies

- A total of fifteen (15) credit hours in courses approved for graduate credit in accordance with the policies of the School of Interdisciplinary and Graduate Studies.
- Nine (9) credit hours must be chosen from the list of "Approved PAS Courses" (available in the Department of Pan-African Studies): three (3) credit hours from the "Historical Studies" area; three (3) credit hours from the "Cultural Studies" area; and three (3) credit hours from the "Social Studies" area. Substitutions must be approved by the Director of Graduate Studies.
- Six (6) credit hours must be chosen from the list of "Approved Electives" (available in the Department of Pan-African Studies”). For students pursuing graduate degrees, at least one course must be outside of the department in which the student is pursuing the degree. Substitutions must be approved by the Director of Graduate Studies.
- At least three (3) credit hours must be at the 600 level.
A single course may satisfy more than one of these requirements.

Course work toward the graduate certificate in Pan-African Studies may also count toward the student's graduate degree.

**Note:** Students may not apply 500-level courses taken for undergraduate credit.

**Faculty**

- **Tomarra Adams**
  - Assistant Professor

- **Latrica Best**
  - Assistant Professor
  - Graduate Director

- **W. Carson Byrd**
  - Assistant Professor

- **Joy G. Carew**
  - Associate Professor

- **Robert L. Douglas**
  - Professor Emeritus

- **Tyler Fleming**
  - Assistant Professor

- **Pearlie Johnson**
  - Assistant Professor

- **Elizabeth M. Jones**
  - Assistant Professor

- **Ricky L. Jones**
  - Professor

- **Department Chair**
  - Yvonne V. Jones
  - Associate Professor

- **Shirletta Kinchen**
  - Assistant Professor

- **Mawuena Logan**
  - Assistant Professor

- **Michael Brandon**
  - McCormack
  - Assistant Professor

- **Priscilla McCutcheon**
  - Assistant Professor

- **Theresa A. Rajack-Talley**
  - Associate Professor

- **Kaila Story**
  - Associate Professor

- **William Tkweme**
  - Assistant Professor
Master of Arts in Pan-African Studies

Major: PAS
Degree Awarded: MA
Unit: GA
Program Webpage: http://louisville.edu/panafricanstudies

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 Department's Director for Graduate Programs (DGS).

Program Admission Information

The Pan-African Studies Graduate Studies Committee only considers applications for the Fall semesters only. The deadline for applications is January 15th. Students applying for admission to the Master of Arts in Pan-African Studies program must meet the following standards:

- Minimum 3.00 undergraduate cumulative grade point average.
- Submission of an official transcript reflecting previous degree earned.
- Three letters of recommendation.
- Graduate Record Examination (GRE): combined score of 300 is preferred.
- Submission of a personal statement.
- Submission of a current CV
- Online Application
- Writing Sample

Curriculum

Core Courses 15 Credit Hours

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 Credit Hours

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 Credit Hours**

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 Three (3 credit hours)

Elective in Related Field (with advisor’s approval) (3 credit hours)

**Minimum Total 33 Credit Hours**

**Faculty**

- Tomarra Adams
  Assistant Professor

- Latrica Best
  Assistant Professor
  Graduate Director

- W. Carson Byrd
  Assistant Professor

- Joy G. Carew
  Associate Professor

- Robert L. Douglas
  Professor Emeritus

- Tyler Fleming
  Assistant Professor

- Pearlie Johnson
  Assistant Professor

- Elizabeth M. Jones
  Assistant Professor

- Ricky L. Jones
  Professor

- Department Chair
- Yvonne V. Jones
  Associate Professor
- Shirletta Kinchen
  Assistant Professor
- Mawuena Logan
  Assistant Professor
- Michael Brandon
  McCormack
  Assistant Professor
- Priscilla McCutcheon
  Assistant Professor
- Theresa A.
  Rajack-Talley
  Associate Professor
- Kaila Story
  Associate Professor
- William Tkwene
  Assistant Professor
Doctor of Philosophy in Pan African Studies

**Major:** PAS_PHD  
**Degree Awarded:** Ph.D.  
**Unit:** GA  
**Program Webpage:** [http://louisville.edu/panafricanstudies](http://louisville.edu/panafricanstudies)

**Program Information**

The Ph.D. program will train professional researchers at the highest level in one or more of the traditional disciplines as well as to focus on two substantive areas; African American or African Diaspora Studies. The expertise of the present core and affiliated faculty to the Department of Pan-African Studies is spread across African American and African Diaspora history, philosophy, sociology, political science, linguistics, religion, education, social work, literature, law, geography, psychology, art, music, anthropology, women’s and gender studies. This amalgam of interdisciplinary subjects makes the department a highly active research and teaching unit that is well positioned to offer a degree of Doctor of Philosophy in Pan-African Studies. The Ph.D. is designed to educate students with the knowledge, analytic abilities, and professional development skills important for both academic and non-academic careers. Beginning in the fall of 2012, the program is open to all students regardless of race/ethnicity, gender, religion, sexual preference, or nationality. Graduates are employable in public and private corporations in areas of education and research, public policy, cultural heritage and public history, programs that deal with human rights and social inequality, economics and trade.

**Admission Requirements for Pan-African Studies Ph.D. Program**

To be admitted students must:

- Demonstrate advanced competency in research skills, as evidenced by completion of a Master’s thesis or other independent research project, such as a sole-authored research report; published articles in peer-reviewed journals or edited volumes.
- Completion of a minimum of 33 credit hours at the M.A. level (beyond the baccalaureate degree).
- Students with a Master’s degree in Black Studies or a traditional discipline in the humanities or social sciences will also be considered for admittance.
- Students who apply for the program without a Master’s degree in Black Studies are required to take prerequisite courses deemed necessary by the Director of Graduate Studies.
- Students may transfer six (6) credit hours from a previously earned Master's degree toward the Ph.D., subject to the approval of the degree program and the Unit Dean.
- Students with a PAS M.A. degree will be allowed to transfer a maximum of 12 credit hours to the Ph.D. In both cases students must petition for additional credit hours. Only courses in which the student earned grades of "B" or better will be considered for transfer.
- Official GRE Scores; a combine score of 300 is preferred.
- GPA of 3.0 or better

**Application Process**

The Pan-African Graduate Committee considers applications to the Ph.D. program for Fall Admissions only. The deadline is January 15th. When credentials are complete, the Graduate Admissions Committee will review all applications and make selections. All applicants will be notified of their outcome.
Applicants applying for admission to the doctoral program must submit required credentials through Studies. All Applicants are encouraged to apply early!

1. A completed Graduate Admission application. Including a $60.00 application fee.
2. Completion of a Master’s degree program or equivalent number of graduate credits prior to admission.
3. Official transcripts of all undergraduate, graduate and post-graduate work.
4. Graduate Record Examination (GRE) General Test scores – a combined score of 300 or more is preferred.
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 a thousand words detailing the applicant’s professional goals.
8. A writing sample – applicants must supply a recent sample (10-20 pages) of their scholarly or professional writing.

To check the status of your application, please visit [http://ulink.louisville.edu](http://ulink.louisville.edu)

For questions about the admissions process contact the School of Interdisciplinary and Graduate Studies, Graduate Admissions office at [gradadm@louisville.edu](mailto:gradadm@louisville.edu)

Current or returning students with questions about policy or procedure not related to the admissions process, contact the School of Interdisciplinary and Graduate Studies, Graduate Student Services Office at [graduate@louisville.edu](mailto:graduate@louisville.edu)

## Curriculum

### Program Structure (full-time):

<table>
<thead>
<tr>
<th>Year I &amp; II</th>
<th>Credit Hours</th>
<th>Other Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research Strategies</strong></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Quantitative Research Strategies (PAS 624)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Qualitative Research Strategies (PAS 623)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Research Strategies – Discipline Based</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(historical, social, cultural – courses not in PAS)</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td><strong>Intellectual Approaches</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pan-African Social Thoughts (PAS 622)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Advanced Seminar on Race (PAS 615)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Seminar on Race &amp; Ethnicity in the Diaspora</td>
<td>3</td>
<td>OR</td>
</tr>
<tr>
<td>Intellectual Approaches – Discipline Based</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(historical, social, cultural – courses not in PAS)</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**Major (Track Area/ Discipline)**

4 courses in one of two tracks: African American Studies or the African Diaspora and within a historical, social or cultural field. At least one of these must be cross listed.

(Example: PAS 510, 520, 528, 531, 535, 551, 577, 575, 612, 616, 618, 619, 625, 645, etc. or PAS 505, 532, 533, 550, 567, 581, 618, 620, 621, 643, 657, 660, etc.)

**Minor (Electives)**

12

6
Professional Development Seminar
Reading for Comprehension (Summer Course)
Comprehensive

TOTAL Credit Hours (Year I & II) 42

* Courses from this area are potential teaching/research fields. They could be cross-listed with other departments and must be discipline/subject based. For example, a Ph.D. student interested in history of the “Slave Trade,” will study this as a history class with possible specialization in the “Atlantic Slavery” or “African Slavery” or “Comparative Slavery,” etc. Upon graduation, the student can compete favorably for job in traditional History Departments as well as Black Studies Departments.

** The two elective courses could be taken outside the PAS as part of the student’s potential teaching fields.

Year III

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Other Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td></td>
</tr>
<tr>
<td>Special Topics Courses</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Comprehensive &amp; Special Topics Exams</td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
</tr>
<tr>
<td>Dissertation Research</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours (for year III) - Defend dissertation, proposal 18

Year IV

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Other Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester 1</td>
<td></td>
</tr>
<tr>
<td>Dissertation Research &amp; Writing</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Semester 2</td>
<td></td>
</tr>
<tr>
<td>Dissertation Research</td>
<td></td>
</tr>
<tr>
<td>(Defend dissertation)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Total Credit Hours (for Year IV) 4

TOTAL CREDIT HOURS (Program) 64

*** [1] Based on this structure students will take at least 5 courses in a specific discipline at the end of the first two years. This includes 1 in research strategy, 1 in intellectual approaches, 2 electives, and at least 1 cross listed course with PAS. These courses can also be in another area study such as Women Studies, Latin American/Latino Studies and others.

Faculty

Tomarra Adams  
Assistant Professor

Latricia Best  
Assistant Professor
Graduate Director

W. Carson Byrd  
Assistant Professor

Joy G. Carew  
Associate Professor

Robert L. Douglas  
Professor Emeritus

Tyler Fleming  
Assistant Professor

Pearlie Johnson  
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Elizabeth M. Jones  
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Mawuena Logan  
Assistant Professor

Michael Brandon  
McCormack

Priscilla  
McCutcheon  
Assistant Professor

William D. Morgan  
Professor Emerita

Theresa A. Rajack-Talley  
Associate Professor

Kaila Story  
Associate Professor

William Tkweme  
Assistant Professor

John Whitesell  
Professor Emerita
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, Chemistry or Engineering, will also be considered.

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 (6) credit hours of research leading to submission of the thesis. Non-thesis students are also encouraged to become involved in research. The details for each option are described below.

Program Admission
Departmental requirements for admission are as follows:

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

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

Program admission procedure:
Admission into the Physics MS program is competitive. The application procedure is as follows:

- Submit a completed graduate application to the University of Louisville School of Interdisciplinary and Graduate Studies, Graduate Admissions together with the $60.00 application fee. Applications may be submitted on-line at http://louisville.edu/graduate/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 to ensure full consideration for Fall entry applications should be received no later than February 1.
Official transcripts from each university or college attended must be submitted to the School of Interdisciplinary and Graduate Studies, Graduate Admissions.

Take the general section of the Graduate Record Examination and arrange for the official score to be sent to the School of Interdisciplinary and Graduate Studies, Graduate Admissions.

Arrange for at least two letters of recommendation to be sent to the School of Interdisciplinary and Graduate Studies, Graduate Admissions. These letters should be written by persons familiar with the applicant’s academic work. Please use the recommendation form found at http://louisville.edu/graduate/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 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.

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 School of Interdisciplinary and Graduate Studies. If admission is granted, that student will be subject to those conditions specified by the Department of Physics and Astronomy, the College of Arts and Sciences or the School of Interdisciplinary and Graduate Studies as being necessary to remedy the conditional admission.

BS/MS Five-Year Accelerated Program

The Department of Physics and Astronomy, in the College of Arts and Sciences, offers a five-year accelerated program leading to a Bachelor of Science degree and Master of Science degree in Physics.

Requirements for admission:

- Applicant will apply for admission to the five-year accelerated program in the first semester of the senior year.
- Applicant will have completed at least 21 credit hours in Physics before applying to the program.
- Applicant will have maintained at least a 3.0 GPA in Physics courses and a 3.35 GPA overall.

Once accepted, the student must meet the following requirements:

- Submit a GRE General test score consistent with School of Interdisciplinary and Graduate Studies guidelines.
- Take at least nine (9) credit hours in 500-level physics courses for graduate credit. Two of the courses must be PHYS 542 and PHYS 556. Preferably these courses will be taken during the same semester in the student’s senior year.
- Maintain a 3.0 GPA.

Curriculum

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

Thesis option: (30 credit hours)

1. Required courses in physics (12 credit hours):
   - Theoretical Mechanics PHYS 605 (three (3) credit hours)
   - Electromagnetic Theory PHYS 611 (three (3) credit hours)
   - Quantum Mechanics I & II PHYS 621-622 (six (6) credit hours)
2. Physics electives (six (6) to nine (9) credit 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.
3. Courses in one minor field (three (3) to nine (9) credit hours): Mathematics is the usual minor, but another field may be chosen with the approval of the department.
4. Graduate Research and Thesis PHYS 699 (six (6) credit hours).
5. At least 21 credit hours at the 600 level or above.

Non-thesis option: (33 credit hours)

1. Required courses in physics (12 credit hours):
   - Theoretical Mechanics PHYS 605 (three (3) credit hours)
   - Electromagnetic Theory PHYS 611 (three (3) credit hours)
   - Quantum Mechanics I & II PHYS 621-622 (six (6) credit hours)
2. Physics electives (12 credit 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.
3. Courses in one minor field (three (3) to nine (9) credit hours): Mathematics is the usual minor, but another field may be chosen with the approval of the department.
4. Graduate Research PHYS 699 (three (3) credit hours).
5. 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYS 298 or 298H</td>
<td>Introductory Mechanics, Heat and Sound - S</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 299 or 299H</td>
<td>Introductory Electricity, Magnetism and Light - S</td>
<td>4</td>
</tr>
<tr>
<td>PHYS 295 or 295H</td>
<td>Introductory Laboratory I - SL</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 296 or 296H</td>
<td>Introductory Laboratory II</td>
<td>1</td>
</tr>
<tr>
<td>PHYS 300</td>
<td>Introductory Modern Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 301</td>
<td>Introductory Modern Physics Laboratory</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 390</td>
<td>Introductory Computational Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 450</td>
<td>Introductory Mathematical Physics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 460</td>
<td>Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 541</td>
<td>Electromagnetic Fields</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 555</td>
<td>Elementary Quantum Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHYS 498</td>
<td>Research</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td></td>
<td><strong>34</strong></td>
</tr>
</tbody>
</table>

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.
Faculty

Swagato Banerjee  
Assistant Professor

David N. Brown  
Professor

Undergraduate Program Director

Joseph S. Chalmers  
Professor Emeritus

Chris L. Davis  
Professor

Graduate Program Director

Timothy E. Dowling  
Professor

Jian Du-Caines  
Assistant Professor

James Grubola  
Professor

Victor K. Henner  
Adjunct Professor

Professor of Perm State University (Russia)

Wei-Feng Huang  
Professor Emeritus

Chakram S. Jayanthi  
Professor

Chair

John F. Kielkopf  
Professor

James T. Lauroesch  
Associate Professor

Shudun Liu  
Associate Professor

Sergio Mendes  
Professor

Roger E. Mills  
Professor Emeritus

John C. Morrison  
Professor

P. J. Ouseph  
Professor Emeritus

John J. Sinai  
Professor Emeritus

Serban Smadici  
Assistant Professor

Gamini Sumanasekera  
Professor

Gerard M. Williger  
Associate Professor

Shi-Yu Wu  
Professor Emeritus

Ming Yu  
Associate 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 Ph.D. 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, Chemistry and Engineering will also be considered. The first two years of the program are very similar to the non-thesis M.S. program. Under normal circumstances Ph.D. students will meet the requirements for the M.S. 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:

- A baccalaureate degree with at least 24 credit hours in physics, or the equivalent.
- A minimum quality-point standing of 3.0 (base 4.0) in physics courses.
- Mathematics course work through differential equations. (MATH 405 or equivalent).
- Submission of the Graduate Record Examination (general) scores. The Physics subject GRE is preferred, but not required.

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

Program admission procedure:

Admission into the Physics Ph.D. program is competitive. The application procedure is as follows:

- Submit a completed graduate application to the University of Louisville, School of Interdisciplinary and Graduate Studies, Graduate Admissions together with the application fee. Applications may be submitted on-line at http://louisville.edu/graduate/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 to ensure full consideration for Fall entry applications should be received no later than February 1.

- Official transcripts from each university or college attended must be submitted to the School of Interdisciplinary and Graduate Studies, Graduate Admissions.
- Take the general section of the Graduate Record Examination and arrange for the official score to be sent to the School of Interdisciplinary and Graduate Studies, Graduate Admissions. (the Physics subject GRE is recommended, but not required).
- Arrange for at least two letters of recommendation to be sent to the School of Interdisciplinary and Graduate Studies, Graduate Admissions. Persons familiar with the applicant’s academic work should write these letters. Please use the recommendation form found at [http://louisville.edu/graduate/apply](http://louisville.edu/graduate/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 of Physics and Astronomy, the College of Arts and Sciences and the School of Interdisciplinary and Graduate Studies 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 credit hours, comprising the seven 3 credit 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 (Pass/Fail course)

**B. Elective Courses – 9-18 credit hours**

Each student is required to take at least three (3) credit hour elective courses. Courses outside the department are acceptable, if approved by the student's thesis advisor and the department Graduate Program Director.

**C. Research Training – Minimum of six (6) credit hours**

Each student must earn a minimum of six (6) credit 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.

1. 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 basic and intermediate problems in the areas of mechanics, electricity and magnetism, quantum mechanics, thermal physics, and special topics in contemporary physics. It will be administered twice yearly with advance notice, typically in September and January. Students are required to pass all areas of the exam. For full-time students this must normally be achieved by the end of their fourth semester and in all cases by the end of their sixth semester. Special arrangements may be made for part-time students. A total of four attempts at the exam will be permitted. Once a subject area part of the exam is passed, that part does not need to be retaken. Under certain circumstances, in order to confirm their familiarity with a particular subject, a student may be extended the opportunity to take an oral examination in that subject.

2. Oral Component

To satisfy the oral component the student must pass an oral exam, in the form of a presentation to the Ph.D. committee of his or her proposed research. The student is expected to take the exam before the end of their sixth 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 both parts of 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.

Faculty

Swagato Banerjee  Professor
Assistant Professor

David N. Brown  Professor
Undergraduate Program Director

Joseph S. Chalmers  Professor Emeritus

Chris L. Davis  Professor
Graduate Program Director

Timothy E. Dowling  Professor

Jian DuCaines  Assistant Professor

Victor K. Henner  Adjunct Professor

State University (Russia)

Weifeng Huang  Professor Emeritus

Chakram S. Jayanthi  Professor

John F. Kielkopf  Professor

James T. Lauroesch  Associate Professor

Shudun Liu  Professor Emeritus

Sergio Mendes  Professor

Roger E. Mills  Professor Emeritus

John C. Morrison  Professor Theory

P. J. Ouseph  Professor Emeritus

John J. Sinai  Professor Emeritus

Swagato Banerjee  Professor
Assistant Professor

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Jian DuCaines  Assistant Professor

Victor K. Henner  Adjunct Professor

Weifeng Huang  Professor Emeritus

Chakram S. Jayanthi  Professor

John F. Kielkopf  Professor

James T. Lauroesch  Associate Professor

Shudun Liu  Professor Emeritus

Sergio Mendes  Professor

Roger E. Mills  Professor Emeritus

John C. Morrison  Professor Theory

P. J. Ouseph  Professor Emeritus

John J. Sinai  Professor Emeritus

Serban Smadici  Associate Professor

Gamini Sumanasekera  Professor

Gerard M. Williger  Associate Professor

Shi-Yu Wu  Professor Emeritus

Ming Yu  Associate Professor
Graduate Certificate in Police Executive Leadership Development

Major: PELDNON
Degree Awarded: CERT
Unit: GA
Program Webpage: http://louisville.edu/justice

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.

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Hours</th>
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<tbody>
<tr>
<td>JA 576</td>
<td>Managing Organizational Performance</td>
<td>3</td>
</tr>
<tr>
<td>JA 578</td>
<td>Criminal Justice Leadership - WR</td>
<td>3</td>
</tr>
<tr>
<td>JA 612</td>
<td>Criminal Justice Administration: Police</td>
<td>3</td>
</tr>
<tr>
<td>JA 625</td>
<td>Legal Aspects of Criminal Justice Management</td>
<td>3</td>
</tr>
<tr>
<td>Total Hours</td>
<td></td>
<td>12</td>
</tr>
</tbody>
</table>

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

Faculty

Terry Edwards
Associate Professor

Alex Ferguson
Associate Director of Southern Police Institute

Gennaro Vito
Professor

William F. Walsh
Professor

Director of Southern Police Institute
Master of Arts in Political Science

Major: POLS
Degree Awarded: MA
Unit: GA
Program Webpage: http://louisville.edu/politicalscience/

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 School of Interdisciplinary and Graduate Studies 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 $60 application fee. Application for admission must be made by July 15 for the Fall semester and November 15 for the Spring semester.
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 Verbal score of at least 153, Quantitative score of at least 144, and an Analytical score of at least 4.0.
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.

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://louisville.edu/graduate/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).

<table>
<thead>
<tr>
<th>Courses</th>
<th>Description</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td><strong>Thesis Option</strong> (6 hours total)</td>
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<tr>
<td>POLS 670</td>
<td>Scope of Political Science</td>
<td>3</td>
</tr>
<tr>
<td>POLS 671</td>
<td>Methods of Political Research</td>
<td>3</td>
</tr>
<tr>
<td><strong>Three of the following six courses</strong> (9 hours total)</td>
<td></td>
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<tr>
<td>POLS 619</td>
<td>Seminar in Public Policy</td>
<td>3</td>
</tr>
<tr>
<td>POLS 625</td>
<td>Seminar in Public Administration</td>
<td>3</td>
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<td>POLS 629</td>
<td>Seminar in American Politics</td>
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<td>POLS 630</td>
<td>Seminar in Political Theory</td>
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<td>Course Code</td>
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<tr>
<td>POLS 639</td>
<td>Seminar in International Relations</td>
<td>3</td>
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<tr>
<td>POLS 649</td>
<td>Seminar in Comparative Politics</td>
<td>3</td>
</tr>
<tr>
<td>Electives*</td>
<td>(9 hours total, from Political Science or other departments)</td>
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<tr>
<td>POLS 699</td>
<td>Thesis</td>
<td>6</td>
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**Non-thesis Option**

**Core Courses (6 hours total)**
- POLS 670 Scope of Political Science 3
- POLS 671 Methods of Political Research 3

**Three of the following six courses (9 hours total)**
- POLS 619 Seminar in Public Policy 3
- POLS 625 Seminar in Public Administration 3
- POLS 629 Seminar in American Politics 3
- POLS 630 Seminar in Political Theory 3
- POLS 639 Seminar in International Relations 3
- POLS 649 Seminar in Comparative Politics 3

Political Science electives 6 or more
Electives from other departments up to 12
POLS 695 Directed Research 3

*Up to nine elective hours may be at the 500-level. Up to six hours may be independent study credit.

**Faculty**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jason Abbott</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>David Buckley</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Julie M. Bunck</td>
<td>Professor</td>
</tr>
<tr>
<td>Anne I. Caldwell</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Dewey M. Clayton</td>
<td>Professor</td>
</tr>
<tr>
<td>Jasmine I. Farrier</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Michael R. Fowler</td>
<td>Professor</td>
</tr>
<tr>
<td>Jason Gainous</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Kristopher Grady</td>
<td>Assistant Professor Term</td>
</tr>
<tr>
<td>Tricia J. Gray</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Shiping Hua</td>
<td>Professor</td>
</tr>
<tr>
<td>Calvin and Helen</td>
<td>Lang Distinguished Chair in Asian</td>
</tr>
<tr>
<td>Studies</td>
<td></td>
</tr>
<tr>
<td>David L.</td>
<td>Imbroscio Professor</td>
</tr>
<tr>
<td>Aung San Suu Kyi</td>
<td>Endowed Chair in Asian Democracy</td>
</tr>
<tr>
<td>Tasha Lavey</td>
<td>Instructor (Term)</td>
</tr>
<tr>
<td>Susan M. Matarese</td>
<td>Professor</td>
</tr>
<tr>
<td>Melissa K. Merry</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Laura P. Moyer</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Rodger A. Payne</td>
<td>Professor</td>
</tr>
<tr>
<td>Laurie A. Rhodebeck</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Sherri L. Wallace</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Tim Weaver</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Susan M. Matarese</td>
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</tr>
<tr>
<td>Okbazghi</td>
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</tr>
<tr>
<td>Yohannes</td>
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</tr>
<tr>
<td>Charles E. Ziegler</td>
<td>Professor</td>
</tr>
<tr>
<td>Director of Grawemeyer Award for Ideas Improving World Order</td>
<td></td>
</tr>
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</table>
Doctor of Philosophy in Psychology - Clinical

**Major:** CPSY  
**Degree Awarded:** Ph.D.  
**Unit:** GA  
**Program Webpage:** [http://louisville.edu/psychology](http://louisville.edu/psychology)

### Program Information

#### Mission Statement

The mission of the Clinical Psychology Doctoral Program at the University of Louisville is to produce scientist-practitioners who are: (1) competent to conduct and evaluate research; (2) competent in implementing research-supported practice; (3) ethical and professional in their relationships with clients, students, and colleagues; and (4) prepared to be professionals in a diverse world.

#### 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 before a student may apply 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

1. The Clinical Psychology Ph.D. Program application deadline is December 1.
2. Completed graduate applications should be submitted to the University of Louisville Office of Graduate Admissions. There is a $60 application fee (on-line at [http://louisville.edu/graduate/apply](http://louisville.edu/graduate/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.
3. The Graduate Record Examination General Test is required. Those for whom English is not their native language must also submit TOEFL scores.
4. Transcripts of college records from all schools attended must be submitted to the Office of Graduate Admissions. Students must have earned an undergraduate degree from an accredited college or university.
5. Three letters of recommendation from academic sources are required and must be submitted to the Office of Graduate Admissions.
6. Application materials are available on line, [http://louisville.edu/psychology/doctorate](http://louisville.edu/psychology/doctorate). For additional information, contact Ms. Maggie Leahy, (502)852-4364
7. 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 two-course intervention sequence, courses in psychopathology, interviewing, legal and ethical issues, and at least three advanced seminars in specific clinical topics, including one on diversity.

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, social, and history and systems of psychology. Students also complete research hours for master's and dissertation research.

Department Core:

- 620 Human Learning or 621 Cognitive Processes
- 642 Behavioral Neuroscience or 643 Principles of Neuroscience
- 670 Advanced Social Psychology
- 661 Advanced Developmental Psychology
- 673 Advanced Personality
- 610 and 611 Advanced Statistics I and II
- 601 History and Systems

Clinical Core:

- 656 Legal and Ethical
- 679 and 680, Assessment I and II
- 683 and 684, Interventions I and II
- 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 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.

Faculty

<table>
<thead>
<tr>
<th>Faculty</th>
<th>Clinical Psychology Core Faculty</th>
<th>Suzanne Meeks</th>
<th>Paul G. Salmon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheri Levinson</td>
<td>Assistant Professor</td>
<td>Professor</td>
<td>Associate Professor</td>
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<tr>
<td>Richard Lewine</td>
<td>Professor</td>
<td>Vice Chair</td>
<td>Associate Professor</td>
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<tr>
<td></td>
<td>Director of Undergraduate Studies</td>
<td>Chair</td>
<td>Barbara Stetson</td>
</tr>
<tr>
<td></td>
<td>Benjamin Mast</td>
<td>Tamara Newton</td>
<td>Associate Professor</td>
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<td>Professor</td>
<td>Paul Rosen</td>
<td>Associate Professor</td>
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<td>Sandra Sephton</td>
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<td>Bernadette Walter</td>
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</table>
Associate Professor
Janet Woodruff-Borden
Professor
Director of Clinical Training
Other Department Faculty
Cara Cashon
Associate Professor
Director of Experimental Psychology
Doctoral Program
Zijiang He
Professor
Judy Danovitch
Associate Professor
Borden
Professor
Marci DeCaro
Assistant Professor
Paul J. DeMarco
Professor
Brendan Depue
Assistant Professor
Lora Haynes
Associate Professor
Carolyn B. Mervis
Professor
Nicholas Noles
Assistant Professor
John R. Pani
Professor
Heywood M. Petry
Professor
Christian Stilp
Assistant Professor
Pavel Zahorik
Associate Professor
Maria
Kondaurova
Assistant Professor
Melinda Leonard
Associate Professor
Keith Lyle
Associate Professor
Doctor of Philosophy in Psychology - Experimental

Major: EPSY  
Degree Awarded: Ph.D.  
Unit: GA  
Program Webpage: http://louisville.edu/psychology/

Program Information

General Information
The Ph.D. program in Experimental Psychology at the University of Louisville's Department of Psychological and Brain Sciences trains students to be experts in the conduct of research in modern psychology. Training is based on coursework, active and continuous involvement in research, and close cooperation between students and faculty mentors.

The program currently has significant strength in several topic areas of psychology, including basic and applied areas of cognitive science, child development, developmental disabilities, hearing, learning, memory, neuroscience, perception, and vision. More detailed information can be found on the websites of individual members of the Faculty.

Two specializations are offered: Cognitive and Developmental Sciences, and Vision and Hearing Science. As defined below, these two specializations have different required courses, first-year requirements and preliminary exam. The specialization 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
1. Experimental Psychology Ph.D. Program Application Deadline (for both areas) is December 1.
2. Submit completed graduate application to Graduate Admissions, School of Interdisciplinary and Graduate Studies. There is a $60 application fee (on-line at http://louisville.edu/graduate/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.
3. The Graduate Record Examination is required for an application to the Ph.D. program to be reviewed. The Experimental Psychology Program requires only the general section of the GRE (Verbal, Quantitative, and Analytical Writing). Those for whom English is not their native language must also submit TOEFL scores.

4. Transcripts of your college records from all of the schools you have attended must be submitted to the Office of Graduate Admissions. Students must have earned an undergraduate degree from an accredited college or university and have a minimum grade point average of 3.0 for all undergraduate and prior graduate work.

5. Three letters of recommendation from academic sources are required and must be submitted to the Office of Graduate Admissions.

6. Fill out the departmental admissions packet and return directly to Maggie Leahy, maggie.leahy@louisville.edu, (502)852-4364. 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.

7. Although no other material is strictly required, you are strongly encouraged to submit a personal statement outlining interests, background, unique experiences, vita, and other information which might be helpful to persons making an admission decision.

8. Only when the application is complete will the Department Review Committee review the application and inform prospective students of its decision. Since your application will not be sent to the Department Review Committee until completed, it is imperative that you be sure that all materials are received well in advance of the closing date (December 1).

9. Additional information about department programs and admissions can be obtained from Maggie Leahy, Graduate Admissions in PBS, Department of Psychological and Brain Sciences, University of Louisville, Louisville KY 40292; Maggie Leahy, maggie.leahy@louisville.edu, (502)852-4364.

**Curriculum**

**Minimum Coursework**

**Cognitive and Developmental Sciences (CDS) Specialization**

**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) Specialization**

**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 Specialization Only

(The CDS specialization 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 Specialization

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 Specialization

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.

Faculty

<table>
<thead>
<tr>
<th>Experimental Psychology Core Faculty</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cara Cashon</td>
<td>Maria Kondaurova</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Director of Experimental Psychology</td>
<td>Melinda Leonard</td>
</tr>
<tr>
<td>Doctoral Program</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Judith Danovitch</td>
<td>Keith Lyle</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Marci DeCaro</td>
<td>Carolyn B. Mervis</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Professor</td>
</tr>
<tr>
<td>Paul J. DeMarco</td>
<td>Nicholas Noles</td>
</tr>
<tr>
<td>Professor</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Brendan Depue</td>
<td>John R. Pani</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Professor</td>
</tr>
<tr>
<td>Zijiang He</td>
<td>Heywood M. Petry</td>
</tr>
<tr>
<td>Professor</td>
<td>Professor</td>
</tr>
<tr>
<td></td>
<td>Christian Stilp</td>
</tr>
<tr>
<td></td>
<td>Professor</td>
</tr>
<tr>
<td></td>
<td>Pavel Zahorik</td>
</tr>
<tr>
<td></td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Other Department Faculty</td>
<td>Tamara Newton</td>
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<td></td>
<td>Associate Professor</td>
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<tr>
<td>Lora Haynes</td>
<td>Paul Rosen</td>
</tr>
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<td>Associate Professor</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Jay Irby</td>
<td>Edna Ross</td>
</tr>
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<td>Assistant Professor</td>
<td>Associate Professor</td>
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<td>Cheri Levinson</td>
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</tr>
<tr>
<td>Professor</td>
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</tr>
<tr>
<td>Barbara Stetson</td>
<td>Bernadette Walter</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Janet Woodruff-Borden</td>
<td>Professors</td>
</tr>
<tr>
<td></td>
<td>Director of Clinical Training</td>
</tr>
</tbody>
</table>
Master of Public Administration

Major: PADM
Degree Awarded: MPA
Unit: GA
Program Webpage: http://louisville.edu/upa

Program Information

General Information

The Master of Public Administration Program at the University of Louisville is central to the University's urban/metropolitan mission. The academic curriculum provides students with a solid foundation in public and nonprofit administration and prepares graduates for placement and advancement in public, private and nonprofit sector careers. The MPA faculty also advances knowledge in the field of public administration through their theoretical and applied research. The MPA is fully accredited by the National Association of Schools of Public Affairs and Administration.

The MPA requires 42 credit hours for completion: a core curriculum of 12 hours, including 6 hours of practicum, internship or thesis, 12 hours from one of the five areas of specialization and 18 hours of electives. Classes are offered in formats and at times that accommodate students who work full time. Traditional classes are offered Monday through Thursday, one evening a week, from 5:30 until 8:15. Hybrid-distance courses have fewer classroom meetings. Some courses are offered entirely online. A student can enroll on either a part-time or full-time basis. The program includes faculty from various disciplines and is aimed at providing recent college graduates, public sector practitioners, and persons in related fields with a mix of theoretical knowledge and applied skills. The degree program is available to qualified individuals holding a bachelor's degree from an accredited college or university. No specific undergraduate major is required; however, coursework in economics and political science at the undergraduate level 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 webpage 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 $60 application fee (See web http://louisville.edu/graduate/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 be 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 six required courses, or 12 credits. Six credits of the core consist of a practicum/internship or a thesis.

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PADM 600 Foundations of Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>PADM 601 Statistics for Public Affairs</td>
<td>3</td>
</tr>
<tr>
<td>PADM 682 Practicum/Internship or PADM 695 Thesis</td>
<td>3</td>
</tr>
<tr>
<td>Total from core</td>
<td>12</td>
</tr>
</tbody>
</table>

SPECIALIZATION AREAS

Students can choose one of five specializations offered in the Program. A total of twelve hours is required for each specialization. Unless identified as a required course for the specialization, students may select among the recommended courses listed under each specialization. Students may substitute a course not listed under the specialty with permission from the Director.

City Management Specialization

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PADM 604 Public Budgeting and Finance</td>
<td>3</td>
</tr>
<tr>
<td>PADM 605 Public Management</td>
<td>3</td>
</tr>
<tr>
<td>PADM 606 Urban Policy and Administration</td>
<td>3</td>
</tr>
<tr>
<td>PADM 607 Planning Theory</td>
<td>3</td>
</tr>
<tr>
<td>PADM 610 Administrative Law and Process</td>
<td>3</td>
</tr>
<tr>
<td>PADM 624 Ethics in Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>PADM 625 Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PADM 642 Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>PADM 680 Independent Research in Public Administration</td>
<td>1-3</td>
</tr>
<tr>
<td>PADM 683 Topical Seminar in Public Administration</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Nonprofit Management Specialization

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PADM 603 Policy Analysis and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>PADM 606 Urban Policy and Administration</td>
<td>3</td>
</tr>
<tr>
<td>Course</td>
<td>Hours</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>PADM 609 Financial Management of Nonprofits</td>
<td>3</td>
</tr>
<tr>
<td>PADM 612 Nonprofit Grantsmanship and Fundraising</td>
<td>3</td>
</tr>
<tr>
<td>PADM 615 Theories of the Nonprofit and Voluntary Sector</td>
<td>3</td>
</tr>
<tr>
<td>PADM 680 Independent Research in Public Administration</td>
<td>1-3</td>
</tr>
<tr>
<td>PADM 683 Topical Seminar in Public Administration</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**Community and Economic Development Specialization**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PADM 621 Urban Demography</td>
<td>3</td>
</tr>
<tr>
<td>PADM 626 Housing and Community Development</td>
<td>3</td>
</tr>
<tr>
<td>PADM 640 Urban Economics</td>
<td>3</td>
</tr>
<tr>
<td>PADM 645 Economic Development</td>
<td>3</td>
</tr>
<tr>
<td>PLAN 607 Land Use Planning</td>
<td>3</td>
</tr>
<tr>
<td>PLAN 631 Real Estate Principles</td>
<td>3</td>
</tr>
<tr>
<td>PADM 680 Independent Research in Public Administration</td>
<td>1-3</td>
</tr>
<tr>
<td>PADM 683 Topical Seminar in Public Administration</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**Human Resources Specialization**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PADM 642 Human Resources Management</td>
<td>3</td>
</tr>
<tr>
<td>PADM 644 Collective Bargaining</td>
<td>3</td>
</tr>
<tr>
<td>PADM 647 Arbitration</td>
<td>3</td>
</tr>
<tr>
<td>PADM 648 Mediation and Dispute Resolution</td>
<td>3</td>
</tr>
<tr>
<td>PADM 649 Legal Aspects of Human Resources</td>
<td>3</td>
</tr>
<tr>
<td>PADM 652 Equal Opportunity and the Workplace</td>
<td>3</td>
</tr>
<tr>
<td>PADM 680 Independent Research in Public Administration</td>
<td>1-3</td>
</tr>
<tr>
<td>PADM 683 Topical Seminar in Public Administration</td>
<td>1-3</td>
</tr>
</tbody>
</table>

**Urban Policy Specialization**

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PADM 603 Policy Analysis and Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>PADM 606 Urban Policy and Administration</td>
<td>3</td>
</tr>
<tr>
<td>PADM 621 Urban Demography</td>
<td>3</td>
</tr>
<tr>
<td>PADM 627 Environmental Policy</td>
<td>3</td>
</tr>
<tr>
<td>PADM 640 Urban Economics</td>
<td>3</td>
</tr>
<tr>
<td>PADM 645 Economic Development</td>
<td>3</td>
</tr>
<tr>
<td>PADM 680 Independent Research in Public Administration</td>
<td>1-3</td>
</tr>
<tr>
<td>PADM 683 Topical Seminar in Public Administration</td>
<td>1-3</td>
</tr>
</tbody>
</table>

MPA students may choose 18 hours of elective credits from among all PADM (Public Administration) or PLAN (Planning) courses. One of the elective courses must be denoted as a methods course. For a list of
all electives and identification of those courses that count as a methods course, consult the Student Guide available at the MPA home page, http://louisville.edu/upa/programs/mpa.

Faculty

Carrie Donald  
Professor 
John Gilderbloom  
Professor 
Frank Goetzke  
Associate Professor 

David Imboscio  
Professor 
Janet Kelly  
Professor 

Steven Koven  
Professor 
Aaron Rollins  
Assistant Professor 
Matthew Ruther  
Assistant Professor 

David Simpson  
Professor 
Sumei Zhang  
Associate Professor
Graduate Certificate in Public History

Major: PHISCHI  
Degree Awarded: CERT  
Unit: GA  
Program Webpage: http://louisville.edu/history/ph.html

Program Information

The graduate certificate in Public History is a specialized program of study that trains students for careers in museums, archives, historical interpretation, and historic preservation. Students may pursue the certificate (1) in combination with a Master of Arts in History or a closely related field or (2) as an independent credential. Students enrolled in the program take seminars in history and electives in history and related fields. All students are required to complete an internship at a historical institution.

Admissions

Students seeking the certificate as a stand-alone program should apply at http://louisville.edu/graduate/. Create an account. When asked to choose a program, select "Graduate - non-degree." On the next page, select "College of Arts and Sciences," then "Public History (CHI)." Materials for admission are two letters of recommendation, college transcripts, GRE scores and a personal statement regarding interest in the program. There is a $60.00 application fee.

Students enrolled in a M.A. program will need to follow the same admission procedure stated above at http://louisville.edu/graduate. Previously submitted materials will be considered. Therefore, you need only submit one additional faculty recommendation and a 500-word personal statement describing your interest in the program.

Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Public History</td>
<td>3</td>
</tr>
<tr>
<td>Public History Practicum (Internship)</td>
<td>3</td>
</tr>
<tr>
<td>Two 600 level non-public history courses in the Department of History</td>
<td>3, 3</td>
</tr>
<tr>
<td>Two public history electives at the 500 level or above</td>
<td>3, 3</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td>18</td>
</tr>
</tbody>
</table>

[Students in the M.A. program in History may apply up to six credit hours toward the certificate]

Sample of public history electives:

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

A. Glenn Crothers
Associate Professor

Carrie Daniels
Associate Professor

Carol Ely
Adjunct Professor

Executive Director of Historic Locust Grove

Benjamin Hufbauer
Associate Professor

Tracy E. K’Meyer
Professor

Lara Kelland
Assistant Professor

Caroline C. Sheffield
Assistant Professor

Daniel J. Vivian
Assistant Professor

Director of Graduate Studies
Graduate Certificate in Real Estate Development

Major: RED CRE
Degree Awarded: CERT
Unit: GA
Program Webpage: http://louisville.edu/upa/programs/gcred

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:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLAN 605</td>
<td>Land Use and Planning Law</td>
<td>3</td>
</tr>
<tr>
<td>PLAN 614</td>
<td>Real Estate Market Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PLAN 631</td>
<td>Real Estate Principles</td>
<td>3</td>
</tr>
<tr>
<td>PLAN 633</td>
<td>Real Estate Development</td>
<td>3</td>
</tr>
<tr>
<td>PLAN 634</td>
<td>Real Estate Finance and Investment</td>
<td>3</td>
</tr>
<tr>
<td>PLAN 636</td>
<td>Site Planning</td>
<td>3</td>
</tr>
</tbody>
</table>

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.
## Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tony Arnold</td>
<td>Boehl Chair in Property and Land Use</td>
</tr>
<tr>
<td>William J. Cahaney</td>
<td>Lecturer in Urban and Public Affairs</td>
</tr>
<tr>
<td>J. Michael McCoy</td>
<td>Lecturer in Urban and Public Affairs</td>
</tr>
<tr>
<td>Sumei Zhang</td>
<td>Assistant Professor of Urban and Public Affairs</td>
</tr>
</tbody>
</table>
Master of Arts in Sociology

Major: SOCI
Degree Awarded: MA
Unit: GA
Program Webpage: http://louisville.edu/sociology/

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 (practicum) options. 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**

All applicants must submit to the Graduate Admissions Office:

- a formal graduate application (may be submitted online)
- official copies of transcripts from all colleges attended (students with a foreign transcript must submit an evaluation of the transcript from World Education Services (www.WES.org) or Educational Credentials Evaluators (www.ECE.org)
- two references (preferably from former instructors, and in sociology, if possible) in the form of a discursive letter of recommendation (completion of the UofL Letter of Evaluation form may supplement a discursive letter but should not replace it)
- GRE scores (GRE scores should be no older than five years unless a graduate degree has been earned within the last five years)
- a curriculum vitae
- and, for international students, TOEFL or IELTS scores.

Applicants must also submit to the Department of Sociology:

- a Sociology Graduate Admissions Questionnaire (below), the responses to which should be of sufficient length to give the Graduate Admissions Committee a basis for evaluating the student’s interest in and ability to complete the program, and provide a sample of the student’s writing. Responses should be emailed to Dr. Jonetta Weber at jonettaweber@louisville.edu

- Please explain your reasons for applying to the Graduate Program in Sociology. What are your professional or occupational objectives (including any study beyond the M.A.)? How does this department’s program fit into those objectives?
- What areas of sociology do you find especially interesting for study and/or research?
- What positions of responsibility, if any, have you had, and what, specifically, do you believe you have gained from such experience? (Those positions include not only employment, but offices held in organizations, volunteer work, etc.)
- Please summarize what you believe to be your most important accomplishments to date, including those in the academic or occupational areas.

Applicants are examined using the following information in the admissions decisions: GRE scores, GPA, quality of the program from which the applicant graduated, two academic letters of recommendation, responses to a questionnaire, and an interview with the candidate.

The Department of Sociology is committed to fostering diversity by considering factors such as race, ethnicity, gender, sexuality, age, and social class in its graduate and undergraduate programs; as such, background factors and circumstances will be considered when reviewing applications.

While the Graduate Admissions Committee does not base admission solely on meeting - or failure to meet - certain criteria, as a guideline, **chances of admission are improved with the following:**

- minimum undergraduate GPA of 3.0;
• minimum combined verbal/quantitative GRE score of 1000 (if tested prior to August, 2011) or 300 (if tested since August, 2011);
• previous course work in statistics, methods, and theory*; and
• international students should also have a quantitative GRE sub-score of at least 450 and either (a) a TOEFL score of at least 550 (on the paper-based test), 213 (on computer-based test) or 79-80 (on the internet-based test), or (b) a IELTS score of at least 6.5.

* Students may be allowed to make up deficiencies regarding these undergraduate prerequisites; however, credit for such courses cannot be applied toward graduate degree requirements.

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

Graduate Assistantships

The Sociology Department has available annually a limited number of graduate assistantships.

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

The application deadline for students seeking funding (in the form of a graduate assistantship) is January 5 of the preceding year for fall admission and October 1 for spring admission. NOTE: The materials must also be accompanied by 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.

Enrollment and Program Guidance

The Director of Graduate Studies 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.

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 two options have different credit hour requirements.

Thesis Option (31 total credit hours)
Graduate Catalog
Summer 2016-Spring 2017

- 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 Director of Graduate Studies, 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 Director of Graduate Studies.

**Grades**

Any students who earns below a B in a core course may not count that course toward degree requirements and must retake that course. Any student who earns below a B- in a non-core course may not count that course toward degree requirements and must retake that course. Students may only (a) repeat a course once, and (b) repeat a total of two courses. Any student needing to repeat a third course, as mandated by the guidelines above, will be dismissed from the program. In accordance with the School of Interdisciplinary and Graduate Studies policy, when a student repeats a course, the GPA will be calculated on the basis of the last grade earned, although the original grade will remain on the transcript.

**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 300 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.

**Faculty**

<table>
<thead>
<tr>
<th>John A. Busch</th>
<th>Karen Christopher</th>
<th>Patricia Gagne</th>
<th>Robin Hognas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Professor</td>
<td>Associate Professor</td>
<td>Professor</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Robert M. Carini</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate Professor</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Gul Aldikacti  
Marshall  
Associate Professor  
Director of  
Graduate Studies  
Deborah Potter  
Assistant Professor  

Jon H. Rieger  
Professor  

Dave Roelfs  
Assistant Professor  

Ryan Schroeder  
Professor  
Chair  

Hiromi Taniguchi  
Associate Professor  

Wayne M. Usui  
Emeritus  

Debbie Warnock  
Assistant Professor  

J. Allen Whitt  
Emeritus
Master of Arts in Spanish

Major: SPAN
Degree Awarded: MA
Unit: GA
Program Webpage: http://louisville.edu/spanish

Program Information

The Master of Arts in Spanish at the University of Louisville offers broad-based coverage of fields in Hispanic studies, including literary/cultural studies, Spanish linguistics, and translation/interpretation. Through a combination of core courses taught exclusively in Spanish, electives taken either in Spanish or in contiguous programs of study, and faculty directed research, students develop mastery in one of these fields, preparing themselves for greater competitiveness in doctoral programs in Hispanic studies or Spanish linguistics; more effective service to the Hispanic community; and/or increased cultural competence in the global workplace. The Spanish M.A. also serves current primary and secondary school teachers of Spanish seeking to deepen their knowledge of the discipline. Study abroad opportunities are available and may be supported by one of several departmental travel grants.

Admission Requirements

A prerequisite for admission to the Spanish M.A. is advanced proficiency in Spanish (speaking, aural comprehension, reading, and writing) and significant previous study of the Spanish language and Hispanic literatures and cultures. Applicants who do not hold a B.A. in Spanish or the equivalent by their intended start date may be required to take remedial coursework to make up for any deficiencies.

Applications are considered throughout the academic year for admission in fall, spring, or summer, although priority will be given to applications received at least six weeks prior to the intended start date. The Director of Graduate Studies in Spanish reviews applications and, in consultation with the Spanish graduate faculty, makes all admission decisions. In rare cases, applicants may be admitted on a conditional basis even though application materials are incomplete.

The complete application includes:

- School of Interdisciplinary and Graduate Studies application and application fee.
- Transcripts from all accredited institutions where undergraduate and/or graduate credit was earned (submitted directly to the School of Interdisciplinary and Graduate Studies by the institution). Minimum GPA required for undergraduate work: 3.0 on a four-point scale.
- Two letters of evaluation (submitted directly to the School of Interdisciplinary and Graduate Studies by the evaluators). Detailed comments should accompany the evaluation form and address specifically the applicant’s proficiency in both Spanish and English, preparation in Hispanic studies, and potential to do graduate work.
- A personal statement of 400-500 words, written in Spanish, discussing how the M.A. in Spanish relates to the applicant’s professional or personal goals.
- A sample of academic writing of at least five pages, preferably a research paper written as part of the requirements for a university-level course. (May be in English or Spanish.)
- (for applicants for whom English is a second language) TOEFL scores. Minimum required: 79 or higher on the internet-based test, 213 or higher on the computer-based test, or 550 or higher on...
Students must submit a separate graduate teaching assistantship application (available on the program webpage) in conjunction with their application for admission to the Spanish M.A. For full consideration, all application materials must be submitted by February 28th.

ACCELERATED B.A./M.A. IN SPANISH

The combined B.A./M.A. program is an accelerated option for motivated and highly prepared undergraduates at the University of Louisville who wish to prepare themselves for the global economy, a multicultural community, and a changing workplace through the study of language, culture, linguistics, translation, and interpreting. Students admitted to the program may apply up to nine (9) credit hours of graduate course work towards both the B.A. in Spanish and the M.A. in Spanish. After completing the undergraduate program and receiving the B.A., the student will enter the graduate program and complete the remaining requirements for the M.A.

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

- have a minimum overall grade point average (GPA) of 3.35.
- complete an application for admission to the Spanish B.A./M.A. (including two letters of evaluation) no later than the end of the junior year.

Full details are available on the program website.
Admission in non-degree status

Applicants who do not seek the Spanish M.A. but wish to take graduate course work in Spanish may be permitted to enroll in non-degree status. Application credentials must include the application form, application fee, and an official transcript showing the award of a baccalaureate degree. Should a non-degree student be admitted at a later date into the degree program, up to nine hours of course work taken in non-degree status may be applied to the degree with departmental approval. No more than fifteen (15) credit hours may be accumulated while in non-degree status.

Curriculum

The M.A. in Spanish requires 30 credit hours of academic coursework at the graduate level, of which at least 18 credit hours must be taken at the 600-level. Upon approval of the Director of Graduate Studies, up to six (6) credit hours of graduate-level coursework taken at another institution or through an accredited study abroad program may be applied toward the degree.

NOTES: Students must take SPAN 611 (Introduction to Methods and Research in Hispanic Studies) within the first year of their admission to the program. In their final semester, all students are required to complete a Directed Research Project under the direction of a faculty mentor and present their findings in a public forum.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Description</th>
<th>Credit Hours</th>
<th>Total Credit Hours</th>
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<tbody>
<tr>
<td>SPAN 524</td>
<td>Introduction to Hispanic Linguistics</td>
<td>3</td>
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<tr>
<td>SPAN 554</td>
<td>Hispanic Culture through Film and Media</td>
<td>3</td>
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<tr>
<td>SPAN 611</td>
<td>Introduction to Methods and Research in Hispanic Studies</td>
<td>3</td>
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<tr>
<td>SPAN 624</td>
<td>Special Topics in Hispanic Linguistics</td>
<td>3</td>
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<tr>
<td>SPAN 634</td>
<td>Spanish for the Workplace and Community</td>
<td>3</td>
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<tr>
<td>SPAN 644</td>
<td>Approaches to Hispanic Literatures</td>
<td>3</td>
<td></td>
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<tr>
<td>SPAN 648</td>
<td>Hispanic Cultural Studies</td>
<td>3</td>
<td></td>
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<tr>
<td>SPAN 661</td>
<td>Foundations of Translation and Interpreting</td>
<td>3</td>
<td></td>
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<tr>
<td>SPAN 5XX or</td>
<td>Two electives in Spanish or in contingent fields (with</td>
<td>6</td>
<td></td>
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<tr>
<td>SPAN 6XX</td>
<td>Director of Graduate Studies' approval</td>
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<tr>
<td></td>
<td>Directed Research Project</td>
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</tr>
</tbody>
</table>

Total Credit Hours: 30

Faculty

Lluís Baixauli Olmos
Assistant Professor
Rhonda L. Buchanan
Professor
Director Latin American Studies

Thomas Wayne
Edison
Assistant Professor

Gregory S. Hutcheson
Associate Professor

Mary Makris
Associate Professor

Manuel F. Medina
Professor

Director of Brazilian Studies

Frank Nuessel
Professor

Brenda Ortiz-Loyola
Assistant Professor

Regina Roebuck
Associate Professor

Clare Sullivan
Associate Professor

Lisa Wagner
Associate Professor
Master of Fine Arts in Studio Art and Design

Major: SAD_MFA
Degree Awarded: MFA
Unit: GA
Program Webpage: http://louisville.edu/art

Program Information

Admission Requirements

Successful applicants will have a superior academic background and a strong commitment to art. M.F.A. students are expected to have a thorough understanding of the principles of form, proficiency in various media and technical skills, as well as a fluency in language and discourse in the historic and contemporary contexts.

The minimum requirement for admission is an undergraduate degree in studio art from an accredited college or university with a minimum of 48 credit hours of undergraduate work in studio courses and 12 credit hours in art history courses. A B.F.A. in Studio Art is recommended. Applicants must have a minimum undergraduate grade point average of 3.0 on a 4.0 scale. Applicants must present a portfolio of work which shows technical and conceptual competency and demonstrates the promise necessary to succeed.

Students who do not meet the minimum credit requirements in undergraduate level courses (such as those who have completed a B.A. rather than a B.F.A. degree) will be required to address any deficiencies by taking undergraduate courses before admitted to the program. These courses will not count toward the requirements for the M.F.A. degree. Students must maintain a 3.0 GPA in all coursework, including undergraduate courses taken to remove deficiencies.

Application Requirements

1. Applicants to the M.F.A. program must fulfill the general admission requirements of the College of Arts and Sciences. To meet the College of Arts and Sciences requirements applicants must hold a bachelor’s degree from an accredited institution with a grade point average of 3.0 on a 4.0 scale, and have completed an undergraduate major or the equivalent in the intended field of study.

2. Applicants must submit the following to the School of Interdisciplinary and Graduate Studies, Graduate Admissions, at the University of Louisville (http://louisville.edu/graduate/apply):

3. An Application for School of Interdisciplinary and Graduate Studies, Graduate Admission
4. A $60 nonrefundable application processing fee
5. At least two letters of recommendation specific to the program
6. And official transcripts of all college work to the School of Interdisciplinary and Graduate Studies, Graduate Admission, at the University of Louisville (http://louisville.edu/graduate/apply).
7. The GRE is not required for application to the M.F.A. program. However, applicants for whom English is a second language must submit official TOEFL scores. In addition, applicants must have completed a minimum of 48 credit hours of undergraduate work in studio art courses and 12 credit hours in art history courses.
8. In addition, applicants must have completed a minimum of 48 credit hours of undergraduate work in studio art courses and 12 credit hours in art history courses.

9. Applicants must submit the following additional materials directly to the Hite Art Institute, Department of Fine Arts:

- A portfolio of 20 images on CD or thumb drive that demonstrates competence in conceptual and technical skills;
- A typed Artist’s Statement relevant to the submitted artwork of no more than 500 words;
- A typed Statement of Intent of no more than 500 words detailing the applicant’s educational and professional goals in the field of Fine Arts;
- A resume [no longer than two pages];
- A completed Application for Admission for a Master of Fine Arts in Studio Art and Design (available from the department).

Curriculum

The 60 credit hour M.F.A. curriculum is structured according to guidelines established by the College Art Association of America (CAA). The professionally compliant curriculum, rigorous admissions and evaluation standards, quality and variety of courses, and the faculty mentoring structure will ensure that students accomplish the program objectives.

The M.F.A. curriculum is rigorous and professional. The program is highly selective to allow students generous access to the excellent faculty and resources. The graduate faculty provides students with individual attention, respects students’ individual directions, and challenges students to explore new avenues of artistic discovery.

Drawing from the diverse expertise of an outstanding faculty, students in the M.F.A. program may choose to focus in one medium or explore and combine a variety of media. Courses are offered in ceramics, drawing, fibers, glass, painting, photography, printmaking, sculpture, graphic design, mixed media, and new media.

The M.F.A. program requires a minimum total of 60 credit hours (31 of which must be at the 600 level).

- Studio Art: 36 credit hours
- Art history, aesthetics and cultural studies: 12 credit hours
- Graduate Seminar (first semester): 1 credit hour
- M.F.A. Seminar (three semesters, 1 credit hour each): 3 credit hours
- Professional Internships or Service Learning (two semesters, 1 credit hour each): 2 credit hours
- M.F.A. Thesis Project: 3 credit hours
- Total: 60 credit hours

1. Upon entering the M.F.A. program, the student will select an advisor/mentor with whom he/she will develop a plan of study. In consultation with this mentor, the student will select courses that follow this plan and ensure timely progress toward graduation. The instructor of each course will evaluate the student’s level of achievement and progress in that particular class. Additionally, the student’s progress will be reviewed and evaluated in each of the four required seminar courses. Each student’s faculty mentor will, on a regular basis, review the progress of the students they are supervising and provide the information necessary for the Director of Graduate Studies for Studio Art to provide an annual review for School of Interdisciplinary and Graduate Studies.
2. Upon completion of the first year and a minimum of 18 credit hours, and again upon completion of the second year and a minimum of 36 credit hours, the student will undergo an M.F.A. Review where their progress will be evaluated by a committee comprised of three members of the faculty. The M.F.A. student’s faculty mentor will serve as chair of the committee. Students who receive a favorable evaluation will be allowed to continue in the program and prepare a body of artwork for their thesis exhibition. Students who fail an M.F.A. Review will be reevaluated in the following semester. Students who receive two unsatisfactory evaluations may be recommended for dismissal.

3. Each M.F.A. candidate will work closely with his/her mentor to develop a body of work for thesis and exhibition. During the last semester of study, the student must demonstrate artistic accomplishments through a thesis exhibition, a written thesis, and a final oral exam. The thesis committee will evaluate the student’s achievement and successful completion of the M.F.A program.

Satisfactory progress toward the degree requires successfully performing of a number of activities, including regular enrollment in graduate courses, consistent satisfaction of course requirements within given time limits, and maintenance of an appropriate grade point average (minimum 3.0).

Faculty

John Begley
Assistant Professor
Emeritus

R. Todd Burns
Associate Professor

Thomas Buser
Associate Professor
Emeritus

Mary Carothers
Associate Professor

Ying Kit Chan
Professor
Chair

Henry
Chodkowski, Jr.
Professor Emeritus

Dario A. Covi
Professor Emeritus

Robert L. Douglas, Sr.
Professor Emeritus

Mitch Eckert
Associate Professor

Christopher B. Fulton
Associate Professor

Linda M. Gigante
Professor Emerita

Lida Gordon
Professor Emerita

Barbara L. Hanger
Associate Professor

Benjamin Hufbauer
Associate Professor

Susan Jarosi
Associate Professor

Jongwoo Kim
Associate Professor

Jay M. Kloner
Associate Professor Emeritus

Delin Lai
Associate Professor

Stephanie J. Maloney
Professor Emerita

Scott Massey
Associate Professor

Gabrielle Mayer
Associate Professor

Suzanne Mitchell
Professor Emerita

William D. Morgan
Professor Emerita

Mark A. Priest
Professor

Christopher Reitz
Assistant Professor

Che Rhodes
Associate Professor

Rachel Singel
Assistant Professor

Steven Skaggs
Professor

John Whitesell
Professor Emerita
Master of Fine Arts in Theatre Arts

Major: TA
Degree Awarded: MFA
Unit: GA
Program Webpage: http://louisville.edu/theatrearts

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 applicants submit 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 must take the Graduate Record Examination prior to beginning graduate studies.

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 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: 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. Students who enter without sufficient knowledge of Theatre History are must take 6 credits of Theatre History during their 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 year of study.

Faculty

Garry Brown  
Associate Professor  
Department Vice-Chair  
Director of Undergraduate Studies  
Nefertiti Burton  
Associate Professor

Erin Crates  
Assistant Professor  
Director of Graduate Studies  
Zhanna Goldentul  
Instructor

Daniel R. Hill  
Assistant Professor  
Johnnie Jones  
Assistant Professor  
Baron Kelly  
Associate Professor  
Daniel Perez  
Assistant Professor  
Amy Steiger  
Assistant Professor

Russell J. Vandenbroucke  
Professor  
Department Chair  
Director of Peace, Justice, and Conflict Transformation Program
Certificate in Translation and Interpreting

Major: TRANCTR  
Degree Awarded: CERT  
Unit: GA  
Program Webpage: http://louisville.edu/modernlanguages/

Program Information

Translating and interpreting 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 and interpreter. 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 the legal, medical, and technical fields.

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

- an introduction to theories in the field
- specific skills in various fields
- hands-on professional experience

Curriculum

The certificate requires completion of a minimum of 15 credit hours focusing on comparative grammar, professional writing skills, culture, history and theory, professional ethics, and computer translation and terminology management.

The minimum requirement for the completion of the graduate Certificate in Translation and Interpreting is 15 credit hours.
1. All students must take TRPR/SPAN 661: Foundations of Translation and Interpreting and TRAN/SPAN 667: Computers in Translation.
2. Students will choose the following courses for a total of six (6) credit hours:
   - Translation and Interpreting Workshop (TRPR/SPAN 662)
   - Commercial and Legal Translation (TRPR/SPAN 663)
   - Literary and Cultural Translation (TRPR/SPAN 664)
   - Scientific, Technical and Medical Translation (TRPR/SPAN 665)
   - Terminology Management (TRPR/SPAN 666)
- Translation Project Management (TRPR/SPAN 668)
- Introduction to Interpreting (TRPR/SPAN 671)
- Legal Interpreting (TRPR/SPAN 672)

3. Students must complete the three-hour internship or directed study, TRPR 669: Final Translation Project.

Coursework towards the Graduate Certificate in Translation and Interpreting may count towards the student’s graduate degree. For students in the M.A. program in Spanish, up to six (6) credit hours may count toward both the certificate requirements and the M.A. requirements. (Consult the Director of Graduate Studies in the particular degree program.)

**Faculty**

<table>
<thead>
<tr>
<th>Lluís Baixauli-Olmos</th>
<th>Bonnie Fonseca-Greber</th>
<th>Associate Professor</th>
<th>Madalena Sánchez Zampaolo</th>
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<tbody>
<tr>
<td>Assistant Professor</td>
<td>Assistant Professor</td>
<td>Mary Makris</td>
<td>Consultant</td>
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<tr>
<td>Simona Bertacco</td>
<td>Carlton Hornung</td>
<td>Associate Professor</td>
<td>Clare Sullivan</td>
</tr>
<tr>
<td>Assistant Professor</td>
<td>Professor</td>
<td>Julio Ramirez</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Rhonda Buchanan</td>
<td>Gregory</td>
<td>Professor</td>
<td>Director of Graduate Services</td>
</tr>
<tr>
<td>Professor</td>
<td>Hutcheson</td>
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</tbody>
</table>
Doctor of Philosophy in Urban and Public Affairs

Major: UPA
Degree Awarded: Ph.D.
Unit: GA
Program Webpage: http://louisville.edu/upa/programs/phd

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 Sustainable 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 Sustainable Development and Urban Policy and Administration. Twelve (12) credit hours of dissertation research are also required. Students must pass a qualifying examination before commencing formal dissertation work. Students should consult the Program Guidelines for details.

ADMISSION REQUIREMENTS

- Bachelor’s degree with at least a 3.0 GPA (on 4.0 scale);
- Master's degree with at least a 3.5 GPA (on a 4.0 scale);
- Minimum GRE score of 300, with minimum individual scores (in the range) of a 154 Verbal/146 Quantitative, as well as 4.0 Analytical are (normally) required
- TOEFL: 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 (in the range) of 100 on the internet-based test, or the International English Language Testing System (IELTS), with a minimum score of 7.5.
- A personal interview with members of the Ph.D. Admissions Committee also may be required for applicants not fully satisfying (normal) admissions requirements. Interviews will be conducted in-person when feasible or via internet video when in-person interviews are not feasible.

Applications must include:

- all transcripts from all institutions attended;
- supplemental application (available from department web site);
- at least two letters of recommendation (from former professors).

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 (exceptionally qualified) part-time students may be admitted if they can demonstrate they have very flexible schedules and can attend daytime courses and fully participate in program and department functions. Students should consult the Program’s Student Guide for additional details and requirements.
Fall Admissions deadline - July 15 (January 29 for a University Fellowship or a Graduate Assistantship)  
Spring Admissions deadline - November 15

ACADEMIC POLICIES

Waivers and Prerequisites

Students who have recently and satisfactorily completed equivalent courses elsewhere may request that up to nine (9) credit hours of course work count towards their 48 credit 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. Students should consult the Program’s Student Guide for details.

Dismissal and Academic Standing

Any student with a point standing below 3.0, or experiencing similar academic problems, will be placed on probation by the School of Interdisciplinary and Graduate Studies. Students are ordinarily not permitted to continue on academic probation for more than one semester. Students not rectifying these academic problems after one semester will be recommended for dismissal if academic problems are not corrected after one semester. In addition, students receiving more than two course grades below a “B-” (C+ or lower) in any graduate-level course (600-level or above) will be dismissed from the program. No grade below a C- will be counted towards the fulfillment of degree requirements. The Program Director will review the performance of students each semester to ensure students are making satisfactory progress. Students not making satisfactory progress are subject to dismissal from the program. Time Limit: Students not completing all program requirements four years after reaching doctoral candidacy status will ordinarily be dismissed from the program.

Qualifying (Comprehensive) Exam

To qualify for Ph.D. candidacy, students must satisfactorily complete a Comprehensive (or Qualifying) Examination. Students must sit for this exam as soon as they are eligible. The Comprehensive (Qualifying) Examination is held in May each year. Consult with the Program Director and refer to the Program’s Student Guide for details about the examination.

Curriculum

The Ph.D. in Urban and Public Affairs consists of 48 credit hours of study including 18 credit hours of core courses, 18 credit hours in a field specialization, and 12 credit hours of dissertation research.

Core Courses (18 Credit Hours)

- UPA 602 Urban Policy and Governance
- UPA 603 Urban Economics
- UPA 680 Advanced Urban Studies
- UPA 606 Research Methods ***
- UPA 610 Urban Theory and Public Affairs
- UPA 680 Regression Analysis ***

Note: Students with limited statistical training may be required to take PADM 601/PLAN 602 (Statistics for Public Affairs) prior to enrolling in UPA 680 (Regression Analysis). This course does not count toward the 48 credit hour requirement.
***UPA 606 and UPA 680 (Regression Analysis) require a grade of a full "B" or better (not a B-) to demonstrate proficiency. Students may repeat either of these courses only once.

Field Area Courses (18 Credit Hours)

Students must pursue one of the two specialty areas, including 9-12 credit hours of required courses and 6-9 credit hours of elective courses. Elective courses must be compatible with track and must be approved by the Program Director.

Urban Planning and Sustainable Development Option

Required Courses (Twelve (12) Credit Hours)
UPA 623 Comparative Urban Development
UPA 683 Land Use Planning
UPA 684 Planning Theory
UPA XXX A Sustainability Course [to be approved by Program Director]
Elective Courses (Six (6) Credit Hours)

Urban Policy and Administration Option

Required Courses (Nine -Twelve (9-12) Credit Hours)
UPA 621 Policy Analysis and Program Evaluation
UPA 630 Politics and Urban Policy
UPA 660 Advanced Organizational Behavior
UPA 661 Public Administration and Organizational Theory [can be waived; see Student Guide]
Elective Courses (Six-Nine (6-9) Credit Hours)

Dissertation (12 Credit Hours)

UPA 700 Dissertation Research

Doctoral Candidacy

After completing all required coursework, including 12 credits of dissertation research, and passing the qualifying exam, each student is required to maintain continuous enrollment in DOCT 600 Doctoral Candidacy until he or she graduates.

Faculty

Tony Arnold  
Professor
Mark Austin  
Associate Professor
Lisa Bjorkman  
Assistant Professor
Daniel DeCaro  
Assistant Professor
Carrie Donald  
Professor
John I. Gilderbloom  
Professor
Frank Goetzke  
Associate Professor
David Imbroscio  
Professor
David Kinahan  
Assistant Professor
Steven G. Koven  
Professor
Cynthia Negrey  
Professor
Aaron Rollins  
Assistant Professor
Mathew Ruther  
Assistant Professor
Hank Savitch  
Professor Emeritus
Kelly Kinahan  
Assistant Professor
Steve Song  
Associate Professor
Margath Walker  
Associate Professor
Sumei Zhang  
Associate Professor

David M. Simpson  
Professor
Chair of
Department of
Urban and Public Affairs

Wei Song  
Associate Professor

Janet Kelly  
Professor
Master of Urban Planning

Major: URPL
Degree Awarded: MUP
Unit: GA
Program Webpage: http://louisville.edu/upa

Program Information

Fully accredited by the Planning Accreditation Board (PAB) and ranked #23 nationally according in Planning Educators in the 2012 Planetizen guide, the Master of Urban Planning Program strives to play an important role in the University of Louisville’s urban/metropolitan mission by creating the best possible learning environment for the student whose goal is to become a planning practitioner, by advancing the state of knowledge in the planning field through faculty research, and by bringing that knowledge to bear on the challenges facing the community.

The Department of Urban and Public Affairs offers a Master of Urban Planning (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.

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 requires minimum scores of 144 quantitative and 153 verbal GRE 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 601 Planning Theory and History (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)
PLAN 608 (GEOG 558) Geographic Information Systems (GIS) (3)
PLAN 636 Site Planning (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. Elective and advanced course work includes 9 credits in an area of specialization (with 3 credits being one required class for the specialization, marked with *** in bold letters below, eg PLAN 607 Land Use Planning for the Land Use and Environmental Planning Specialization) 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)*** (Required for Specialization)
PLAN 608 (GEOG 558) 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 624 Urban Transportation Planning (3)
PLAN 635 Comparative Urban Development (3)
PLAN 651 Urban Design Studio (3)
PLAN 652 Neighborhood Planning Studio (3)
PLAN 680 Urban Environment and Sustainability

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) *** (Required for Specialization)
PLAN 610 Strategic Management and Planning (3)
PLAN 611 Human Resources Management (3)
PLAN 612 Mediation and Dispute Resolution (3)
Specialization in Spatial Analysis for Planning

Three courses (nine (9) credit hours) from the following:

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) *** (Required for Specialization)
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) *** (Required for Specialization)
PLAN 621 Urban Infrastructure (3)
PLAN 622 Urban Design (3)
PLAN 625 Historic Preservation (3)
PLAN 626 Economic Development (3)
PLAN 631 Real Estate Principles (3)
PLAN 633 Real Estate Development (3)
PLAN 635 Comparative Urban Development (3)
PLAN 637 Netherlands: Planning and Policy (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:

PLAN 601 Planning Theory and History
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.

Master of Urban Planning (MUP)/ Master of Public Health (MPH) MUP/MPH

The Dual Master of Urban Planning-Master of Public Health Program (MUP-MPH program) is designed to graduate students with core competencies in both urban planning and public health. Graduates of the program receive two degrees: Master of Urban Planning and Master of Public Health.

Graduates of the MUP-MPH program are prepared for positions relating to public health and the built environment, including urban form/design and health, urban public health planning and development, and urban “green” sustainability and health planning and policy.

The MUP-MPH program is a collaboration of the MUP program in the Department of Urban and admission to the MUP-MPH program requires separate admissions to each of the MUP program and the MPH program. This includes two separate graduate education applications.

Coursework Required for Dual Degree

72 total credit-hours:

62 credit-hours of required coursework
24 credit hours of MPH core coursework
24 credit hours of MUP core coursework
(6 credit hours of combined public health and urban planning core coursework)
6 credit hours of combined MPH practicum and MUP internship experience
9 credit hours of MPH specialization coursework
9 credit-hours of elective coursework in public health and urban planning

Core Courses in Public Health

- Intro to Public Health Practice and Administration
- Intro to Biostatics
- Intro to Epidemiology
- Issues in Public Health
- Into to Environmental Health Services
- Intro to Health Behavior
- Critical Thinking and Program Evaluation

Electives in Public Health

- Global Issues in Environmental Health
- Managing Healthy Communities
- Public Health and the Built Environment

Graduate Certificate in Real Estate Development (GCRED) Program

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. 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.

Admission

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.

Required Courses

The program requires six courses, or 18 credits. Courses may be waived by the Program Coordinator based on previous study; however, substitute course work will be 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, and 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.

Faculty

Tony Arnold  
Professor of School of Law

Carrie G. Donald  
Professor

John I. Gilderbloom  
Professor

Frank Goetzke  
Associate Professor

Lauren Heberle  
Associate Professor

Janet Kelly  
Professor

Steven G. Koven  
Professor

Aaron Rollins  
Assistant Professor

Matthew Ruther  
Assistant Professor

H.V. Savitch  
Brown and Williamson

Distinguished Professor Emeritus

David M. Simpson  
Professor

Department Chair

MUP Director

Sumei Zhang  
Associate Professor
Graduate Certificate in Women's and Gender Studies

Major: WGST
Degree Awarded: CERT
Unit: GA
Program Webpage: http://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:

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 School of Interdisciplinary and Graduate Studies by:

1. Completing a School of Interdisciplinary and Graduate Studies application form and sending in the application fee
2. Submitting an official transcript reflecting previous degrees earned

Students must also send directly to Women’s and Gender Studies a one-to-two page letter of intent, describing how the WGS graduate certificate will further their personal or professional goals.

Students wishing to pursue the graduate certificate in conjunction with a graduate degree program in another UofL department should first apply and be admitted to the degree program before applying for admission to the WGS graduate certificate program.

Curriculum

1. Students must complete a total of 15 hours in courses approved for graduate credit in accordance with the policies of the School of Interdisciplinary and Graduate Studies, approved by the WGS chairperson.
2. One course among the 15 hours must be WGST 601, WGST 602, or WGST 603.
3. At least two courses must be at the 600-level.
4. Courses must be chosen from both humanities and social sciences disciplines, with consultation of WGS chairperson.
5. Students pursuing the WGS certificate in conjunction with a graduate degree program must take at least one course outside of the department in which the student is pursuing the degree.
6. A single course may satisfy more than one requirement.
7. Course work toward the graduate certificate in WGS may also count toward the student’s graduate degree.
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<tr>
<th>Name</th>
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<tr>
<td>Tomarra Adams</td>
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<td>Assistant Professor</td>
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<td>Ann Allen</td>
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<td>Carol Mattingly</td>
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<td>Audre Lorde</td>
<td>Endowed Chair in Race, Class, Gender, and Sexuality</td>
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<td>Tamara Yohannes</td>
<td>Affiliated Faculty</td>
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<td>Assistant Professor</td>
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</table>
Master of Arts in Women's and Gender Studies

Major: WGST
Degree Awarded: MA
Unit: GA
Program Webpage: http://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 School of Interdisciplinary and Graduate Studies (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 School of Interdisciplinary and Graduate Studies). Letters of recommendation must be current (written within the last year), and letter writers must be familiar with the applicant's academic preparation for graduate study. 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 (19 hours)

Foundation courses:

WGST 600 Research and Writing in WGS (1 hour)
WGST 601 Feminist Research and Theory in the Humanities (3 hours) or
WGST 603 History of American Feminisms
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 632 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 632 History of Sexualities
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

Faculty

Tomarra Adams
Associate Professor
(Affiliated Faculty of Pan-African Studies)

Ann Allen
Professor Emerita
(Affiliated Faculty of History)

Simona Bertacco
Assistant Professor
(Affiliated Faculty of Humanities)

Beth Boehm
Professor
(Affiliated Faculty of English)

Tom Byers
Professor Emeritus
(Affiliated Faculty of English)

Anne Caldwell
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(Affiliated Faculty of History)

Cate Fosl
Associate Professor

Lauren Freeman
Assistant Professor
(Affiliated Faculty of Philosophy)

Patricia Gagne
Professor
(Affiliated Faculty of Sociology)

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Mary Hums
Professor
(Affiliated Faculty of Health Education and Promotion)

Greg Hutcheson
Associate Professor
(Affiliated Faculty of Classical and Modern Languages)

Susan Jarosi
Associate Professor

Lara Kelland
Assistant Professor
(Affiliated Faculty of History)

Jongwoo J. Kim
Assistant Professor
(Affiliated Faculty of Fine Arts)

Cheryl Kolander
Professor
(Affiliated Faculty of Health Education and Promotion)

Karen L. Kopelson
Associate Professor
(Affiliated Faculty of English)

Gul Marsh
Associate Professor

Maryam Moazzen
Assistant Professor
(Affiliated Faculty of Humanities)

Laura Moyer
Associate Professor
(Affiliated Faculty of Political Science)

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Professor Emerita
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Kaila Story
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Audre Lord  
Endowed Chair in Race, Class, Gender, and Sexuality  
Nancy M. Theriot  
Professor

Chairperson  
Margaret Walker  
Assistant Professor (Affiliated Professor of Geography and Geosciences)
Master of Accountancy

Major: ACCYMAC
Degree Awarded: MA.c.
Unit: GB
Program Webpage: http://business.louisville.edu/master-of-accountancy/

Program Information

The College of Business Master of Accountancy at the University of Louisville is offered once each year, with a new cohort starting in August. Admission to the Master of Accountancy program is highly competitive. The College of Business Master of Accountancy program requires completion of an undergraduate degree majoring in accountancy, or completion of an accounting Certificate Program, or equivalent prior to admission. GMAT scores and letters of reference are required (the GMAT requirement may waived if specified academic standards are met). The program is cohort based, and includes 30 credit hours of required coursework.

Curriculum

Master of Accountancy

The Master of Accountancy is a 12 month cohort based program. The program fee is $21,000. Application requirements include an undergraduate degree majoring in accountancy or equivalent (with official university transcripts), a GMAT or GRE test result, two letters of reference, and a $50 application fee. The GMAT requirement may be waived in certain circumstances, based on academic performance in an undergraduate degree program.

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<thead>
<tr>
<th>Semester</th>
<th>Course Number and Name</th>
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<td>Fall I</td>
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<td>MAC 622, Advanced AIS</td>
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NOTE: Courses and timing are subject to change.

## Faculty

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<thead>
<tr>
<th>Name</th>
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</thead>
<tbody>
<tr>
<td>Lisa Blum</td>
<td>Instructor</td>
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</tr>
<tr>
<td>Richard Coppage</td>
<td>Professor</td>
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</tr>
<tr>
<td>Jian (Jeff) Guan</td>
<td>Associate Professor</td>
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<tr>
<td>Julia N. Karcher</td>
<td>Associate Professor</td>
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<td>Alan S. Levitan</td>
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<tr>
<td>Elizabeth Payne</td>
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<td>William D. Stout</td>
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<tr>
<td>Lyle Sussman</td>
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</tr>
</tbody>
</table>
Master of Business Administration

Major: BA_MBA
Degree Awarded: M.B.A.
Unit: GB
Program Webpage: http://business.louisville.edu/uoflmba

Program Information

The College of Business Master of Business Administration at the University of Louisville is offered in multiple formats: the Full-time MBA; Professional (Part-time) MBA; Integrative (Entrepreneurship) MBA; Executive MBA; and Global MBA. Admission to MBA programs is highly competitive. All College of Business Master of Business Administration programs require completion of an undergraduate degree. GMAT scores and letters of reference requirements vary by program. All programs are cohort based, vary in duration between 13 and 20 months, and in credit hour requirements between 42 and 48.

Curriculum

Full-time Master of Business Administration

The Full-time MBA is a 13 month cohort based program with two tracks: an internship track (48 credit hours); and a non-internship track (45 credit hours). The program fee is $32,000. Application requirements include an undergraduate degree (with official university transcripts), a GMAT or GRE test result, two letters of reference, an interview, and a $50 application fee. Dual degree students in the University of Louisville School Law, Dentistry, or Medicine may be provided with a GMAT or GRE waiver.

Program Webpage: http://business.louisville.edu/uoflmba/

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**MBA 619 Marketing II**  1.5  1.5  
**MBA 621 Global Business**  1.5  1.5  
**MBA 622 Project Management**  1.5  1.5  

### Summer I

**MBA 623 Global Learning**  1.5  1.5  
**MBA 624 Strategic Management**  1.5  1.5  
**MBA 670 Business Consulting I**  1.5  1.5  
**MBA 671 Business Consulting II**  1.5  1.5  
**MBA Electives**  6.0  
**MBA Electives**  9.0  

Two credit hours per semester  
MBA 699 Internship  6.0  
Spread multiple semesters  
MBA 644 Professional Development Modules  3.0  3.0  

| Total Credit Hours | 48 | 45 |

Sequence of courses are subject to change.

**Professional (Part-time) Master of Business Administration**

The Part-time MBA is a 20 month cohort based 45 credit hour program. The program is delivered in two formats: a weekday evening format and a weekend format. The program fee is $32,000. Application requirements include an undergraduate degree (with official university transcripts), a GMAT or GRE test result, two letters of reference, an interview, and a $50 application fee. Dual degree students in the University of Louisville School Law, Dentistry, or Medicine may be provided with a GMAT or GRE waiver.

Program Webpage: [http://business.louisville.edu/uoflmba/](http://business.louisville.edu/uoflmba/)

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Spring II

MBA 670 Business Consulting I 1.5
MBA 671 Business Consulting II 1.5
MBA 680 Electives 4.5
Spread multiple semesters MBA 644 Professional Development Modules 3.0

Total Credit Hours 45

Sequence of courses are subject to change.

Integrative (Entrepreneurship) Master of Business Administration

The Integrative (Entrepreneurship) MBA is a part-time program that is 20 months long. It is a cohort based 45 credit hour program. The program fee is $32,000. Application requirements include an undergraduate degree (with official university transcripts), a GMAT or GRE test result, two letters of reference, an interview, and a $50 application fee. Dual degree students in the University of Louisville School Law, Dentistry, or Medicine may be provided with a GMAT or GRE waiver.

Program Webpage: http://business.louisville.edu/uoflmba/

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<td>IMBA 626 Team Dynamics I</td>
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<td>IMBA 668 Business Consulting</td>
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Total Credit Hours 54 48
Sequence of courses are subject to change.

**Executive Master of Business Administration**

The Executive MBA is a 20 month, cohort-based, 46 credit hour program. It is a joint degree delivered in conjunction with the University of Kentucky. One-half of the courses are physically taught at each of the University of Louisville and the University of Kentucky. The program fee is $67,500. Application requirements include an undergraduate degree (with official university transcripts), two letters of reference, an employer letter of support (required due to program scheduling), an interview, and a $100 application fee.

Program Webpage: [http://business.louisville.edu/uoflmba/](http://business.louisville.edu/uoflmba/)

<table>
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<th>Semester</th>
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<td>EMBA 610 Marketing Management I</td>
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<td>EMBA 614 Managing Global Challenges</td>
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Total Credit Hours 44.0

Sequence of courses are subject to change.

**Global Master of Business Administration**

The Global MBA is a 14 month, cohort-based, 42 credit hour program. The first semester consists of a one month residency at the University of Louisville. Students study during the fall and spring semesters with our partner Adolf Würth at the Akademie Würth Business School in Germany. Students return to the University of Louisville for a final one-month summer residency. The program fee is EUR 18,950. Application requirements include three years of business experience, a completed undergraduate degree, a TOEFL test score (a minimum is applied), two letters of reference, and health insurance covering instructional periods in the United States.
Program Webpage: [http://business.louisville.edu/uoflmba/](http://business.louisville.edu/uoflmba/)

<table>
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<td><strong>Fall / Spring</strong></td>
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<td>MBA 640 Marketing and Distribution Management</td>
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<td>MBA 630 Operations Design and Analysis</td>
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<td>MBA 680 Advanced Corporate Finance</td>
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<td>IMBA 632 Business Plan Development</td>
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<td>MBA 680 Social Media Marketing</td>
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<td><strong>Total Credit Hours</strong></td>
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Sequence of courses are subject to change.

**Faculty**

**Richard Germain**  
*Associate Dean for Graduate Programs*
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 odd years (2015, 2017, 2019, etc.).

No specific graduate or undergraduate major is required. However, an M.B.A. is 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 M.B.A. 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-to-five years, subject to progress on a dissertation. Students generally take about 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 current 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. Faculty may change as well. Applicants should contact the Program Director, Dr. James O. Fiet, if they have questions about the curriculum requirements.

YEAR 1 --First month (August) in the program
New students may be required to take an online review of statistics course. Faculty mentors for research assistantships are established.

FALL I

Entrepreneurship 780: Seminar: Foundations of Entrepreneurship Research
This seminar reviews the major streams of entrepreneurship research. It will provide students the opportunity to critique and build on prior research as they endeavor themselves to contribute to the existing body of knowledge. Instructor: Dr. James O. Fiet
Entrepreneurship 761: Research Design
This seminar is designed to teach students the fundamentals of research design in the social sciences. It is intended for entrepreneurship doctoral students who will conduct empirical research publishable in scholarly journals. Topics include philosophy of science, theory building, causality analysis, overviews of statistical methods, 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 780: New Product Strategy and Conjoint Analysis
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

Linear Statistics
Students will take one of the following statistics courses: ENTR 780/ELFH 701 (Intermediate Statistics), ENTR 780/PSYC 610 (Advanced Statistics I), or equivalent.

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. Namok Choi

Entrepreneurship 780: Entrepreneurial 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 Dr. David Dubofsky

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. Ryan Quinn
Entrepreneurship 780: Entrepreneurial Discovery
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

Entrepreneurship 780: Philosophy of Science
Scholars engage in research in search of “truth”. This seminar explores the schism in many of the social sciences with respect to what constitutes truth and genuine knowledge about business phenomena. Students will examine these competing views that relate to reality as a knowable, objective, reducible entity versus a socially constructed, subjective realm that one cannot stand outside of and analyze without influencing in some manner. Students should gain an understanding about how these views influence the development of research questions, methods and analysis. Instructor: Dr. Robert Garrret, Jr.

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

Entrepreneurship 789: Survey of Entrepreneurship I
The student conducts a supervised review in preparation for the preliminary examination in entrepreneurship.

Preliminary exam preparation
Preliminary exam (July)
First year paper due (by end of July)

FALL II

ENTR 780/ECPY 764: Structural Equation Modeling
This course focuses on basic concepts, applications, and interpretations of structural equation models. Instructor: Dr. Jill Adelson

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

Entrepreneurship 780: Research Design II
This seminar is designed to teach students research design in the social sciences. It is intended for entrepreneurship doctoral students who will conduct empirical research publishable in scholarly journals. Topics include research design, experimental design, random selection, validity, reliability, manipulation and confound checks, quasi-experiment, multi-level design and analysis, social network analysis and meta-analysis. Instructor: Dr. Manju Ahuja

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. Bobby Garrett, Jr.

Entrepreneurship 780: Family Business
This seminar discusses succession, firm governance, and new venture creation. Instructor: Dr. Jim Chrisman

SUMMER II

Required paper must be completed and defended in order to progress into candidacy. Potential Student Teaching
FALL II

Dissertation Proposal
Potential Student Teaching

SPRING III

Dissertation Proposal
Potential Student Teaching

YEARS IV and V (if necessary)

Dissertation Proposal
Potential Student Teaching

1 Four courses

Faculty

Manju Ahuja
Professor

Brown-Forman
Chair in
Entrepreneurship

Robert E. Carter
Associate Professor

Chair of Ph.D.
Program Committee

Yong Chao
Assistant Professor

Program Director

David Dubofsky
Professor

Robert Garrett, Jr.
Associate Professor

James O. Fiet
Professor

Bruce Kemelgor
Associate Professor

Ryan Quinn

Associate Professor

FALL II

Dissertation Proposal
Potential Student Teaching

SPRING III

Dissertation Proposal
Potential Student Teaching

YEARS IV and V (if necessary)

Dissertation Proposal
Potential Student Teaching

1 Four courses

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Ryan Quinn

Associate Professor

Simon Parker
Distinguished
Faculty Instructor

Howard Aldrich
Distinguished
Faculty Instructor

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Jr.

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James J.
Chrisman
Distinguished
Faculty Instructor

Per Davidsson
Distinguished
Faculty Instructor

Dean Shepherd
Distinguished
Faculty Instructor
Master of Science in Oral Biology

Major: OBIO
Degree Awarded: MS
Unit: GD
Program Webpage: http://louisville.edu/dentistry/degrees/oralbiology/msob

Program Information

The School of Dentistry offers a research-based program leading to the Master of Science Degree in Oral Biology. The program is directed toward an in depth understanding of the biology of the oral cavity and processes leading to disease, including the interactions between oral and systemic health. Students obtain the scientific knowledge and biomedical skills required to perform contemporary dental research. This is a research-based degree for which each student completes a thesis project under the guidance of a faculty mentor. Research projects include basic, clinical, and translational studies.

The M.S. in Oral Biology offers training important to persons wishing to pursue a career in either academic or clinical dentistry, or to enter the biotechnology sector or advance to a Ph.D. The program is available to students wishing to obtain only the M.S. in Oral Biology degree, as well as to students currently enrolled in the D.M.D. degree program wishing to earn a dual degree (D.M.D./M.S.), and persons who have previously earned a D.M.D. or M.D. (or equivalent) degree, including international applicants. See http://louisville.edu/dentistry/degrees/oralbiology.

Areas for research training include: molecular, cellular and craniofacial biology; craniofacial diagnostic imaging; neural crest-related craniofacial and cardiovascular disorders; regulation of gene transcription; oral microbiology and immunology; cellular mechanisms of salivary gland secretion; birth defects; infection control; protein glycosylation; protein expression and trafficking; periodontology; dental materials science; orthodontics; endodontics; periodontology; and health services research related to dentistry. Developmental biology, oral microbiology and innate immunology are particular strengths of the program.

A minimum of 30 credit 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, development of a biomedical research project, and a thesis.

Individualized programs are developed by students working with their thesis advisor and graduate committee. The graduate committee also approves proposed thesis research, reviews the thesis research, reviews the thesis for acceptance, and administers a final oral examination. Additional important information about the program is available in the Oral Biology Program Guide.

Application for Admission

Information about application process is at http://louisville/oralbiology/msob/admissions. Application for the program is online at: http://louisville.edu/graduate/apply/. There is a $60.00 non-refundable application fee. Applications are not processed until the application fee is received and all required application materials have been received by the School of Interdisciplinary and Graduate Studies, Graduate Admissions.
Credentials listed below should be sent to the School of Interdisciplinary and Graduate Studies, Graduate Admission by the following admission deadlines for complete applications:

June 5 for Fall  
November 1 for Spring  
March 1 for Summer (Reserved for the M.S.D. track)

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 also apply to the M.S. degree in oral biology program should meet with the Program Director or Director of Student Affairs to determine a timeline for making an application.

Admission Credentials (See Oral Biology Program Guide)

- 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 or National Boards Dental Exam (NBDE)
- Two letters of recommendation which document your research experience or academic ability
- A personal statement of research experience or interest in research, and your career goals
- TOEFL scores, if English is not applicant's native language

Curriculum

Major subject required (core) courses:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBIO 501</td>
<td>Biomedical Data Analysis: Experimental Design and Statistics (Fall Semester)</td>
<td>3</td>
</tr>
<tr>
<td>OBIO 601</td>
<td>Introduction to Oral Biology Research (Fall Semester)</td>
<td>2</td>
</tr>
<tr>
<td>OBIO 605</td>
<td>Oral Health Seminars (Fall and Spring, Prerequisite: OBIO 601)</td>
<td>1</td>
</tr>
<tr>
<td>OBIO 606</td>
<td>Oral Biology Communication (Spring, Prerequisite: OBIO 601)</td>
<td>1</td>
</tr>
<tr>
<td>OBIO 619</td>
<td>Research (minimum of 8 semester hours required); Thesis (minimum of 6 credit hours required);</td>
<td>8</td>
</tr>
<tr>
<td>OBIO 620</td>
<td>Thesis (minimum of 6 credit hours required);</td>
<td>6</td>
</tr>
</tbody>
</table>

Major subject selective courses:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBIO 600</td>
<td>Concepts in Oral Immunology</td>
<td>2</td>
</tr>
<tr>
<td>OBIO 604</td>
<td>Oral Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>OBIO 611</td>
<td>Craniofacial Osteology</td>
<td>1-3</td>
</tr>
<tr>
<td>OBIO 612</td>
<td>Craniofacial Diagnostic Imaging</td>
<td>2-4</td>
</tr>
<tr>
<td>OBIO 613</td>
<td>Diagnosis and Treatment of Temporomandibular Disorders</td>
<td>1</td>
</tr>
<tr>
<td>OBIO 614</td>
<td>Advanced Oral Diagnosis/Oral Medicine</td>
<td>1</td>
</tr>
<tr>
<td>OBIO 615</td>
<td>Advanced Clinical Pharmacology</td>
<td>1</td>
</tr>
<tr>
<td>OBIO 616</td>
<td>Overview of Medical Genetics in Oro-facial Disease</td>
<td>1.5</td>
</tr>
<tr>
<td>OBIO 617</td>
<td>Advanced Oral Pathology</td>
<td>1</td>
</tr>
<tr>
<td>ASNB 670</td>
<td>Dental Gross Anatomy</td>
<td>6</td>
</tr>
<tr>
<td>ASNB 671</td>
<td>General and Oral Histology</td>
<td>5</td>
</tr>
<tr>
<td>ASNB 675</td>
<td>Advanced Head and Neck Anatomy</td>
<td>2</td>
</tr>
</tbody>
</table>
BIOC 668 Molecular Biology 4
MBIO 605 Cell Biology 3

In addition, 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.

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

Faculty

Pascale Alard
Associate Professor of Microbiology

Bruno Azevedo
Assistant Professor of Surgical Hospital and Dentistry

Sherry Babbage
Lecturer of General Dentistry and Oral Medicine

Eric Bednar
Clinical Assistant Professor of Orthodontics, Pediatric Dentistry and Special Care

Mark Bernstein
Professor of Surgical Hospital and Dentistry

Cathy Binkley
Associate Professor of Surgical Hospital and Dentistry

Ricardo Caicedo
Associate Professor of Surgical Hospital and Dentistry

Sunita Chandiramani
Clinical Associate Professor of Orthodontics, Pediatric Dentistry and Special Care

Jangching Chou
Assistant Professor of Surgical Hospital and Dentistry

Stephen Clark
Professor of Surgical Hospital and Dentistry

Gary Crim
Professor of General Dentistry and Oral Medicine

Douglas Darling
Professor of Oral Immunology and Infectious Diseases

Donald Demuth
Professor of Oral Immunology and Infectious Diseases

Marcelo Durski
Assistant Professor of General Dentistry and Oral Medicine

Carmine Esposito
Professor of Surgical Hospital and Dentistry

John Firriolo
Professor of General Dentistry and Oral Medicine

James Graham
Associate Professor of Microbiology

Gerald T. Grant
Professor of Surgical Hospital and Dentistry

Bob Greene
Professor of Molecular, Cellular and Craniofacial Biology

Henry Greenwell
Professor of Surgical Hospital and Dentistry

Ann Greenwell
Associate Professor of Orthodontics, Pediatric Dentistry and Special Care

Bryan Harris
Associate Professor of Surgical Hospital and Dentistry

Margaret Hill
Associate Professor of Surgical Hospital and Dentistry

Wendy Hupp
Associate Professor of General Dentistry and Oral Medicine

Zaf Khan
Professor of Surgical Hospital and Dentistry

Richard Lamont
Professor of Oral Immunology and Infectious Diseases

Matthew Lawrenz
Assistant Professor of Microbiology

Shuang Liang
Assistant Professor of Oral Immunology and Infectious Diseases

Weishao Lin
Associate Professor of Surgical Hospital and Dentistry

Mike Mansfield
Assistant Professor of General Dentistry and Oral Medicine

Hector Martinez
Assistant Professor of Orthodontics, Pediatric Dentistry and Special Care

Lee Mayer
Associate Professor of General Dentistry and Oral Medicine

Michael Metz
Assistant Professor of General Dentistry and Oral Medicine

Joseph Morelli
Associate Professor of Surgical Hospital and Dentistry

Michele Pisano
Professor of Molecular, Cellular
and Craniofacial Biology

Jan Potempa
Professor of Oral Immunology and Infectious Diseases

Liliana Rozo Gaeth
Associate Professor of Orthodontics, Pediatric Dentistry and Special Care

Lisa Sandell
Assistant Professor of Molecular, Cellular and Craniofacial Biology

John Sauk
Professor of Surgical Hospital and Dentistry
Dean

William Scarfe
Professor of Surgical Hospital and Dentistry

David Scott
Professor of Oral Immunology and Infectious Diseases

Brian Shumway
Associate Professor of Surgical Hospital and Dentistry

Anibal Silveira
Professor of Orthodontics, Pediatric Dentistry and Special Care

Jackie Singleton
Associate Professor of Surgical Hospital and Dentistry

Robert Staat
Professor of Surgical Hospital and Dentistry

David Tasman
Clinical Professor of Orthodontics, Pediatric Dentistry and Special Care

Silvia Uriarte
Associate Professor of Medicine

John Virag
Clinical Associate Professor of Surgical Hospital and Dentistry

Huiyhi Wang
Assistant Professor of Oral Immunology and Infectious Diseases

Jon Warawa
Assistant Professor of Microbiology
Master of Science in Dentistry

Major: OBIO
Degree Awarded: MSD
Unit: GD
Program Webpage: http://louisville.edu/dental/

Program Information

The School of Dentistry offers a program of study leading to the Master of Science Degree in Dentistry for postgraduate students/residents enrolled in Advanced Specialty Certificate Programs in Endodontics, Orthodontics, Pediatric Dentistry, Periodontics, and Prosthodontics.

The courses for the Master of Science in Dentistry will total 31 credit hours. The curriculum is at least 19 credit hours (11 core and 8 selective courses), plus credit for research and thesis/publication. In addition, depending on the specific accreditation requirements of the specialty, either two or three years of clinical training are required. The credit hours needed to complete the M.S.D. and the certificate are listed below.

<table>
<thead>
<tr>
<th>M.S.D./Specialty Programs</th>
<th>Credit Hours</th>
<th>Time to Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endodontics</td>
<td>69</td>
<td>2 years</td>
</tr>
<tr>
<td>Orthodontics</td>
<td>72</td>
<td>2 years</td>
</tr>
<tr>
<td>Pediatric Dentistry</td>
<td>70</td>
<td>2 years</td>
</tr>
<tr>
<td>Periodontics</td>
<td>103.5</td>
<td>3 years</td>
</tr>
<tr>
<td>Prosthodontics</td>
<td>94</td>
<td>3 years</td>
</tr>
</tbody>
</table>

The School of Dentistry post-professional Master of Science in Dentistry with Specialty Certificate programs offer didactic and clinical training leading to certification in the specific dental specialty area. Completion of an accredited certificate program allows the student to be recognized by state boards of dentistry and by the respective specialty boards as eligible for specialty board examination and specialty dental licensure.

These programs help to develop skillful clinicians and researchers for careers in academic dentistry or private practice in the specialty areas of Endodontics, Orthodontics, Pediatric Dentistry, Periodontics, and Prosthodontics. Excellent training in clinical dentistry, teaching skills, and the process and interpretation of biomedical research is essential to equip tomorrow’s specialists with the proper scientific background to deal with the changes and challenges inherent in a profession undergoing rapid scientific advancement. These postgraduate students are exposed to a wide variety of clinical techniques by a group of highly qualified faculty with diverse training and varied backgrounds. The philosophy of the programs is that clinical excellence is based on technical proficiency, expert diagnostic skills and broad-based knowledge of the specific specialty literature.

The didactic portion of the curriculum explores the concepts, designs, regulation, interpretation, and presentation of modern biomedical research upon which the practice of modern Endodontics, Orthodontics, Pediatric Dentistry, Periodontics, or Prosthodontics is based.
The Master of Science in Dentistry trains students in research concepts allowing them to design and complete a clinical or basic science research project. As a part of this program, the student is guided to design a research project and write a research proposal including any informed consent and data collection forms. The student will then conduct the research project to completion. Federal regulations and University of Louisville policy require that all research involving human subjects or analysis of data gathered from human subjects, regardless of funding status, be reviewed and approved by the IRB prior to the implementation of any research activity. After completion of the research project, the student will present the research project in both oral and written form. The oral presentation (defense) includes a review of the literature relevant to the research project, analysis of all data using appropriate statistical tests, and comparison of the results of the project to similar research in the dental literature. The student will also write a thesis or a paper that is suitable for submission and publication in an appropriate peer-reviewed journal.

Students who are enrolled in Endodontics, Orthodontics, Pediatric Dentistry, Periodontics, or Prosthodontics will complete the requirements for the Master of Science in Dentistry in conjunction with the awarding of the specialty certificate.

**Program Descriptions:**

**M.S.D./Endodontics**

Endodontics is the branch of dentistry which is concerned with the morphology, physiology and pathology of the human dental pulp and tissues around the tooth root. Its study and practice encompass the basic and clinical sciences, including biology of the normal pulp, the etiology, diagnosis, prevention and treatment of diseases and injuries of the pulp and associated conditions occurring around the tooth root.

**M.S.D./Orthodontics**

Orthodontics is the dental specialty that includes the diagnosis, prevention, interception, and correction of malocclusion of the teeth, as well as neuromuscular and skeletal abnormalities of the developing or mature orofacial structures.

**M.S.D./Pediatric Dentistry**

Pediatric Dentistry is an age-defined specialty that provides both primary and comprehensive preventive and therapeutic oral health care for infants and children through adolescence, including those with special health care needs.

**M.S.D./Periodontics**

Periodontics is that specialty of dentistry which encompasses the prevention, diagnosis and treatment of diseases of the supporting and surrounding tissues of the teeth or their substitutes and the maintenance of the health, function and esthetics of these structures and tissues.

**M.S.D./Prosthodontics**

Prosthodontics is the dental specialty pertaining to the diagnosis, treatment planning, rehabilitation and maintenance of the oral function, comfort, appearance and health of patients with clinical conditions.
associated with missing or deficient teeth and/or oral and maxillofacial tissues using biocompatible substitutes.

Application for Admission

After acceptance into an Advanced Specialty Certificate Program in Endodontics, Orthodontics, Pediatric Dentistry, Periodontics or Prosthodontics, please complete the application form available on-line at: http://louisville.edu/graduate/apply. Additionally, there is a $60 non-refundable application fee. Applications are not processed until the application fee is received and all required application materials have been received by the School of Interdisciplinary and Graduate Studies, Graduate Admissions.

Admission Credentials

- Application and application fee
- Official transcripts of all college coursework, including evidence of a baccalaureate degree
- Two letters of recommendation
- TOEFL scores, if English is not the applicant’s native language
- For international applicants, Official Course-by-Course Evaluation Report from ECE (Educational Credential Evaluators, Inc.), P. O. Box 514070, Milwaukee, Wisconsin 53203-3470-USA - http://www.ece.org

Curriculum

All of the specialty programs will require 11 credit hours in the following courses:

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBIO-501 Biomedical Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>OBIO-601 Introduction to Oral Biology Research</td>
<td>2</td>
</tr>
<tr>
<td>OBIO-606 Oral Biology Seminars and Communication</td>
<td>2</td>
</tr>
<tr>
<td>OBIO-617 Advanced Oral Pathology</td>
<td>1</td>
</tr>
<tr>
<td>OBIO-622 Multidisciplinary Seminars</td>
<td>1</td>
</tr>
<tr>
<td>ASNB 675 Advanced Head and Neck Anatomy</td>
<td>2</td>
</tr>
</tbody>
</table>

All of the specialty programs are also required to take at least eight (8) credits hours from the following list of electives:

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBIO-600 Concepts in Oral Immunology</td>
<td>2</td>
</tr>
<tr>
<td>OBIO-604 Oral Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>OBIO-605 Oral Health Seminars</td>
<td>1</td>
</tr>
<tr>
<td>*OBIO-610 Advanced Topics in Oral Biology</td>
<td>1-4</td>
</tr>
</tbody>
</table>

*Prerequisite: OBIO 600 or consent of instructor. Selected areas will be investigated in depth, using one or more of a variety of formats, including lectures, seminars, tutorials, and research projects.

| OBIO-611 Craniofacial Osteology                            | 1-3          |
| OBIO-612 Craniomaxillofacial Diagnostic Imaging            | 2-4          |
OBIO-613 The Diagnosis and Treatment of Temporomandibular Disorders and Facial Pain 1
OBIO-614 Diagnosis and Oral Medicine 1
OBIO-615 Advanced Clinical Pharmacology 1
OBIO-616 Medical Genetics in Oral Diagnosis 1.5
OBIO-623 Advanced Implantology 1

**Curriculum Credit Hours** 19

In addition to these 19 Credit Hours, each postgraduate student/resident will complete a research project that will be supervised by the specialty program director or a designated faculty member.

**Course Description**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBIO-0635-619 Research</td>
<td>1-8</td>
</tr>
<tr>
<td>OBIO-620 Thesis/Publication</td>
<td>1-8</td>
</tr>
</tbody>
</table>

**Total credit hours for Master of Science in Dentistry** 31

In addition to the completion of the core curriculum and the postgraduate research project, there are didactic, and clinical courses required for the completion of the necessary hours needed for each certificate as indicated in the M.S.D./Specialty Programs table.

**Contact Information**

**Dr. Margaret Hill**  
Associate Dean for Academic Affairs  
University of Louisville School of Dentistry  
501 S. Preston Street  
Louisville, KY 40292  
Phone: (502)852-1302

Email: margaret.hill@louisville.edu

and

**Ms. Linda Klump**  
Program Coordinator, Sr.  
University of Louisville School of Dentistry  
501 S. Preston Street  
Louisville, KY 40292  
Phone: (502)852-0002

Email: linda.klump@louisville.edu

**Faculty**

<table>
<thead>
<tr>
<th>Brian Alpert</th>
<th>Eric Bednar</th>
<th>Mark Bernstein</th>
<th>Sunita Chandiramani</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>Clinical Assistant</td>
<td>Professor</td>
<td>Clinical Associate</td>
</tr>
<tr>
<td>Bruno Azevedo</td>
<td>Professor</td>
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</tr>
<tr>
<td>Assistant Professor</td>
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</tr>
<tr>
<td>Name</td>
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<tr>
<td>Jangching Chou</td>
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<tr>
<td>Stephen Clark</td>
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<tr>
<td>Gary A. Crim</td>
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<tr>
<td>Douglas S. Darling</td>
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<tr>
<td>Don R. Demuth</td>
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<tr>
<td>Juliet Dunaway</td>
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<tr>
<td>Marcelo Durski</td>
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<tr>
<td>Eiad Elathamma</td>
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<tr>
<td>Carmine Esposito</td>
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<td>John Firriolo</td>
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<td>Robert Flint</td>
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<td>Ann Greenwell</td>
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<tr>
<td>Henry Greenwell</td>
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<td>Bryan Harris</td>
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<td>Margaret Hill</td>
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<td>Wendy Hupp</td>
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<td>Lewis Jones</td>
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<td>Zafrulla Khan</td>
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<td>George Kushner</td>
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<td>Richard Lamont</td>
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<td>Shuang Liang</td>
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<tr>
<td>Wei-Shao Lin</td>
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<tr>
<td>Hector Martinez</td>
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<tr>
<td>Michael Metz</td>
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<tr>
<td>Joseph Morelli</td>
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<tr>
<td>Jan Potempa</td>
<td>Professor</td>
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<tr>
<td>Lisa Sandell</td>
<td>Assistant Professor</td>
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<tr>
<td>John J. Sauk</td>
<td>Professor</td>
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</tbody>
</table>
Master of Arts in Teaching in Art Education

Major: EDAR
Degree Awarded: MAT
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/mat-ae

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 School of Interdisciplinary and Graduate Studies & Teacher Education. Minimum undergraduate degree GPA 2.75, Minimum GRE scores as required by EPSB; Praxis II content exam registration and/or scores; three letters of recommendation; professional statement; bachelor’s degree with major in Art or appropriate prerequisite courses; "C" or higher in English 102 and oral communication courses; acceptable interview.

*EDTP 602 Exploring Teaching Within the Socio-Cultural Context of P-12 Schools
*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 and ECPY 607, and ART 508 and 518 passed; Satisfactory mid-point teacher performance assessment (TPA); Positive recommendation from Middle/Secondary Program Committee. Electronic documentation of 200 hours of diverse and approved field experiences.

EDTP 612 Student Teaching P-12
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 Competence 1
ART 5xx Academic support course 1 3
ART 6xx Academic support course 1 3
EDTP 620 Reading and Writing Across the Curriculum\textsuperscript{1} 3
\textsuperscript{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

Content courses remaining to complete certification requirements:

**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:** Students not enrolled during the semester in which they intend to graduate must register for master’s candidacy as outlined in the graduate Catalog "Academic Policies, Procedures, and Requirements.", under the section called academic policies and requirements.

**Praxis Disclaimer:** Teacher certification requirements are subject to change. Before registering for certification test(s), please refer to the Education Professional Standards Board (EPSB) website at [www.epsb.ky.gov](http://www.epsb.ky.gov) or [www.ets.org/praxis](http://www.ets.org/praxis) for current requirements.

**Faculty**

<table>
<thead>
<tr>
<th>Barbara Hanger</th>
<th>Maggie McGatha</th>
<th>Caroline Sheffield</th>
<th>Tom Tretter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Professor</td>
<td>Associate Professor</td>
<td>Assistant Professor</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Penny Howell</td>
<td>Susan Peters</td>
<td>Steve Swan</td>
<td>Professor</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Assistant Professor</td>
<td>Instructor</td>
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<td>Susan Peters</td>
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<tr>
<td>Shelley Thomas</td>
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</tr>
</tbody>
</table>

**Faculty**

Barbara Hanger  
Associate Professor

Maggie McGatha  
Associate Professor

Caroline Sheffield  
Assistant Professor

Tom Tretter  
Associate Professor

Penny Howell  
Associate Professor

Susan Peters  
Assistant Professor

Steve Swan  
Instructor

Jean Wolph  
Instructor

Caroline Sheffield  
Assistant Professor

Tom Tretter  
Professor

Steve Swan  
Instructor

Shelley Thomas  
Instructor
Graduate Certificate in Autism and Applied Behavior Analysis

Major: AABACAA
Degree Awarded: CERT
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/bcba-certificate

Program Information

The University of Louisville's Graduate Certificate in Autism and Applied Behavior Analysis provides practitioners with advanced knowledge in autism research and behavioral analytic approaches to skill development and the treat of challenging behavior.

Students receive rigorous academic work within the program's carefully designed course sequence that is taught by faculty with practical and research experience in autism and applied behavior analysis.

Upon completion of the program's approved courses, students with a masters degree must complete a 1,500 hour practicum to be eligible to sit for the Board Certified Behavior Analyst Certification Exam. For more information on certification, go to www.bacb.com.

Certification in applied behavior analysis demonstrates a level of competency in research-based principles for education and the treatment of challenging behavior.

The reported increase in the number of children with autism suggests growth in the availability of positions for behavior analysts. Therefore, teachers with certifications in special education and applied behavior analysis will likely be more competitive for teaching positions.

Curriculum

Prerequisites for entry into the program:

- EDSP 644 Applied Behavior Analysis (taken within the past three years with a grade of "B" or better);
- EDSP 670 Autism: Introduction and Understanding (taken within the past three years with a grade of "B" or better);
- Professional certification license in a field related to autism (e.g., special education, psychology, speech language pathology, occupational therapy, or social work).

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>EDSP 671 Autism: Methods and Teaching Strategies</td>
<td>3</td>
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<tr>
<td>EDSP 669 Single Subject Research Methods and Designs</td>
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<tr>
<td>EDSP 646 AAC and a Behavior Analytic Approach to Communication</td>
<td>3</td>
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<tr>
<td>Midpoint Assessment</td>
<td>3</td>
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<tr>
<td>EDSP 650 Advanced Applied Behavior Analysis</td>
<td>3</td>
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<tr>
<td>EDSP 651 Behavior Consultation</td>
<td>3</td>
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<tr>
<td>EDSP 673 Supporting Individuals with HFA/Asperger's Syndrome</td>
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<td>Total minimum credit hours</td>
<td>18</td>
</tr>
</tbody>
</table>
Faculty

Debra Bauder  
Associate Professor

Justin Cooper  
Assistant Professor

Ginevra Courtade  
Associate Professor

Assistant Chair of Special Education Department

Monica Delano  
Associate Professor

Director Doctoral Program  

Erick Dubuque  
Assistant Professor

Regina Hirn  
Assistant Professor

Timothy Landrum  
Professor

Chair of Special Education Department

Amy Lingo  
Professor

Associate Dean for Academic Affairs and Unit Effectiveness

Scott Patton  
Instructor

Rob Pennington  
Assistant Professor

Terry Scott  
Professor

Interim Associate Dean for Research and Graduate Studies

Thomas Simmons  
Associate Professor
Rank I Program in Certified School Counselor

Major: IT
Degree Awarded: NON
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/med-it

Program Information

ADMISSION REQUIREMENTS

- Admission to School of Interdisciplinary and Graduate Studies
- Masters Degree in School Counseling
- Certification in School Counseling
- Signed Professional Code of Ethics/Technology User Agreement

Curriculum

RANK I PROGRAM IN CERTIFIED SCHOOL COUNSELING (P-12)

Courses                                           Credit Hours

Inquiry (Select one of the following) (3 credit hours)      3
ELFH 600 Introduction to Research and Statistics OR
EDAP 639 Education Research in P-12 Setting

Advocacy (Professional Leader) (6 credit hours)      6

Leadership: (select one of the following)
ECPY 605 Human Development
ECPY 611 Learning Systems
EDAP 640 Cognitive Coaching
EDAP 677 Teacher Leader: Mentoring & Coaching
ECPY 730 Social, Legal, and Ethical Issues
ECPY 650 Group Process and Practice

Diversity: (select one of the following)
EDAP 637 Using Assessment to Improve Student Achievement
EDAP 638 Instructional Strategies for Diverse Learners
EDAP 642 Literature, Learning, and Cultural Differences
EDAP 581 Introduction to Gifted Education
ECPY 663 Multicultural Counseling

AREA OF EMPHASIS (at least 12 credit hours)      12
(May be chosen from courses above that are NOT taken to meet the Advocacy requirement)

Electives (9 credit hours)      9
(Independent Study or Directed Readings may be included as approved by faculty advisor; also courses in the Advocacy section may be used here as long as they have NOT been taken in the Advocacy or Area of Emphasis sections)
EDAP 585 Introduction to Educational Technology: Integrating Technology into Instruction
ECPY 601 Introduction to Clinical Mental Health Counseling
ECPY 639 Differential Diagnosis and Treatment in Counseling
ECPY 694 Graduate Seminar in Educational and Counseling Psychology
ECPY 721 Advanced Counseling Seminar
EDSP 540 Introduction to Exceptional Children
EDSP 644 Applied Behavior Analysis
Prior Masters degree in School Counseling
The number of semester hours required to complete Rank I*
Minimum total credit hours 30

*If Masters degree is more than 30 credit hours, indicate the number of hours student needs to complete Rank I. It may be fewer than 30 credit hours.

Exit Requirement: A portfolio is required for successful completion of this program.

Notes:
1. The candidate for Rank I shall hold a School Counseling certificate and a Masters degree in School Counseling.
2. The Rank I classification shall require the completion of 60 semester hours of approved graduate level credit including a Masters degree.
3. The candidate shall plan the Rank I program in consultation with a faculty advisor in the ECPY Department prior to enrolling in Rank I courses.
4. Of the total number of hours on the Rank I program, at least 15 credit hours beyond the Masters degree shall be taken at the University of Louisville. The remaining credit hours may be taken at the University of Louisville, 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, 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 courses carrying a grade lower than “C.”
7. The resulting School Counseling certification will include grades P-12.
8. A portfolio is required for successful completion of this program.

Faculty

Jill Adelson
Associate Professor

Rick Balkin
Professor
Assistant Chair of ECPY Department

Eileen Estes
Assistant Professor

Gene Foster
Instructor
Director of Shawnee Center

Patrick Hardesty
Associate Professor

Amy Hirschy
Assistant Professor

Lisa Hooper
Professor
Program Director of Clinical Mental Health Counseling

Katy Hopkins
Clinical Assistant Professor

Mark Leach
Professor
Interim Chair of ECPY Department

Laurie McCubbin
Associate Professor

Marybeth Orton
Adjunct Faculty
Master of Education in Community Health

Major: HPE
Degree Awarded: MED
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/med-ch

Program Information

This program will be suspended in Summer 2016 and no new applications will be accepted.

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 293 on the verbal and quantitative sections of the GRE and a 4.0 on the Analytical section is required for this program. 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.

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:

- Transcripts of all undergraduate and graduate work. Minimum cumulative grade point average (GPA) of 2.75 overall.
- GRE scores of at least 293 (verbal and quantitative combined) and 4.0 on the Analytical section.
- 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.
- Two letters of recommendation
- Formal Statement of Purpose
## Curriculum

### Core Curriculum

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSS 675 Health Promotion and Disease Prevention at the Individual Level</td>
<td>3</td>
</tr>
<tr>
<td>HSS 676 Community Health Promotion and Disease Prevention</td>
<td>3</td>
</tr>
<tr>
<td>HSS 684 Program Planning in Health Education and Promotion</td>
<td>3</td>
</tr>
<tr>
<td>HSS 655 Current Trends and Issues in Health and Sport Sciences</td>
<td>3</td>
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<tr>
<td>HSS 631 Leadership in Health Promotion</td>
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### Research Methods

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ELFH 600 Introduction to Research Methods and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>HSS 604 Research Methods in Health and Sport Sciences</td>
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<tr>
<td>Internship/Practicum – Location approved by advisor.</td>
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<tr>
<td>HSS 692 Cooperative Internship/Practicum</td>
<td>6</td>
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<tr>
<td>Electives – Courses approved by advisor.</td>
<td>9</td>
</tr>
</tbody>
</table>

**Minimum total hours:** 36

### Exit Requirements:
Student must also satisfactorily complete an exit exam and submit a portfolio of all Hallmark Assessments and internship materials.

## Faculty

- **Kristy King**  
  Assistant Professor

- **Cheryl Kolander**  
  Professor

- **Carol O'Neal**  
  Associate Professor  
  Health Education Program  
  Director
Master of Education in Counseling and Personnel Services with a Concentration in Student Personnel Services

Major: CPS_MEDCPL  
Degree Awarded: MED  
Unit: GE  
Program Webpage: http://louisville.edu/education/departments/ecpy/

Program Information

Master's degree applicants must submit Graduate Record Examination (GRE) scores and obtain a minimum combined score of 800 on the verbal and quantitative sections, if taken prior to August 2011, except for the Counseling Psychology concentration, which requires a minimum combined score of 900.

If the Graduate Record Examination (GRE) is taken August 2011 or thereafter, the following scores are preferred:

For the Art Therapy, Clinical Mental Health, Counseling Psychology, and School Counseling concentrations, a score in the 40th percentile on the Verbal section and the 25th percentile on the Quantitative section.

For the College Student Personnel concentration, a score in the 35th percentile on the Verbal section and 20th percentile on the Quantitative section.

With regard to grade point average (GPA) requirements, applicants must have earned a minimum 2.75 GPA in an undergraduate degree from an accredited institution, except for the Counseling Psychology concentration, which requires a 3.0 GPA.

If the applicant meets one of the above standards and does not meet the other, he or 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

CLINICAL MENTAL HEALTH COUNSELING

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

General Requirement: Undergraduate prerequisite: Course in abnormal psychology ¹

Core Professional Area (total 30 hours)

ELFH 600 Introduction to Research Methods and Statistics ²
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 grade of "B".

ECPY 672  Practicum in Clinical Mental Health Counseling  3

Clinical Mental Health Counseling Concentration (total 24 hours)

ECPY 621  Differential Diagnosis & Treatment in Counseling  3
ECPY 626  Consultation  3
ECPY 640  Assessment Methods for Counselors  3
ECPY 682  Internship in Clinical Mental Health Counseling  3 (Two internships are required for CACREP accreditation)
ECPY 682  Internship in Clinical Mental Health Counseling  3
ECPY 601  Introduction to Clinical Mental Health Counseling  3
ECPY 639  Prevention and Treatment of Substance Abuse  3
ELFH 601  Applied Statistics  3

Professional Electives from the 9 areas designated in Curriculum Guidelines for CACREP and LPCC (total 6 hours)  6

Minimum total hours: 60

Degree Assessment: All program coursework with a 3.0 cumulative GPA.

1. Students admitted to the Clinical Mental Health Counseling Program who have not completed a course in abnormal psychology are required to take PSYC 385: 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 practicum and 2 internships including at least 280 direct service hours. CACREP requires that 600 hours be completed during the internships.

CACREP and Kentucky Board of Licensed Professional Counselors Curriculum Guidelines:

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)**

**Initial Assessment:** Admission to School of Interdisciplinary and Graduate Studies and School Counseling Program

**General Requirement:** Undergraduate prerequisites as required by concentration

**Core Professional Area** (total 30 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ECPY 540</td>
<td>Evaluation and Measurement in Education</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 619</td>
<td>Empirical and Theoretical Foundations of Counseling and Psychotherapy</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 605</td>
<td>Human Development</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 630</td>
<td>Theories and Techniques of School Counseling</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 650</td>
<td>Group Process and Practice</td>
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<td>ECPY 663</td>
<td>Multicultural and Diversity Issues</td>
<td>3</td>
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<tr>
<td>ECPY 670</td>
<td>Career Development and Counseling</td>
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<tr>
<td>ECPY 730</td>
<td>Social, Legal, &amp; Ethical Issues in Counseling</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 600</td>
<td>Introduction to Research Methods and Statistics</td>
<td>3</td>
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</table>

**Mid-Point Assessment:** Prior to Practicum in School Counseling: Students must earn at least a grade of "B" in ECPY 630 & satisfactory completion of midpoint portfolio to be completed in ECPY 624

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
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<tbody>
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<td>ECPY 674</td>
<td>Practicum in School Counseling</td>
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**School Counseling Concentration** (total 21 hours)

<table>
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<tr>
<td>ECPY 611</td>
<td>Learning Systems: Theory and Practice</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 624</td>
<td>Foundations of School Counseling</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 626</td>
<td>Consultation</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 639</td>
<td>Prevention and Treatment of Substance Abuse</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 640</td>
<td>Assessment Methods for Counselors</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 684</td>
<td>Internship in School Counseling (Two internships are required for CACREP accreditation)</td>
<td>3</td>
</tr>
</tbody>
</table>

**MINIMUM TOTAL HOURS** 51

**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 the 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 School of Interdisciplinary and Graduate Studies & College Student Personnel Program

**Core Professional Area** (total 30 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELFH 600</td>
<td>Introduction to Research Methods and Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 660</td>
<td>Introduction to Student Personnel Works</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 661</td>
<td>Theories of College Student Development</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 623</td>
<td>Helping Skills for Student Affairs Professionals</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 662</td>
<td>Student Affairs Programs, Policies, and Practices</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 663</td>
<td>Multicultural and Diversity Issues</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 664</td>
<td>College Student Sub-Cultures</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 670</td>
<td>Career Counseling</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 761</td>
<td>Program development &amp; Evaluation in Student Affairs</td>
<td>3</td>
</tr>
</tbody>
</table>

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 9 hours)

- 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:** 42

Degree Assessment: All program coursework with a 3.0 cumulative GPA.

### COUNSELING PSYCHOLOGY

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

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

**Core Professional Area** (total 30 hours)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECPY 540</td>
<td>Evaluation &amp; Measurement</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 605</td>
<td>Human Development</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 619</td>
<td>Empirical and Theoretical Foundations of Counseling &amp; Psychotherapy</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 629</td>
<td>Theories and Techniques of Counseling &amp; Psychotherapy</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 650</td>
<td>Group Process &amp; Practice</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 663</td>
<td>Multicultural &amp; Diversity Issues</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 670</td>
<td>Career Counseling</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 730</td>
<td>Social, Legal &amp; Ethical Issues</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 600</td>
<td>Introduction to Research Methods and Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

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

- ECPY 673 Practicum in Counseling Psychology 3

**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
ECPY 683  Internship in Counseling Psychology  3
ECPY 775  Biological Bases of Behavior  3
ELFH 601  Applied Statistics  3

Professional Electives (6 hours)  6

Minimum total hours:  60

Degree Assessment: All program coursework 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 Studies & 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 (section taught by an ATR)  3
ECPY 670  Career Counseling  3
ECPY 730  Social, Legal & Ethical Issues (section taught by an ATR)  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 grade of "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  3  
**Minimum total hours**  60  

**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.

**Degree Assessment:** All program coursework 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.

**Faculty**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jill Adelson</td>
<td>Assistant Department Chair</td>
</tr>
<tr>
<td>Richard Balkin</td>
<td>Professor</td>
</tr>
<tr>
<td>Eileen Estes</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Eugene Foster</td>
<td>Instructor</td>
</tr>
<tr>
<td>Patrick Hardesty</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Amy Hirschy</td>
<td>Assistant Professor</td>
</tr>
</tbody>
</table>
| Lisa Hooper       | Mark Leach        | Katie Snyder          | Ahmad Washington
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Professor</td>
<td>Professor</td>
<td>Assistant Professor</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Program Director of Clinical Mental Health Counseling</td>
<td>Interim Department Chair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kathryn Hopkins</td>
<td>Marybeth Orton</td>
<td>Jeffrey Valentine</td>
<td></td>
</tr>
<tr>
<td>Clinical Assistant</td>
<td>Adjunct Faculty</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Patrick Possel</td>
<td></td>
<td>Program Coordinator of Educational Psychology,</td>
<td></td>
</tr>
<tr>
<td>Assistant Professor</td>
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<td></td>
<td></td>
<td>Hongryun Woo</td>
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<tr>
<td></td>
<td></td>
<td>Assistant Professor</td>
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</tbody>
</table>
Doctor of Philosophy of Education
Counseling and Personnel Services

Major: CPS_PHDSTP
Degree Awarded: Ph.D.
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/phd-cps-csp

Program Information


Distinctive Characteristics of Doctoral Programs in the College of Education and Human Development.

I. Social Justice and Equity

Aligned with our mission, our students would build experience and expertise in the issues of social justice and equity. This theme would align with our metropolitan mission and that of student achievement.

II. Leadership

This area could be assisted by the Future Faculty/Future Leaders program. Leadership is a distinct focus in other programs in the College of Education and Human Development 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 the College of Education and Human Development 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 College of Education and Human
Development 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 CREDIT HOUR PROGRAM

**Master’s Degree prerequisite + 60 credit 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 credit hours minimum) *Selected with Program Committee Approval*

- **Research Methodology** (27 credit hours minimum) *Selected with Program Committee Approval*

  - Statistics and Methodology I (*ELFH 601 or equivalent required*) 3
  - Statistics and Methodology II $^b$ (*ELFH 701 – Intermediate Multiple Regression*) 3
  - Statistics and Methodology III (*ELFH 703 - Multivariate educational statistics*) 3
  - Research Electives: 6
  - *e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.* $^{a,b}$
  - Dissertation/Portfolio Research 12

**Elective Component or Master’s Degree** Master’s Degree comprises Elective component of program.

- *Selected with Program Committee Approval within program guidelines/framework*
- *b. ELFH 600 may not be used for this course.*

**Minimum total credit hours:** 60

### 90 CREDIT 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** (60 credit hours minimum) *Selected with Program Committee Approval.*

- Includes Counseling Core -- 12 credit hours 12
- Foundations -- 18 credit hours 18

**RESEARCH METHODOLOGY** (27 credit hours minimum) *Selected with Program Committee Approval*
Statistics and Methodology II (ELFH 701 or equivalent required) 3

Statistics and Methodology III (ELFH 702 - Applied Multiple Regression or equivalent required) 3

Statistics and Methodology IV (ELFH 703 - multivariate educational statistics or ECPY 793 Structural Equation Modeling or ECPY 793 Multilevel Modeling or ECPY 793 Meta-analysis and Systematic Review or equivalent required) 3

**Evaluation and Measurement** (ECPY 540 or equivalent required) 3

Advanced Psychotherapy Research Methodology I (ECPY 793 Adv. Psychotherapy Research and Practice or equivalent required) 3

Supervised Research (ECPY 700) 6

Dissertation/Portfolio Research 3

**ELECTIVE COMPONENT** (21 credit hours Minimum) *Selected with Program Committee Approval* Counseling Psychology Specialty - 21 credit hours 21

a. *Selected with Program Committee Approval within program guidelines/framework*

b. *ELFH 600 may not be used for this course.*

**Minimum total credit hours:** 108

**SPECIALIZATION IN COUNSELOR EDUCATION AND SUPERVISION**

**Master's Degree prerequisite + 60 credit 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 credit hours minimum) 24 credit hours Required Courses + minimum 9 hours of Specialty Electives *Selected with Program Committee Approval.*

- ECPY 755 Counselor Supervision 3
- ECPY 793 Advanced Counseling and Consultation 3
- ECPY 793 Advanced Theories of Counseling and Psychotherapy 3
- ECPY 724 Advanced Multicultural Counseling 3
- ECPY 731 Counseling Education Seminar: Teaching, Ethics, & Professional Issues in Counselor Education 3
- ECPY 782 Doctoral Internship 6
RESEARCH METHODOLOGY (27 credit hours minimum) Selected with Program Committee Approval

Statistics and Methodology I (ELFH 601 or equivalent required) 3
Statistics and Methodology II (ELFH 701 Intermediate Multiple Regression) 3
Statistics and Methodology III (ELFH 703 - Multivariate Educational Statistics) 3

Research Electives: e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies. a,b 6

Dissertation/Portfolio Research 12

ELECTIVE COMPONENT OR MASTER'S DEGREE Master's Degree comprises Elective Component of program.

a. Selected with Program Committee Approval within program guidelines/framework

b. ELFH 600 may not be used for this course.

Minimum total credit hours: 90

Faculty

Jill Adelson
Assistant Professor

Patrick Hardesty
Associate Professor

Mark Leach
Professor

Jeffrey Valentine
Professor

Richard Balkin
Professor

Amy Hirschy
Assistant Professor

Interim Director

Program Coordinator of

Educational Psychology,

Measurement, and

Evaluation (EPME)

Assistant Chair

Laurie McCubbin
Associate Professor

Marybeth Orton
Adjunct Faculty

Ahmad
Washington
Assistant Professor

Eileen Estes
Assistant Professor

Lisa Hooper
Professor

Patricia Possel
Associate Professor

Katie Snyder
Clinical Assistant Professor

Katy Hopkins
Clinical Assistant Professor

Hongryum Woo
Assistant Professor
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 the College of Education and Human Development

I. Social Justice and Equity

Aligned with our mission, our students would build experience and expertise in the issues of social justice and equity. This theme would align with our metropolitan mission and that of student achievement.

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III. Practical Experience

The doctoral programs in the College of Education and Human Development 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.

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Curriculum

60 CREDIT HOUR PROGRAM

Master’s Degree prerequisite + 60 credit 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 credit hour minimum) *Selected with Program Committee Approval* 30

*EDAP 711 Doctoral Professional Seminar: First Year* 3

Research Methodology (27 credit hour minimum) *Selected with Program Committee Approval*

*ELFH 601 Applied Statistics* 3

*ELFH 701 – Intermediate Multiple Regression* 3

*ELFH 703 - Multivariate Educational Statistics* 3

Research Electives: 6
e.g., *Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.* *a,b*

Dissertation Research 12-15

Elective Component Masters Degree comprises elective component of program and satisfies 30 credit hours of the Ph.D. program.

a. *Selected with Program Committee Approval within program guidelines/framework*

b. *ELFH 600 may not be used for these courses.*

Minimum total credit hours: 90

90 CREDIT 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 credit hour minimum) *Selected with Program Committee Approval* 39

*EDAP 711 Doctoral Professional Seminar: First Year* 3

**RESEARCH METHODOLOGY** (27 credit hour minimum) *Selected with Program Committee Approval*
ELFH 601 Applied Statistics  
ELFH 701 – Intermediate Statistics  
ELFH 703 - Multivariate Educational Statistics  

Research Electives:  

e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies. a,b  

EDAP 795 Dissertation Research  

ELECTIVE COMPONENT (21 credit hour minimum) Selected with Program Committee Approval  

a. Selected with Program Committee Approval within program guidelines/framework  

b. ELFH 600 may not be used for these courses.  

Minimum total credit hours:  

90  

Faculty  

Kathryn Whitmore Barten  
Professor  
Endowed Chair  

Debra Bauder  
Associate Professor  

Jennifer Bay-Williams  
Professor  
Chair of Middle/Secondary Education Department  

Sherri Brown  
Associate Professor  
Director Early Childhood and Elementary Program  

James Chisholm  
Assistant Professor  

Justin Cooper  
Assistant Professor  

Ginevra R. Courtade  
Associate Professor  

Ann Elisabeth Larson  
Professor  

Monica E. Delano  
Associate Professor  
Director of Doctoral Programs  

Penny Howell  
Associate Professor  

Timothy J. Landrum  
Professor  

Amy Lingo  
Professor  

Maggie McGatha  
Associate Professor  

Lori Norton-Meier  
Professor  

Robert Pennington  
Assistant Professor  

Susan Peters  
Associate Professor  

Terry Scott  
Professor  

Interim Associate Dean for Research and Graduate Studies  

Caroline Sheffield  
Associate Professor  

Thomas Simmons  
Assistant Professor  

Steve Swan  
Instructor  

Shelley Thomas  
Associate Professor  

Thomas R. Tretter  
Professor
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

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:

- Nurturing students as active agents in their own learning
- Authentic, performance-based assessment of teaching and learning
- Meeting the needs of all students
- Responding constructively to sociocultural 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:

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

Curriculum

Initial Assessment: Admission to School of Interdisciplinary and Graduate Studies and Teacher Education. Minimum undergraduate degree GPA 2.75, Minimum GRE scores as required by EPSB; three letters of recommendation; professional statement; signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admission Guidelines; Bachelor's degree; "C" or higher in English 102 and oral communication; interview.

EDTP 527 Inquiry into Early Childhood Education and Child Development 3
EDTP 532 Advanced Curriculum and Methods in Early Childhood Education 3
EDTP 533 Curriculum and Methods in Early Childhood Special Education 3
EDTP 536 Theories of Play 3
EDTP 537 Infant/Toddler Development and Care 3
EDTP 635 Administration and Consultations: Day Care and Early Childhood Education 3
EDTP 641 Interdisciplinary Content Methods in Early Childhood Education 3
EDSP 684 Family Dynamics and Early Interventions in IECE 3
EDSP 683 Early Childhood/Special Education Screening 3
Course elective approved by advisor 3

**Mid-Point Assessment: Prior to Student Teaching:** No lower than 2.0 in EDTP 641; successful completion of all courses listed above except EDSP 684; Positive recommendation from Program Committee (including assessment of dispositions and mid-program portfolio). Electronic documentation of 200 hours of diverse and approved field experiences.

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

**Minimum total credit hours:** 36

**Certification Assessment:** After Student Teaching: Satisfactory dispositions assessment; 2.0 or higher in student teaching; satisfactory certification portfolio; Passing scores on required PRAXIS exams; Positive recommendation from ECEE Program Committee.

**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.

**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 under the section called academic policies and requirements.

**Praxis Disclaimer:** Teacher certification requirements are subject to change. Before registering for certification test(s), please refer to the Education Professional Standards Board (EPSB) website at [www.epsb.ky.gov](http://www.epsb.ky.gov) or [http://www.ets.org/praxis/ky](http://www.ets.org/praxis/ky) for current requirements.

**Faculty**

**Kathryn Whitmore Barten**
Professor
Endowed Chair

**Sherri Brown**
Associate Professor
Assistant Chair of Early Childhood and Elementary Education

**Ginevra Courtade**
Associate Professor
Assistant Chair of Special Education Department

**Betty Doyle**
Instructor

**Amy Seely Flint**
Professor
Chair of Early Childhood and

**Elementary Education Department**

**Jill Jacobi-Vessels**
Assistant Professor

**Interim Director of Early Learning Campus**

**Timothy Landrum**
Professor

**Chair of Special Education Department**

**Lori Norton-Meier**
Professor

**Amy Stevens**
Instructor
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

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 the School of Interdisciplinary and Graduate Studies and Teacher Education; minimum undergraduate degree GPA 2.75; minimum GRE scores as required by EPSB; three letters of recommendation; professional statement; signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admissions Guidelines; Bachelor’s degree and specific prerequisite courses; "C" or higher in English 102 and oral communication course; and acceptable interview.

*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 prerequisites met; all courses listed above passed; Positive recommendation from Elementary Program Committee (including assessment of dispositions and mid-program portfolio). Electronic documentation of 200 hours of diverse and approved field experiences.

*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 580 Digital Citizenship: Teaching with Technology ¹ 3
¹ Can be taken at any point in the program.
* Course is required for certification

Minimum total credit hours 36

Prerequisite courses remaining to complete certification requirements:

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).

Praxis Disclaimer: Teacher certification requirements are subject to change. Before registering for certification test(s), please refer to the Education Profession Standards Board (EPSB) website at www.epsb.ky.gov or www.ets.org/praxis for current requirements.

Degree Candidacy: Students not enrolled during the semester in which they intend to graduate must register for degree candidacy as outlined in the Graduate Catalog, "Academic Policies, Procedures, and Requirements".

Faculty

Kathryn Whitmore Barten  Professor
Sherri Brown  Associate Professor
Tammi Davis  Instructor

Betty Doyle  Instructor
Tia Dumas  Clinical Assistant
John Finch  Instructor
Amy Seely Flint  Professor

Education Department
Jill Jacobi-Vessels  Assistant Professor
Interim Director of Early Learning Campus
Pam Jett  Instructor
Justin McFadden  Assistant Professor
Lori Norton-Meier  Professor

Mikkaka Overstreet  Instructor
Caroline Sheffield  Associate Professor
Steve Swan  Instructor
Shelley Thomas  Associate Professor
Specialist in Education in Educational Administration

Major: EDAD  
Degree Awarded: Ed.S.  
Unit: GE  
Program Webpage: http://louisville.edu/education/degrees/eds-ea

Program Information

Includes both Principal Certification and Supervisor of Instruction Certification

Cards 7: Degree Program Admission Requirements

- Joint screening by ELFH Department and local school district personnel
- A written rationale for pursuing the degree (limit of 1 page)
- A current resume
- Your philosophy of education (not to exceed 2 pages)
- Two written letters of recommendation attesting to the candidate's skills and understanding of (a) ability to improve student achievement, (b) leadership, (c), advanced knowledge of curriculum, instruction, and assessment. One must be from the current site supervisor.
- Three years of successful K-12 teaching experience in Kentucky (including successful completion of the Kentucky Teacher Internship Program), or three years (1 year = 140 contract days) of successful K-12 teaching outside the state of Kentucky.

Admission

- Evidence of bachelor’s and master's degree.
- Transcripts of all undergraduate and graduate work

Admission to this Program

- General Test Section score on the Graduate Record Examination of 900 (Verbal + Quantitative)
- A 3.3 grade point average from the Masters degree program
- Signed copies of the following forms: Acceptable Use of Technology Agreement and Professional Code of Ethics for Kentucky School Personnel

Curriculum

Level 1

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELFH 633</td>
<td>Organizational Structures and Operations</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 634</td>
<td>P-12 Leadership for Curriculum, Instruction, and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 635</td>
<td>P-12 Human Resources: Securing and Developing Staff</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 636</td>
<td>Shaping School Culture and Community</td>
<td>3</td>
</tr>
</tbody>
</table>

MIDPOINT ASSESSMENT

Satisfactory dispositions assessment. Satisfactory completion of Hallmark/Dispositions Assessments in ELFH 633, 634, 635, and 636. Must maintain a GPA of 3.3.
ELFH 637  Leveraging Community Systems and Resources for School Improvement  3
ELFH 620  Legal Issues in P-12 Education  3
ELFH 622  Educational Resource Management in P-12 Education  3
ELFH 782  Reflective Practice for School Leaders  3

Total Hours for Level 1  24

Refer to program completion requirements for Level 1 prior to Level 2
ELFH 609  Principal Internship (required course)  3
ELFH XXX  Elective (TBD by student and advisor - may be a course leading to additional certification)  3
ELFH XXX  Elective (TBD by student and advisor - course may be outside of the College of Education)
ELFH XXX  Elective (TBD by student and advisor - course may be outside of the College of Education)

EXIT ASSESSMENT
Students in the Ed.S. program will be required to complete an exit portfolio in their last semester of the program.

Minimum Total Hours for Ed.S.  30
Minimum Total Hours for Rank I*  60

*Completion of a Rank I program requires a minimum of 60 hours in approved program before 45 hours have been completed. For Rank I purposes, approved graduate hours at the Masters level may be counted to reach 60 hours, though some of those hours may not count toward 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.

DEGREE PROGRAM COMPLETION REQUIREMENTS

1. A grade point average of 3.3 in all courses counting on this program.
2. Successful completion of a capstone in ELFH 782 at the completion of Level 1.
3. Successful completion of a program portfolio at the end of Level 2. Information about the portfolio is found in "Guidelines for Portfolio Completion Requirement," available from your advisor.

Certification requirements

1. The Education Professional Standards Board is responsible for issuing and renewing certificates for all Kentucky teachers and administrators. Candidates for principal certification must pass both the SLLA and the KYTP. These tests may be taken during the last semester of coursework for Level 1 Principal Certification. Current information about the Kentucky assessment program may be retrieved from www.kyepsb.net/assessment/.
2. Completion of three (3) years of full-time teaching experience.

Faculty

Meera Alagaraja  Associate Professor
Mathew Bergman  Assistant Professor
Lee Bewley  Associate Professor
Jessica Buckley  Clinical Assistant Professor
Roger Buskill  Instructor
Namok Choi  Professor
Denise Cumberland  Assistant Professor
<table>
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<tr>
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<td>Professor</td>
</tr>
</tbody>
</table>
Doctor of Education in Educational Leadership and Organizational Development

Major: ELOD  
Degree Awarded: Ed.D.  
Unit: GE  
Program Webpage: http://louisville.edu/education/degrees/edd-elod

Program Information

Distinctive Characteristics of Doctoral Programs in the College of Education and Human Development

I. Social Justice and Equity

Aligned with our mission, our students would build experience and expertise in the issues of social justice and equity. This theme would align with our metropolitan mission and that of student achievement.

II. Leadership

This area could be assisted by the Future Faculty/Future Leaders program. Leadership is a distinct focus in other programs in the College of Education and Human Development 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 the College of Education and Human Development 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 College of Education and Human Development 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 CREDIT HOUR PROGRAM

**Master’s Degree prerequisite + 60 credit 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 credit hours minimum), *selected with Program Committee Approval*

ELFH 715 Advanced Organizational Theory  3

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

Statistics and Methodology I (*ELFH 601 or equivalent required*)  3
Research Course to aid in the completion of the EdD Degree  3
Research Course to aid in the completion of the EdD Degree  3

**RESEARCH ELECTIVES:**

e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies. *a,b*
ELFH 777 Capstone for Education Doctorate Degree  12

**MASTER’S DEGREE OR ELECTIVE COMPONENT** Master’s Degree comprises Elective component of program.
a. Selected with Program Committee Approval within program guidelines/framework
b. *ELFH 600 may not be used for this course.*

Minimum total credit hours:  60

90 CREDIT 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 credit hours minimum), *selected with Program Committee Approval*

ELFH 715 Advanced Organizational Theory  3

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

Statistics and Methodology I (*ELFH 601 or equivalent required*)  3
Research Course to aid in the completion of the EdD Degree  3
Research Course to aid in the completion of the EdD Degree  3

**RESEARCH ELECTIVES:**

e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies. *a,b*
ELFH 777 Capstone for Education Doctorate Degree  12

**ELECTIVE COMPONENT** selected with Program Committee Approval  21
a. Selected with Program Committee Approval within program guidelines/framework
b. ELFH 600 may not be used for this course.

Minimum total credit hours: 90

**Faculty**

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Meera Alagaraja</td>
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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

Program Information

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

Distinctive Characteristics of Doctoral Programs in the College of Education and Human Development

I. Social Justice and Equity

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Curriculum

60 CREDIT HOUR PROGRAM

Master's Degree prerequisite + 60 credit 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.

CORE AND ELECTIVE COGNATE COMPONENTS (33 credit hours minimum), selected with Program Committee Approval

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>ELEOD Core (ELFH 710 -- Introduction to Doctoral Studies Seminar) 3</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>ELEOD Core (ELFH 674 -- Advanced Leadership Theory) 3</td>
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<tr>
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<td>ELEOD Core (ELFH 715 -- Advanced Organization Theory) 3</td>
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<tr>
<td></td>
<td>ELEOD Core (ELFH 780 -- Problem Analysis) 3</td>
</tr>
<tr>
<td></td>
<td>Electives 21</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Credit Hours</th>
<th>Research Core (ELFH 601 or equivalent required) 3</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Research Core (ELFH 701 -- Intermediate Multiple Regression)(^a) 3</td>
</tr>
<tr>
<td></td>
<td>Research Core (ELFH 703 -- Multivariate Educational Statistics) 3</td>
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<td></td>
<td>Research Core (ELFH 704 -- Qualitative Research Methods) 3</td>
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<td></td>
<td>Research Core (ELFH 705 -- Qualitative Data Analysis) 3</td>
</tr>
<tr>
<td></td>
<td>Dissertation/Portfolio Research (ELFH 795 -- Dissertation Credit Hours) 12</td>
</tr>
</tbody>
</table>

ELECTIVE COMPONENT OR MASTER'S DEGREE

Master's Degree comprises Elective component of program.

\(a\). ELFH 600 may not be used for this course.

Minimum total credit hours 60

90 CREDIT 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.

CORE AND ELECTIVE COGNATE COMPONENTS (42 credit hours minimum), selected with Program Committee Approval

<table>
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<th>Credit Hours</th>
<th>ELEOD Core (ELFH 710 -- Introduction to Doctoral Studies Seminar) 3</th>
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<td></td>
<td>ELEOD Core (ELFH 715 -- Advanced Organization Theory) 3</td>
</tr>
</tbody>
</table>
ELEOD Core (ELFH 780 -- Problem Analysis) 3
Electives 30

RESEARCH METHODOLOGY (27 credit hours minimum), selected with Program Committee Approval
Research Core (ELFH 601 or equivalent required) 3
Research Core(ELFH 701 -- Intermediate Multiple Regression) 3
Research Core (ELFH 703 -- Multivariate Educational Statistics) 3
Research Core (ELFH 704 -- Qualitative Research Methods) 3
Research Core (ELFH 705 -- Qualitative Data Analysis) 3
Dissertation/Portfolio Research (ELFH 795 -- Dissertation Credit Hours) 12

ELECTIVE COMPONENT (21 credit hours Minimum), selected with Program Committee Approval 21

Minimum total credit hours 90

Faculty

Meera Alagaraja
Associate Professor

Bradley Carpenter
Assistant Professor

Ann Herd
Assistant Professor

Kevin Rose
Assistant Professor

Mathew Bergman
Assistant Professor

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Roger Buskill
Instructor

W. Blake Haselton
Associate Professor

Carlos McCray
Associate Professor

Department Chair

Ann Herd
Assistant Professor

Kevin Rose
Assistant Professor

Terri Rowland
Clinical Assistant Professor

Brad Shuck
Associate Professor

Jeffrey Sun
Professor
Rank I Program in Elementary Education

Major: ERED
Degree Awarded: NON
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/rank

Program Information

PROGRAM ADMISSION PROCEDURE

- Hold Certification in P-5 and a Masters degree or Rank II equivalency
- Admission to the School of Interdisciplinary and Graduate Studies

Curriculum

RANK I IN ELEMENTARY EDUCATION PROFESSIONAL PROGRAM (FULFILLS THE REQUIREMENTS FOR THE M.ED. IN ELEMENTARY EDUCATION)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP 606 Orientation and Readings (take in first semester of enrollment)</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 600 Introduction to Research Methods &amp; Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Leadership and change: (select one of the following courses)</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 607 Leadership and Change</td>
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<tr>
<td>ELFH 603 Administrative Leadership in a Reform Environment</td>
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<tr>
<td>EDAP 624 Curriculum Theory</td>
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<tr>
<td>EDAP 625 Social and Ethical Development of Teaching</td>
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<tr>
<td>Success for All Learners: (select one of the following courses)</td>
<td>3</td>
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<tr>
<td>EDAP 642 Literacy Learning &amp; Cultural Differences</td>
<td></td>
</tr>
<tr>
<td>EDAP 626 Affirming Diversity</td>
<td></td>
</tr>
<tr>
<td>EDTP 503 Developing Cross-Cultural Competence</td>
<td></td>
</tr>
</tbody>
</table>

AREA OF EMPHASIS

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP 680 Capstone Course</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

Exit Requirement: Portfolio or Master’s Thesis (EDAP 699)

Minimum total hours 30

Midpoint Requirement: M.Ed. candidates are required to submit a mid-program portfolio at the completion of 15 credit hours of coursework. 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.

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. Only 6 hours taken in non-degree status may be applied to a Masters degree, with advisor's approval.
4. To complete the program, students must have a minimum grade point average of 3.0. No credit shall be accepted for carrying a grade lower than "C".


To obtain Rank I, a total of 60 hours of graduate coursework beyond the Bachelors degree must be earned.

**RANK I PROGRAM IN ELEMENTARY EDUCATION ADVANCED PRACTITIONER (FOR STUDENTS WHO HAVE EARNED A MASTERS DEGREE)**

<table>
<thead>
<tr>
<th>Courses</th>
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<tbody>
<tr>
<td>Leading Change (Select one of the following courses)</td>
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</tr>
<tr>
<td>EDAP 606 Orientation and Readings (take in first semester of enrollment)</td>
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<tr>
<td>EDAP 607 Leadership and Change</td>
<td></td>
</tr>
<tr>
<td>EDAP 624 Curriculum Theory</td>
<td></td>
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<tr>
<td>EDAP 625 Social and Ethical Development of Teaching</td>
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<tr>
<td>ELFH 603 Administrative Leadership in a Reform Environment</td>
<td></td>
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<tr>
<td>ELFH 600 Introduction to Research Methods &amp; Statistics OR</td>
<td></td>
</tr>
<tr>
<td>FROM Leadership and change category</td>
<td></td>
</tr>
<tr>
<td>The Multicultural Learner: (select one of the following courses)</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 642 Literacy learning &amp; Cultural Differences</td>
<td></td>
</tr>
<tr>
<td>EDTL 626 Affirming Diversity</td>
<td></td>
</tr>
<tr>
<td>EDTP 503/403 Developing Cross-Cultural Competence</td>
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<tr>
<td>SOC 630 Sociology of Education</td>
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<td>WMST 532 History of American Sexualities</td>
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<tr>
<td>WMST 556 Feminist Theory</td>
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<tr>
<td>PAS 529 Teacher Institute on African-American Issues</td>
<td></td>
</tr>
<tr>
<td>Area of Emphasis</td>
<td>12</td>
</tr>
<tr>
<td>EDAP 680 Capstone Course</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>9</td>
</tr>
<tr>
<td>Exit Requirement: Portfolio or National Board Certification</td>
<td></td>
</tr>
<tr>
<td><strong>Minimum total hours</strong></td>
<td><strong>30</strong></td>
</tr>
</tbody>
</table>

**Midpoint Requirement:** Candidates are required to submit a mid-program portfolio at the completion of 15 credit hours of coursework. 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.

**Notes**

1. Minimum of 18 hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the faculty advisor (maximum of 6 hours) - final acceptance is dependent upon receipt of official transcripts.
3. Only 6 hours taken in non-degree status may be applied toward a Master's degree, with faculty advisor's approval.
4. To complete the program, a minimum grade point average of 3.0 is required. No credit shall be accepted for carrying a grade lower than a "C".
5. To obtain Rank I, a total of 60 hours of graduate credit beyond the Bachelors degree must be earned.

**Faculty**

<table>
<thead>
<tr>
<th>Kathryn Whitmore Barten</th>
<th>Sherri Brown</th>
<th>Elementary Education Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>Associate Professor</td>
<td>Tammi Davis</td>
</tr>
<tr>
<td>Endowed Chair</td>
<td>Director of Early Childhood</td>
<td>Instructor</td>
</tr>
</tbody>
</table>

**Betty Doyle**

**Tia Dumas**

**Clinical Assistant Professor**
John Finch  
*Instructor*

Amy Seely Flint  
*Professor*

Jill Jacobi-Vessels  
*Assistant Professor*

Interim Director of Early Learning Campus

Pamela Jett  
*Instructor*

Tasha Laman  
*Associate Professor*

Director of the Nystrand Center of Excellence in Education

Justin McFadden  
*Assistant Professor*

Lori Norton-Meier  
*Professor*

Mikkaka Overstreet  
*Instructor*

Director of Minority Teacher Recruitment Project
Elementary Mathematics Specialist (P-5) Teaching Endorsement

Major: 
Degree Awarded: NON 
Unit: GE 
Program Webpage: http://louisville.edu/education/degrees/endorsements

Program Information

PROGRAM ADMISSION PROCEDURE

- Hold Certification in P-5 and a Masters degree or Rank II equivalency
- Admission to the School of Interdisciplinary and Graduate Studies

Curriculum

CARDS 4 (Entry Assessment): Admission to School of Interdisciplinary and Graduate Studies and to the Elementary Mathematics Specialist Endorsement program; must hold a valid teaching certificate. EDAP 646 and EDAP 647 have the prerequisite course of an Elementary Mathematics Methods course.

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP 646</td>
<td>Advanced Methods: Number &amp; Algebra</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 647</td>
<td>Advanced Methods: Geometry and Data</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 640</td>
<td>Cognitive Coaching</td>
<td>3</td>
</tr>
</tbody>
</table>

CARDS 5 (Mid-point Assessment- after 9 hours): Successful completion of all Core courses including Hallmark assessments. The advisor assesses the candidate’s Hallmark Assessments using the Ideas to Action Unit Disposition Rubric and the Ideas to Action Holistic Construct Rubric. The candidate must submit a dispositions assessment completed by a school administrator, instructional coach, or department chair and a dispositions self-assessment as a requirement of EDAP 640 Cognitive Coaching; minimum GPA of 3.0.

Electives – 6 hours (Pick two from the following)

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP 604</td>
<td>Formative Assessments in Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 674</td>
<td>Math for Girls and other Problem Solvers</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 694</td>
<td>Culture and Language in P-12 Math and Science Teaching</td>
<td>3</td>
</tr>
</tbody>
</table>

CARDS 6 (Exit Assessment): Candidates Hallmarks will be assessed with the Advanced Practitioner’s Diversity Rubric. Candidates will be assessed according to the KTS, technology...
and Impact Assessment Rubrics. Candidates must meet the acceptable or target criterion on all rubrics. Candidates must maintain a minimum cumulative GPA of 3.0 in graduate coursework. The Education Advising and Student Services Office (EASS) conducts a program check upon completion of the program and candidates are informed of TC1 application procedures.

| Minimum total hours: | 15 |

Notes
1. Transfer credit must be officially accepted by the advisor - final acceptance is dependent upon receipt of official transcripts.
2. A maximum of 6 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
3. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".
Master of Science in Exercise Physiology

Major: EXP
Degree Awarded: MS
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/ms-ep

Program Information

General program information: Students who complete the Master of Science degree in Exercise Physiology are prepared to pursue a number of career options. Graduates from our program have continued their education by completing the Ph.D. degree in fields such as exercise physiology, physiology, biochemistry, and the M.D. Many students have pursued careers in allied health fields such as nursing and physical therapy as well as in such fields as aviation physiology, cardiac rehabilitation, corporate wellness, and ergonomics. Because many of our students seek to work in the fields of cardiac rehabilitation and corporate wellness, the curriculum is structured to satisfy the preliminary requirements for certification as “exercise technologist” or “exercise specialist” as set by the American College of Sports Medicine. The curriculum provides students the necessary knowledge base and course work to satisfy entrance into the certification process (which is under 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 293 (Verbal and Quantitative sections combined) and 4.0 on the Analytical section of 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 293 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 (WITH PRIOR ORGANIC CHEMISTRY)

The M.S. thesis option requires a minimum of 33 credit hours of course work, which includes six (6) 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 credit hours must be at the 600 level or above

Admission Requirements: Organic Chemistry with lab (4 credit hours)

<table>
<thead>
<tr>
<th>First Year:</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td></td>
</tr>
</tbody>
</table>
EXP 501 Applied Exercise Physiology 3  
EXP 601 Lab Methods in Exercise Physiology 3  

**Spring**  
EXP 502 Principles of Exercise Testing & Prescription 3  
EXP 600 Physiology of Exercise 3  
HSS 604 Research Methods in HSS 3  

**Summer**  
EXP 603 Seminar in Exercise Physiology 3  
EXP 699 Thesis 6  

**Pre-PHD Concentration** (18 credit hours)  
PHZB 605 Systemic Physiology I 5  
PHZB 606 Systemic Physiology II 5  
BIOCH 645 Advanced Biochemistry I 4  
*BIOCH 647 Advanced Biochemistry II* 4  
Minimum Total Credit Hours 42  

**NON-THESIS CLINICAL 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 credit hours of course work. The non-thesis program requires two full years of study including the summer between the first and second years.  

**Core** (24 credit hours)  
EXP 501 Applied Exercise Physiology 3  
EXP 601 Lab Methods in Exercise Physiology 3  
EXP 605 Human Physiology 3  
EXP 502 Principles of Exercise Testing & Prescription 3  
EXP 600 Physiology of Exercise 3  
EXP 604 Advanced Topics in Exercise Physiology 3  
HSS 604 Research Methods in HSS 3  
EXP 603 Seminar in Exercise Physiology 3  

**Clinical Concentration** (12 credit hours)  
EXP 503 Clinical Exercise Physiology 3  
EXP 611 Principles of Electrocardiography 3  
EXP 620 Exercise Physiology Clinical Internship 6  
Minimum Total Credit Hours 36  

**THESIS OPTION - CONCENTRATION IN STRENGTH AND CONDITIONING**  
This option is suspended as of Spring 2016. No applications are being taken.  

**Core** (24 credit hours)  
HSS 604 Research Methods in HSS 3
EXP 501 Applied Exercise Physiology 3
EXP 502 Principles of Exercise Testing & Prescription 3
EXP 600 Physiology of Exercise 3
EXP 601 Laboratory Methods in Exercise Physiology 3
EXP 603 Seminar in Exercise Physiology 3
EXP 604 Advanced Topics in Exercise Physiology 3
EXP 605 Human Physiology 3

**Strength and Conditioning Concentration** Thesis option (10-15 credit hours)

- HSS 530 Nutrition and Athletic Performance 3
- EXP 607 Neuromuscular Mechanics of Human Movement 3
- EXP 608 Advanced Strength and Conditioning 3
- EXP 699 Thesis 1-6

**Minimum Total Credit Hours** 36-39

### NON-THESIS OPTION - CONCENTRATION IN STRENGTH AND CONDITIONING

**Core** (24 credit hours)

- HSS 604 Research Methods in HSS 3
- EXP 501 Applied Exercise Physiology 3
- EXP 502 Principles of Exercise Testing & Prescription 3
- EXP 600 Physiology of Exercise 3
- EXP 601 Laboratory Methods in Exercise Physiology 3
- EXP 603 Seminar in Exercise Physiology 3
- EXP 605 Human Physiology 3

**Strength and Conditioning Concentration** Non thesis option (12-15 credit hours)

- HSS 530 Nutrition and Athletic Performance 3
- EXP 607 Neuromuscular Exercise Physiology 3
- EXP 608 Strength and Conditioning I 3
- EXP 609 Strength and Conditioning II 3
- EXP 620 Exercise Physiology Clinical Internship 3-6

**Minimum Total Credit Hours** 36-39

### Faculty

**Adrienne Bratcher**
Assistant Professor
M.S. Program Coordinator

**John Caruso**
Professor

**Daniela Terson de Paleville**
Assistant Professor

**Jessica Gibb**
Instructor

**Tiffany Isaac**
Instructor

**Michael Jett**
Instructor

**Ann Swank**
Professor

**Brock Symons**
Assistant Professor
Gifted and Talented Education Teaching Endorsement

Major:
Degree Awarded: NON
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/endorsements

Program Information

PROGRAM ADMISSION PROCEDURE

- Hold Certification in P-5 and a Masters degree or Rank II equivalency
- Admission to the School of Interdisciplinary and Graduate Studies

Curriculum

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP 581</td>
<td>Introduction to Gifted Education (Must be completed 1st semester of program)</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 682</td>
<td>Responding to Needs of Gifted and Talented Students</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 683</td>
<td>Curriculum and Instruction for Gifted Students</td>
<td>3</td>
</tr>
</tbody>
</table>

CARDS 4 (Entry Assessment): Admission to Graduate School and to the Endorsement in Gifted & Talented Education program; Self-Assessment on Kentucky Guide to Reflective Classroom Practice; Professional Growth Plan; must hold a valid teaching certificate.

CARDS 5 (Mid-point Assessment- after 9 hours): Successful completion of all Level 1 work; self-assessment on standards 1-4 of the Kentucky Guide to Reflective Practice. Scored acceptable or target on Rubrics for Advanced Candidates (by advisor); acceptable Dispositions assessment; minimum GPA of 3.0.

Leadership in Gifted and Talented (3 hours)

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP 684</td>
<td>Practicum in Gifted Education</td>
<td>3</td>
</tr>
</tbody>
</table>

CARDS 6 (Exit Assessment): Successful completion of all required coursework; adapted exit work sample, 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: 12
Notes
1. Transfer credit must be officially accepted by the advisor - final acceptance is dependent upon receipt of official transcripts.
2. A maximum of 6 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
3. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".
Master of Arts in Teaching Health and Physical Education

Major: HPE
Degree Awarded: MAT
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/mat-hpe

Program Information

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

The Departments of Teaching and Learning and Health and Sport Sciences are 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 degree offers school-based methods in the fall semester (August-December) in health and physical education for grades P-12. During the spring semester candidates complete 15 weeks of student teaching at both the elementary and secondary levels, a weekly seminar class and an action research project. The program's schedule coincides with that of the public schools. Candidates progress through the program in a cohort group. The program is full-time and classes are offered only during the day.

Curriculum

**Initial Assessment:** Admission to School of Interdisciplinary and Graduate Studies and Admission to Teacher Education. Minimum undergraduate degree GPA of 2.75, Minimum GRE scores as required by EPSB; Praxis II content exam registration and/or scores; three letters of recommendation; professional statement; Bachelor's degree with major in content area or appropriate prerequisite courses; "C" or higher in English 102 and oral communication course.

**Prerequisites:** ECPY 507607 or EDTP 107 Learning Theory and Human Growth and Development and EDTP 301 or 501 General Methods.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSS 605</td>
<td>Teaching and Learning for Elementary Physical Education</td>
<td>6</td>
</tr>
<tr>
<td>HSS 606</td>
<td>Teaching and Learning for Secondary Physical Education</td>
<td>6</td>
</tr>
<tr>
<td>HSS 609</td>
<td>Methods in Practical Living: Health</td>
<td>6</td>
</tr>
</tbody>
</table>

**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). Electronic documentation of 200 hours of diverse and approved field experiences.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSS 611</td>
<td>Seminar in Student Teaching in Health and Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>HSS 612</td>
<td>Student Teaching in Elementary Physical Education I*</td>
<td>4</td>
</tr>
<tr>
<td>HSS 613</td>
<td>Student Teaching in Middle/Secondary Physical Education II*</td>
<td>4</td>
</tr>
</tbody>
</table>
HSS 614  Action Research Project  3
HSS 615  Student Teaching in Health Education  4
**Minimum total credit 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.

**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.

**Degree Candidacy:** Students not enrolled during the semester in which they intend to graduate must register for degree candidacy as outlined in the Graduate Catalog Academic Policies, Procedures, and Requirements."

**Praxis Disclaimer:** Teacher certification requirements are subject to change. Before registering for certification test(s), please refer to the Education Professional Standards Board (EPSB) website at www.epsb.ky.gov or https://www.ets.org/praxis/ky for current requirements.

**Faculty**

Stefanie C. Wooten Burnett  
*Assistant Professor*

Cody Hinton  
*Instructor*

Cheryl A. Kolander  
*Professor*

School Health Program Coordinator

Dylan Naeger  
*Instructor*

Carol O’Neal  
*Associate Professor*

Public Health Education Coordinator

Carla Vidoni  
*Assistant Professor*

Physical Education Program Director
Graduate Certificate in Health Professions Education

Major: HPEDCHP  
Degree Awarded: CERT  
Unit: GE  
Program Webpage: http://louisville.edu/education/degrees/gc-hpe

Program Information

The Certificate in Health Professions Education (CHP) is offered through a partnership between the College of Education and Human Development and the School of Medicine. The program is designed specifically for faculty, future faculty, residents and graduate students in the health sciences including medicine, nursing, dentistry, public health, clinical and allied health professions. The program includes four graduate-level credit courses (12 total credit hours), and the Certificate is an academic credential offered through the University of Louisville School of Interdisciplinary and Graduate Studies.

All courses are part of the College of Education and Human Development graduate curriculum and may be applied to other degree programs such as a Masters degree. Each course is grounded on the plan for the corresponding course taught in the College of Education and Human Development but is focused primarily for healthcare educators. For example, instructional techniques include working not only in the classroom, but also at the bedside, and in the clinic. Class projects are designed for the healthcare environment.

Program courses follow the Belknap Campus semester schedule, but meet on the Health Sciences Campus. Courses are taught in the evening and are web-enhanced with approximately 1/3 of weekly work assignments completed online. Students enrolled in other education degree programs may substitute a more advanced statistics course for ELFH 600, if they prefer. Students enrolled in other education degree programs may substitute a more advanced statistics course for the ELFH 600, if they wish to do so.

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 School of Interdisciplinary and Graduate Studies non-degree status. Requires a minimum of 2.75 GPA.

Curriculum

The current course sequence is as follows.

ELFH 600, Introduction to Research Methods (Fall): A project based course with emphasis on how to teach research problem identification, research methodologies, including qualitative methodology, and introductory statistics. This course is designed for those with a minimum level of research experience.
ELFH 606, Program Evaluation and Planning (Spring): The purpose of this course is to provide learners with a preliminary understanding of the field of program evaluation. The course will focus on the theories, techniques and current methods of program evaluation.

ELFH 683, Introduction to College Teaching (Fall): The course focus is on syllabus development, teaching and assessment strategies, student rights, the role of research and publication in the academic arena.

ELFH 661, Adult Development and Learning (Spring): The purpose of this course is to assist learners in a critical analysis of the theoretical framework of adult learning throughout the lifespan and the developmental issues of adults.

Faculty

Meera Alagaraja  
Associate Professor

Mathew Bergman  
Assistant Professor

Lee Bewley  
Associate Professor

Jessica Buckley  
Clinical Assistant Professor

Roger Buskill  
Instructor

Bradley Carpenter  
Assistant Professor

Namok Choi  
Professor

Denise  
Cumberland  
Assistant Professor

Casey George-Jackson  
Assistant Professor

Jacob Gross  
Assistant Professor

W. Blake Haselton  
Associate Professor

Superintendent in Residence

Ray Haynes  
Clinical Associate Professor

Ann Herd  
Assistant Professor

Amy Hirschy  
Assistant Professor

Jason Immekus  
Associate Professor

Kyle Ingle  
Associate Professor

Carlos McCray  
Associate Professor

Kevin Rose  
Assistant Professor

Terri Rowland  
Clinical Assistant Professor

Brad Shuck  
Associate Professor

Jeffrey Sun  
Professor
Master of Arts in Higher Education Administration

Major: HED
Degree Awarded: MA
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/ma-he

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

- Evidence of a Bachelor’s Degree and 2.75 cumulative grade point average (GPA).
- Transcripts of all undergraduate and graduate work.
- General Test score on the Graduate Record Examination of 800 (verbal + quantitative) taken prior to August 1, 2011.
- Two letters of recommendation.
- Department committee reviews application materials and makes recommendation to School of Interdisciplinary and Graduate Studies.

Curriculum

**General Requirements** (3 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELFH 600 Introduction to Research Methods and Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

**Professional Area** (15 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELFH 678 The American College and University</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 681 Philosophy of Higher Education</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 682 Organization and Administration of Higher Educational Institutions</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 693 College Students in the U.S.</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 607 Principles of Educational Leadership (for Higher Education)</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 684 Educational Resource Management in Postsecondary Education</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 694 Diversity and Higher Education</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 680 Legal Issues -- Postsecondary</td>
<td>3</td>
</tr>
</tbody>
</table>

**Electives** (approved by advisor) (6 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELFH 690 Internship in Post-secondary Education</td>
<td>3</td>
</tr>
</tbody>
</table>

**Exit Requirements** (3 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELFH 690 Internship in Post-secondary Education</td>
<td>3</td>
</tr>
</tbody>
</table>

**Minimum total credit hours** 36

**CONCENTRATION IN SPORT ADMINISTRATION**

**Professional Area**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELFH 607 Principles of Educational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 620 Legal Issues in Education</td>
<td>3</td>
</tr>
</tbody>
</table>
ELFH 682 Organ. & Admin. of Higher Educ. Institutions 3
ELFH 600 Introduction to Research Methods & Statistics 3
ELFH 680 The American College and University OR 3
ELFH 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 credit hours
ELFH 699 Thesis or Professional Paper OR 1-6
SPAD 692 Internship in Sport Administration 3

**Minimum Total Credit Hours** 31-33

**CONCENTRATION FOR FORT KNOX**
**General Requirements** (3 credit hours)
ELFH 689 Special Problems in Educational Leadership 3

**Professional Area** (24 credit hours)
ELFH 610 Collaboration & Communication for Effective Leadership (Replaces ELFH 678) 3
ELFH 641 Graduate Seminar: Leadership, Foundations, & Human Resource Education (Replaces ELFH 681) 3
ELFH 682 Organization and Administration of Higher Education Institutions 3
ELFH 693 College Students in the U.S. 3
ELFH 607 Principles of Educational Leadership (for Higher Education) 3
ELFH 684 Educational Resource Management in Postsecondary Education 3
ELFH 694 Diversity and Higher Education 3
ELFH 680 Legal Issues -- Postsecondary 3
**Electives** (approved by advisor) (6 credit hours)
ELFH 683 College Teaching 3
ELFH 623 Special Problems in Leading Instructional Improvements 3

**Exit Requirements** (3 credit hours)
ELFH 690 Internship in Postsecondary Education 3

**Minimum total credit hours:** 36

**Faculty**

**Meera Alagaraja**  
Associate Professor

**Mathew Bergman**  
Assistant Professor

**Lee Bewley**  
Associate Professor

**Jessica Buckley**  
Clinical Assistant Professor

**Roger Buskill**  
Instructor

**Bradley Carpenter**  
Assistant Professor

**Namok Choi**  
Professor

**Jennifer Buckley**  
Clinical Assistant Professor

**Denise Cumberland**  
Assistant Professor

**Casey George-Jackson**  
Assistant Professor
Jacob Gross
Assistant Professor
W. Blake Haselton
Associate Professor
Superintendent in Residence

Ray Haynes
Clinical Associate Professor
Ann Herd
Assistant Professor
Amy Hirschy
Assistant Professor

Jason Immekus
Associate Professor
Kyle Ingle
Associate Professor
Carlos McCray
Associate Professor
Kevin Rose
Assistant Professor

Terri Rowland
Clinical Assistant Professor
Brad Shuck
Associate Professor
Jeffery Sun
Professor
Master of Science in Human Resources and Organization Development

Major: HRE  
Degree Awarded: MS  
Unit: GE  
Program Webpage: http://louisville.edu/education/degrees/ms-hrod

Program Information

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

The program has four concentrations which emphasize various aspects of this field:

- Health Professions Education - Education, learning, leadership, and organization change for health-care settings.
- Human Resource Leadership - Strategic and tactical human resource leadership for generalists and specialists.
- Workplace Learning and Performance - Learning, training, performance improvement, and instructional design in organizational settings.
- Career and Technical Education - Performance development and learning in career and technical education through discovery and critical inquiry.

Curriculum

CONCENTRATION IN HEALTH PROFESSIONS EDUCATION

Program Purpose: To prepare professionals who lead performance, development, and learning in the health professions through discovery and critical inquiry. Students may also apply for the Health Professions Education Certificate after completion of the 12-hour concentration in Health Professions Education.

Initial Assessment:

- Admitted to the School of Interdisciplinary and Graduate Studies  
- GRE Completed  
- Attended mandatory program orientation  
- Program Competency Self-Assessment  
- Approved by Faculty Committee

Core Courses (18-21 hours)
ELFH 617 Evidence Based Research in HROD 3  
ELFH 616 HROD Integrative Capstone OR 3-6  
ELFH 699 Thesis (requires 36 hours total)
ELFH 605  Leadership in HROD  3
ELFH 614  Program and Organization Evaluation  3
ELFH 661  Adult and Organizational Learning  3
ELFH 662  Organizational Analysis  3

**Concentration: Health Professions Education** (12 hours)

ELFH 671  Performance Improvement  3
ELFH 672  Instructional Design and Development  3
ELFH 673  E-Learning Design and Development  3
ELFH 675  Teaching and Learning in Health Professions Education  3

**Elective** (3 hours)

ELFH 684  Organizational Change and Consulting  3
ELFH 612  Talent Acquisition and Management  3

**Minimum total**  33-36

**Midpoint Assessment:** Successful progress on Hallmark Assessment Rubrics, as determined by faculty advisor

**Exit Assessment:** Competency Self-Assessment/Reflection, Program Portfolio and Integration of Research, Theory, and Practice or Thesis

**Degree Assessment:**

- A minimum of 33 hours with an overall grade point average of 3.0, and no more than 2 grades of C.
- Satisfactory completion of Program Portfolio

**CONCENTRATION IN HUMAN RESOURCE LEADERSHIP**

**Program Purpose:** To prepare professionals who lead people, performance, development, and learning through discovery and critical inquiry.

**Initial Assessment:**

- Admitted to the School of Interdisciplinary and Graduate Studies
- GRE completed
- Attended mandatory program orientation
- Program Competency Self-Assessment
- Approved by Faculty Committee

**Core Courses** (18-21 hours)

ELFH 617  Evidence Based Research in HROD  3
ELFH 616  HROD Integrative Capstone OR  3-6
ELFH 699  Thesis (requires 36 hours total)  3
ELFH 605  Leadership in HROD  3
ELFH 614  Program and Organization Evaluation  3
ELFH 661  Adult and Organizational Learning  3
ELFH 662  Organizational Analysis  3

**Concentration** (15 hours)
Graduate Catalog  
Summer 2016-Spring 2017  

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credits</th>
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<tr>
<td>ELFH 611</td>
<td>Strategic Human Resources</td>
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<tr>
<td>ELFH 612</td>
<td>Talent Acquisition and Management</td>
<td>3</td>
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<tr>
<td>ELFH 631</td>
<td>Performance Management and Rewards</td>
<td>3</td>
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<tr>
<td>ELFH 664</td>
<td>Organizational Change and Consulting</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 671</td>
<td>Performance Improvement</td>
<td>3</td>
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<td><strong>33-36</strong></td>
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</table>

**Midpoint Assessment:** Successful progress on Hallmark Assessment Rubrics, as determined by faculty advisor

**Exit Assessment:** Competency Self-Assessment/Reflection, Program Portfolio and Integration of Research, Theory, and Practice or Thesis.

**Degree Assessment:**
- A minimum of 33 hours with an overall grade point average of 3.0, and no more than 2 grades of C.
- Satisfactory completion of Program Portfolio.

**CONCENTRATION IN WORKPLACE LEARNING AND PERFORMANCE**

**Program Purpose:** To prepare professionals who lead performance, development, and learning through discovery and critical inquiry.

**Initial Assessment:**
- Admitted to the School of Interdisciplinary and Graduate Studies
- GRE Completed
- Attended mandatory program orientation
- Program Competency Self-Assessment
- Approved by Faculty Committee

**Core Courses** (18-21 hours)
- ELFH 617 Evidence Based Research in HROD 3
- ELFH 616 HROD Integrative Capstone OR 3-6
- ELFH 699 Thesis (requires 36 hours total) 3
- ELFH 605 Leadership in HROD 3
- ELFH 614 Program and Organization Evaluation 3
- ELFH 661 Adult and Organizational Learning 3
- ELFH 662 Organizational Analysis 3

**Concentration** (12 hours)
- ELFH 611 Strategic Human Resources 3
- ELFH 664 Organizational Change and Consulting 3
- ELFH 671 Performance Improvement 3
- ELFH 672 Instructional Design and Development 3

**Elective** (3 hours)
- ELFH 641 Graduate Seminar 3
- ELFH 663 Methods of Facilitation 3
ELFH 673  E-Learning Design and Development  3

Minimum total hours  33-36

Midpoint Assessment: Successful completion on Hallmark Assessment Rubrics, as determined by faculty advisor

Exit Assessment: Competency Self-Assessment/Reflection, Program Portfolio and Integration of Research, Theory, and Practice or Thesis

Degree Assessment:
- A minimum of 33 hours with an overall grade point average of 3.0, and no more than 2 grades of C.
- Satisfactory completion of Program Portfolio.

CONCENTRATION IN CAREER AND TECHNICAL EDUCATION

Program Purpose: To prepare professionals who lead performance, development, and learning in career and technical education through discovery and critical inquiry.

Initial Assessment:
- Admitted to School of Interdisciplinary and Graduate Studies
- GRE Completed
- Attended mandatory program orientation
- Program Competency Self-Assessment
- Approved by Faculty Committee

Core Courses (18-21 hours)
ELFH 617  Evidence Based Research in HROD  3
ELFH 616  HROD Integrative Capstone OR  3-6
ELFH 699  Thesis (requires 36 hours total)
ELFH 605  Leadership in HROD  3
ELFH 614  Program and Organization Evaluation  3
ELFH 661  Adult and Organizational Learning  3
ELFH 662  Organizational Analysis  3

Concentration: Career and Technical Education (12 - 15 hours)
ELFH 510*  Teaching Career and Technical Education (req for NTI only)  3
ELFH 663*  Methods of Facilitation*  3
ELFH 672*  Instructional Design and Development  3
ECPY 507*  Learning Theory and Human Growth and Development* OR  3
ECPY 607*  Learning Theory and Human Growth and Development* OR  3
ECPY 540*  Introduction to the Exceptional Child* OR  3
ECPY 545*  Exceptional Children in the Regular Classroom*  3
ELFH 641  Seminar in Workforce Development  3

Elective (3 hours)
ELFH 607  Principles of Educational Leadership for Higher Education  3
ELFH 673  E-Learning Design and Development  3
ELFH 684  Educational Resource Management in Post-secondary Education  3
ELFH 686  The Two-Year College  3

**Minimum total 33-36 hours**
*Courses designed as KY CTE Teacher 64-hour rank change certification requirements; ELFH 540 is designed for New Teaching Institute (NTI) students only.*

**Midpoint Assessment:** Successful progress on Hallmark Assessment Rubrics, as determined by faculty advisor.

**Exit Assessment:** Competency Self-Assessment/Reflection, Program Portfolio, and Integration of Research, Theory, and Practice or Thesis.

**Degree Assessment:**
- A minimum of 33 hours with an overall grade point average of 3.0, and no more than 2 grades of C.
- Satisfactory completion of Program Portfolio.

**Faculty**

- **Meera Alagaraja**  
  Associate Professor
- **Mathew Bergman**  
  Assistant Professor
- **Lee Bewley**  
  Associate Professor
- **Jessica Buckley**  
  Clinical Assistant Professor
- **Roger Buskill**  
  Instructor
- **Bradley Carpenter**  
  Assistant Professor
- **Namok Choi**  
  Professor
- **Denise Cumberland**  
  Assistant Professor
- **Casey George-Jackson**  
  Assistant Professor
- **Jacob Gross**  
  Assistant Professor
- **W. Blake Haselton**  
  Associate Professor
  Superintendent in Residence
- **Ray Haynes**  
  Clinical Associate Professor
- **Ann Herd**  
  Assistant Professor
- **Amy Hirschy**  
  Assistant Professor
- **Jason Immekus**  
  Associate Professor
- **Kyle Ingle**  
  Associate Professor
- **Carlos McCray**  
  Associate Professor
- **Kevin Rose**  
  Assistant Professor
- **Terri Rowland**  
  Clinical Assistant Professor
- **Brad Shuck**  
  Associate Professor
- **Jeffrey Sun**  
  Professor
Rank I Program in Instructional Computer Technology (P-12)

Major: IT  
Degree Awarded: NON  
Unit: GE  
Program Webpage: http://louisville.edu/education/degrees/rank

Program Information

<table>
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<tr>
<th>Courses</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Inquiry (Critical Thinker) (3 credit hours)</td>
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<tr>
<td>ELFH 600 Introduction to Research Methods and Statistics</td>
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<tr>
<td>Advocacy (Professional Leader) (3 credit hours)</td>
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<tr>
<td>EDAP 677 Teacher Leadership: Mentoring and Coaching</td>
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<tr>
<td>EDAP 642 Literacy, Learning, and Cultural Differences OR</td>
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<tr>
<td>EDSP 618 Instructional Technology for Students with Special Needs</td>
<td></td>
</tr>
<tr>
<td>Action (Problem Solver) (3 credit hours)</td>
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<tr>
<td>EDAP 680 Capstone Seminar</td>
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<tr>
<td>Area of Emphasis (18 credit hours)</td>
<td>18</td>
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<tr>
<td>EDAP 688 Designing a Technology Integrated Curriculum</td>
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<tr>
<td>EDAP 689 Using the Internet in P-12 Teaching</td>
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<tr>
<td>EDAP 587 Teaching and Learning Online</td>
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<tr>
<td>EDAP 601 Teaching with Emerging Technologies</td>
<td></td>
</tr>
<tr>
<td>EDAP 585 Intro to Education Technology: Integrating Technology into Instruction</td>
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<tr>
<td>EDAP 624 Curriculum Theory</td>
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<td>EDAP 629 Teaching Mathematics with Technology, P-8</td>
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<td>EDAP 687 Literacy, Teaching and Technology</td>
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<td>Elective: To be selected with advisor's approval (3 credit hours)</td>
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<td>Minimum total credit hours</td>
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</table>

1 Denotes courses that are required for the Instructional Technology endorsement.  
2 Denotes courses that must be taken in the last 6 hours of program study.


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.
Faculty

Jenny Bay-Williams
Professor
Chair of Middle and Secondary Education
Department

Lateefah Id-Deen
Assistant Professor

Timothy Landrum
Professor
Chair of Special Education
Department

Maggie McGatha
Associate Professor
Assistant Chair of Middle and Secondary Education
Department

Susan Peters
Associate Professor

Steve Swan
Instructor
Coordinator of Instructional Technology program

Amy Seely Flint
Professor
Chair of Early Childhood and Education
Department

Caroline Sheffield
Associate Professor

Shelley Thomas
Associate Professor


Instructional Technology Endorsement (P-12)

Major:
Degree Awarded: NON
Unit: GE
Program Webpage: http://louisville.edu/online/programs/teaching-endorsements/instructional-technology-endorsement/online-course-map

Program Information

To be considered for this endorsement, applicants must have a bachelor’s degree and initial teacher certification. Be sure to review all of the admission requirements on the Apply Now page.

This endorsement consists of 5 courses (including one elective to be taken after successful completion of all core course work) for a total of 15 credit hours. These courses include:

<table>
<thead>
<tr>
<th>Course</th>
<th>Core (required) courses</th>
<th>Credit Hours</th>
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<tr>
<td>EDAP 585</td>
<td>Intro to Education Technology; Integrating Technology Tools into Instruction</td>
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<tr>
<td>EDAP 587</td>
<td>Teaching and Learning Online</td>
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<td>EDAP 688</td>
<td>Designing a Technology Integrated Curriculum</td>
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<tr>
<td>EDAP 690</td>
<td>Teaching with Multimedia Authoring Tools</td>
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<td><strong>Total Required Credits</strong></td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Electives (only 3 credit hours required)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP 601</td>
<td>Emerging Technologies</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 689</td>
<td>Using the Internet in P-12 Teaching</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Required Credits</strong></td>
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<td><strong>3</strong></td>
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</table>

**Total Required Credit Hours (for program)** 15

Faculty

Stephen B. Swan
Term Instructor
Director of the Instructional Technology Program for the College of Education and Human Development.
Master of Education in Instructional Technology

Major: IT MED
Degree Awarded: MED
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/med-it

Program Information

Initial Requirements:

1. Teaching certification in P-12 Area.
2. Admission to the School of Interdisciplinary and Graduate Studies.
3. Admission to M.Ed. in Instructional Technology program (which requires completion of EDAP 585: Introduction to Educational Technology with B+ or higher or equivalent course/experience).
4. Meeting with faculty advisor to discuss Kentucky Experienced Teacher Standards, UofL Program Themes, Conceptual Framework, and ISTE Technology Facilitation Standards.

Curriculum

CARDS 4 (Entry Assessment): Admission to the School of Interdisciplinary and Graduate Studies and to the Instructional Computer Technology program; Self-Assessment on Kentucky Guide to Reflective Classroom Practice; Professional Growth Plan.

Research (3 credit hours)  Credit Hours
ELFH 600 Introduction to Research Methods and Statistics OR 3
EDAP/EDSP 639 Education Research in the P-12 Setting 3

Leadership (6 credit hours) Instructor Permission required
EDAP 677 Teacher Leadership: Mentoring and Coaching 3
EDAP 607 Teacher Leadership in Practice 3

Area of Emphasis (15 credit hours)
EDAP 688 Designing a Technology Integrated Curriculum 3
EDAP 690 Teaching with Multimedia Tools 3
EDAP 587 Teaching and Learning Online 3
EDAP 687 Literacy, Teaching and Technology 3
EDAP 585 Introduction to Education Technology: Integrating Technology into Instruction 3

Successful completion of 15 hours of Instructional Computer Technology coursework; self-assessment on Standards 1-4 of the Scored acceptable or target on Rubrics for Advanced Candidates (by advisor); acceptable Dispositions assessment, minimum GPA of 3.0.

Electives (6 credit hours)
EDAP 601 Teaching with Emerging Technologies 3
EDSP 618 Instructional Technology for Students with Special Needs 3
EDSP 689 Using the Internet in P12 Teaching 3

Other courses, as approved by advisor
CARDS 6 (Exit Assessment): Successful completion of all required coursework, 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 faculty advisor)

Minimum total credit hours 30
1. Denotes Courses that are required for the endorsement.

Mid-Point Assessment:
Review program on KY Experienced Teacher Standards, UofL 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:
All endorsement coursework completed.
No lower than 3.0 GPA in endorsement courses and no credit accepted for grade lower than C.
Review of Portfolio which includes Post-Program Self-Assessment.

Faculty

Jennifer Bay-Williams
Professor
Chair of Middle and Secondary Education
Sherri Brown
Associate Professor
Director of Early Childhood and Elementary Education Program

James Chisholm
Assistant Professor
Tammi Davis
Instructor
John Finch
Instructor
Amy Seely Flint
Professor
Department Chair Early and Middle Childhood Education

Penny Howell

Associate Professor
Timothy Landrum
Professor
Chair of Special Education Department
Maggie McGatha
Associate Professor
Lori Norton-Meier
Professor
Mikkaka Overstreet
Instructor

Director of Minority Teacher Recruitment Project
Susan Peters
Associate Professor
Amy Stevens
Instructor
Steve Swan
Instructor
Program Coordinator for Instructional Technology
Master of Education in Literacy

Major: LITEMED
Degree Awarded: MED
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/med-re

Program Information

The M.Ed. in Literacy with Literacy Specialist P-12 Endorsement is designed for certified teachers who plan to seek a master's degree. The program was designed in collaboration with P-12 classroom teachers, district specialists, and university faculty for preparing reading specialists/literacy coaches. The program leads to a Kentucky “Literacy Specialist P-12” endorsement.

Program Highlights include:

- Prepares candidates to become reading specialists (work with students who are struggling readers) as well as literacy coaches (work with adults to advance literacy school-wide)
- Meets the International Reading Association Standards for Reading Professionals (2010)
- Has a strong emphasis on the balance among knowledge, skills, and strategies
- Prepares candidates to work with students in literacy from birth through grade 12
- Uses the Common Core Standards as a guide
- Is taught by nationally recognized faculty in collaboration with practitioners
- Focuses on meeting the needs of diverse learners
- Emphasizes coaching and mentoring colleagues
- Places your classroom and school as the focus of course discussions and assessment

Curriculum

CARDS 4 (Entry Assessment): Admission to School of Interdisciplinary and Graduate Studies and to the M.Ed. in Literacy program; Self-Assessment on The Kentucky Guide to Reflective Classroom Practice; Professional Growth Plan; must hold a valid teaching certificate and 3 years of full-time teaching experience.

Research (3 hours)  Credit Hours
EDAP 639  Education Research in the P-12 Setting  3

Teaching Reading Core (15 hours) (9 hours should be completed before EDAP 615/CARDS 5)
EDAP 610  Literacy Research and Theory  3
EDAP 636  Advanced Reading Methods  3
EDAP 642  Literacy Learning and Cultural Differences  3
EDAP 678  Language Knowledge and Acquisition  3
EDAP 615  Measurement and Diagnosis of Literacy  3

CARDS 4 (Mid-point Assessment--after at least 9 hours)
Successful completion of 9 hours Teaching Reading Core; IRA Standards Midpoint Portfolio (to be completed and assessed in EDAP 615); self-assessment on standards 1-4 of The Kentucky Guide to
Reflective Classroom Practice. Scored acceptable or target on Rubrics for Advanced Candidates (by advisor); acceptable Dispositions assessment; minimum GPA of 3.0

Reading Specialist/Literacy Coach Focus (15 hours)
EDAP 614 Supporting Struggling Readers and Writers 3
EDAP 693 Teaching Writing P-12 3
EDAP 641 Literacy Leadership and School-wide Planning 3
EDAP 618 Practicum in Literacy: Reading Specialist 3
EDAP 679 Practicum in Literacy: Literacy Coach 3
Elective (to be approved by advisor) 3 hours 3
Minimum total hours 36

CARDS 6 (Exit Assessment):
Successful completion of all required coursework; completed IRA Standards Portfolio (to be assessed by advisor); updated and revised Professional Growth Plan; final self-assessment on all standards of The Kentucky Guide to Reflective Classroom Practice. Scored acceptable or target on Rubrics for Advanced Candidates (by advisor). Praxis for Reading Specialist (#0300) with acceptable KY cut off score. At least 3 years of teaching experience is required to be eligible for the Literacy Specialist Endorsement.

Notes
1. Transfer credit must be officially accepted by the advisor--final acceptance is dependent upon receipt of official transcripts.
2. A maximum of 6 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor)
3. 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".

Degree Candidacy: Students not enrolled during the semester in which they intend to graduate must register for degree candidacy as outlined in the Graduate Catalog, "Academic Policies, Procedures, and Requirements".

Faculty

Kathryn Whitmore Barten
Professor
Endowed Chair
James Chisholm
Assistant Professor
Tammi Davis
Instructor

Amy Seely Flint
Professor
Chair of Early Childhood and Elementary Education

Penny Howell
Associate Professor

Pamela Jett
Instructor
Ann Larson
Professor

Lori Norton-Meier
Professor
Amy Stevens
Instructor
Jean Wolph
Instructor

Ann Larson
Professor
Dean of the College of Education and Human Development

Penny Howell
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Professor
Amy Stevens
Instructor
Jean Wolph
Instructor

Ann Larson
Professor
Dean of the College of Education and Human Development

Penny Howell
Associate Professor
M.Ed. in Literacy with Literacy Specialist (P-12) Endorsement

Major:
Degree Awarded: NON
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/endorsements

Program Information

This endorsement is designed for teachers who wish to be literacy specialists across their districts. The Literacy Specialist endorsement may be completed ONLY through the Master of Education in Literacy.

The program is designed for certified teachers who plan to seek a master's degree. The M.Ed. with a concentration in Literacy with Literacy Specialist P-12 Endorsement was created in collaboration with P-12 classroom teachers, district specialists, and university faculty for preparing reading specialists/literacy coaches. The program leads to a Kentucky “Literacy Specialist P-12 Endorsement.”

The program prepares candidates to be a reading specialist as well as a literacy coach. It addresses the 4 areas of literacy: Reading, writing, speaking and listening and meets the International Reading Association Standards for Reading Professionals (IRA) 2010.

Curriculum

<table>
<thead>
<tr>
<th>COURSE PREFIX</th>
<th>COURSE NUMBER</th>
<th>COURSE TITLE</th>
<th>CREDIT HOURS</th>
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<tr>
<td>EDAP</td>
<td>639</td>
<td>Education Research in the P-12 Setting</td>
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<tr>
<td>EDAP</td>
<td>610</td>
<td>Literacy Research and Theory</td>
<td>3</td>
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<tr>
<td>EDAP</td>
<td>636</td>
<td>Advanced Reading Methods</td>
<td>3</td>
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<td>Literacy Learning and Cultural Differences</td>
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<td>Language Knowledge and Acquisition</td>
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<td>EDAP</td>
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<td>Measurement and Diagnosis of Literacy</td>
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<td>EDAP</td>
<td>614</td>
<td>Supporting Struggling Readers and Writers</td>
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<td>Teaching Writing P-12</td>
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<td>EDAP</td>
<td>641</td>
<td>Literacy Leadership and School-wide Planning</td>
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<tr>
<td>EDAP</td>
<td>618</td>
<td>Practicum in Literacy: Reading Specialist</td>
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<tr>
<td>EDAP</td>
<td>679</td>
<td>Practicum in Literacy: Literacy Coach</td>
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</tbody>
</table>

Minimum total hours: 36
Notes
4. Transfer credit must be officially accepted by the advisor - final acceptance is dependent upon receipt of official transcripts.
5. A maximum of 9 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
6. 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".
7. Praxis Disclaimer: “Teacher certification requirements are subject to change. Before registering for the test(s), please refer to the Education Professional Standards Board (EPSB) website at www.kyepsb.net or the Praxis website http://www.ets.org/praxis.ky for current requirements.”
Rank I Program in Middle Grades Education

Major: MSED  
Degree Awarded: NON  
Unit: GE  
Program Webpage: [http://louisville.edu/education/degrees/rank](http://louisville.edu/education/degrees/rank)

Program Information

**PROGRAM ADMISSION PROCEDURE**

- Hold Certification in a 5-9 grade level area and a Masters degree or Rank II equivalency
- Admission to School of Interdisciplinary and Graduate Studies

Curriculum

**RANK I PROGRAM IN MIDDLE GRADES EDUCATION ADVANCED PRACTITIONER** (FOR STUDENTS WHO HAVE EARNED A MASTERS DEGREE)

<table>
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<tr>
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<td>EDAP 606 Orientation and Reading</td>
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<td>ELFH 600 Introduction to Research Methods &amp; Statistics</td>
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<td><strong>Leadership and Change</strong> (Select one of the following)</td>
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<td>EDAP 607 Leadership and Change</td>
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<td>ELFH 603 Administrative Leadership in a Reform Environment</td>
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<td>EDAP 624 Curriculum Theory</td>
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<td>EDAP 625 Social and Ethical Development of Teaching</td>
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<tr>
<td><strong>The Multicultural Learning</strong> (Select one of the following)</td>
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<tr>
<td>EDAP 624 Literacy Learning &amp; Cultural Differences</td>
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<tr>
<td>EDAP 626 Affirming Diversity</td>
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<tr>
<td>EDTP 503 Developing Cross-Cultural Competence</td>
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</tr>
<tr>
<td>SOC 630 Sociology of Education</td>
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<tr>
<td>WGST 532 History of American Sexualities</td>
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<td>WGST 556 Feminist Theory</td>
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<td>PAS 529 Teacher Institute on African-American Issues</td>
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<tr>
<td><strong>Area of Emphasis</strong></td>
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<tr>
<td><strong>Electives</strong></td>
<td>9</td>
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<tr>
<td><strong>Minimum total hours:</strong></td>
<td>30</td>
</tr>
</tbody>
</table>

**Exit Requirement:** Portfolio or National Board Certification  
**Midpoint Requirement:** Candidates are required to submit a mid-program portfolio at the completion of 15 credit hours of coursework. 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.
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, with faculty advisor's approval.
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 (FULFILLS THE REQUIREMENTS FOR THE M.ED. IN MIDDLE GRADES EDUCATION)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
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<tr>
<td>EDAP 606 Orientation and Readings (take in first semester of enrollment)</td>
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<td>ELFH 600 Introduction to Research Methods &amp; Statistics</td>
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<td><strong>Leadership and change:</strong> (select one of the following courses)</td>
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<td>EDAP 607 Leadership and Change</td>
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<td>ELFH 603 Administrative Leadership in a Reform Environment</td>
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<tr>
<td>EDAP 624 Curriculum Theory</td>
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<tr>
<td>EDAP 625 Social and Ethical Development of Teaching</td>
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<tr>
<td><strong>Success for All Learners:</strong> (select one of the following courses)</td>
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<tr>
<td>EDAP 642 Literacy Learning &amp; Cultural Differences</td>
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<td>EDAP 626 Affirming Diversity</td>
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<td>EDTP 503 Developing Cross-Cultural Competence</td>
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<td><strong>AREA OF EMPHASIS</strong></td>
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<td>EDAP 680 Capstone Course</td>
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<td>Elective</td>
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<td>Exit Requirements: Portfolio or Master’s Thesis (EDAP 699)</td>
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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 Masters degree, with advisor's approval.
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. To obtain Rank I, a total of 60 graduate credit hours including a Masters degree must be earned.

Faculty

Jennifer Bay-Williams
Professor
Chair of Middle and Secondary Education

Peggy Brooks
Instructor
Coordinator of KTIP Program

Lateefah Id-Deen
Assistant Professor

Robin Lipsey
Instructor
Field and Clinical Coordinator

James Chisholm
Assistant Professor

Penny Howell
Associate Professor

Ann Larson
Professor

Lateefah Id-Deen
Assistant Professor

Pam Jett
Instructor

Sheron Mark
Assistant Professor

James Chisholm
Assistant Professor

Ann Larson
Professor

Dean

Penny Howell
Associate Professor
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maggie McGatha</td>
<td>Associate Professor</td>
<td>Middle and Secondary Education</td>
</tr>
<tr>
<td>Lori Norton-Meier</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Elizabeth Patton</td>
<td>Assistant Professor</td>
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<tr>
<td>Susan Peters</td>
<td>Associate Professor</td>
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</tr>
<tr>
<td>Stephanie Philipp</td>
<td>Term Faculty</td>
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<tr>
<td>Caroline Sheffield</td>
<td>Associate Professor</td>
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<tr>
<td>Amy Stevens</td>
<td>Instructor</td>
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<tr>
<td>Steve Swan</td>
<td>Instructor</td>
<td>Coordinator of Instructional</td>
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<tr>
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<td>Technology Program</td>
</tr>
<tr>
<td>Shelley Thomas</td>
<td>Associate Professor</td>
<td></td>
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<tr>
<td>Thomas Tretter</td>
<td>Professor</td>
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<td>Technology Program</td>
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<tr>
<td>Jean Wolph</td>
<td>Instructor</td>
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<tr>
<td></td>
<td></td>
<td>Director of Louisvile Writing</td>
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<td>Project</td>
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<tr>
<td>Director of Gheens</td>
<td>Science Hall and</td>
<td></td>
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<tr>
<td>Science Hall and</td>
<td>Rauch Planetarium</td>
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<tr>
<td>Louisville Writing</td>
<td>Project</td>
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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

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 goal.

Curriculum

Single Content Area Certification

Initial Assessment: Admission to School of Interdisciplinary and Graduate Studies and Teacher Education. Minimum undergraduate degree GPA 2.75; minimum GRE scores as required by EPSB; Praxis II content exam registration and/or scores; three letters of recommendation; professional statement; signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admissions Guidelines; Bachelor’s degree with major in content area or appropriate prerequisite courses; "C" or higher in English 102 and oral communication; acceptable interview.

*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 completed prior to Content Methods course)
Choose one from that following courses (3 credit hours) 3
*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 501, 602, and content method course passed; satisfactory mid-point teacher performance assessment (TPA); positive recommendation from Middle/Secondary Program Committee; electronic documentation of 200 hours of diverse and approved field experiences.

*EDTP 617 Student Teaching: Middle School 6
*EDTP 677 Capstone Seminar: Initial Certification 2 3
Certification Assessment: After Student Teaching: Satisfactory dispositions assessment; all
certification course work* completed with 2.5 cumulative GPA; 2.5 cumulative GPA in content course
requirements. 2.0 or higher GPA in student teaching; satisfactory certification teacher performance
assessment (TPA); passing scores on PRAXIS content and PLT exams; positive recommendation from
Middle/Secondary Program Committee.

EDTP 541 Teaching Middle School 3
EDTP 503 Developing Cross-Cultural Competence 1 3
EDTP 620 Reading and Writing Across the Curriculum 1 3
Choose the technology course 1 appropriate for your content certification area: 3
EDTP 581 Technology Applications for Mathematics Teaching (Math)
EDTP 582 Technology Applications for Science Teaching (Science)
EDTP 580 Digital Citizenship (English, Soc. Studies, Business, World Language)
1 Can be taken at any point in the program.
2 Must be taken concurrent with student teaching.
3 Must be taken concurrently.

Minimum total credit hours 36

Content courses remaining to complete certification requirements:

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 certification teacher
performance assessment (TPA).

Degree Candidacy: Students not enrolled during the semester in which they intend to graduate must
register for degree candidacy as outlined in the graduate catalog "Academic Policies, Procedures, and
Requirements”.

Praxis Disclaimer: Teacher certification requirements are subject to change. Before registering for
certification test(s), please refer to the Education Professional Standards Board (EPSB) website

Dual Content Area Certification

Initial Assessment: Admission to School of Interdisciplinary and Graduate Studies & Teacher
Education; minimum undergraduate degree GPA of 2.75; minimum GRE scores as required by EPSB;
Praxis II content exam registration and/or scores; three letters of recommendation; professional statement;
signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of
Admissions Guidelines; Bachelor's degree with major in content area or appropriate prerequisite courses;
"C" or higher in English 102 and oral communication course; acceptable interview.

*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 the Content Methods Courses)
Choose two from the following courses (6 credit hours) 6
*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

Mid-Point Assessment: Prior to Student Teaching: Satisfactory dispositions assessment; no lower than 2.0 GPA in either content methods classes; within 3 credits of meeting content requirements; ECPY 607 and EDTP 501, 602, and content methods courses passed; satisfactory mid-point teacher performance assessment (TPA); positive recommendation from Middle/Secondary Program Committee; electronic documentation of 200 hours of diverse and approved field experiences.

*EDTP 617  Student Teaching: Middle School  6
*EDTP 677  Capstone Seminar: Initial Certification  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  3
EDTP 620  Reading and Writing Across the Curriculum  3
Choose the technology course 1 appropriate for your content certification area:  3
EDTP 581  Technology Applications for Mathematics Teaching (Math)
EDTP 582  Technology Applications for Science Teaching (Science)
EDTP 580  Digital Citizenship (English, Soc. Studies, Business, World Language)
1 Can be taken at any point in the program
2 Must be taken concurrent with student teaching.
3 Must be taken concurrently.

Minimum total credit hours  36

Content courses remaining to complete certification requirements:

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

Degree Candidacy: Students not enrolled during the semester in which they intend to graduate must register for degree candidacy as outlined in the Graduate Catalog.

Praxis Disclaimer: Teacher certification requirements are subject to change. Before registering for certification test(s), please refer to the Education Professional Standards Board (EPSB) website at www.epsb.ky.gov or http://www.ets.org/praxis/ky for current requirements.

Faculty

<table>
<thead>
<tr>
<th>Jennifer Bay-Williams</th>
<th>Peggy Brooks</th>
<th>Assistant Chair of Special Education Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>Instructor</td>
<td></td>
</tr>
<tr>
<td>Chair of Middle and Secondary Education Department</td>
<td>KTIP Coordinator</td>
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</tr>
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<td>James Chisholm</td>
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<td>Associate Professor</td>
</tr>
<tr>
<td>Ginevra Courtade</td>
<td>Associate Professor</td>
<td>Lateefah Id-Deen</td>
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<tr>
<td>Ann Larson</td>
<td>Professor</td>
<td>Dean of the College of Education and Human Development</td>
</tr>
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</table>

298 | Page
Sheron Mark  
Assistant Professor

Justin McFadden  
Assistant Professor

Maggie McGatha  
Associate Professor
Assistant Chair of Middle and Secondary Education

Danna Morrison  
Instructor
Coordinator of Field & Clinical Placements

Susan Peters  
Associate Professor

Caroline Sheffield  
Associate Professor

Steve Swan  
Instructor
Coordinator of Instructional Technology Program

Shelley Thomas  
Associate Professor

Thomas Tretter  
Professor
Director of Gheens Science Hall and Rauch Planetarium

Jean Wolph  
Instructor
Masters of Arts in 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

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.

Curriculum

Initial Assessment: Admission to the School of Interdisciplinary and Graduate Studies and Teacher Education; employment as a full-time temporary provisional teacher; passing scores on Content Praxis II exams; minimum undergraduate GPA of 2.75; minimum GRE scores as required by EPSB; three letters of recommendation; professional statement; signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admissions Guidelines; Bachelor's degree in content area or prerequisite content courses; "C" or higher in English 102 and oral communication course; and acceptable interview.

EDTP 631 Integrated Teaching and Learning I 3  
EDTP 632 Integrated Teaching and Learning II 3  
Choose one from the following courses (3 credit hours) 3  
EDTP 607 Middle School Language Arts Methods OR  
EDTP 608 Middle School Math Methods OR  
EDTP 609 Middle School Science Methods OR  
EDTP 610 Middle School Social Studies Methods OR  
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; no lower than 2.0 in content methods class(es); 2.0 or higher in Practicum for Alternative Certification. 2.50 cumulative GPA in content course requirements; passing score on 5-9 PLT PRAXIS exam; satisfactory midpoint teacher performance assessment (TPA); positive recommendation from Middle/Secondary Program Committee.

EDTP 503 Developing Cross-Cultural Competence 3
Choose the technology course appropriate for your content certification area: 3
EDTP 581 Technology Applications for Math Teachers (Math) OR
EDTP 582 Technology Applications for Science Teachers (Science) OR
EDTP 580 Digital Citizenship (English, Social Studies)
EDTP 620 Reading and Writing Across the Curriculum 3
EDTP 678 Supporting the Intern Teacher I 3
EDTP 679 Supporting the Intern Teacher II 3
Minimum total credit hours 30

Content courses remaining to complete certification requirements:

To maintain your Temporary Provisional Certificate, you MUST be enrolled in Alternative certification coursework.

Certification Assessment: Satisfactory dispositions assessment; satisfactory certification teacher performance assessment (TPA). Passing score on 5-9 PLT PRAXIS exam; must pass KTIP.

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/degree-requirements](http://louisville.edu/graduatecatalog/degree-requirements), under the section called academic policies and requirements.


Faculty

<table>
<thead>
<tr>
<th>Jenny Bay-Williams</th>
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<th>Danna Morrison</th>
<th>Steve Swan</th>
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<td>Justin McFadden</td>
<td>Mikkaka</td>
<td>Thomas Trettet</td>
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<tr>
<td>Janet Calvert</td>
<td>Assistant Professor</td>
<td>Overstreet</td>
<td>Professor</td>
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<tr>
<td>Instructor</td>
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<td>Director of Gheens Science Hall and Rauch Planetarium</td>
</tr>
<tr>
<td>Coordinator of Alternative Certification Program</td>
<td>Maggie McGatha</td>
<td>Susan Peters</td>
<td>Jean Wolph</td>
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<tr>
<td></td>
<td>Associate Professor</td>
<td>Associate Professor</td>
<td>Instructor</td>
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</table>
Master of Arts in Teaching in Music Education

Major: EDMU  
Degree Awarded: MAT  
Unit: GE  
Program Webpage: http://louisville.edu/education/degrees/mat-me

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 School of Interdisciplinary and Graduate Studies and Teacher Education; minimum undergraduate degree GPA 2.75, Minimum GRE scores as required by EPSB; three letters of recommendation; professional statement; Praxis II content exam (middle/secondary); dispositions self-assessment; signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admissions Guidelines; Bachelors degree, "C" or higher in English 102 and oral communication course; and acceptable interview.

Prerequisites: Completion of the Pre-Teacher Education courses: ECPY 507/607 Learning Theory and Human Growth and Development, EDTP 502/602 Exploring Teaching within the Socio-Cultural Context of P-12 Schools, and MUED 556 Special Methods. Appropriate Bachelors degree or specific Music Education content required. For specific admission requirements, contact the School of Music.

Professional Education Requirements:

MUED 628 Qualitative Research Methods 2
MUED 629 Foundations of Music Education 2
MUED 630 Quantitative Research Methods in Music Education 2
MUED 639 Learning Theories in Music Education 2
MUS 511/611 Applied Music OR 2
MUS 659 Conducting
MUS 512/612 Applied Music OR 2
MUS 660 Conducting

Exit Requirements:
MUED 607 Student Teaching Seminar 3
MUED 609 Capstone Seminar (Second semester of student teaching)* 3
MUED 610 Music Student Teaching in the Elementary/Secondary Schools I (CE)* 6
MUED 611 Music Student Teaching in the Elementary/Secondary Schools II (CE)* 6

Minimum total credit hours 30
*Electronic documentation of 200 hours of diverse and approved field experiences required prior to student teaching.

Certification Exit Assessment:
B- or better in student teaching; satisfactory portfolio; passing score on Praxis, all certification and degree coursework competed with a 3.0 cumulative GPA; 2.5 GPA in content area.

Degree Exit Assessment:
B- or better in each student teaching placement, certification exit requirements plus a satisfactorily updated portfolio, and a 3.0 GPA overall.

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

Praxis Disclaimer: Teacher certification requirements are subject to change. Before registering for certification test(s), please refer to the Education Professional Standards Board (EPSB) website at www.epsb.ky.gov or http://www.ets.org/praxis/ky for current requirements.

Faculty

Amy Acklin
Associate Professor
Director of Marching Band
Robert Amchin
Professor
Distinguished Teaching Professor
Jack Ashworth
Professor Emeritus
Jerry W. Ball
Professor Emeritus
Ansyn Banks
Associate Professor
Randi Bolding
Assistant Professor

Paul R. Brink
Professor Emeritus
Devin Burke
Assistant Professor
Greg Byrne
Professor
Jean Christensen
Professor Emerita
Darcy DeLoach
Associate Professor
Anne Marie de Zeeuw
Professor Emerita
Christopher Doane
Professor

Caroline Ehman
Assistant Professor
R. Christopher Fitzgerald
Assistant Professor
Donn Everette
Graham
Professor Emeritus
Kent Hatteberg
Professor

Rebecca Jemian
Assistant Professor
Brenda E. Kee
Professor Emerita
Sidney King
Assistant Professor
Herbert Koerselman
Dean Emeritus
John Labarbera
Professor Emeritus
W. Reese Land
Assistant Professor
Kimcherie Lloyd
Professor
Director of Orchestral Studies and Opera
Lee Luvisi
Professor Emeritus

Director of Undergraduate Studies
Stephen Mattingly
Assistant Professor

Daniel McAninch
Professor Emeritus

Peter McHugh
Professor Emeritus

Matthew Nelson
Assistant Professor

Naomi Oliphant
Professor

Associate Dean
Distinguished Teaching Professor
Seow-Chin Ong
Professor

Acton Ostling
Professor Emeritus

J. Patrick Rafferty
Professor

Steve Rouse
Professor

Marc Satterwhite
Professor

Brett Shuster
Professor

Chad Sloan
Assistant Professor

Richard Spalding
Professor Emeritus

Frederick Speck
Professor

Department Chair of Performance Studies

Director of Bands

Edith Davis
Tidwell
Professor Emerita

Distinguished Teaching Professor

Gerald Tolson
Professor

Department Chair of Academic and Professional Studies

Michael Tracy
Professor

Krista Wallace-Boaz
Associate Professor

Director of Graduate Studies

Assistant Dean of Student Services

Robert Weaver
Professor Emeritus

Krzysztof Wolek
Associate Professor

Mark Yeary
Assistant Professor

Paul York
Professor
Rank I Program in School Social Work

**Major:** SW_RK1  
**Degree Awarded:** NON  
**Unit:** GE  
**Program Webpage:** [http://louisville.edu/education/degrees/rank](http://louisville.edu/education/degrees/rank)

**Program Information**

The Rank I program in School Social Work includes the School Social Work Specialization. It is designed for the Advanced Practitioner P-12.

**Contact information:**
Kent School of Social Work  
Dr. Andy Frey (502) 852-0431  
or CEHD Education Advising and Student Services (502) 852-5597

**Curriculum**

**Admission Requirements:** Admission to School of Interdisciplinary and Graduate Studies; signed Professional Code of Ethics/Technology User Agreement; and Completion of Official Program along with School Social Work Specialization program sheet.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Inquiry (Critical Thinker) (6 credit hours)</td>
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<tr>
<td>SW 668 Advanced Research Practice I AND SW 669 Advanced Research Practice II</td>
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<td><strong>Leadership:</strong> (Select one of the following) (3 credit hours)</td>
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<tr>
<td>EDSP 652 Academic and Behavior Response to Intervention</td>
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<tr>
<td>ECPY 740 Instrument Development</td>
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<tr>
<td>ELFH 575 Instructional Technology</td>
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<tr>
<td>ELFH 607 Principles of Educational Leadership</td>
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<tr>
<td><strong>Diversity:</strong> (Select one of the following) (3 credit hours)</td>
<td>3</td>
</tr>
<tr>
<td>EDSP 545 Exceptional Child in the General Classroom** OR EDSP 540 Introduction to the Exceptional Child**</td>
<td></td>
</tr>
</tbody>
</table>
(**One of these courses in the Diversity section must be completed for School Social Work Specialization)

**Action:** (Problem Solver) (3 credit hours) 3

EDSP 669 Single Subject Research Design

**Area of Emphasis** (at least 15 credit hours) 15

SW 630 School Social Work**

EDSP 644 Applied Behavior Analysis**

SW 615 Mental Health

SW 636 Death and Grief

ECPY 605 Human Development

ECPY 607 Learning and Human Development

**Electives** (3 credit hours) 3

ECPY 624 Foundations for School Counseling

ECPY 639 Prevention and Treatment of Substance Abuse

ECPY 732 Promoting Social Change

SW 662 Substance Abuse

SW 642 Psychopathology

SW 657 Group Methods

SW 660 Motivation and Change

EDSP 510 Legal Issues in Special Education

EDSP 671 Autism: Strategies and Techniques

EDSP 673 Asperger's Syndrome

**Minimum credit hours required** 30

**Exit requirements:** Hallmark Assessment Task for EDSP 669 or equivalent project that demonstrates proficiency in the Advanced-Level Kentucky Teacher Standards.

*Course project must address all of the Advanced-Level Kentucky Teacher Standards. Successful completion of portfolio.*
Notes:
1. Minimum of 15 credit hours of 600-level courses is required.
2. Up to 15 credit hours of graduate credit may be transferred to the Rank I program, as long as the student will have completed 60 credit hours of approved graduate credit.
3. including a Masters degree at the end of the Rank I program. Transfer credit must be officially accepted by the advisor and final acceptance is dependent upon receipt of official transcripts.
4. In the Rank I program at least 15 credit hours of new graduate coursework must be taken at the University of Louisville.
5. To complete the program, students must have a minimum 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than a B-.
6. **Courses are required for students completing the School Social Work Specialization and Rank I program.
7. This program sheet must be accompanied by a signed School Social Work specialization program sheet as well.

Faculty

Andy Frey
Professor in Kent
School Social Work Specialization Coordinator
Rank I Program in Secondary Education

Major: SE  
Degree Awarded: NON  
Unit: GE  
Program Webpage: http://louisville.edu/education/degrees/rank

Program Information

PROGRAM ADMISSION PROCEDURE

- Hold Certification in an 8-12, P-12, or 5-12 area and Masters of Rank II equivalency.  
- Admission to School of Interdisciplinary and Graduate Studies.

Curriculum

RANK I PROGRAM IN SECONDARY EDUCATION ADVANCED PRACTITIONER

(For students who have earned a Masters degree)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inquiry (3 hours)</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 600 Introduction to Research Methods &amp; Statistics</td>
<td></td>
</tr>
<tr>
<td>Advocacy Leadership (3 hours)</td>
<td></td>
</tr>
<tr>
<td>EDAP 606 (take in first semester of enrollment)</td>
<td></td>
</tr>
<tr>
<td>ELFH 603 Administrative Leadership in a Reform Environment</td>
<td></td>
</tr>
<tr>
<td>EDAP 624 Curriculum Theory</td>
<td></td>
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<tr>
<td>EDAP 625 Social and Ethical Development of Teaching</td>
<td></td>
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<tr>
<td>EDAP 677 Teacher Leader: Coaching</td>
<td></td>
</tr>
<tr>
<td>The Multicultural Learner (3 hours)</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 642 Literacy learning &amp; Cultural Differences</td>
<td></td>
</tr>
<tr>
<td>EDAP 626 Affirming Diversity</td>
<td></td>
</tr>
<tr>
<td>EDTP 503 Developing Cross-Cultural Competence</td>
<td></td>
</tr>
<tr>
<td>SOC 630 Sociology of Education</td>
<td></td>
</tr>
<tr>
<td>PAS 529 Teacher Institute on African-American Issues Or other diversity course in consultation with advisor</td>
<td></td>
</tr>
<tr>
<td>AREA OF EMPHASIS</td>
<td>12</td>
</tr>
<tr>
<td>EDAP 680 Capstone Course</td>
<td>3</td>
</tr>
<tr>
<td>Electives (6 hours)</td>
<td>6</td>
</tr>
<tr>
<td>Minimum total hours:</td>
<td>30</td>
</tr>
</tbody>
</table>

Exit Requirements: Portfolio or National Board Certification.

Midpoint Requirement: Candidates are required to submit a mid-program portfolio to a faculty advisor at the completion of 15 credit hours of coursework. 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.

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 a minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than a "C." Rank I in Secondary Education Professional Program (Fulfills the requirements for the M.Ed. in Secondary Education)

**RANK I IN SECONDARY EDUCATION PROFESSIONAL PROGRAM**
(Fulfills the requirements for the M.Ed. in Secondary Education)

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>Inquiry (6 hours)</td>
<td>6</td>
</tr>
<tr>
<td>EDAP 606 Orientation and Readings</td>
<td></td>
</tr>
<tr>
<td>ELFH 600 Introduction to Research Methods &amp; Statistics</td>
<td></td>
</tr>
<tr>
<td>Leadership and change (3 hours)</td>
<td>3</td>
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<tr>
<td>EDAP 607 Leadership and Change</td>
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<td>ELFH 603 Administrative Leadership in a Reform Environment</td>
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<td>EDAP 624 Curriculum Theory</td>
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<tr>
<td>EDAP 625 Social and Ethical Development of Teaching</td>
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<tr>
<td>Diversity (3 hours)</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 642 Literacy Learning &amp; Cultural Differences</td>
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<tr>
<td>EDTP 503 Developing Cross-Cultural Competence</td>
<td></td>
</tr>
<tr>
<td><strong>AREA OF EMPHASIS</strong></td>
<td>12</td>
</tr>
<tr>
<td>EDAP 680 Capstone Course</td>
<td>3</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td>3</td>
</tr>
<tr>
<td><strong>Minimum total hours</strong></td>
<td>30</td>
</tr>
</tbody>
</table>

**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 a minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than a "C."

**Faculty**

Jennifer Bay-Williams  
Professor  
Chair of Middle and Secondary Education  
Department

Peggy Brooks  
Instructor  
Coordinator of KTIP Program

Penny Howell  
Associate Professor

Lateefah Id-Deen  
Assistant Professor

Ann Larson  
Professor

Adam Larson  
Dean

Robin Lipsey  
Instructor  
Field and Clinical Coordinator

Sheron Mark  
Assistant Professor
Maggie McGatha  
Associate Professor  
Assistant Chair of  
Middle and  
Secondary  
Education  
Department
Elizabeth Patton  
Assistant Professor

Susan Peters  
Associate Professor  
Stephanie Philipp  
Term Faculty
Caroline Sheffield  
Associate Professor
Amy Stevens  
Instructor

Steve Swan  
Instructor  
Coordinator of  
Instructional  
Technology  
Program
Shelley Thomas  
Associate Professor

Thomas Tretter  
Professor  
Director of Gheens  
Science Hall and  
Rauch Planetarium
Jean Wolph  
Instructor  
Director of  
Louisville Writing  
Project
Master of Arts in Teaching in Secondary Education

Major: SE
Degree Awarded: MAT
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/mat-se

Program Information

The Master of Arts in Teaching (MAT) degree in Secondary Education leads to certification in:

- Biology
- Chemistry
- Earth & Space Science
- English
- Mathematics
- Physics
- Social Studies Education (grades 8-12)

Business Education leads to certification in grades 5-12. World Language Education (Spanish and French) leads to certification in grades P-12.

Curriculum

Initial Assessment: Admission to School of Interdisciplinary and Graduate Studies & Teacher Education; minimum undergraduate degree GPA of 2.75; minimum GRE scores as required by EPSB; Praxis II content exam registration and/or scores; three letters of recommendation; professional statement; signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admissions Guidelines; Bachelor’s degree with major in content area or appropriate prerequisite courses; "C" or higher in English 102 and oral communication course; acceptable interview.

Courses

*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 credit hours):

- EDTP 622 High School English Methods
- EDTP 623 High School Math Methods
- EDTP 624 High School Science Methods
- EDTP 625 High School Social Studies Methods
- EDTP 628 Business Methods 5-12
- EDTP 629 World 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 methods class; within 3 credits of meeting content requirements; ECPY 607 and EDTP 501, 602, and content methods courses passed; satisfactory mid-point teacher performance assessment (TPA); positive recommendation from Middle/Secondary Program Committee; electronic documentation of 200 hours of diverse and approved field experiences.

Choose one of the following courses (6 credit hours)
*EDTP 619 Student Teaching High School
*EDTP 618 Student Teaching: Middle and High School
*EDTP 677 Capstone Seminar: Initial Certification

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:
EDTP 503 Developing Cross-Cultural Competence
EDTP 620 Reading and Writing Across the Curriculum

Choose the technology course ¹ appropriate for your content certification area:
EDTP 580 Digital Citizenship (English, Social Studies, Business, World Lang)
EDTP 581 Technology Applications for Mathematics Teaching (Math)
EDTP 582 Technology Applications for Science Teaching (Science)

¹ Can be taken at any point in the program.
² Must be taken concurrently with student teaching.
³ Must be taken concurrently.

Minimum total credit hours 36

Content courses remaining to complete certification requirements:

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

Degree Candidacy: Students not enrolled during the semester in which they intend to graduate must register for degree candidacy as outlined in the Graduate Catalog "Academic Policies, Procedures, and Requirements”.

Praxis Disclaimer: Teacher certification requirements are subject to change. Before registering for certification test(s), please refer to the Education Professional Standards Board (EPSB) website at www.epsb.ky.gov or http://www.ets.org/praxis/ky for current requirements.

Faculty

<table>
<thead>
<tr>
<th>Jenny Bay-Williams</th>
<th>Chair of Middle and Secondary Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peggy Brooks</td>
<td>Instructor</td>
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</table>


<table>
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<tr>
<th>Coordinator of KTIP Program</th>
<th>James Chisholm</th>
<th>Assistant Professor</th>
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<tr>
<td>Ginevra Courtade</td>
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<td>Assistant Chair of Special Education Department</td>
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<td>Penny Howell</td>
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<td>Lateefah Id-Deen</td>
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<td></td>
</tr>
<tr>
<td>Tasha Laman</td>
<td>Associate Professor</td>
<td></td>
</tr>
<tr>
<td>Director of the Nystrand Center of Excellence in Education</td>
<td>Ann Larson</td>
<td>Professor</td>
</tr>
<tr>
<td>Dean of the College of Education and Human Development</td>
<td>Danna Morrison</td>
<td>Instructor</td>
</tr>
<tr>
<td>Steve Swan</td>
<td>Instructor</td>
<td>Coordinator of Instructional Technology Program</td>
</tr>
<tr>
<td>Maggie McGatha</td>
<td>Associate Professor</td>
<td>Assistant Chair of Middle and Secondary Education Department</td>
</tr>
<tr>
<td>Justin McFadden</td>
<td>Assistant Professor</td>
<td></td>
</tr>
<tr>
<td>Susan Peters</td>
<td>Associate Professor</td>
<td>Field and Clinical Placements</td>
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<tr>
<td>Caroline Sheffield</td>
<td>Associate Professor</td>
<td></td>
</tr>
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<td>Steve Swan</td>
<td>Instructor</td>
<td>Coordinator of Instructional Technology Program</td>
</tr>
<tr>
<td>Thomas Tretter</td>
<td>Professor</td>
<td>Director of Gheens Science Center and Rauch Planetarium</td>
</tr>
<tr>
<td>Jean Wolph</td>
<td>Instructor</td>
<td></td>
</tr>
</tbody>
</table>
Masters of Arts in 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

Program Information

The Alternative Certification program is designed to assist the 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 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.

Curriculum

Initial Assessment: Admission to the School of Interdisciplinary and Graduate Studies and Teacher Education; employment as a full-time temporary provisional teacher; passing scores on content Praxis II exams; minimum undergraduate GPA of 2.75; minimum GRE scores as required by EPSB; three letters of recommendation; professional statement; signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admissions Guidelines; Bachelor's degree in content area or prerequisite content courses; "C" or higher in English 102 and oral communication course; acceptable interview.

EDTP 631 Integrated Teaching and Learning I 3
EDTP 632 Integrated Teaching and Learning II 3
Choose one methods course from the following (3 credit hours) 3
EDTP 622 High School English Methods
EDTP 623 High School Math Methods
EDTP 624 High School Science Methods
EDTP 625 High School Social Studies Methods
EDTP 628 Business Methods 5-12
EDTP 629 World Language Methods P-12
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; no lower than 2.0 GPA in content methods class(es); 2.0 or higher GPA in Practicum for Alternative Certification; 2.50 cumulative GPA in content course requirements; passing scores on 8-12 PLT Praxis
exam; satisfactory mid-point teacher performance assessment (TPA); positive recommendation from Middle/Secondary Program Committee.

EDTP 503 Developing Cross-Cultural Competence 3

**Choose the technology course appropriate for your content certification area:** 3
EDTP 580 Digital Citizenship (English, Social Studies, Science, World Language)
EDTP 581 Technology Applications for Math Teaching (Math)
EDTP 582 Technology Applications for Science Teaching (Science)
EDTP 620 Reading and Writing Across the Curriculum 3
EDTP 678 Supporting the Intern Teacher I 3
EDTP 679 Supporting the Intern Teacher II 3
Minimum total credit hours 30

Certification courses remaining to complete certification requirements:

To maintain your Temporary Provisional Certificate, you MUST be enrolled in Alternative Certificate coursework.

**Certification Assessment:** Satisfactory dispositions assessment; satisfactory certification teacher performance assessment (TPA); passing score on 8-12 PLT Praxis exam; must pass KTIP.

**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:** Students who are not enrolled during the semester in which they are graduating must register for degree candidacy as outlined in the Graduate Catalog, under the section called academic policies and requirements".

**Praxis Disclaimer:** Teacher certification requirements are subject to change. Before registering for the test(s), please refer to the Education Professional Standards Board (EPSB) website at [http://www.epsb.ky.gov/] or [http://www.ets.org/praxis/ky?WT.ac=praxishome_states_150414]

**Faculty**

**Jenny Bay-Williams**
**Professor**
Chair of Middle and Secondary Education Department

**Peggy Brooks**
**Instructor**
KTIP Coordinator

**Janet Calvert**
**Instructor**
Coordinator of Alternative

**James Chisholm**
**Assistant Professor**

**Penny Howell**
**Associate Professor**

**Lateefah Id-Deen**
**Assistant Professor**

**Ann Larson**
**Professor**
Dean

**Sheron Mark**
**Assistant Professor**

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**Associate Professor**

**Steve Swan**
**Term Instructor**
Director of the Instructional Technology Program

**Thomas Tretter**
**Professor**
Director of Gheens Science Hall and Rauch Planetarium

**Jean Wolph**
**Instructor**
Rank I Program in Special Education - Advanced Practitioner (P-12)

Major: SPE
Degree Awarded: NON
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/rank

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.

Admission Requirements:

Students may apply to the program by first going to the School of Interdisciplinary and Graduate Studies, http://louisville.edu/graduate/apply.

- Official transcripts with a GPA of 2.75 in the Bachelor's degree and a GPA of 3.0 in the Master's degree.
- Teaching certificate
- TOEFL (Students holding a baccalaureate or advanced degree from an accredited institution in the U.S. are exempt from this requirement.)

Curriculum

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inquiry (Critical Thinker) (3 credit hours)</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 600 Introduction to Research Methods &amp; Statistics</td>
<td></td>
</tr>
<tr>
<td>EDAP 606 Orientation in Reading (take first semester of enrollment)</td>
<td></td>
</tr>
<tr>
<td>EDSP 639 Research in Special Education</td>
<td></td>
</tr>
<tr>
<td>Advocacy (Professional Leader) (6 credit hours)</td>
<td></td>
</tr>
<tr>
<td>Leadership (Select one of the following) (3 hours)</td>
<td>3</td>
</tr>
<tr>
<td>EDSP 597 Issues in Special Education</td>
<td></td>
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<tr>
<td>EDAP 606 Orientation and Readings (take in first semester of enrollment)</td>
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<tr>
<td>EDAP 607 Leadership and Change</td>
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<td>ELFH 603 Administrative Leadership in a Reform Environment</td>
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<tr>
<td>ELFH 613 Administration and Supervision in Special Education</td>
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<tr>
<td>Diversity (Select one of the following) (3 hours)</td>
<td>3</td>
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<tr>
<td>EDSP 537 Language Learning</td>
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</tbody>
</table>


EDSP 545  Exceptional Child in the Regular Classroom
EDAP 642  Literacy Learning and Cultural Differences
EDTP 626  Affirming Diversity
EDTP 503  Developing Cross-Cultural Competence
SOC 630  Sociology of Education
WMST 532  History of American Sexualities
WMST 556  Feminist Theory
PAS 529  Teaching Institute on African-American Issues

Action (Problem Solver) (3 credit hours) 3
EDSP 669  Single Subject Research Design
Area of Emphasis (at least 15 credit hours) 15
Electives (3 credit hours) 3
Minimum Hours Required 30

Midpoint Requirement: M.Ed. candidates are required to submit a mid-program portfolio at the completion of 15 credit hours of coursework. The faculty advisor will assess the candidate's portfolio, which must 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 Requirement: 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 Masters degree (upon approval of advisor).
4. To complete the program, students must have a minimum grade point average of 3.0. No credit shall be accepted for carrying a grade lower than "C".
5. Successful completion of the appropriate PRAXIS Exam(s) is required if adding teacher certification in LBD or MSD.
6. The Rank I classification shall require the completion of 60 semester hours approved graduate level credit including a Masters degree.

Praxis Disclaimer: "Teacher certification requirements are subject to change. Before registering for the test(s), please refer to the Education Professional Standards Board (EPSB) website at www.kyepsb.org or www.ets.org/praxis.ky for current requirements."

Faculty

Debra Bauder  Associate Professor
Justin Cooper  Assistant Professor
Ginevra Courtade  Associate Professor

Monica Delano  Associate Professor
Director of Doctoral Program
Erick Dubuque  Assistant Professor
Regina Hirn  Assistant Professor

Timothy Landrum  Professor
Chair of Special Education Department
Amy Lingo  Professor
Associate Dean for Academic Affairs and Unit Effectiveness

Scott Patton  Instructor
Robert Pennington  Assistant Professor
Terry Scott  Professor
Teddy Scott  Interim Associate Dean for Research and Graduate Studies
Thomas Simmons  Associate Professor
Master of Education in Special Education

Major: SPE
Degree Awarded: MED
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/med-se

Program Information

The goal of the program is to offer a Master's degree that will advance one’s knowledge and further expertise in a specialty area. Through this program students will increase their understanding of individuals with Autism/Pervasive Developmental Disorder (PDD) across the lifespan. They will learn to use alternative communication systems to address the needs of persons with Autism/PDD.

Curriculum

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.

Admission Requirements/Entry Assessment: Admission to School of Interdisciplinary and Graduate Studies; 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 (TOEFL) required of all international students from countries in which English is not the native language; and 2.75 cumulative GPA; personal statement (Ideas to Action Unit Dispositions Rubric and Ideas to Action Holistic Construct Rubric completed by Special Education Screening Committee using personal statement; signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admissions Guidelines; and background check as required by work setting.

Inquiry (Critical Thinker) (6 hours)
EDSP 540 Introduction to Exceptional Children 3
EDSP 644 Applied Behavior Analysis 3

Advocacy (Professional Leader) (6 hours)
EDSP 652 Academic and Behavior Response to Intervention 3
EDSP 627 Applications in Assistive Technology 3

Action (Problem Solving) (3 hours)
EDSP 639 Education Research in P-12 Settings 3

Midpoint Assessment: Cumulative GPA of 3.0 or higher; grade no lower than B- in all coursework; Acceptable or Target performance on all Hallmark Assessment Tasks to date.

Area of Emphasis in Special Education: (At least 15 hours)
Minimum total hours: 30

Exit Assessment: Cumulative GPA of 3.0 or higher, grade no lower than B- in all coursework; Acceptable or Target performance on all Hallmark Assessment Tasks.
**Degree Candidacy:** Students not enrolled during the semester in which they intend to graduate must register for degree candidacy as outlined in the Graduate Catalog, "Academic Policies, Procedures, and Requirements".

- **Advanced courses** 9
- **Related Electives** 9

**Exit Requirement:**
- EDSP 639 Research Analysis in Special Education 3
- **Minimum total hours** 33

**Faculty**

- **Debra Bauder**
  - Associate Professor
- **Justin Cooper**
  - Assistant Professor
- **Ginevra Courtade**
  - Associate Professor
  - Assistant Chair of Special Education Department
- **Monica Delano**
  - Associate Professor
  - Director Doctoral Program
- **Timothy Landrum**
  - Professor
  - Chair of Special Education Department
- **Amy Lingo**
  - Associate Professor
  - Associate Dean for Academic Affairs and Unit Effectiveness
- **Robert Pennington**
  - Assistant Professor
- **Terry Scott**
  - Professor
  - Interim Associate Dean for Research and Graduate Studies
- **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

Program Information

Admission Requirements: Admission to the School of Interdisciplinary and Graduate Studies; baccalaureate degree or its equivalent from an accredited institution; two letters of recommendation; minimum required score on the GRE of 147 Verbal and 142 Quantitative; 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.

Prerequisite to entry into the program:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSP 540 Introduction to Exceptional Children or equivalent</td>
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</table>

Curriculum

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inquiry (Critical Thinker) (9 credit hours)</td>
<td>9</td>
</tr>
<tr>
<td>EDSP 644 Applied Behavior Analysis</td>
<td></td>
</tr>
<tr>
<td>EDSP 639 Research Analysis in Special Education</td>
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<tr>
<td>EDSP 669 Single Subject Research Methods and Designs</td>
<td></td>
</tr>
<tr>
<td>Advocacy: (Professional Leader) (6 credit hours)</td>
<td>6</td>
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<tr>
<td>EDSP 652 Academic and Behavior Response to Intervention</td>
<td></td>
</tr>
<tr>
<td>EDSP 627 Applications of Assistive Technology</td>
<td></td>
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<tr>
<td>Action (Problem Solver) (3 credit hours)</td>
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</tr>
<tr>
<td>EDSP 668 Assistive Technologies Seminar</td>
<td></td>
</tr>
<tr>
<td>Midpoint Assessment: Completion of ½ of Experienced Teacher Standards, with ¾ of indicators for each standard</td>
<td></td>
</tr>
<tr>
<td>Area of Emphasis (18 credit hours)</td>
<td>18</td>
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<tr>
<td>EDSP 663 Low Tech Assistive Technologies</td>
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<tr>
<td>EDSP 664 Assistive Technology: Computer Access and Switches and Toys</td>
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<tr>
<td>EDSP 672 Assistive Technology: Autism</td>
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</tr>
<tr>
<td>EDSP 661 Assistive Technology: Assessment Data Collection and Decision-Making</td>
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<tr>
<td>EDSP 665 Assistive Technology: Multimedia and the Classroom Integration</td>
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</tr>
<tr>
<td>EDSP 632 Assistive Technology: Universal Design for Learning</td>
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</tr>
<tr>
<td>Minimum total credit hours:</td>
<td>36</td>
</tr>
<tr>
<td>CARDS 6 (Exit Assessment): Cumulative GPA of 3.0 or higher; grade no lower than B- in all coursework; satisfactory performance on all Hallmark Assessment Tasks as determined by advisor;</td>
<td></td>
</tr>
</tbody>
</table>
scored exemplary or accomplished on Rubrics for Advanced Candidates (by instructor); positive recommendation from the Special Education Program Committee.

Exit Requirements:

Note
1. Minimum of 18 credit hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of six (6) credit hours) – final acceptance is dependent upon receipt of official transcripts.
3. A maximum of six (6) credit 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”.

Faculty

Debra Bauder  Associate Professor
Justin Cooper  Assistant Professor
Ginevra Courtade  Associate Professor
Assistant Chair of Special Education Department
Monica Delano  Associate Professor

Director of Doctoral Program

Erick Dubuque  Assistant Professor
Regina Hirn  Assistant Professor
Timothy Landrum  Professor
Chair of Special Education Department

Amy Lingo  Professor
Associate Dean for Academic Affairs and Unit Effectiveness
Scott Patton  Instructor
Robert Pennington  Assistant Professor

Terry Scott  Professor
Interim Associate Dean for Research and Graduate Studies

Thomas Simmons  Associate Professor
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

Program Information

Admission Requirements:
Admission to School of Interdisciplinary and Graduate Studies; baccalaureate degree in special education, psychology, speech language pathology, occupational therapy or social work from an accredited institution; professional certification/license in a field related to autism/intellectual disability; statement of professional goals related to working within the field of applied behavior analysis and with individuals with disabilities; 2 letters of recommendation related to the applicant's work with individuals with disabilities; minimum score of 147 verbal and 142 quantitative on the GRE; Test of English as a Foreign Language required of all international students from countries in which English is not the native language; and 2.75 grade point average.

Curriculum

Inquiry (Critical Thinker) (9 credit hours)
EDSP 644 Applied Behavior Analysis 3
EDSP 654 Radical Behaviorism 3
EDSP 669 Single Subject Research Designs 3

Advocacy: (Professional Leader) (6 credit hours)
EDSP 651 Practical and Ethical Practice of Behavior Analysis 3
EDSP 673 Research Seminar on Special Topics in Autism 3

Action (Problem Solver) (12 credit hours)
EDSP 653 Practicum in Autism and Applied Behavior Analysis 1 3
EDSP 653 Practicum in Autism and Applied Behavior Analysis 2 3
EDSP 653 Practicum in Autism and Applied Behavior Analysis 3 3
EDSP 653 Practicum in Autism and Applied Behavior Analysis 4 3

Midpoint Assessment:
Cumulative GPA of 3.0 or higher; grades no lower than B in all coursework. Completion of intervention proposal and presentation with a rating of Satisfactory. Acceptable or Target performance on all Hallmark Assessments to date including EDSP 644, 669, 670, 671, and 646. Positive recommendation from the Special Education Program Committee.

Area of Emphasis

EDSP 570 Autism: Introduction and Understanding 3
EDSP 671 Autism: Strategies and Techniques 3
EDSP 546 Augmentative Communication and a Behavior Analytic Approach to Communication 3
EDSP 650 Advanced Applied Behavior Analysis 3

Exit Requirement:

Cumulative GPA of 3.0 or higher; grades no lower than B in all coursework; Completion of intervention proposal and presentation with a rating of Satisfactory. Acceptable or Target performance on all Hallmark Assessments. Positive recommendation from the Special Education Program Committee.

Minimum total credit hours: 39

Notes
1. Minimum of 18 credit hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of 6 credit hours) -- final acceptance is dependent upon receipt of official transcripts.
3. A maximum of 6 credit 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 "B".

Faculty

Debra Bauder  
Associate Professor
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Ginevra Courtade  
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Assistant Chair of Special Education Department
Monica Delano  
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Terry Scott  
Professor
Interim Associate Dean for Research and Graduate Studies
Thomas Simmons  
Associate Professor
Master of Arts in Teaching in Special Education Concentration in Learning and Behavior Disorders (P-12)

Major: SPE  
Degree Awarded: MAT  
Unit: GE  
Program Webpage: [http://louisville.edu/education/degrees/med-se-lbd](http://louisville.edu/education/degrees/med-se-lbd)

Program Information

Due to ESEA regulations pertaining to highly effective teachers, the Department of Special Education is re-evaluating the MAT program for Learning and Behavior Disorders.

No applications will be accepted to this program.

Curriculum

Initial Assessment: Admission to Teacher Education, Minimum undergraduate degree GPA 2.75, Minimum GRE scores [Verbal 150 (450), Quantitative 143 (490), Analytical Writing 4.0], three letters of recommendation, professional statement, bachelor’s degree, "C" or higher in English 102 and oral communication.

Courses

<table>
<thead>
<tr>
<th>Student Characteristics (6 hours)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDSP 540 Introduction to Exceptional Children</td>
<td>6</td>
</tr>
<tr>
<td>EDSP 675 Characteristics, Needs, &amp; Responses to Students with EBD</td>
<td></td>
</tr>
</tbody>
</table>

Pedagogy (30 hours)

| EDSP 612 LBD Curriculum Methods and Assessment I | |
| EDSP 616 LBD Curriculum Methods and Assessment II | |
| EDSP 607 Student Teaching in Learning & Behavior Disorders OR | |
| EDSP 617 Practicum in Learning & Behavior Disorders | |
| EDSP 644 Applied Behavior Analysis | |
| EDSP 640 Teaching Reading Special Education P-12 | |

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 | |
| EDAP 647 Teaching Mathematics to Students with Disabilities | |
| EDSP 637 Transition, Collaboration, and Inclusion | |
| EDTP/AP Content Course | |
| EDTP/AP Content Course | |

Research (3 hours)

| EDSP 639 Research Methods in Special Education | Must be taken in last six hours |
| Elective: Choose from one of the following courses (3 hours) | |
EDSP 537 Language Learning for Exceptional Children
EDSP 627 Applications of Assistive Technology
EDSP 670 Autism: Introduction and Understanding
EDSP 681 Early Childhood Education and Exceptional Children

**Minimum total hours**: 42

**Certification Assessment**: Satisfactory dispositions assessment; no grade lower than "B-" in all coursework; passing scores on PRAXIS exams; positive recommendation from the Special Education Program Committee.

**Degree Assessment**: 3.0 cumulative GPA; Satisfactory Dispositions Assessment.

**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/toc#Academic_Policies](http://louisville.edu/graduatecatalog/toc#Academic_Policies), under the section called academic policies and requirements.

**Faculty**

- **Debra Bauder**
  Associate Professor
- **Justin Cooper**
  Assistant Professor
- **Ginevra Courtade**
  Associate Professor
- **Monica Delano**
  Associate Professor
- **Director of Doctoral Program**
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- **Amy Lingo**
  Professor
- **Associate Dean for Academic Affairs and Unit Effectiveness**
- **Scott Patton**
  Instructor
- **Robert Pennington**
  Assistant Professor
- **Terry Scott**
  Professor
  Interim Associate Dean for Research Studies
- **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

Program Information

CARD 4: (Entry Requirements): Admission to the School of Interdisciplinary and Graduate Studies; baccalaureate degree or its equivalent from an accredited institution; two letters of recommendation; minimum required score on the GRE of 147 Verbal and 142 Quantitative; Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language; copy of a Kentucky teaching certificate; 2.75 cumulative GPA for undergraduate and 3.0 GPA for graduate work; personal statement (Ideas to Action Unit Dispositions Rubric and Ideas to Action Holistic Construct Rubric completed by Special Education Screening Committee using personal statement); Signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admissions Guidelines.

Prerequisite for Admission to the Program:
1. EDSP 540, Introduction to Exceptional Children or its equivalent
2. Teacher Certification

Curriculum

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Inquiry (Critical Thinker) (9 credit hours)</td>
<td>9</td>
</tr>
<tr>
<td>EDSP 644* Applied Behavior Analysis</td>
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<tr>
<td>EDSP 639 Research Analysis in Special Education</td>
<td></td>
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<tr>
<td>EDSP 669 Single Subject Research Methods and Designs</td>
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<tr>
<td>Advocacy (Professional Leader) (6 credit hours)</td>
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<tr>
<td>EDSP 652 Academic and Behavior Response to Intervention</td>
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<tr>
<td>EDSP 627 Applications of Assistive Technology</td>
<td></td>
</tr>
<tr>
<td>Action (Problem Solver)(3 credit hours)</td>
<td>3</td>
</tr>
<tr>
<td>EDSP 645* Learning and Behavioral Disorders Practicum</td>
<td></td>
</tr>
</tbody>
</table>

CARD 5: (Midpoint Assessment): Cumulative GPA of 3.0 or higher; grade no lower than B- in all coursework; satisfactory performance on all Hallmark Assessment Tasks to date (EDSP 512, 516, 644, 518) as determined by advisor; scored exemplary or accomplished on Rubrics for Advanced Candidates (by instructor); positive recommendation from the Special Education Program Committee.

Area of Emphasis (At least 18 credit hours)
- EDTP 647 Teaching Mathematics to Students with Disabilities
- EDSP 512* Methods for Students with Learning and Behavior Disorders

18
EDSP 516* Assessment Procedures for Learning and Behavior Disorders  
EDSP 675* Characteristics, Needs, and Responses to Students with EBD  
EDSP 518* Teaching Reading to Students with Disabilities  
Elective: Choose from one of the following courses (3 credit hours)  
EDSP 570 Autism: Introduction and Understanding OR  
EDSP 650 Advanced Applied Behavior Analysis  
Minimum total credit hours 36  
*Course is required for certification.

**CARDS 6 (Exit Assessment):** Cumulative GPA of 3.0 or higher; grade no lower than B- in all coursework; satisfactory performance on all Hallmark Assessment Tasks as determined by advisor; scored exemplary or accomplished on Rubrics for Advanced Candidates (by instructor); positive recommendation from the Special Education Program Committee.

### Exit Requirements:

**Notes:**
1. Students who earn a grade of B- or below in any course leading to teacher certification are required to repeat the course before being admitted to Practicum (EDSP 645).
2. Successful completion of appropriate PRAXIS Exams is required for Learning and Behavior Disorders teacher certification.
3. Satisfactory performance on Hallmark Assessment Tasks as determined by advisor; satisfactory on all additional rubrics (see CARDS 4, 5, and 6 above).
4. Minimum of 36 total credit hours in 600-level courses is required.
5. Transfer credit must be officially approved by the advisor (maximum of six (6) credit hours) - final acceptance is dependent upon receipt of official transcripts.
6. A maximum of six (6) credit hours taken in non-degree status can be applied toward a Masters degree (upon approval of advisor).
7. All courses must be completed within six years of admission to the program.
8. A student must have a minimum 3.0 grade point average. No credit shall be accepted for carrying a grade lower than "B-".

**PRAXIS Disclaimer:**

**Degree Candidacy:** Students not enrolled during the semester in which they intend to graduate must register for degree candidacy as outlined in the Graduate Catalog. "Academic Policies, Procedures, and Requirements."

### Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debra Bauder</td>
<td>Associate Professor</td>
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</table>
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Robert Pennington
Assistant Professor
Terry Scott
Professor

Interim Associate Dean for Research and Graduate Studies

Thomas Simmons
Associate Professor
Master of Arts in Teaching in Special Education Concentration in Moderate and Severe Disabilities (P-12)

**Major:** SPE  
**Degree Awarded:** MAT  
**Unit:** GE  
**Program Webpage:** [http://louisville.edu/education/degrees/mat-se-msd](http://louisville.edu/education/degrees/mat-se-msd)

**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). 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**

**CARDs 1 (Entry Assessment):** Admission to School of Interdisciplinary and Graduate Studies and Teacher Education; Bachelor's degree, “C” or higher in English 102 and oral communication course; and acceptable interview; minimum degree GPA of 2.75; Minimum GRE scores as required by EPSB; three letters of recommendation; professional statement (Ideas to Action Unit Dispositions Rubric and Ideas to Action Holistic Construct Rubric completed by Special Education Program Committee using professional statement; signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admissions Guidelines.

**Courses**

<table>
<thead>
<tr>
<th>Student Characteristics (6 hours)</th>
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<tbody>
<tr>
<td>EDSP 540 Introduction to Exceptional Children</td>
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<tr>
<td>EDSP 594 Foundational Concept in Intellectual and Physical Disabilities</td>
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<thead>
<tr>
<th>Pedagogy (27 hours)</th>
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</thead>
<tbody>
<tr>
<td>EDSP 644 Applied Behavior Analysis</td>
<td></td>
</tr>
<tr>
<td>EDSP 609 MSD Curriculum and Methods I</td>
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<tr>
<td>EDSP 520 Assessment of Students with Moderate and Severe Disabilities</td>
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<tr>
<td>EDSP 611 MSD Curriculum and Methods II</td>
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<tr>
<td>EDSP 614 Transition Programs and Services for Children and Youth with Disabilities</td>
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</table>

**CARDs 2 (Mid-Point Assessment):** Cumulative GPA of 3.0 or higher, grade no lower than B- in all coursework; Acceptable or Target performance on Hallmark Assessment Tasks to date (including EDSP 644, 520, 609, and 611); Acceptable or Target performance on the following rubrics: Ideas to Action Holistic Construct Rubric, Ideas to Action Dispositions Rubric (failure to receive Acceptable on the dispositions assessment may result in removal from the program); Advanced Program Planning Rubric;
positive recommendation from the Special Education Program Committee; electronic documentation of 200 hours of diverse and approved field experiences.

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>EDSP 647</td>
<td>Teaching Mathematics to Students with Disabilities</td>
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<td>EDSP 546</td>
<td>Behavior Analytic Approach to Communication</td>
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<tr>
<td>EDSP 570</td>
<td>Autism: Introduction and Understanding</td>
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<tr>
<td>EDSP 608</td>
<td>Student Teaching in Moderate and Severe Disabilities</td>
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Research (3 hours)

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>EDSP 639</td>
<td>Research Analysis in Special Education</td>
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Elective: Choose from one of the following courses. (3 hours) 3

<table>
<thead>
<tr>
<th>Course Code</th>
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</thead>
<tbody>
<tr>
<td>EDSP 627</td>
<td>Applications of Assistive Technology</td>
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<tr>
<td>EDSP 650</td>
<td>Advanced Applied Behavior Analysis</td>
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<tr>
<td>EDSP 671</td>
<td>Autism: Strategies and Techniques</td>
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</tr>
<tr>
<td>EDSP 669</td>
<td>Single Subject Research Methods</td>
<td></td>
</tr>
</tbody>
</table>

Minimum total hours 39

CARDS 3 (Exit Assessment): Cumulative GPA of 3.0 or higher; no grade lower than "B-" in all coursework; Acceptable or Target performance on all Hallmark Assessment Tasks; Acceptable or Target performance on the following rubrics: Ideas to Action Holistic Construct Rubric, Ideas to Action Dispositions Rubric (failure to receive acceptable on the dispositions assessment may result in remove from the program); Advanced Program Technology Rubric; Advanced Program Impact on P-12 Student Learning Rubric; Advanced Program Clinical Practice Rubric; positive recommendation from the Special Education Program Committee.

Certification Assessment: Satisfactory dispositions assessment (as noted above); no grade lower than "B-" in all coursework; passing scores on PRAXIS exams; positive recommendation from the Special Education Program Committee.

Degree Candidacy: Students not enrolled during the semester in which they intend to graduate must register for degree candidacy as outlined in the Graduate Catalog, under the section, "Academic Policies, Procedures, and Requirements".

Praxis Disclaimer: Teacher certification requirements are subject to change. Before registering for certification test(s), please refer to the Education Professional Standards Board (EPSB) website at www.epsb.ky.gov or http://www.ets.org/praxis/ky for current requirements.

Degree Assessment: See CARDS 3 above.

Faculty

<table>
<thead>
<tr>
<th>Name</th>
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<th>Department/Program</th>
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<tbody>
<tr>
<td>Debra Bauder</td>
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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](http://louisville.edu/education/degrees/med-se-msd)

Program Information

Admission Requirements:

Admission to the School of Interdisciplinary and Graduate Studies; Bachelors degree from an accredited institution; two letters of recommendation; minimum combined score of 800 on the Graduate Record Exam; Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language; copy of teaching certificate; and 2.75 cumulative grade point average.

Prerequisites for admission to the program:

EDSP 540 Introduction to Exceptional Children 3
Teacher certification

Curriculum

**CARDS 4 (Entry Assessment):** Admission to the School of Interdisciplinary and Graduate Studies; bachelor's degree or its equivalent from an accredited institution; two letters of recommendation; minimum required score on the GRE of 147 Verbal and 142 Quantitative; Test of English as a Foreign Language required of all foreign students from countries in which English is not the native language; copy of teaching certificate; and 2.75 cumulative GAP for undergraduate and 3.0 GPA for graduate work; personal statement (Ideas to Action Unit Dispositions Rubric and Ideas to Action Holistic Construct Rubric completed by Special Education Screening Committee using personal statement); signed Professional Code of Ethics/Technology User Agreement/Statement of Understanding of Admissions Guidelines.

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<td>Advocacy: (Professional Leader) (6 credit hours)</td>
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<td>EDSP 627 Applications of Assistive Technology</td>
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<tr>
<td>Action (Problem Solver) (3 credit hours)</td>
<td>3</td>
</tr>
<tr>
<td>EDSP 635* Moderate and Severe Disabilities Practicum</td>
<td></td>
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</tbody>
</table>
**CARDS 5 (Mid-Point Assessment):** Cumulative GPA of 3.0 or higher; no lower than B- in all coursework; satisfactory performance on all Hallmark Assessment Tasks to date (520, 609, 611, 644) as determined by advisor; scored exemplary or accomplished on Rubrics for Advanced Candidates (by instructor); positive recommendation from the Special Education Program Committee.

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<th>Courses</th>
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<tr>
<td><strong>Area of Emphasis</strong> (At least 18 credit hours)</td>
<td>18</td>
</tr>
<tr>
<td>EDSP 594* Foundational Concepts in Intellectual and Physical Disabilities</td>
<td></td>
</tr>
<tr>
<td>EDSP 520 Assessment of Students with Moderate and Severe Disabilities</td>
<td></td>
</tr>
<tr>
<td>EDSP 609* Moderate/Severe Disabilities Curriculum and Methods I</td>
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</tr>
<tr>
<td>EDSP 611* Moderate/Severe Disabilities Methods II</td>
<td></td>
</tr>
<tr>
<td>EDSP 570 Autism: Introduction and Understanding</td>
<td></td>
</tr>
<tr>
<td>EDSP 546* Behavior Analytic Approach to Communication</td>
<td></td>
</tr>
</tbody>
</table>

**Minimum total credit hours:** 36

**CARDS 6 (Exit Assessment):** Cumulative GPA of 3.0 or higher; grade no lower than B- in all coursework; satisfactory performance on all Hallmark Assessment Tasks as determined by advisor; scored exemplary or accomplished on Rubrics for Advanced Candidates (by instructor); positive recommendation from the Special Education Program Committee.

*Course is required for certification.

**Exit Requirements:**

**Notes**

1. Students who make a grade below a B- in any required course must repeat the course before being admitted to Practicum (EDSP 635).
2. Successful completion of the appropriate PRAXIS Exams is required for Moderate and Severe Disabilities teacher certification.
3. Satisfactory performance on Hallmark Assessment Tasks as determined by advisor; satisfactory performance on all additional rubrics (see CARDS 4, 5, and 6 above) as determined by advisor.
4. Minimum of 18 credit hours in 600-level courses is required.
5. Transfer credit must be official accepted by the advisor (maximum of six (6) credit hours) - final acceptance is dependent up on receipt of official transcripts.
6. A maximum of six (6) credit hours taken in non-degree status can be applied toward a Masters 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 a minimum 3.0 grade point average. No credit shall be accepted for carrying a grade lower than "B-".

**Praxis Disclaimer:**

Teacher certification requirements are subject to change. Before registering for the test(s), please refer to the Education Professional Standards Board (EPSB) website at [www.epsb.ky.gov](http://www.epsb.ky.gov) or [http://www.ets.org/praxis/ky](http://www.ets.org/praxis/ky) for current requirements.

**Degree Candidacy:** Students not enrolled during the semester in which they intend to graduate must register for degree candidacy as outlined in the Graduate Catalog, "Academic Policies, Procedures, and Requirements".
## Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debra Bauder</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Justin Cooper</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Ginevra Courtade</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Monica Delano</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Erick Dubuque</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Regina Hirn</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Timothy Landrum</td>
<td>Professor</td>
</tr>
<tr>
<td>Amy Lingo</td>
<td>Professor</td>
</tr>
<tr>
<td>Scott Patton</td>
<td>Instructor</td>
</tr>
<tr>
<td>Robert Pennington</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Terry Scott</td>
<td>Professor</td>
</tr>
<tr>
<td>Amy Lingo</td>
<td>Associate Dean for Academic Affairs and Unit Effectiveness</td>
</tr>
<tr>
<td>Scott Patton</td>
<td>Instructor</td>
</tr>
<tr>
<td>Thomas Simmons</td>
<td>Associate Professor</td>
</tr>
</tbody>
</table>
Master of Science in Sport Administration

Major: SPAD  
Degree Awarded: MS  
Unit: GE  
Program Webpage: http://louisville.edu/education/degrees/ms-sa

Program Information

The Master of Science in Sport Administration is accredited by the Commission on Sport Management Accreditation (COSMA).

The College of Education and Human Development's Sport Administration (SPAD) program at the University of Louisville prepares students for a variety of management positions in the sport industry. The goals of the faculty and the program are to create an active learning environment for each student and to encourage students to demonstrate a commitment to education, community involvement, and their fellow students. A strong foundation in education, community service, peer networks, and alumni networks is invaluable to students as they prepare to enter the sport industry. Exceptional theoretical and practical knowledge gained through the Sports Administration Program will also provide students with the foundation to become the next generation of leaders, decision makers, and managers 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: University of Louisville 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 293 (verbal and quantitative section) and 4.0 on the Analytical section and undergraduate GPA of 2.75 is desired.

Curriculum

<table>
<thead>
<tr>
<th>Core (27 credit hours)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPAD 604 Financial Principles in Sport</td>
<td>3</td>
</tr>
<tr>
<td>SPAD 605 Sport Facility Management</td>
<td>3</td>
</tr>
<tr>
<td>SPAD 625 Sport Management and Leadership</td>
<td>3</td>
</tr>
<tr>
<td>SPAD 635 Research in Sport Administration</td>
<td>3</td>
</tr>
<tr>
<td>SPAD 637 Sport Analytics</td>
<td>3</td>
</tr>
<tr>
<td>SPAD 683 Sport Marketing</td>
<td>3</td>
</tr>
<tr>
<td>SPAD 684 Sport Policy</td>
<td>3</td>
</tr>
<tr>
<td>SPAD 689 Legal Aspects in the Sport Industry</td>
<td>3</td>
</tr>
<tr>
<td>SPAD 692 Internship in Sport Administration</td>
<td>3</td>
</tr>
</tbody>
</table>
Electives (9 Hours) Courses approved by advisor

Minimum Total Credit Hours

Exit Requirements - Students must complete one of the following: written examination, research project, or thesis.

Faculty

Chris Greenwell  
Professor  
Sport Administration  
Program Director  
Marion Hambrick  
Assistant Professor

Meg Hancock  
Instructor  
Interim Co-Chair

Mary A. Hums  
Professor

Anita M. Moorman  
Professor  
Ph.D. Program Coordinator

Regina (Gin) Presley  
Instructor

B.S. Program Director  
Megan Shreffler  
Assistant Professor  
M.S. Program Director

Mary A. Hums  
Professor  
Ph.D. Program Coordinator

Anita M. Moorman  
Professor  
Ph.D. Program Coordinator

Regina (Gin) Presley  
Instructor

B.S. Program Director  
Megan Shreffler  
Assistant Professor  
M.S. Program Director
Teacher Leadership Endorsement (P-12)

Major: 
Degree Awarded: NON
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/endorsements

Program Information

This endorsement addresses the knowledge, skills and dispositions needed for teacher leaders in their classrooms and schools. Focus will be on development of teacher leadership skills and action research to increase student achievement. The Teacher Leadership Endorsement does not lead to Principalship. If you are interested in becoming a Principal or other type of school administrator, please contact the Educational Leadership, Foundations, and Human Resource Department at (502)852-6667 for further information.

The Teacher Leadership endorsement may be completed as part of the Master of Education in Teacher Leadership, a Rank I program, or as a Standalone endorsement.

Curriculum

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher Leadership – Level I (9 hours)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDAP 637</td>
<td>Using Assessment to Improve Student Achievement</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 638</td>
<td>Instructional Strategies for Diverse Learners</td>
<td>3</td>
</tr>
<tr>
<td>EDAP/EDSP 639</td>
<td>Education Research in the P-12 Setting</td>
<td>3</td>
</tr>
</tbody>
</table>

**CARDS 5 (Mid-point Assessment- after Level I Leadership):** Successful completion of all Level 1 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.

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teacher Leadership – Level III (6 hours)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDAP 677</td>
<td>Teacher Leadership Through Coaching and Mentoring</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 607</td>
<td>Teacher Leadership in Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

**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: 15
Notes

1. Transfer credit must be officially accepted by the advisor - final acceptance is dependent upon receipt of official transcripts.
2. A maximum of 6 hours taken in non-degree status can be applied toward a master's degree (upon approval of advisor).
3. To complete the program, students must have minimum of a 3.0 cumulative grade point average. No credit shall be accepted for carrying a grade lower than "C".
Master of Education in Teacher Leadership

Major: LEADMED
Degree Awarded: MED
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/med-tl

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. Instructional Technology
7. Content Area or Teaching Specialty (e.g. Humanities, Biology, Women & Gender Studies, etc.)
8. Special Education Core (For Teachers already certified in Special Education)
9. Autism
10. Assistive Technology
11. Learning and Behavior Disorders (For teachers already certified in Special Education)
12. Moderate and Severe Disabilities (For teachers already certified in Special Education)

Program Highlights

- individualized to meet professional goals
- based on three levels of leadership development
- many specialized courses specific to content area and grade level
- preparation pathway to National Board Application
- courses taught by nationally recognized faculty
- focused on meeting needs of diverse learners
- emphasizes coaching and mentoring
- 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.
Teacher Leadership - Level I (9 credit hours)

**Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP 637 Using Assessment to Improve Student Achievement</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 638 Instructional Strategies for Diverse Learners</td>
<td>3</td>
</tr>
<tr>
<td>EDAP/EDSP 639 Education Research in the P-12 Setting</td>
<td>3</td>
</tr>
</tbody>
</table>

**CARDS 5** (Mid-point Assessment - after Level I Leadership and 9 credit hours of Level II coursework): Successful completion of all Level I work and 6-9 credit 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 II (12-15 credit hours) 12-15

Concentration

**Elective:** (0-3 credit hours) 0-3

Teacher Leadership – Level III (6 credit hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP 677 Teacher Leadership Through Coaching and Mentoring</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 607 Teacher Leadership in Practice</td>
<td>3</td>
</tr>
</tbody>
</table>

**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 Credit Hours 30

**Notes**

1. Minimum of 18 credit hours in 600-level courses is required.
2. Transfer credit must be officially accepted by the advisor (maximum of 6 credit hours) - final acceptance is dependent upon receipt of official transcripts.
3. A maximum of 6 credit 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”.

Degree Candidacy: Students not enrolled during the semester in which they intend to graduate must register for degree candidacy as outlined in the Graduate Catalog, "Academic Policies, Procedures, and Requirements”.

**Faculty**

<table>
<thead>
<tr>
<th>Kathryn Whitmore Barten</th>
<th>Director, Early Childhood Research Center</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Endowed Chair, Early Childhood Education</strong></td>
<td><strong>Debra Bauder</strong></td>
</tr>
<tr>
<td><strong>Jennifer Bay-Williams</strong></td>
<td><strong>Professor</strong></td>
</tr>
<tr>
<td><strong>Chair of Middle/Secondary Education</strong></td>
<td><strong>Education Department</strong></td>
</tr>
<tr>
<td><strong>Sherri Brown</strong></td>
<td><strong>Instructor</strong></td>
</tr>
<tr>
<td><strong>Endowed Chair, Early Childhood Research Center</strong></td>
<td><strong>Coordinator of the Kentucky Teacher Internship Program</strong></td>
</tr>
<tr>
<td><strong>Associate Professor</strong></td>
<td><strong>Associate Professor</strong></td>
</tr>
</tbody>
</table>
Assistant Chair of Early Childhood/Elementary Education Department
James Chisholm
Assistant Professor
Justin Cooper
Assistant Professor
Ginevra Courtade
Associate Professor
Assistant Chair of Special Education Department
Tammy Davis
Instructor
Monica Delano
Associate Professor
Director Doctoral Program
John Finch
Instructor
Amy Seely Flint
Professor
Chair of Early Childhood/Elementary Education Department
Penny Howell
Associate Professor
Jill Jacobi-Vessels
Associate Professor
Term
Pam Jett
Instructor
Lateefah Id-deen
Assistant Professor
Tasha Laman
Associate Professor
Director of Nystrand Center
Timothy Landrum
Professor
Chair of Special Education
Ann Larson
Professor
Dean of the College of Education and Human Development
Amy Lingo
Associate Professor
Sheron Mark
Assistant Professor
Justin McFadden
Assistant Professor
Maggie McGatha
Associate Professor
Lori Norton-Meier
Professor
Mikkaka
Overstreet
Instructor
Director of Minority Teacher Recruitment Project (MTRP)
Elizabeth Patton
Assistant Professor
Term
Robert Pennington
Assistant Professor
Susan Peters
Assistant Professor
Stephanie Philipp
Instructor
Terry Scott
Professor
Caroline Sheffield
Associate Professor
Thomas Simmons
Associate Professor
Amy Stevens
Special Appointment to Middle/Secondary Education Department
Steve Swan
Instructor
Director of Instructional Technology Program
Shelley Thomas
Associate Professor
Thomas Tretter
Professor
Director of Gheens Science Hall and Rauch Planetarium
Jean Wolph
Instructor
Director of Louisville Writing Project
Classroom Reading Endorsement (P-12)

Major:  
Degree Awarded: NON  
Unit: GE  
Program Webpage: [http://louisville.edu/education/degrees/endorsements](http://louisville.edu/education/degrees/endorsements)

**Program Information**

This endorsement is designed for teachers who would like to be better equipped to teach reading in their own classrooms.  
It may be completed as part of the Master of Education in Teacher Leadership, the Master of Education in Literacy, a Rank I program, or as a Standalone endorsement.

**Curriculum**

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Title</th>
<th>Term</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDAP 610</td>
<td>Literacy Research and Theory – 12 hours in education</td>
<td>Fall</td>
<td>--</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 636</td>
<td>Advanced Reading Methods P-12</td>
<td>Fall</td>
<td>--</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 615</td>
<td>Measurement and Diagnosis of Literacy</td>
<td>Spring</td>
<td>EDAP 610</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 678</td>
<td>Language Knowledge and Acquisition</td>
<td>Spring</td>
<td>--</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 618</td>
<td>Capstone Practicum in Literacy: Reading Specialist</td>
<td>Summer</td>
<td>EDAP 610; EDAP 636</td>
<td>3</td>
</tr>
<tr>
<td>EDAP 642</td>
<td>Literacy Learning and Cultural Differences</td>
<td>Summer/Fall</td>
<td>--</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Required Credits 18

**Faculty**

Amy Stevens  
*Program Coordinator*  
Literacy and Classroom Reading Endorsement
English as a Second Language Endorsement (P-12)

Major:
Degree Awarded: NON
Unit: GE
Program Webpage: http://louisville.edu/education/degrees/endorsements

Program Information

The ESL Endorsement is a 12 hour P-12 professional development program for classroom teachers. The Endorsement attaches to an existing Kentucky teaching certificate. Students who enroll in the ESL Endorsement program may already possess a Kentucky teaching certificate or may also be in the process of working upon their initial certification. Both pre-service and in-service teachers may take classes in the ESL Endorsement.

You may complete the ESL Endorsement as part of our M.Ed. degree, Rank I coursework, or complete it as a stand-alone program, without earning an additional degree.

Courses are in each area of the Endorsement are offered every semester. Course offerings vary each semester and there are courses that you may take that are not listed on the Endorsement program sheet. Please make an advising appointment with ESL Coordinator to ensure that you know what your options are and what classes you can take in each area of the Endorsement.

For those wishing to complete the Endorsement in the summer, there is the accelerated option of taking one class each month (in a hybrid format which combines face to face instructional time in the university classroom and assessments completed online) beginning each May and finishing in July.

Upon successful completion of the ESL Endorsement Program (including completing 30 hours of field experience and passing the ESL Praxis examination), the endorsement will be attached to the initial teaching certification.

Students who are interested in teaching internationally (but are not working on a teacher educator program in the College of Education and Human Development) may also take classes in the ESL Endorsement. These four courses provide excellent preparation for teaching non-native speakers of English, both in the United States and overseas.

Curriculum

<table>
<thead>
<tr>
<th>COURSE</th>
<th>COURSE TITLE</th>
<th>CREDIT HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>AREA A: Linguistics (3 hours)</td>
<td>ENGL LING 518 Foundations of Language</td>
<td>3</td>
</tr>
</tbody>
</table>

Students must earn a minimum of six semester-hours of credit in a second or foreign language, or demonstrate fluency in a foreign language comparable to the proficiency level of the first two semesters.

AREA B: Applied Linguistics (3 hours)
ENGL LING 621  Teacher Leadership Through Coaching and Mentoring  3
ENGL LING 622  Teacher Leadership in Practice  3
ENGL LING 535  3
ENGL LING 522  3

EDAP 521  3

**AREA C: Materials and Methods**  * (3 hours)
LING 630  3
EDAP 642  3
EDTP 503  3

Minimum total hours: 12

**Exit Assessment**

Performance assessment aligned to TESOL Standards for English as a Second Language Professionals and Kentucky Teacher Standards; Academic average of “B” (GPA 3.0); no grade lower than “C”; completed Portfolio/work samples based on TESOL Standards; passing score on PRAXIS for ESL.

* Includes participation in a P-12 classroom setting with English Language Learners under the supervision of an ESL-endorsed classroom teacher and successful completion of performance assessment tasks for the exit assessment.

**Praxis Disclaimer:**

"Teacher certification requirements are subject to change. Before registering for the test(s), please refer to the Education Professional Standards Board (EPSB) website at [www.epsb.ky.gov](http://www.epsb.ky.gov) or the Praxis website [http://www.ets.org/praxis.ky](http://www.ets.org/praxis.ky) for current requirements."

**Faculty**

*Elizabeth Patton*

*Coordinator ESL Endorsement Program*
Master of Arts in Interdisciplinary Studies

Major: IS  
Degree Awarded: MA  
Unit: GI  
Program Webpage: http://louisville.edu/graduate/

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 School of Interdisciplinary and Graduate Studies 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 School of Interdisciplinary and Graduate Studies. 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 School of Interdisciplinary and Graduate Studies; 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 School of Interdisciplinary and Graduate Studies.
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 School of Interdisciplinary and Graduate Studies.

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 School of Interdisciplinary and Graduate Studies for review. Students will be admitted to the School of Interdisciplinary and Graduate Studies 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 School of Interdisciplinary and Graduate Studies 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**  
**School of Interdisciplinary and Graduate Studies**  
**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.

**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://louisville.edu/graduate/

Program Information

The Master of Science degree in Interdisciplinary Studies provides a mechanism for accommodating the interests of students and faculty in areas in which the faculty expertise is not confined to a department or individual academic unit. It permits students to establish individualized programs and groups of faculty to establish interdisciplinary tracks.

Application and Admission

Applicants for individualized interdisciplinary master's programs must present complete admission credentials in order to be formally admitted by one of their constituent departments. Such formal admission must be recommended by at least one department or program offering degrees through the School of Interdisciplinary and Graduate Studies 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 School of Interdisciplinary and Graduate Studies. 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 School of Interdisciplinary and Graduate Studies; 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 School of Interdisciplinary and Graduate Studies.
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 School of Interdisciplinary and Graduate Studies.

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 School of Interdisciplinary and Graduate Studies for review. Students will be admitted to the School of Interdisciplinary and Graduate Studies 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 School of Interdisciplinary and Graduate Studies 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
School of Interdisciplinary and Graduate Studies
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.

Faculty

Faculty will be determined during the development of each individual student's program proposal.
Doctor of Philosophy in Interdisciplinary Studies

**Major:** IS  
**Degree Awarded:** Ph.D.  
**Unit:** GI  
**Program Webpage:** [http://louisville.edu/graduate](http://louisville.edu/graduate)

**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 coursework.
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 studies.

**Design of Interdisciplinary Degrees**

In addition to established School of Interdisciplinary and Graduate Studies 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
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.

Faculty

Faculty participants will be determined during the development of each individual student's program proposal.
Master of Arts in Interdisciplinary Studies with a concentration in Bioethics and Medical Humanities

Major: ISBMH  
Degree Awarded: MA  
Unit: GI  
Program Webpage: http://louisville.edu/bioethicsma

Program Information

The Bioethics and Medical Humanities concentration is a special track within the Interdisciplinary M.A. awarded by the School of Interdisciplinary and Graduate Studies. 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 their chosen field 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 program examines concepts of race, gender, and culture as well 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:

- Current health care and bioscience practitioners or faculty;
- Current or future members of ethics committees;
- Seminary faculty or students with an interest in health care chaplaincy;
- Dual-Degree students who wish to distinguish themselves with expertise in bioethics for their future professional, educational, and scholarly pursuits in medicine, dentistry, law, nursing, social work, or other fields;
- Post-Baccalaureate students during their transition from undergraduate to professional or PhD programs.

For more information about this program, contact our Program Coordinator at (502)852-6501.

Program Admission Procedure

Please refer to http://louisville.edu/bioethicsma/admissions

Curriculum

The Bioethics and Medical Humanities concentration is a 33 credit-hour M.A 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 diversify and allow customization of the program.

- For more details about our courses or electives please refer to our posted curriculum at [louisville.edu/bioethicsma/curriculum](louisville.edu/bioethicsma/curriculum)

Most students will complete the degree requirements after two years of full time course work, though motivated students are welcome to complete the hours in four consecutive semesters instead. Additionally, the program has the flexibility to allow for part time students to take up to six years to complete the degree. And for those who are pursuing a Bioethics concentration in their Bachelor's work there is an accelerated option that allows them to complete up to 9 credit hours towards the M.A while an undergraduate.

- For sample schedules please refer to our curriculum plans at [louisville.edu/bioethicsma/curriculum/schedule.html](louisville.edu/bioethicsma/curriculum/schedule.html)

We offer a rich classroom experience to all of our students - including distance learners. Through the KY-Telehealth network distance learners from anywhere in the world attend our core courses through video conferencing. This technology allows real time interaction with professors and fellow students during courses so the conversation stays rich and nuanced. Please contact our Program Coordinator for help identifying and gaining access to distance learning options.

**Faculty**

**Kyle Brothers**  
Assistant Professor of Pediatrics  
Kosair Charities Pediatric Clinical Research Unit  
**David Doukas**  
Professor  
Co-Director  
William Ray Moore Endowed Chair in Family Medicine  

and Medical Humanism  
Chief of Division of Medical Humanism and Ethics, Family and Geriatric Medicine  
**Lauren Freeman**  
Assistant Professor of Philosophy  

**Stephen Hanson**  
Associate Professor of Philosophy  
Co-Director  
**Avery Kolers**  
Associate Professor of Philosophy  
**Nancy Potter**  
Associate Professor of Philosophy  
**Mark Rothstein**  

Director of Institute for Bioethics, Health Policy and Law  
Herbert F. Boehl Chair of Law and Medicine  
**Paul Simmons**  
Clinical Professor of Department of Family and Geriatric Medicine
Master of Arts/Master of Science in Interdisciplinary Studies: Concentration in Sustainability

Major: IS MS SUS
Degree Awarded: MA/MS
Unit: GI
Program Webpage: http://louisville.edu/upa/programs/master-of-interdisciplinary-studies-in-sustainability

Program Information

The large-scale goal of the Master of Interdisciplinary Studies in Sustainability Degree program (both M.A. and M.S. degrees) is to prepare students to address complex regional, state, national and global challenges posed by the intersection of human exponential growth and increasingly limited resources that support society. The exponentially rising demands that human populations make on natural resources and ecological systems that supply us with energy, food, water and many other ecosystem services will be further threatened by climate change and the pollution of air, soil and water. Continued reliance on a “business as usual” approach to the economic production and consumption of goods and services, often characterized by the stresses it places on The Commons and by a disregard for environmental and social justice, now threatens the ability of the natural world to absorb our collective impact, erodes our collective security, and polarizes our societies. Substantial changes in social contracts, economic systems, as well as individual and institutional behaviors will be needed to provide more sustainable, healthy and secure societies. National, regional and local experimentation is needed to find solutions to societal challenges.

This Master of Interdisciplinary Studies in Sustainability program is an initiative of the University of Louisville’s Sustainability Council which seeks to integrate sustainability into everything that goes on at UofL. Students in the program are encouraged to contribute to the Sustainability Council’s efforts to explore sustainable solutions for UofL and our community. More information about the UofL Sustainability Council can be found on their website at louisville.edu/sustainability

Curriculum

Required Course: (Mandatory for all students)
SUST 600 Introduction to Sustainability.

Core Courses: (Students are required to take one course in each area)
Sustainability and the Built Environment Core Courses:
PLAN 670 Sustainable Development and Planning (Frank Goetzke)
UPA 679 Environmental Policy (John Gilderbloom)

Sustainability and the Natural Environment Core Courses:
BIOL 644 Advanced Global Change Ecology (Margaret Carreiro)
GEOS 663 Climate and Environmental Change (Keith Mountain)
Sustainability and the Social Environment Core Courses:
HIST 611 Advanced Environmental History (Randall Dills)
SOC 610 Environmental Sustainability and Social Change (Lauren Heberle)

Students will be entered into the program within one of the three Core Areas: Built Environment, Natural Environment, and Social Environment.

3 credit hours will be in a research methods or statistics course related to the student's concentration. 6 credit hours will be devoted to the thesis or portfolio 12 credit hours in Elective Courses.

We strongly recommend that student committees distribute Elective Courses such that at least 3 or 4 credit hours are in a Core area other than that of the student's home department.

Students will take 12 credit hours in guided electives. The Sustainability Education Committee obtained 47 syllabi from instructors willing to have their courses considered for this Master's Program. Other courses are acceptable with director's approval.

**BUILT ENVIRONMENT (16 courses)**

- CEE 660 Transportation, Planning and Urban Development
- CEE 661 Environmental Analysis of Transportation Systems (Hybrid web-based class)
- CEE 681 Green Engineering and Sustainable Design
- GEOG 5xx Sustainability and Transportation (CIF submitted Fall 2014)
- LAW 902 Land Use and Planning Law
- PLAN 670 Sustainable Development and Planning
- PLAN 607 Land-Use Planning
- PLAN 622 Urban Design
- PLAN 623 Environmental Policy and Natural Hazards
- PLAN 625 Historic Preservation/Sustainability Practice
- PLAN 636 Site Planning
- PLAN 650 Capstone Studio
- UPA 618 Urban Demography
- UPA 648 Housing and Community Development
- UPA 672 Planning and Sustainability
- UPA 679 Environmental Policy
- UPA 680 Special Topics, The Ideal City

**NATURAL ENVIRONMENT (10 courses)**

- ANTH 528 Animals and Humans
- ANTH 531 The Anthropology of Water
- ANTH 652 Topics in Nutritional Anthropology
- BIOL 567 Conservation Biology
- BIOL 644 Advanced Global Change Ecology (CIF submitted Fall 2014)
- BIOL 660 Ecology of Urban and Suburban Landscapes
- BIOL 663 Population and Community Ecology
- BIOL 667 Advanced Conservation Biology
- GEOS 663 Climate and Environmental Change (CIF submitted Fall 2014)
- LAW 903 Land and Ecosystem Conservation

**SOCIAL ENVIRONMENT (18 courses)**

- ANTH 530 Human Impacts on Past Environments
- ANTH 540 Health and Civilization
- ANTH 626 Food Justice
- ART 692 Art, Thinking and Social Change
Students will work with their academic advisors to select the core and elective courses needed. Tools courses in each of the three blocks, such as Geographic Information Systems, are accepted for credit toward the degree.

For example, if a student were interested in Sustainability and the Built Environment, a sample curriculum may consist of the following progression of courses:

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st year Fall</td>
<td>SUST 600</td>
<td>Introduction to Sustainability</td>
<td>3</td>
<td>Mandatory</td>
</tr>
<tr>
<td></td>
<td>CEE 680</td>
<td>Green Engineering and Sustainable Design</td>
<td>3</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>UPA 679</td>
<td>Environmental Policy</td>
<td>3</td>
<td>Core</td>
</tr>
<tr>
<td>1st year Spring</td>
<td>PLAN 680</td>
<td>Sustainable Development and Planning</td>
<td>3</td>
<td>Core</td>
</tr>
<tr>
<td></td>
<td>GEOS 663</td>
<td>Climate and Environmental Change</td>
<td>3</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>UPA 606</td>
<td>Research Methods</td>
<td>3</td>
<td>Mandatory</td>
</tr>
<tr>
<td>2nd year Fall</td>
<td>SOC 610</td>
<td>Environmental Sustainability and Social Change</td>
<td>3</td>
<td>Core</td>
</tr>
<tr>
<td></td>
<td>PLAN 623</td>
<td>Environmental Policy and Natural Hazards</td>
<td>3</td>
<td>Elective</td>
</tr>
<tr>
<td></td>
<td>LAW 902</td>
<td>Land Use and Planning Law</td>
<td>3</td>
<td>Elective</td>
</tr>
</tbody>
</table>
In the future, disciplines such as Economics, Business, Political Science, Philosophy, and Ethics will be included in the Interdisciplinary Master of Sustainability Degree Program. We intend to work with the relevant departments to develop graduate classes that are Sustainability Related and Focused.

A total of three hours will be required in research methods in the student's focus area. Research methods are offered by many of the departments in the core areas (see Table below). Which research methods course a student will take shall be determined by the academic advisory committee and the student.

<table>
<thead>
<tr>
<th>Department</th>
<th>Course Title</th>
<th>Course #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>Research Design Anthropology</td>
<td>ANTH 609 &amp; 611</td>
</tr>
<tr>
<td>Art</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>Advanced Experimental Design and Analysis</td>
<td>BIOL 648</td>
</tr>
<tr>
<td>Communication</td>
<td>Qualitative Communication Research</td>
<td>COMM 616</td>
</tr>
<tr>
<td>Geography/Geosciences</td>
<td>Research Design</td>
<td>GEOG 641</td>
</tr>
<tr>
<td>Health and Sports Science</td>
<td>Research Methods</td>
<td>HSS 604</td>
</tr>
<tr>
<td>History</td>
<td>Research Methods</td>
<td>HIST 605</td>
</tr>
<tr>
<td>Political Science</td>
<td>Methods of Political Research</td>
<td>POLS 671</td>
</tr>
<tr>
<td>Public Health</td>
<td>Statistical Foundations for Epidemiology</td>
<td>PHEP 621</td>
</tr>
<tr>
<td>Sociology</td>
<td>Seminar in Research Methods</td>
<td>SOC 615</td>
</tr>
<tr>
<td>Urban and Public Affairs</td>
<td>Research Methods</td>
<td>UPA 606</td>
</tr>
</tbody>
</table>

There are no free electives. All electives will be guided by the student committee.

INTRODUCTION

The large-scale goal of the Master of Interdisciplinary Studies in Sustainability Degree program (both M.A. and M.S. degrees) is to prepare students to address complex regional, state, national and global challenges posed by the intersection of human exponential growth and increasingly limited resources that support society. The exponentially rising demands that human populations make on natural resources and ecological systems that supply us with energy, food, water and many other ecosystem services will be further threatened by climate change and the pollution of air, soil and water. Continued reliance on a “business as usual” approach to the economic production and consumption of goods and services, often characterized by the stresses it places on The Commons and by a disregard for environmental and social justice, now threatens the ability of the natural world to absorb our collective impact, erodes our collective security, and polarizes our societies. Substantial changes in social contracts, economic systems, as well as individual and institutional behaviors will be needed to provide more sustainable, healthy and secure societies. National, regional and local experimentation is needed to find solutions to societal challenges.

This Master of Interdisciplinary Studies in Sustainability program is an initiative of the University of Louisville’s Sustainability Council which seeks to integrate sustainability into everything that goes on at UofL. Students in the program are encouraged to contribute to the Sustainability Council’s efforts to explore sustainable solutions for UofL and our community. More information about the UofL Sustainability Council can be found on their website at louisville.edu/sustainability
Faculty

Margaret Carreiro
Associate Professor of Biology

Randall Dills
Assistant Professor of History

John Gilderbloom
Professor of Urban and Public Affairs

Frank Goetzke
Associate Professor of Urban and Public Affairs

Lauren Heberle
Associate Professor of Sociology

Keith Mountain
Associate Professor of Geography and Geosciences

Chairperson
Dave Simpson
Professor of Urban and Public Affairs
Doctor of Philosophy in Interdisciplinary Studies: Specialization in Bioinformatics

Major: IS_PHDINFO
Degree Awarded: Ph.D.
Unit: GI
Program Webpage: http://bioinformatics.louisville.edu/phd/

Program Information

PROGRAM EXECUTIVE COMMITTEE CHAIR
Dr. Eric C. Rouchka, (502) 852-3060, Email Dr. Rouchka

GENERAL INFORMATION
The Interdisciplinary Ph.D. Program in Bioinformatics (the Bioinformatics Program) trains students in bioinformatics for careers in research, education, and industry.

Defined as “the field of science in which biology, computer science, and information technology merge to form a single discipline, bioinformatics is a broad and diverse domain, ranging from management of biological research databases to computational approaches to biomedical modeling and data analysis.

The Bioinformatics Program focuses on those aspects of bioinformatics that reflect the research interests and experience of the Program’s faculty. These include basic research in biostatistical methodology, computer science and mathematical modeling with applications to biochemistry, cell biology and molecular biology. The following areas have been identified and named by the Bioinformatics Program faculty to represent the focus application areas of the Program:

- Biomedical and Natural Sciences
- Computational Sciences
- Mathematics and Statistics

Students in the Bioinformatics Program specialize in one of the three focus application areas and graduate with cutting-edge expertise in this area and working knowledge in the other two focus application areas.

Curriculum

Graduate Studies -- Ph.D.

To earn the Doctor of Philosophy in Interdisciplinary Studies: Concentration in Bioinformatics, a student is required to successfully complete the following:

- Core coursework in the focus application areas
- Required coursework in the student’s area of specialization
- Elective courses in the student’s area of specialization
- Qualifying examination
- Dissertation
• Presentation and defense of dissertation

Good standing requires that the student maintain a minimum 3.0 grade point average. Upon successful completion of the written and oral portions of the qualifying examination, the examination committee will recommend acceptance into Ph.D. candidacy. Successful completion of the dissertation and its presentation and defense is established by the approval of the student’s dissertation committee and the approval of the chair of the sponsoring department and the program chair.

Programs of Study

Course requirements for the Interdisciplinary Ph.D. Degree Program in Bioinformatics consist of 16 core credit hours (that will be conditional based upon focus area) and 21 credit hours derived from a combination of required courses from a chosen focus area and electives from each of the three focus areas. Students with an appropriate background in the biomedical and natural sciences may petition to substitute a course in either the Computational Sciences or Mathematics and Statistics focus for the core course BIOC 545 Biochemistry I, and a corresponding course in either the Computational Sciences or Mathematics and Statistics for MBIO 667 Graduate Cell Biology, thus maintaining 16 core credit hours. Following acceptance into a focus area, students will be required to complete three courses totaling at least nine hours from the declared focus area. At least four additional elective courses (12 credit hours) will be selected from available elective courses, with the provision that two elective courses must be selected in each of the other two focus areas. The Program of Study will be determined by the student and approved by both an advisor residing in a declared focus area department and the Executive Committee. The following tables list the required courses for the core as well as the required and elective courses in each of the focus areas. Students must accumulate at least nine credit hours of dissertation.

Core Course Work

<table>
<thead>
<tr>
<th>Department</th>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBIOC</td>
<td>BIOC</td>
<td>Biochemistry I</td>
<td>3</td>
</tr>
<tr>
<td>BIOC</td>
<td></td>
<td>Responsible Conduct of Research: Survival Skills and Research Ethics</td>
<td>1</td>
</tr>
<tr>
<td>MBIO</td>
<td>667*</td>
<td>Computational Cognitive Science I</td>
<td>3</td>
</tr>
<tr>
<td>PSYCH</td>
<td>571/609*</td>
<td>Introduction to Bioinformatics</td>
<td>3</td>
</tr>
<tr>
<td>CECS</td>
<td>660*</td>
<td>Statistical Methods for Bioinformatics</td>
<td>3</td>
</tr>
<tr>
<td>PHBI</td>
<td>750*</td>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

*All courses are required. †CHEM 645 may be substituted. Students may take either the BIOC 545/BIOC547 or CHEM 645/647 sequence but are not allowed to take the sequence BIOC 545/CHEM647 or CHEM 645/BIOC547. ‡Cross-listed as CECS 590-02.

Courses in Mathematics and Statistics

<table>
<thead>
<tr>
<th>Department</th>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH</td>
<td>505</td>
<td>Introduction to Partial Differential Equations</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>507</td>
<td>Fourier Series</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>561#</td>
<td>Probability</td>
<td>3</td>
</tr>
<tr>
<td>PHYS</td>
<td>565</td>
<td>Computational Physics</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>566</td>
<td>Nonparametric Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>PHYS</td>
<td>625</td>
<td>Statistical Mechanics</td>
<td>3</td>
</tr>
<tr>
<td>PHST</td>
<td>630</td>
<td>Applied Statistical Models</td>
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</tbody>
</table>
### Courses in Mathematical and Natural Sciences

<table>
<thead>
<tr>
<th>Department</th>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH</td>
<td>636</td>
<td>Mathematical Modeling II</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>660</td>
<td>Probability Theory</td>
<td>3</td>
</tr>
<tr>
<td>PHST</td>
<td>661#</td>
<td>Probability</td>
<td>3</td>
</tr>
<tr>
<td>PHST</td>
<td>662#</td>
<td>Mathematical Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>562/662#</td>
<td>Advanced Mathematical Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>665</td>
<td>Advanced Linear Statistical Models</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>667*</td>
<td>Methods of Classification</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>670</td>
<td>Introduction to Stochastic Calculus</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>681</td>
<td>Combinatorics and Graph Theory I</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>682</td>
<td>Combinatorics and Graph Theory II</td>
<td>3</td>
</tr>
<tr>
<td>PHST</td>
<td>682</td>
<td>Multivariate Statistical Analysis</td>
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</tr>
<tr>
<td>PHST</td>
<td>691</td>
<td>Bayesian Inference and Decision</td>
<td>3</td>
</tr>
<tr>
<td>PHST</td>
<td>710</td>
<td>Advanced Statistical Computing</td>
<td>3</td>
</tr>
<tr>
<td>PHST</td>
<td>711</td>
<td>Advanced Statistical Computing II</td>
<td>3</td>
</tr>
<tr>
<td>PHST</td>
<td>725</td>
<td>Design of Experiments</td>
<td>3</td>
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<tr>
<td>PHBI</td>
<td>751</td>
<td>High-throughput Data Analysis</td>
<td>3</td>
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<tr>
<td>PHBI</td>
<td>752</td>
<td>Statistical Genetics</td>
<td>3</td>
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<tr>
<td>PHST</td>
<td>762</td>
<td>Advanced Statistical Inference</td>
<td>3</td>
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<td>PHST</td>
<td>780</td>
<td>Advanced Nonparametric Statistics</td>
<td>3</td>
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<tr>
<td>PHST</td>
<td>781</td>
<td>Advanced Linear Models</td>
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<tr>
<td>PHST</td>
<td>782</td>
<td>Generalized Linear Models</td>
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</tbody>
</table>

#Credit only for one: MATH 561/PHST 661; MATH 562/PHST 662

### Courses in Biomedical and Natural Sciences

<table>
<thead>
<tr>
<th>Department</th>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIOL</td>
<td>542</td>
<td>Gene Structure and Function</td>
<td>3</td>
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<tr>
<td>BIOL</td>
<td>569</td>
<td>Evolution</td>
<td>3</td>
</tr>
<tr>
<td>BIOC</td>
<td>680</td>
<td>Biomolecular Interactions</td>
<td>3</td>
</tr>
<tr>
<td>BIOC</td>
<td>611</td>
<td>Biochemical and Molecular Methods</td>
<td>4</td>
</tr>
<tr>
<td>ASNB</td>
<td>614</td>
<td>Molecular Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>BIOC</td>
<td>641</td>
<td>Advanced Eukaryotic Genetics</td>
<td>3</td>
</tr>
<tr>
<td>BIOC</td>
<td>647#</td>
<td>Advanced Biochemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM</td>
<td>647</td>
<td>Advanced Biochemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM</td>
<td>648</td>
<td>Systems Biochemistry Principles and Practices</td>
<td>3</td>
</tr>
<tr>
<td>CHEM</td>
<td>652</td>
<td>Practical Approaches to Metabolomics</td>
<td>3</td>
</tr>
<tr>
<td>BIOC</td>
<td>661</td>
<td>Molecular Mechanisms of Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>BIOC</td>
<td>668</td>
<td>Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOC</td>
<td>670</td>
<td>Protein Structure and Function</td>
<td>4</td>
</tr>
<tr>
<td>CHEM</td>
<td>684</td>
<td>Biophysical Chemistry</td>
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</tr>
</tbody>
</table>

#Credit only for one: CHEM 645/BIOC 645, CHEM 647/BIOC 647. Students may take either the BIOC 545/BIOC547 or CHEM 645/647 sequence but are not allowed to take the sequence BIOC 545/CHEM647 or CHEM 645/BIOC547.

### Courses in Computational Sciences

<table>
<thead>
<tr>
<th>Department</th>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
</tr>
</thead>
</table>

363 | Page
CECS 535 Introduction to Databases 3
CECS 546 Knowledge Engineering and Expert Systems 3
CECS 619 Design and Analysis of Computer Algorithms 3
CECS 622 Simulation and Modeling of Discrete Engineering Systems 3
CECS 624 Advanced Simulation 3
CECS 627 Digital Image Processing 3
CECS 628 Computer Graphics 3
CECS 629 Distributed System Design 3
CECS 630 Advanced Databases and Data Warehousing 3
CECS 632 Data Mining 3
CECS 641 Introduction to Medical Imaging 3
CECS 643 Introduction to Biomedical Computing 3
CECS 645 Advanced Artificial Intelligence 3
CECS 646 Intelligent Systems 3

Faculty

Participating Faculty for the Bioinformatics Program have primary appointments in various departments across the University, including:

- **College of Arts and Sciences**: Departments of Biology, Chemistry, Mathematics, and Psychological and Brian Sciences
- **J.B. Speed School of Engineering**: Department of Computer Engineering and Computer Science
- **School of Medicine**: Departments of Anatomical Sciences and Neurobiology and Biochemistry and Molecular Biology
- **School of Public Health and Information Sciences**: Departments of Bioinformatics and Biostatistics, Environmental Health and Occupational Health Sciences, and Epidemiology and Population Health

Nigel G.F. Cooper  
Professor of Anatomical Sciences and Neurobiology  
Executive Committee Vice-Chair

Ryan Gill  
Associate Professor of Mathematics  
Richard Kerber  
Associate Professor of Epidemiology and Population Health

Gary Hoyle  
Professor of Environmental and Occupational Health Sciences  
Ashok Kumar  
Professor of Anatomical Sciences and Neurobiology

Theodore S. Kalbfleisch  
Assistant Professor of Biochemistry and Molecular Biology  
Jiaxu Li  
Assistant Professor of Mathematics

Rachel Neal  
Assistant Professor of Environmental and Occupational Health Sciences  
Liz O'Brien  
Assistant Professor of Epidemiology and Population Health

John Pani  
Professor of Psychological and Brain Sciences  
Juw Won Park  
Assistant Professor of Computer Engineering and Computer Science

Michael Perlin  
Professor of Biology  
Jeffrey C. Petruska  
Assistant Professor of Anatomical Sciences and Neurobiology

Shesh Rai  
Professor of Bioinformatics and Biostatistics  
Eric C. Rouchka  
Associate Professor of Computer Science
Engineering and Computer Science
Executive Committee Chair

David Schultz
Associate Professor of Biology

Patrick Shafto
Assistant Professor of Psychological and Brain Science

Xiang Zhang
Associate Professor of Chemistry
Doctor of Philosophy in Interdisciplinary Studies: Specialization in Translational Bioengineering

Major: IS_PHDSTN
Degree Awarded: Ph.D.
Unit: GI
Program Webpage: http://louisville.edu/translational-bioengineering

Program Information

The Interdisciplinary Program in Translational Bioengineering is a Ph.D. program designed to provide multidisciplinary training in translational bioengineering preparing students to lead research and development in academia, industry and governmental agencies and/or to advance bioengineering technologies through start-up companies as entrepreneurs or within establish biomedical companies. This program is a collaborative effort between Speed School, the School of Medicine, the School of Dentistry and the College of Business. In this Ph.D. program, students will have the opportunity to pursue graduate level training in one of three tracks:

- Traditional Bioengineering Research,
- Clinical Translational Research, or
- Advancement of Bioengineering Technologies through Entrepreneurship.

Students must also choose one of the following concentration areas:

- Bioelectronics and Biomedical Devices
- Bioimaging and Biocomputational Modeling
- Biomechanics and Rehabilitation
- Molecular and Tissue Engineering

Students will initially be assigned an advisor to aid in course selection, to identify a primary research mentor and to choose a laboratory where they will conduct their research. Dissertation committee members will be assembled from participating faculty in the Schools of Engineering, Dentistry or Medicine, or the College of Business, representing opportunities to conduct research within a broad range of bioengineering topics and/or develop technology for a wide variety of clinical applications. Students who successfully complete the program will demonstrate excellence in designing and conducting research leading to an intellectual contribution to the field, demonstrate in-depth knowledge of their concentration area and associated scientific literature, have an understanding of the clinical relevance and ethical implications of their research, have the ability to critically analyze, evaluate and interpret research methods and findings, and have the ability to effectively communicate knowledge of their concentration area.
Curriculum

To earn the Doctor of Philosophy in Interdisciplinary Studies with a specialization in Translational Bioengineering, a student is required to successfully complete the following:

Students must pass the Qualifying Examination, complete 47 credit hours of course work beyond their Bachelor’s Degree (18 Core credit hours, 9 Concentration credit hours, 20 Specialization credit hours), participate in the Bioengineering Seminar Series (75% attendance rate and 1 presentation/term as a Doctoral Candidate), pass the Comprehensive Examination, successfully defend their dissertation (15 credit hours) and submit two or more peer-reviewed journal papers representing their original dissertation research to meet the requirements of the Ph.D. ISSTBE.

Core Courses:

**BE 695 Advanced Research Design and Methods (3 credit hours)**

Description: Topics include the structure of scientific journal papers and proposals, development of specific aims, formulation of hypotheses, types of study design/research methodologies and their appropriate application, data management, data analysis strategies, interpretation and communication of research findings, critique of the scientific literature, and responsible conduct in research.

**BE 601 Bioengineering Seminar (1 credit hour each – 3 required credit hours total)**

Description: Current research topics in the field of translational bioengineering will be presented and discussed. Sessions will include guest speakers, student presentations on research projects with interaction and feedback from students and faculty, and critical discussion of scientific literature.

**BE 621 Bioinstrumentation (4 credit hours)**

Description: Analysis and design of bioinstrumentation will be covered. Topics include basic circuitry, electronics and laboratory techniques including sensors, transducers, biopotentials, amplifiers, measurement and safety.

**BE 654 Advanced Physiology for Engineers (3 credit hours)**

Description: An in-depth view of the fundamental principles of how biochemistry and physiology are integrated will be discussed. Emphasis is placed on the physiologic mechanisms for feedback control of physiologic function in humans.

**BE 603 Research Ethics in Bioengineering (2 credit hours)**

Description: Complex ethical issues facing bioengineers will be addressed, including conflicts of interest, patient rights, protection, beneficence and confidentiality, equitable allocation of scarce health resources, research misconduct, animal experimentation, and clinical trials for new medical devices.

**ME 565 Advanced Engineering Mathematics I (3 credit hours)**

Description: Topics include the formulation and solution of mathematical models for engineering problems leading to ordinary and partial differential equations. Transform solution methods and linear algebra concepts, including real and complex-domain eigenvalue problem solutions will be addressed.

Example Electives: Customized to each student (Many additional elective courses available. This list is not intended to reflect required number or composition of elective courses.)
**Dissertation Committee:** By the end of the 1st semester, it is expected that the student has identified their Dissertation Chair. After the 1st year of study, the student (under the guidance of his or her advisor) must select a Dissertation Committee of five or more persons, for approval by the Program Director. The committee must consist of the student's advisor from the Department of Bioengineering (who will act as the Dissertation Committee Chair), at least two additional faculty members from within the Department of Bioengineering, at least one faculty member from a partnering School or College, and at least one additional faculty member from outside the Department of Bioengineering.

**QUALIFYING EXAMINATION:**

The Ph.D. Qualifying Examination will be offered once per year and is to be taken by students upon completion of Core courses (with the exception of Bioengineering Seminar credits) and Concentration Area courses. The Qualifying Examination includes written and oral components. The written portion of the exam gauges student competency in fundamental bioengineering topics covered in their courses. ISSTBE affiliated faculty will submit and grade questions in their respective areas of expertise for the written portion of the Qualifying Examination. The oral portion of the examination is a formal presentation comprised of the student’s critique of a peer-reviewed journal paper selected from the student’s area of concentration, delivered to the ISSTBE Program Director and a subset of faculty with
expertise in the respective concentration having Graduate Faculty status. Students are allowed no more than two opportunities to take the Qualifying Examination (oral or written components).

COMPREHENSIVE EXAMINATION:

To qualify for candidacy, students must pass the Qualifying Examination, maintain a minimum GPA of 3.0 and pass the Comprehensive Examination. The Comprehensive Examination requires the student to prepare a written dissertation research proposal (following an external funding agency format) that is presented, defended and approved by their Dissertation Committee. The Dissertation Committee approval constitutes passing both the written and oral portions of the Comprehensive Examination. The written portion is comprised of the student’s dissertation document and the oral portion consists of the student’s presentation and defense of their dissertation, including response to questions posed by their Dissertation Committee and public attendees. The Dissertation Committee will grade written and oral performance on the Comprehensive Examination separately as a ‘pass’, ‘conditional pass’, or ‘fail’. Students receiving a ‘conditional pass’ must satisfactorily meet conditions set forth by the Dissertation Committee in order to receive a passing grade. Students receiving a failing grade on either or both portions of the Comprehensive Examination will be permitted to repeat the respective portion(s) once. Students must meet with their Dissertation Committee at least once per year during the remainder of their Ph.D. program, culminating in the Dissertation Defense.

Faculty

Amir Amini  
Professor
Eric Berson  
Associate Professor
Gina Bertocci  
Professor
Karen Bertocci  
Assistant Professor
Andrea Bherman  
Professor
Mary Ellen Buning  
Assistant Professor
Term
Van Clouse  
Associate Professor
Endowed Chair
Bob Cohn  
Professor
Doug Darling  
Professor
Donald Demuth  
Professor
Ayman El-Baz  
Associate Professor
Hermann Frieboes  
Assistant Professor
Joel Fried  
Professor
Sean Fu  
Assistant Professor
Guruprasad Girdharan  
Associate Professor
Susan Harkema  
Professor
Cindy Harnett  
Associate Professor
Dena Howland  
Associate Professor
Irving Joshua  
Professor
Chairperson
James Kang  
Professor
Kyung Kang  
Professor
Brad Keller  
Professor
Robert Keynton  
Professor
Director of Graduate Studies
Carolyn Klinge  
Professor
Steven Koenig  
Professor
David Magnuson  
Professor
Endowed Chair
Donald Miller  
Director
John Naber  
Professor
Martin O'Toole  
Assistant Professor
Alex Ovechkin  
Associate Professor
George Pantalos  
Professor
Tommy Roussel  
Assistant Professor
Keith Sharp  
Professor
Mark Slaughter  
Professor
Kevin Soucy  
Assistant Professor
Patricia Soucy  
Assistant Professor
Jill Steinbach  
Assistant Professor
Michael Voor  
Associate Professor
Kevin Walsh  
Professor
Associate Dean
Eugena Wang  
Professor
Endowed Chair
Scott Whittemore  
Professor
Endowed Chair
Stuart J. Williams  
Assistant Professor
Jon Wu  
Professor
Doctor of Philosophy in Interdisciplinary Studies: Specialization in Translational Neuroscience

Major: IS_PHDSTN  
Degree Awarded: Ph.D.  
Unit: GI  
Program Webpage: http://louisville.edu/translational-neuroscience

Program Information

The Interdisciplinary Program in Translational Neuroscience (IPTN) is a PhD program designed to provide broad training in neuroscience to prepare students for careers in academic, clinical and translational research involving the nervous system including disease, trauma and developmental disorders.

Students will be assigned advisors initially to help them with course selection, choosing laboratories to rotate in and finding research mentors. Committee members will be assembled from the participating professors/lecturers representing a broad range of both basic and clinical Neuroscience. Individualized curricula will emphasize basic genetic, molecular, cellular, and/or systems mechanisms that underlie a wide range of neurological and neuropsychiatric diseases and disorders.

Students who successfully complete the program will gain a strong academic background in the neurosciences and intellectual mastery of relevant scientific literature with a major emphasis either in the system/cognitive or cellular/molecular areas. They will gain a good understanding of the ethical issues involved in conducting translational research and receive outstanding training in how to conduct basic science research and/or clinical research with patients.

Areas of focus include:

- Spinal cord injury, motor systems and rehabilitation.
- Vision, retina and visual pathways
- Sensory systems, autonomic nervous system and pain
- Developmental neurobiology
- Behavioral & cognitive neuroscience
- Neuropharmacology and neurochemistry

Curriculum

Graduate Studies – PhD

To earn the Doctor of Philosophy in Interdisciplinary Studies: Concentration in Translational Neuroscience, a student is required to successfully complete the following:

- Core Courses
- Other required and elective courses as approved
Graduate Catalog  
Summer 2016-Spring 2017

- Qualifying examination
- Laboratory Rotations
- Original Investigation
- Dissertation and defense

Core Courses:

Fundamentals of Neuroscience: ASNB XYZ Fall semester. 3 credit hours. A survey of processes underlying the functioning of neurons and neural systems.

Translational Neuroscience: NSCI 601 Spring semester. 3 credit hours. This interdisciplinary course combines the basic genetic, molecular, and cellular mechanisms that underlie a wide range of neurological and neuropsychiatric diseases and disorders with their clinical manifestations. The goal is to foster an understanding of the links between basic science, disease-oriented research, and translational research, building an interdisciplinary foundation of knowledge in basic and clinical neuroscience. Classes will be taught by experts in basic and clinical neuroscience. For each thematic area, there will be one discussion session/journal club that will be led by a student and will focus on the topic being covered.

Advanced Biostatistics (BIOL 650). 4 credit hours. Application of statistical methods commonly used in life sciences, with emphasis on interpretation of experimental data. Alternate statistics classes (e.g., PSYC 610/611; others) can be substituted with student committee approval. A minimum of 4 credit hours total is required.

Research Ethics (BIOC 630). Spring semester. 1 credit hour. Topics include ethical conduct in research; data acquisition, management, sharing and ownership; mentor/trainee responsibilities; publication practices; peer review; conflict of interest; as well as career guidance and opportunities.

Neuroscience Seminar Series Journal Club (ASNB 606). 1 credit hour/semester (total = 4 hours). Students present their review/critique of published journal articles from the laboratories of neuroscientists speaking in the Neuroscience Series. The host faculty for each seminar speaker facilitates the discussion. The goals of this course are to 1) provide students with background information needed to understand Neuroscience Seminars 2) increase student participation and enhance their interactions with Neuroscience Seminar speakers during the seminar and student-speaker lunches 3) teach critical thinking and evaluation of Neuroscience literature.

Example Electives: Customized to each student (many more available).

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>PSYC 642</td>
<td>Behavioral Neuroscience</td>
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<tr>
<td>MBIO 667</td>
<td>Cell Biology</td>
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<tr>
<td>PSYC 645</td>
<td>Cognitive Neuroscience</td>
</tr>
<tr>
<td>PSYC 621</td>
<td>Cognitive Processes</td>
</tr>
<tr>
<td>ASNB 677</td>
<td>Current Topics in Sensory Systems</td>
</tr>
<tr>
<td>ASNB 617</td>
<td>Developmental Neurobiology</td>
</tr>
</tbody>
</table>

Laboratory Rotations and Original Investigation: Students must work in a laboratory during every semester of their graduate training. Before choosing a laboratory for their dissertation research, students must take rotation hours through at least one laboratory in the interdisciplinary program. These and subsequent research hours (until the student has entered candidacy) will be taken under GS 699 Independent Research.
Mentor and Advisory Committee: Once a student selects a mentor, he or she will form an Advisory Committee consisting of the mentor plus 4 additional members of the Translational Neuroscience Program faculty. The faculty members composing the Advisory Committee will have primary appointments in a minimum of three separate departments. The Advisory Committee may be reformulated, with the permission of the Executive Committee, as the student progresses towards completion of the degree.

QUALIFYING EXAMINATION: (Completion by the end of the second year).

Part 1: The student’s committee will prepare two questions designed to assess the student’s ability to integrate course material, to demonstrate critical thinking, and to evaluate neuroscience literature related to the student’s area of interest. These two questions will be submitted to the chair of the Neuroscience Steering Committee, who will select one question for distribution to the student. The exam is “open-book” and the student will have one month to complete the exam. The exam must be written in the student’s own words, and represent the student’s unaided efforts. Prior to submission, it should not be edited or critiqued in any form by the mentor or by the student’s committee. The answer for Part 1 should be no less than 25 pages and no more than 35 pages in length, double-spaced, not including references. The use of books and review articles is acceptable; however, a significant portion of the paper must be based on recent, primary sources in scientific journals. The answer will be evaluated on a mastery of basic background and conceptual material, familiarity with the literature in the field of study and critical thinking about the cited works and the scientific question. Part 2 of the exam will consist of an oral defense of the student’s answer before the program faculty. Faculty may also ask general neuroscience questions using a current graduate-level neuroscience text as a source and/or a set of classic papers.

Other Programmatic Activities (students are also required to participate in the following programmatic activities):

Student Research Presentations: Students in their second through fourth years of study are required to present their research progress to the Neuroscience Program faculty.

Neuroscience Research Day: Students are expected to participate in this annual event sponsored by the Louisville Chapter of the Society for Neuroscience. The Neuroscience Seminar Series: (Fall and Spring semesters) All students are required to attend neuroscience research seminars. Two researchers are brought in each month during the academic year whose technique or research focus areas are of broad interest to the university’s diverse neuroscience research community.

Faculty

Faculty will be determined during the development of each individual student’s program proposal.
Graduate Certificate in School Social Work

Major: SW  
Degree Awarded: MSSW  
Unit: GK  
Program Webpage: http://louisville.edu/kent

Program Information

The School Social Work Specialization is designed to prepare students for careers in school settings. The goals of the SSW specialization are to:

- Prepare Masters level social workers who can help children and their families overcome barriers to learning through interventions in the home, school and community.
- Enable matriculating students, graduates, and other qualified MSWs to meet the Education Professional Standards Board’s (EPSB) requirements for school social work certification.
- Encourage communities to develop and maintain effective school social work services throughout the state.

The specialization is integrated within the Kent School curriculum. The MSSW at Kent is based on a 60-hour degree program for traditional students and 30-hour program for advanced standing students. Regular and advanced standing students will be recommended for SSW certification through the EPSB upon completion of the program requirements.

APPLICATION PROCEDURES

For new 30-hr applicants: You will apply at the time you complete your graduate application and should send the Curriculum Planning Sheet, technology agreement, admissions agreement and education ethics statements to gradadm@louisville.edu by January 30th.

For current MSSW applicants: Applications are accepted in December and January. Please allow for a few weeks for them to be processed. All applicants should begin by completing the School Social Work Specialization Current Student Application. Next, complete the Curriculum Planning Sheet, and read and sign copies of the technology agreement, admissions agreement, and education ethics statements. Submit all of these, along with a current resume, to msswhelp@louisville.edu.

Post-Master’s applicants: Applications are accepted on a rolling basis, but please allow for several weeks for them to be processed. All applicants should begin by completing School Social Work Certificate Application which can be found at https://goo.gl/kVXdHZ. Next, complete the Curriculum Planning Sheet, and read and sign copies of the technology agreement, admissions agreement, and education ethics statements. Finally, submit 2 letters of recommendation from someone who is familiar with your work with children and can assess your potential to successfully complete the SSWS, a statement articulating your experiences with children and families and your career goals relevant to the completion of the specialization, and an official transcript with your MSW.

Submit all of these, along with a current resume, to Dr. Andy Frey.

Dr. Andy Frey  
University of Louisville Patterson Hall, Rm 302, Louisville, KY 40292
Upon acceptance into the Certificate Program, you will need to complete the online application to the School of Interdisciplinary and Graduate Studies. Be sure to apply as a Kent Non-Degree Post-Master’s student. Once this has been completed, email Admissions Staff at msswkent@louisville.edu to let them know that you have been accepted into the specialization and that your application to the graduate school has been completed.

**CERTIFICATION APPLICATION PROCEDURES**

Complete the CA-1 application, which can be printed from the state website at [www.kyepsb.net](http://www.kyepsb.net) under the Certificate Applications tab. Send your CA-1, all official transcripts for each degree granting institution, and your completed curriculum planning sheet to Andy Frey at University of Louisville, Kent School of Social Work, Louisville, KY 40292.

Please note that applicants are now required to submit a Kentucky state and federal background check, completed within twelve (12) months of the date the application is received by the EPSB. The background check used to obtain employment as a certified educator in Kentucky public schools or to be placed as a student teacher in a Kentucky public school may be submitted to the EPSB to meet this requirement. All other applicants who do not have a background check readily available to submit with your application may request a background check from the Kentucky State Police using the following form: [http://www.kentuckystatepolice.org/pdf/employment_rev11_10.pdf](http://www.kentuckystatepolice.org/pdf/employment_rev11_10.pdf). An FBI background check may be obtained by following directions found here: [http://www.fbi.gov/about-us/cjis/identity-history-summary-checks/submitting-an-identity-history-summary-request-to-the-fbi](http://www.fbi.gov/about-us/cjis/identity-history-summary-checks/submitting-an-identity-history-summary-request-to-the-fbi). If you have questions, please contact the Division of Certification. Your background check can be submitted to Dr. Andy Frey with your completed application, or sent directly to the EDSP.

When you send your paperwork, make your payment to the Division of Certification [http://www.kyepsb.net/certification/certquicklinks.asp](http://www.kyepsb.net/certification/certquicklinks.asp). If you use the E-Pay option, you will also be allowed to monitor the status of your application online.

**Curriculum**

- **SW 672 and SW 673** Advanced Social Work Practicum in an approved school setting regular and advanced standing (students only)
- **SW 630** School Social Work: Policy and Practice
- **EDSP 644** Applied Behavior Analysis
- **EDSP 540** Introduction to Exceptional Children
- A student portfolio ([Portfolio instructions](#))

**Faculty**

- **Becky Antle** Associate Professor
- **Lisa Barrett** Instructor
- **Richard Cloud** Associate Professor
- **Anita P. Barbee**
- **Professor**
- **Counseling Specialization**
- **Wanda Lott Collins** Professor
- **Annatjie Faul** Professor
- **Crystal Collins-Camargo** Associate Professor
- **Andy Frey**

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Coordinator of
School Social Work
Specialization
Martha Fuller
Instructor
Director of Field
Education
Seana Golder
Associate Professor
Martin Hall
Assistant Professor
Barbara Head
Associate Professor
Eli Karam
Associate Professor

Karen Kayser
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Oncology
Specialization
Tom Lawson
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Coordinator of
Military
Specialization
Jon Lee
Instructor
Lynetta Mathis
Instructor

Assistant Director
of Field Education
Larry Michalczyk
Instructor
Sharon Moore
Professor
Armon Perry
Associate Professor
Bibhuti Sar
Professor
Director of Doctoral
program
Terry L. Singer
Professor
Dean
Emma Sterrett

Assistant Professor
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Family Therapy
Specialization
Riaan Van Zyl
Professor
Associate Dean of
Research
Kim Wadlington
Instructor
Pamela Yankeelov
Professor
Associate Dean of
Student Services
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 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 http://www.louisville.edu/kent, or attend a prospective student session. Please consult the Kent School website for a list of scheduled prospective student sessions.

Kent School seeks mature students with a demonstrated ability to work with people, emotional stability, good interpersonal skills, good health, and the ability to perform well academically. To ensure that entering students meet these standards, the faculty has set the following requirements:

- A bachelor’s degree from a regionally accredited institution of higher learning;
- A minimum of 27 credit hours in the social sciences, i.e. communications (6), natural sciences (3), humanities (9), and social sciences (9);
- A minimum of three credit hours in each of the following courses: statistics, research methodology, and human biology.
Additionally, an undergraduate GPA of 3.00 is recommended to be considered for admission to Kent School. While we consider applicants whose undergraduate GPA does not meet this standard, applicants with GPAs less than 2.75 must take the Miller Analogies Test or the Graduate Record Exam.

The application file is complete when all of the following are received by Graduate Admissions, University of Louisville, Louisville, Kentucky 40292:

1. **Completed Graduate Admission application.** Application forms are available on-line at [http://louisville.edu/graduate/apply](http://louisville.edu/graduate/apply) $60 non-refundable application processing fee. It is suggested that you apply online at the above website and pay your application with a credit card or electronic check. If you submit a hard copy application, attach a personal check, money order or cashier’s check payable to University of Louisville. Note: Paying your application fee with a check will delay the process for 8 days.

2. 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/testing.

3. **Advanced Standing Admissions:** Applicants who obtained a BSW within the last 7 years from an undergraduate social work program accredited or in candidacy by CSWE with a cumulative GPA of 3.00 and a social work GPA of 3.25 may be eligible to apply to the Advanced Standing 30-hour program. BSW applicants with less than a cumulative 3.0 GPA and a social work GPA of less than 3.25 will rarely be considered for the 30-hour program and will rarely be allowed to transfer social work coursework from their undergraduate degree toward their MSSW degree. Additionally, if an Advanced Standing applicant received a grade of “C” or lower in any social work foundation courses as a BSW, they may be asked to re-take these courses by the Admissions Committee as a condition of admission. Applicants who wish to be considered for 30 hour Advanced Standing program must submit their BSW Practicum Field Evaluation and 1 of their 3 letters of recommendation must be from their Director of Field Education.

4. **Personal statement** - This statement must be submitted with the application for admission. Submit a carefully written personal statement of approximately 700-1000 words that addresses the following four topics:
   - Describe a social problem or problem strategy that is of greatest interest to you.
   - Describe your commitment to engage in social work roles that involve social welfare institutions and systems most likely to have an effect on major social problems.
   - Describe in detail how you would insure that your work is relevant to the most economically and socially disadvantaged groups in our society.
   - Describe the intellectual and personal qualifications that will enable you to practice social work successfully.

Note: If there are gaps or deficiencies in your academic record or if you have ever had an
academic review, please address these in an addendum to your statement (recommended for all applicants with a GPA of 3.0 or less). The personal statement and any accompanying addenda may be emailed to gradadm@louisville.edu as an attachment after you have submitted your online application (recommended).

5. **Required Statements in Personal Statement (5)**

1. **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".

2. **Release and Waiver** - Applicants are required to submit the following release and waiver which authorizes the release of academic records. *Please add this completed Release and Waiver to the bottom of your Personal Statement.*

   *RELEASE and WAIVER for Admission to the Kent School of Social Work: I, (print name)_________________________, having made application for admission to the University of Louisville Kent School of Social Work (hereinafter University), hereby authorize the University to obtain any information and records available pertaining to, and in any manner related to, my enrollment at (list prior colleges)_______________(hereinafter Institution). This release includes copies of any education records including, but not limited to, academic, attendance, personal history and disciplinary records. I further authorize the University to contact any employees of the Institution to obtain verbal and written information concerning me. I hereby release the University and the Institution including any of their officers, directors, trustees or employees, individually and collectively, from any and all liability for damage of any nature whatsoever and of whatever kind which may at any time result to me, my heirs or assigns because of compliance with this authorization. A copy of this RELEASE and WAIVER shall be honored as an original. ____________________________________

   Signature

   (list prior college ID’s)_______________ Student ID# at Institution

   ________________ Date ____________

3. **Ethical Standards of Behavior Agreement**: Please review, complete and sign the Kent School's ethical standards of behavior agreement at this link and submit to Graduate Admissions with your personal statement.

4. **Two Technology admissions documents**--a) Technology Agreement and b) Personal Commitment Contract--these agreements must be completed and signed and can be found on the Application Checklist at http://www.louisville.edu/kent They can be emailed to gradadm@louisville.edu after completing an online application.

6. **Resume**: Please include current/past employment as well as volunteer and service roles served. This can be emailed to gradadm@louisville.edu after you have submitted your online application.

7. **Addendum to Personal Statement**: Submit an Addendum if you fulfill any of the following categories:
8. **ALL applicants:** If there are gaps or deficiencies in your academic record or if you have ever had an academic review, please explain (recommended for all applicants with a GPA of 3.0 or less)

   1. MSSW ONLINE applicants only: Rationale for Online Learning Essay—please submit a separate essay describing the factors that played a significant role in your decision to apply to the MSSW Online program in approximately 500 words. In your description, please include 1) a discussion of the most appealing aspects of the Online program, 2) concerns you have related to participation in the Online program, and 3) any personal attributes that will help you succeed in an online learning environment. Email all to gradadm@louisville.edu

9. **Three recommendations** - each submitted on a University of Louisville Recommendation of School of Interdisciplinary and Graduate Studies Form in a sealed, signed envelope or by selecting the “online” option when completing the online graduate admission application. 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 and supervising your human service related work/volunteer experience and academic performance. Avoid personal references (co-workers, mentors, advisors, friends, clergy, personal therapists, etc.). The Kent School requires three recommendation forms, however letters accompanying the forms are welcomed and strongly 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, on-site Practicum Supervisor, or Practicum/Practice Instructor. The school reserves the right to request additional supportive material from persons acquainted with the applicant’s academic and/or practice capabilities.

10. **Specializations:** If you wish to be considered for the MFT, SSW, GER, MH, ADCS, PSO, or MIL specializations, please check the prospective students link at our website [louisville.edu/kent/](http://louisville.edu/kent/) for any additional admission procedures, documents and deadlines necessary for consideration for admission to a particular specialization. Admission to these programs follows admission to Kent School but is not automatic. The deadline for all specializations is 1/15. Students accepted into the ONLINE MSSW program are not eligible for the MFT or SSW specializations.

11. **Dual Degrees:** If you wish to be considered for any of the *dual degree programs*, you must also complete the other unit's application process. Students accepted into the ONLINE MSSW program are not eligible for dual degrees.

12. **International students** for whom English is not their primary language must show English proficiency by demonstration of a specified level of proficiency on the TOEFL exam or by successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at UofL or by demonstration of a degree award from an acceptable English language institution. A score of 550 on the paper-based TOEFL or a score of 213 on the computer-based TOEFL or a score of 79-80 on Internet-based TOEFL is required. Scores must be submitted before a decision will be made on an application. More information at [http://louisville.edu/graduate/futurestudents/international-applicants/international](http://louisville.edu/graduate/futurestudents/international-applicants/international)
13. **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](http://www.wes.org) and Educational Credential Evaluators at [www.ece.org](http://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 contact UL’s International Center to determine if any other immigration documentation is necessary to begin practicum at [http://louisville.edu/internationalcenter](http://louisville.edu/internationalcenter).

14. **MSSW Online US Citizens Living Abroad & Outside of Kentucky**: Applicants who live outside of the US will need to consult with Kent's Director of Field Education, Martha Fuller, in advance of applying to the MSSW program to ensure the feasibility of meeting the practicum placement requirements in accordance with CSWE policies at martha.a.fuller@louisville.edu. A qualified practicum supervisor must be readily available (e.g., the supervisor has an MSSW/MSW degree from a CSWE accredited institution or similar CSWE type accreditation) and/or the applicant must participate in identifying a qualified practicum supervisor with the support of the Field Education Office. Both applicants outside of the US and outside of KY must be willing to participate in the process of identifying a qualified practicum supervisor with the support of the Field Education Office. MSSW Online applicants in rural areas must consider that they may be required to travel to their practicum placements if no qualifying practicums are available in their local area.

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 semesters.

**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:

**January 30th Special Circumstances Deadline**

*Applicants who must meet this deadline:*
* • 74-hr MSSW-MFT specialization applicants (not available to online students)*
* • 30-hr applicants who wish to apply to a specialization (MFT and School social work are not available to Online students)*
* • All applicants who want a practicum placement the first year that is not already established on Kent's Agency Roster*
February 28th Early Bird

Applicants who must meet this deadline:
• 30-hr applicants who wish to start in the Summer

May 15 Traditional Deadline

*EXCEPTIONS TO DEADLINES

• Applications after January 30th for 30-hr Specializations (on campus and online) and the 74-hr MSSW-MFT specialization (on campus only) will only be considered if space in the specialization is available AND if an appropriate practicum site is readily available.

• Applications submitted after May 30th will be considered on a case by case basis if space allows and ONLY if the applicant is willing to choose a curriculum plan that delays practicum until the following year. (Plans C-F for 60-hr, and Plans EE/FF for 30-hr; 30-hr applicants at this stage must also be working at a social service agency to be eligible for these plans in order to execute the year-long research project.

*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 seven years from an undergraduate social work program accredited or in candidacy by CSWE with a cumulative grade point average of 3.00, cumulative 3.25 in all social work foundation courses, 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 prospective students link of the Kent School website, louisville.edu/kent

M.S.S.W. Dual Degree Programs (not available to online students)

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./M.Div.), 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.) and the Department of Philosophy/Medical Humanities and Bioethics (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), Gerontology (GER), Mental Health (MH), Psychosocial Oncology (POS) or Military Social Work (MIL) while obtaining the M.S.S.W. degree. In general, these programs require the
student to take prescribed electives in a particular concentration, take a targeted advanced practicum, and participate in an integrative seminar or supervision with the specialization cohort. Dual degree programs require additional coursework, while the specializations may require an extra integrative seminar or supervision as well as additional coursework. For more complete descriptions of these programs, please refer to the prospective students link at the Kent School website: louisville.edu/kent

**M.S.S.W./Master in Divinity**

The joint M.S.S.W./M.Div. program recognizes the value of professional education in two interrelated fields and encourages students who have an interest in both ministry and social work to pursue these degrees simultaneously. A student may enter the dual degree program from social work or theology.

**M.S.S.W./Juris Doctor**

The dual M.S.S.W./J.D. program recognizes the value of interdisciplinary study and encourages students having an interest in both social work and law to pursue these degrees simultaneously. Social workers and lawyers often seek to address identical or related societal concerns, albeit from different perspectives; understanding both disciplines enhances one’s effectiveness in both professional capacities. Law courses strengthen the social worker’s understanding of legal doctrine and structures that have an impact on social institutions and human conditions; social work courses help lawyers to better understand human behavior, conflict resolution and social welfare institutions.

**M.S.S.W./M.A. in Pan-African Studies**

The dual M.S.S.W./PAS program recognizes the value of professional education in two interrelated fields and encourages students who have an interest in both Pan-African Studies and Social Work to pursue these degrees simultaneously. Social workers and Pan-African studies scholars often seek to address identical or related societal concerns, albeit from different perspectives; understanding both disciplines enhances one’s effectiveness in both the analysis of and engagement with contemporary social and cultural issues. Pan-African Studies courses strengthen the social worker’s understanding of the historical foundations for policies and structures that have an impact on social institutions and human conditions; social work courses help Pan-African scholars or activists to better understand human behavior, conflict resolution and social welfare institutions. A Pan African Studies and Social Work combination provides the tools of social change for an historic problem of racial injustice.

**M.S.S.W./M.A. in Women’s and Gender Studies**

The dual M.S.S.W./ WGST program recognizes the value of professional education in two interrelated fields and encourages students who have an interest in both Women’s and Gender Studies and Social Work to pursue these degrees simultaneously. Social workers and Women’s and Gender Studies scholars often seek to address identical or related societal concerns, albeit from different perspectives; understanding both disciplines enhances one’s effectiveness in both the analysis of and engagement with contemporary social and cultural issues. Women’s and Gender Studies courses strengthen the social worker’s understanding of the historical foundations for policies and structures that have an impact on social institutions and human conditions; social work courses help Women’s and Gender Studies scholars or activists to better understand human behavior, conflict resolution and social welfare institutions. A Women’s and Gender Studies and Social Work combination provides the tools of social change for an historic problem of gender inequality and injustice.
M.S.S.W./M.A. in Bioethics and Medical Humanities

The dual MSSW/BETH degree program focuses on providing our social work graduates a contextual experience within the interdisciplinary fields that comprise bioethics in addition to the development of social work skills. 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. In addition to any career options presented by the MSSW, degree holders may then participate in hospital ethics committees, teach medical ethics and humanities, or be prepared for future doctoral-level work in medical ethics and humanities.

M.S.S.W. Specializations

For more complete descriptions of the following specializations, please refer to the prospective students link at the Kent School website: [http://www.louisville.edu/kent](http://www.louisville.edu/kent)

Couple and Family Therapy Specialization (MFT)--not available to online students

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 couple 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.

School Social Work Specialization (SSW)--not available to online students

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. Start-up 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.

Mental Health Specialization (MH)

The mental health specialization (MH) prepares students to enter into the mental health field by focusing on theoretical perspectives regarding the course and etiology of mental illness, diagnostic and assessment skills, evidence-based approaches, knowledge of mental health services, policies, and programs in the context of social work practice and values. Students complete their advance practicum rotation in a mental health setting providing the opportunity to build collaborative and interdisciplinary skills and professional identity by integrating knowledge with an intricate understanding of mental health practice, policy and service delivery.

Psychosocial Oncology Specialization (PSO)

The Kent School of Social Work offers the first specialization in psychosocial oncology in the nation. The high rate of cancer on local, national, and global levels and the potential shortage of oncology social workers are creating the demand for skilled practitioners. Responding to the growing need for social workers who are trained in cancer care, this program will prepare students with the knowledge and skills for meeting the psychosocial health needs of persons with cancer and their families. Students will learn how to apply skills such as assessment, counseling, palliative care, program planning and evaluation in cancer care settings. Our students work in a variety of health settings in the full range of care for cancer patients.

Military Specialization (MIL)

The Master of Science in Social Work – Military Social Work Specialization program is designed to prepare students to provide services to persons who have served or are serving in the military and their families. The specialization focuses on theoretical perspectives, and policy implications concerning problems facing service members and their families as well as programs and application of interventions to ameliorate them. It is recognized that those seeking assistance from problems associated with military service may be seen in a myriad of programs both inside and outside the frame of the more traditionally recognized military service delivery systems. Thus students can complete an advanced practicum rotation from one of the many settings which provide the opportunity to work with military members their families or retirees. During their practicum students will be able to hone their skills and collaborate with other professions in the provision of services for this population by integrating knowledge learned with practice.
Curriculum

For a complete description of possible 30 and 60 hour curriculum plans, please refer to the Kent School website: [http://www.louisville.edu/kent](http://www.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 result from the social work practice they do.

Critical thinking is defined as "the intellectual disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief or action" (Scriven & Paul, 2004). Critical thinking includes specific skills such as problem-solving and the ability to integrate knowledge from multiple disciplines and theories of human behavior. Throughout the curriculum, there is an emphasis on critical reflection, or appraisal of various points of view no matter what the source. The curriculum draws heavily on social science knowledge and integrates this with problem-solving phases such as assessment, intervention, and evaluation. In this respect, the curriculum is designed to teach students to access, integrate, and assess practice and policy related research to solve social problems and to work towards social justice. When critical thinking skills are used effectively, it leads to transparency and promotes social change, particularly with and on behalf of vulnerable and oppressed individuals and groups of people.

Bruner's spiral curriculum format (1991) is used to implement the above mentioned cognitive flexibility philosophy in the development of higher order critical thinking skills. With this format, topics are revisited throughout the curriculum, while increasing the level of difficulty, complexity and depth of the area and linking new knowledge or information to previous levels of learning on the same topic to increase the competency of the students. Students will be introduced in the foundation curriculum to different strategies on how to develop critical thinking. In the advanced curriculum, students will move towards a higher level of complexity in their thinking because they will be required to analyze problems from multiple perspectives, evaluate multiple sources of evidence, and address complex issues and problems incorporating multiple level forces on client systems.
M.S.S.W. Foundation Curriculum

The foundation curriculum promotes a generalist perspective in which the simultaneous impact of many systemic levels (individuals, families, groups, organizations, and communities) on clients' lives is critically analyzed and recognized. The foundation builds upon a liberal arts base that fosters an understanding of society as a complex organization of diverse people and ideas. Social problems are understood as occurring within the nexus of culture, conflict, development, ecology, and systems and as such, efforts to help or intervene must include consideration of these forces. Students will be able to critically identify and assess social problems, specifically attending to 1) how such problems are maintained, 2) how they impact the quality of people's life, 3) cultural sensitivity and appreciation of marginalized people, and 4) how to actively promote social and economic justice. In the 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://www.louisville.edu/kent. All students admitted to the 60 credit-hour program are required to satisfactorily complete 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 satisfactorily complete 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 Field Education Handbook which can be found at the prospective students link at the Kent School website, http://www.louisville.edu/kent. If employed in a human services agency meeting the Kent 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 be enrolled simultaneously 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 advanced 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 social justice
practice 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, [http://www.louisville.edu/kent](http://www.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 Social Justice Practice - 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 and a 3.25 cumulative GPA in all social work foundation courses and 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 7 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, http://www.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

MSSW ONLINE PROGRAM

There are two options for earning a Master of Social Work degree online:

1. Standard 60-hr MSSW--starting every fall (one start per year). Current and future social work professionals who have a bachelor's degree in any area of study other than Social Work can complete a 60 credit hour program and earn a Master in Social Work degree online, from the comfort of their home or office while working and/or taking care of the family.

2. Advanced Standing 30-hr MSSW--starts summer and fall (two starts per year). Social Work professional who have already earned a Bachelor of Social Work within the last seven years may enroll in the MSSW online degree and complete a 30 credit hour program. Applicants must have a minimum undergraduate coursework GPA of 3.0, and a minimum Social Work coursework GPA of 3.25.

Students enrolled in the Master of Science in Social Work Online program may choose to specialize in the areas of: Psychosocial Oncology, Gerontology, Mental Health, Alcohol and Drug Counseling, or Military Social Work and must meet the Early 1/15 Special Consideration Deadline.

The online program's structure, quality and rigorous coursework mirror those in the on-campus program. The combination of online learning and real-world practicum (hands-on supervised field instruction, completed in the community of choice) helps our students gain valuable field-related knowledge as well as critical thinking, self-discipline and time management skills.
Faculty

Becky Antle  
Associate Professor  
Adrian Archuleta  
Assistant Professor  
Coordinator of Mental Health Specialization  
Anita P. Barbee  
Professor  
Lisa Barrett  
Instructor  
Richard Cloud  
Associate Professor  
Coordinator of Alcohol and Drug Counseling Specialization  
Crystal Collins-Camargo  
Associate Professor  
Wanda Lott Collins  
Professor  
Director of BSW Program  
Annatjie Faul  
Professor  
Coordinator of Academic Affairs  
Andy Frey  
Professor  
Coordinator of School Social Work Specialization  
Martha Fuller  
Instructor  
Director of Field Education  
Seana Golder  
Associate Professor  
Martin Hall  
Assistant Professor  
Barbara Head  
Associate Professor  
Eli Karam  
Associate Professor  
Karen Kayser  
Professor  
Coordinator of Psychosocial Oncology Specialization  
Tom Lawson  
Professor  
Coordinator of Military Specialization  
Jon Lee  
Instructor  
Lynetta Mathis  
Instructor  
Assistant Director of Field Education  
Larry Michalczyk  
Instructor  
Sharon Moore  
Professor  
Armon Perry  
Associate Professor  
Bibhuti Sar  
Professor  
Director of Doctoral program  
Terry L. Singer  
Professor  
Dean  
Emma Sterrett  
Assistant Professor  
Coordinator of Marriage and Family Therapy Specialization  
Riaan Van Zyl  
Professor  
Associate Dean of Research  
Kim Wadlington  
Instructor  
Pamela Yankeelov  
Professor  
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/

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 December 15th to:

School of Interdisciplinary and Graduate Studies  
Graduate Admissions  
University of Louisville  
Houchens Bldg., Rm 105  
Louisville, KY 40292

1. Completed Graduate Admissions 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 $60 (if UofL is the most recent University you attended, the application fee is $30)
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:

- Review of application materials by the doctoral admissions committee
- Admission committee interviews with those recommended
- 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 comprehensive exam 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

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Semester Hours</th>
<th>Cumulative Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Research Design &amp; Analysis I</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Advanced Research Design &amp; Analysis II</td>
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<td>12</td>
</tr>
<tr>
<td>Advanced Research Design &amp; Analysis III</td>
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<td>15</td>
</tr>
<tr>
<td>Professional Seminar I</td>
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<td>16</td>
</tr>
<tr>
<td>Professional Seminar II</td>
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<td>17</td>
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<tr>
<td>Teaching in Social Work</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Theory I: Change Theories in Social Work</td>
<td>3</td>
<td>23</td>
</tr>
<tr>
<td>Ethics, Social Work, and Society</td>
<td>3</td>
<td>26</td>
</tr>
<tr>
<td>Theory II: Theory Development</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>Theory III: Advanced Analysis of Social Welfare Problems</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>Advanced Measurement in Social Work Research</td>
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<td>35</td>
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<tr>
<td>Advanced Qualitative Research</td>
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<td>38</td>
</tr>
<tr>
<td>Research Practicum</td>
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<tr>
<td>Individualized Studies and Dissertation Hours</td>
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<td></td>
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<tr>
<td>Individualized Studies</td>
<td>9</td>
<td>50</td>
</tr>
<tr>
<td>Dissertation</td>
<td>6</td>
<td>56</td>
</tr>
</tbody>
</table>

Doctoral Comprehensive Examination

The purpose of the comprehensive exam 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 comprehensive exam 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 comprehensive exam, 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.
# Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adrian Archuleta</td>
<td>Professor</td>
<td>Faculty</td>
</tr>
<tr>
<td>Anita Barbee</td>
<td>Professor</td>
<td>Faculty</td>
</tr>
<tr>
<td>Crystal Collins-Camargo</td>
<td>Associate Professor</td>
<td>Faculty</td>
</tr>
<tr>
<td>Anna C. Faul</td>
<td>Professor</td>
<td>Associate Dean for Academic Affairs</td>
</tr>
<tr>
<td>Andy Frey</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Lesley Harris</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Karen Kayser</td>
<td>Endowed Chair</td>
<td></td>
</tr>
<tr>
<td>Thomas R. Lawson</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Bibhuti K. Sar</td>
<td>Director of Ph.D. Program in Social Work</td>
<td></td>
</tr>
<tr>
<td>Terry L. Singer</td>
<td>Professor</td>
<td>Dean</td>
</tr>
<tr>
<td>Riaan van Zyl</td>
<td>Professor</td>
<td>Associate Dean for Research</td>
</tr>
</tbody>
</table>
Master of Science in Anatomical Science and Neurobiology

**Major:** ASNB  
**Degree Awarded:** MS  
**Unit:** GM  
**Program Webpage:** [http://louisville.edu/medschool/anatomy/](http://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://louisville.edu/graduate/apply](http://louisville.edu/graduate/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 and/or MCAT.
6. A brief statement of purpose describing your interests and career goals.
7. All international applicants whose native language is not English must submit Test of English as a Foreign Language (TOEFL) scores. 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 UofL Graduate Catalog. Briefly, a minimum of 30 semester hours is required for the master’s degree.
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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASNB 601</td>
<td>Gross Anatomy</td>
<td>6.5</td>
</tr>
<tr>
<td>ASNB 603</td>
<td>Microscopic Anatomy</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Fundamentals of Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>ASNB 605</td>
<td>Human Embryology</td>
<td>3</td>
</tr>
<tr>
<td>ASNB 617</td>
<td>*Developmental Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>ASNB 614</td>
<td>*Molecular Neurobiology</td>
<td>4</td>
</tr>
<tr>
<td>ASNB 666</td>
<td>*Synaptic Organization of the Brain</td>
<td>3</td>
</tr>
<tr>
<td>ASNB 672</td>
<td>Survey of Dental Gross and Neuroanatomy</td>
<td>7</td>
</tr>
<tr>
<td>ASNB 671</td>
<td>Dental Microscopic Anatomy</td>
<td>5</td>
</tr>
</tbody>
</table>

* Offered on a rotational basis

**Seminar:** Anatomy Seminar (ASNB 606, 1 credit hr) must be taken for credit each semester prior to candidacy.

**Electives:** Additional courses (electives) within ASNB 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.

**Research Hours:** Research credit hours may be taken as Laboratory Rotation (ASNB 618), which is graded on a pass/fail basis, prior to choosing a mentor. Once a mentor is chosen, research hours are taken as Original Investigation (ASNB 619), in which students earn a letter grade.

**Candidacy:** After completion of all requirements (as outlined above), students enter Master’s Candidacy and must register for and maintain candidacy (MAST 600) until the successful defense of his/her thesis. This registration must be maintained year round (fall, spring and summer semesters) until the degree is awarded. Once a student registers for MAST 600, he/she may not register for additional courses. The statute of limitation for obtaining a Master’s degree is six years from the beginning of the program of study.

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.

**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 enrollment, 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
written agreement, signed by both the student and thesis advisor, will be filed with the Graduate Program Director.

A thesis Master of Science degree requires more than the completion of a prescribed curriculum of course work, a written thesis based on original research, and a successful oral defense. 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 the equivalent of two academic semesters and maintain steady and satisfactory progress. Faculty advisors submit Graduate Student Progress Reports biannually to the ASNB Graduate Program Committee for review.

**Thesis Committee**

The composition requirements of, and specific deadlines related to, the thesis committee appear in the Graduate 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. Once in Master’s candidacy, the student should meet with their committee at least once per semester.

**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. SIGS requires that an announcement of the defense be posted at least two weeks prior to the scheduled date. The defense will consist of an oral presentation (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.

**Electronic Format of Thesis**

Deadlines for the submission are published in the schedule of classes. Students must follow The School of Interdisciplinary and Graduate Studies (SIGS) requirements for the format of their Master’s thesis. The published Guidelines for the Preparation and Processing of Theses/Dissertations [pdf] are available for reference. Any thesis received by SIGS that does not reasonably adhere to their guidelines will be returned to the student or committee chairperson.

SIGS requires the submission of a digital thesis. The digital document must be submitted in Adobe PDF format. The electronic version should not include signatures from the thesis advisory committee. It should list the committee members’ names only. Students must submit a hard copy of their signature page on white paper, with original signatures, to SIGS. If students wish to use material that has been previously published under their names in their thesis, they will need to contact the original publisher for permission.
ASNB requires a bound copy of each student’s thesis. For archival purposes, it is recommended that the document be printed on 25% cotton paper.

**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 Graduate 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.

**Faculty**

- **Richard Benton**  
  Assistant Professor

- **Kunwar P. Bhatnagar**  
  Professor Emeritus

- **Martha E. Bickford**  
  Professor
  
  Course Director of
  
  Synaptic Organization of the Brain

- **Maxwell Boakye**  
  Associate Professor
  
  of Neurological Surgery

- **Bart Borghuis**  
  Assistant Professor

- **Jennifer Brueckner-Collins**  
  Professor

- **Rita M. Colella**  
  Associate Professor
  
  Course Director of Medical
Microscopic Anatomy

**Nigel G.F. Cooper**
Professor
Director of Molecular Neurobiology Core Laboratory

**William Guido**
Professor
Chairman

**Susan Harkema**
Professor of Neurological Surgery
Research Director of Frazier Rehab Institute

**Nicole R. Herring**
Assistant Professor
Course Director of Advanced Head and Neck Anatomy and Survey of Dental Gross & Neuroanatomy
Director of Fresh Tissue Laboratory and Bequeathal Program

**Dena Howland**
Associate Professor of Neurological Surgery

**Charles H. Hubscher**
Professor
Vice Chair and Director of Graduate Studies Course Director of Fundamentals of Neuroscience

**Kathleen M. Klueber**
Professor Emerita

**Robin F. Krimm**
Professor
Vice Chair for Research Course Director of Developmental Neurobiology

**Ashok Kumar**
Professor

**Nobuyuki Kuwabara**
Associate Professor

Course Director of Medical Gross Anatomy
Facilitator for Guest Clinical Gross Anatomy Instructors

**Robert F. Lundy, Jr.**
Associate Professor
Course Director of Medical Neurosciences

**David Magnuson**
Professor of Neurological Surgery

**Maureen McCall**
Professor of Ophthalmology and Visual Sciences

**J. Patrick Moore**
Associate Professor
Director of Graduate Admissions

**Jeffrey C. Petruska**
Associate Professor

**Matthew Qiu**
Professor
Director of Neurochemistry

Shared Instrumentation Laboratory

**Richard Rink**
Professor Emeritus

**Guillermo W. Rougier**
Professor

**Patrick Scott**
Assistant Professor of Ophthalmology and Visual Sciences

**Michael T. Tseng**
Professor
Course Director of Dental Microscopic Anatomy

**Scott Whittemore**
Professor of Neurological Surgery
Scientific Director of Kentucky Spinal Cord Injury Research Center
Doctor of Philosophy in Anatomical Science and Neurobiology

Major: ASNB
Degree Awarded: Ph.D.
Unit: GM
Program Webpage: http://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:

- A formal application submitted to the Office of Graduate Admissions (see website: http://louisville.edu/graduate/apply for forms and directions).
- Application fee.
- A minimum of two letters of recommendation.
- Official transcripts of all college work.
- Official scores on the Graduate Record Examination (GRE) General Test.
- A brief statement of purpose describing your interests and career goals.
- All international applicants whose native language is not English must submit Test of English as a Foreign Language (TOEFL) scores. 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.
are automatically considered for a fellowship, which provides a stipend and covers tuition and health insurance.

**Curriculum**

**Non-thesis M.S. degree requirements**

All Ph.D. students must complete the requirements for the non-thesis M.S. degree, after which they will be considered a Ph.D. candidate. 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, excluding research credit hours. Courses with numbers from 500 to 599, open to both advanced undergraduate and graduate students, can be taken by graduate students for graduate credit (additional course requirements must be completed). In addition, up to 6 credits of earned graduate semester hours can be transferred upon request from other accredited institutions, as long as the course work was taken within the past three years and a grade of B or better was earned (transferred grades do not get calculated in the student’s GPA).

**Required coursework**

Integrated Programs in Biomedical Sciences (IPIBS) Course Requirements:

- Students must successfully complete all of the following IPIBS courses within the School of Medicine:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOC /CHE 545</td>
<td>Biochemistry I or equivalent</td>
<td>3</td>
</tr>
<tr>
<td>BIOC 667</td>
<td>Cell Biology or equivalent</td>
<td>3</td>
</tr>
<tr>
<td>ASNB 610</td>
<td>Methods &amp; Analysis in the Biomedical Sciences</td>
<td>2</td>
</tr>
<tr>
<td>BIOC 630</td>
<td>Research Ethics</td>
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</tbody>
</table>

- 1 of the following required IPIBS Graduate electives:

<table>
<thead>
<tr>
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<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBIO 602</td>
<td>Introductory Immunology</td>
<td>2</td>
</tr>
<tr>
<td>Bioch/Che54</td>
<td>Biochemistry II (7)</td>
<td>3</td>
</tr>
<tr>
<td>MBIO 658</td>
<td>Cellular and Molecular Immunology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Fundamentals of Neuroscience (TBD)</td>
<td>4</td>
</tr>
<tr>
<td>PHY 605</td>
<td>Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>PHY 606</td>
<td>Physiology II</td>
<td>3</td>
</tr>
</tbody>
</table>

ASNB Course Requirements:

- Students must earn at least 9 additional credits by successfully completing any of the following Departmental core courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASNB 601</td>
<td>Gross Anatomy</td>
<td>6.5</td>
</tr>
<tr>
<td>ASNB 603</td>
<td>Microscopic Anatomy</td>
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<td>ASNB 605</td>
<td>Human Embryology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Fundamentals of Neuroscience</td>
<td>4</td>
</tr>
<tr>
<td>ASNB 617</td>
<td>*Developmental Neurobiology</td>
<td>3</td>
</tr>
<tr>
<td>ASNB 614</td>
<td>*Molecular Neurobiology</td>
<td>4</td>
</tr>
<tr>
<td>ASNB 666</td>
<td>*Synaptic Organization of the Brain</td>
<td>3</td>
</tr>
<tr>
<td>ASNB 671</td>
<td>Dental Microscopic Anatomy</td>
<td>5</td>
</tr>
<tr>
<td>ASNB 672</td>
<td>Survey of Dental Gross &amp; Neuroanatomy</td>
<td>7</td>
</tr>
</tbody>
</table>

* Offered on a rotational basis

In addition, 2 lab rotations (ASNB 618): see description below - 6.0 credit hours
Seminar: Anatomy Seminar (ASNB 606, 1 credit hour) must be taken for credit each semester prior to Master’s candidacy.

Electives: Additional courses (electives) within ASNB 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. A course in statistics is highly recommended.

Laboratory Rotations and Research Hours

Lab Rotations: Each student will complete two rotations in different laboratories prior to start of their third semester. Exceptions or the addition of a third rotation require approval from the ASNB Graduate Committee. The objectives of rotations in 2 labs 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 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, an ASNB Rotation Report must be completed and submitted to the Graduate Program Director.

Research Hours: Once a mentor is chosen, research hours are taken as Original Investigation (ASNB 619), in which students earn a letter grade.

The purpose of the advisory committee is to act as the primary guiding and assessment body for the student in a course of study and training through which they will acquire the knowledge and skills required to earn the degree of Doctor of Philosophy. The course of study and training will have components that are common for all students, but may have others that are tailored to the particular needs and/or desires of individual students.

The committee must have a minimum of five members. The Principal Advisor serves as chair. The majority of committee members must have a primary, joint or associate appointment in ASNB. At least one member must have a primary appointment in a department outside ASNB (this outside committee member must not have a joint appointment in ASNB) and can include a Graduate Faculty from another University. 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. A Graduate Student Progress Report, completed by the Advisor, must be filed semi-annually (at the end of the fall and spring semesters) with the ASNB Graduate Program Director. Registration for courses is contingent on this filing.

Masters Candidacy

After completion of all course requirements, students must register for and maintain candidacy (MAST 600) until the successful completion of his/her qualifying exam. This registration must be maintained year round (fall, spring and summer). Once a student registers for MAST 600, he/she may not register for additional courses.

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 two terms (Fall, Spring or Summer terms) after the completion of required coursework. The exam consists of an oral presentation and defense of a research proposal (described below).
Prior to writing the Research Proposal, the student will develop an outline of the proposed experiments in coordination with their advisor and then present this outline to their committee. It is at this point, prior to writing the Research Proposal that the committee should recommend any changes in the research plan, regarding, for example, too many or too few experiments, experiments that are too difficult, or experiments that may be more appropriate for addressing the research question. Once the committee is satisfied with the proposed experiments, the student will write a Research Proposal in the following general format. *

**Literature Review and Significance**

Section one will be an extensive literature review (similar to an expanded Background and Significance section of a National Institutes of Health grant proposal). This review should provide evidence that the student has a sufficient command of the background information relevant to the proposed research.

**Specific Aims, Hypotheses and Experiments**

This section will consist of a list of the proposed specific aims. Each aim should include hypotheses to be tested and a brief description of the experiments that will be used to test these hypotheses.

**Experimental Design and General Methods**

This section will consist of a detailed description of the experimental design as well as the methods that will be used to carry out the proposed experiments.

**Expected Outcomes**

This section will describe the expected results and how they will be interpreted.

**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 eligible 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. Students must consider this two week reading period when preparing the document and scheduling the exam. The qualifying exam itself will be chaired by the student’s advisor. The exam will begin with an oral presentation, open to the public, in which the student will present an overview (approximately 40 min) 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 background information relevant to the proposed research. Non-committee members in the audience will have an opportunity to ask questions first. The general audience will then be dismissed and the student will defend his/her proposal before the committee. Success or failure 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 Proposal Defense Evaluation Form stating the outcome of the exam will be completed and 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 a M.S. degree. At this point the student becomes a doctoral candidate and must register for and maintain candidacy (DOCT 600) until the successful completion of his/her dissertation. This registration must be maintained year round (Fall, Spring and Summer). The statute of limitation for obtaining a Ph.D. degree is four years from the beginning of Doctoral Candidacy. University wide official maximums for fellowships and Graduate Assistantships are typically 6 years.

**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. Presentations at journal clubs are encouraged, but cannot be used as a substitute for the annual presentation requirement.

**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. The candidate must complete all requirements for the degree of Doctor of Philosophy within four calendar years after passing the qualifying examination. It is expected that the dissertation should contain data sufficient for approximately three publishable manuscripts. Upon completion of a near final draft of their dissertation and prior to scheduling of their defense, the student must 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 and distribute a final copy to each committee member. SIGS requires that an announcement of the defense be made at least two weeks prior to the scheduled date. The defense will consist of a public oral presentation (approximately 45 minutes in length) of the research completed during the student’s graduate training. Non-committee members in the audience will be allowed to ask questions. The general audience will then be dismissed and the student will defend his/her dissertation before the committee. Upon completion, a written report stating the outcome of the defense will be completed by each committee member and will become a permanent part of the student’s record. Approval by the majority of Dissertation Committee members will signify completion of the Ph.D. degree.

**Electronic Format of Dissertation**

Deadlines for the submission are published online in the schedule of classes. Students must follow The School of Interdisciplinary and Graduate Studies (SIGS) requirements for the format of their Doctoral Dissertation. The published [Guidelines for the Preparation and Processing of Theses/Dissertations (PDF)](https://example.com/theses-guidelines.pdf)
are available for reference any dissertation received by SIGS that does not adhere to their guidelines will be returned to the student or committee chairperson.

SIGS requires the submission of a digital dissertation. The digital document must be submitted in Adobe PDF format. The electronic version should not include signatures from the dissertation advisory committee. It should list the committee members’ names only. Students must submit a hard copy of their signature page on white paper, with original signatures, to SIGS. If students wish to use material that has been previously published under their names in their dissertation, they will need to contact the original publisher for permission. ASNB requires a bound copy of each student’s dissertation. For archival purposes, it is required that the document be printed on 25% cotton paper.

Academic policies

General Program Requirements

Students should familiarize themselves with the general requirements for the Master’s and Ph.D. Degrees as stated in the current University of Louisville Graduate Catalog (http://louisville.edu/graduatecatalog/). 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, including the ability to think critically. 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 in the candidate’s chosen field.

All Ph.D. students receiving financial support from the University of Louisville, including University Fellows and Graduate Assistants, must be enrolled as full-time students during the period for which they are receiving support. The minimum and maximum number of credit hours for full time study is 9 and 12, respectively, in the fall and spring semesters (6 and 12 for the summer). To be considered in good standing, a grade average of 3.0 or better must be maintained. The program faculty and unit dean monitor the GPA of every graduate student. A student must be in good standing to receive a degree. Students must be enrolled during the semester in which they wish to graduate.

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. 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 director 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.

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.
Faculty

Richard Benton
Assistant Professor
Kunwar P. Bhatnagar
Professor Emeritus
Martha E. Bickford
Professor
Course Director of Synaptic Organization of the Brain
Maxwell Boakye
Associate Professor of Neurological Surgery
Bart Borghuis
Assistant Professor
Jennifer Brueckner-Collins
Professor
Rita M. Colella
Associate Professor
Course Director of Medical Microscopic Anatomy
Nigel G.F. Cooper
Professor
Director of Molecular Neurobiology Core Laboratory
William Guido
Professor
Chairman

Susan Harkema
Professor of Neurological Surgery
Research Director of Frazier Rehab Institute
Nicole R. Herring
Assistant Professor Course Director of Advanced Head and Neck Anatomy and Survey of Dental Gross & Neuroanatomy
Director of Fresh Tissue Laboratory and Bequeathal Program
Dena Howland
Associate Professor of Neurological Surgery
Charles H. Hubscher
Professor
Vice Chair and Director of Graduate Studies
Course Director of Fundamentals of Neuroscience
Kathleen M. Klueber
Professor Emerita

Robin F. Krimm
Professor
Vice Chair for Research
Course Director of Developmental Neurobiology
Ashok Kumar
Professor
Nobuyuki Kuwabara
Associate Professor
Course Director of Medical Gross Anatomy Facilitator for Guest Clinical Gross Anatomy Instructors
Robert F. Lundy, Jr.
Associate Professor
Course Director of Medical Neurosciences
David Magnuson
Professor of Neurological Surgery
Maureen McCall
Professor of Ophthalmology and Visual Sciences
J. Patrick Moore
Associate Professor

Richard Rink
Professor Emeritus
Guillermo W. Rougier
Professor
Patrick Scott
Assistant Professor of Ophthalmology and Visual Sciences
Michael T. Tseng
Professor
Course Director of Dental Microscopic Anatomy
Scott Whittemore
Professor of Neurological Surgery
Scientific Director of Kentucky Spinal Cord Injury Research Center

Director of Graduate Admissions
Jeffrey C. Petruska
Associate Professor
Matthew Qiu
Professor
Director of Neurochemistry Shared Instrumentation Laboratory

Graduate Catalog
Summer 2016-Spring 2017
Doctor of Audiology

Major: AUDI
Degree Awarded: Au.D.
Unit: GM
Program Webpage: http://louisville.edu/medschool/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 School of Interdisciplinary and Graduate Studies. 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
- three letters of recommendation

Applicants must have a minimum GPA of 3.0 and minimum cumulative GRE score of 300 to apply. 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.
This is a typical 4-year curriculum. This is subject to change.

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Course#</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fall</td>
<td>AUDI 600</td>
<td>Anatomy &amp; Physiology for Communication Sciences</td>
<td>3</td>
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<tr>
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<td></td>
<td>AUDI 604</td>
<td>Essential Techniques in Audiometry for Pediatrics and Adults</td>
<td>3</td>
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<tr>
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<td>AUDI 606</td>
<td>Acoustics</td>
<td>3</td>
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<td>AUDI 614</td>
<td>Clinical Techniques I</td>
<td>1</td>
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<td></td>
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<td>AUDI 610</td>
<td>Clinical Clerkship I</td>
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<tr>
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<td>AUDI 626</td>
<td>Assessment &amp; Management of Vestibular Disorders</td>
<td>3</td>
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<tr>
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<td>AUDI 624</td>
<td>Amplification Technology</td>
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<td>AUDI 615</td>
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<td>AUDI 610</td>
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</tr>
<tr>
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<td>Summer</td>
<td>AUDI 654</td>
<td>Assessment &amp; Management of Auditory Processing Disorders</td>
<td>3</td>
</tr>
<tr>
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<td>AUDI 630</td>
<td>Amplification Selection &amp; Fitting</td>
<td>3</td>
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<tr>
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<td>2</td>
<td>Fall</td>
<td>AUDI 650</td>
<td>Research Methods</td>
<td>3</td>
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<td>AUDI 629</td>
<td>Cochlear Implants &amp; Implantable Devices</td>
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<td>PSYC 646</td>
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<td>AUDI 646</td>
<td>Medical Audiology</td>
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<td>AUDI 652</td>
<td>Prevention of Hearing Loss</td>
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<td></td>
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<td>AUDI 660</td>
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</tr>
<tr>
<td></td>
<td>Summer</td>
<td>AUDI 616</td>
<td>Genetics and Hearing Loss</td>
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<td>AUDI 632</td>
<td>Professional Issues in Audiology</td>
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<td>AUDI 635</td>
<td>Audiology Internship</td>
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<td>AUDI 660</td>
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<td>Practice Management in Audiology</td>
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<td>AUDI 679</td>
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<td>Internship</td>
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<td>AUDI 660</td>
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<td>AUDI 612</td>
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<td>AUDI 621</td>
<td>Audiologic Rehabilitation</td>
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<td>AUDI 634</td>
<td>Electrophysiologic Techniques in Audiology II</td>
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</tbody>
</table>
AUDI 635  Internship                      4
AUDI 660  Investigation in Audiologic Practice  1

**Total Credit Hours**

<table>
<thead>
<tr>
<th>Term</th>
<th>Course</th>
<th>Credit Hours</th>
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<tr>
<td>Summer</td>
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<td>Fall</td>
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<td>1**</td>
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<tr>
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**Full Time Status**

**Faculty**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynzee Cornell</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Jill Preminger</td>
<td>Professor</td>
</tr>
<tr>
<td>Sharon Miller</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>George Purvis</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Pavel Zahorik</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Jill Preminger</td>
<td>Director</td>
</tr>
<tr>
<td>Jeffrey Weihing</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Term</td>
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</tr>
</tbody>
</table>
Master of Science in Biochemistry and Molecular Biology

Major: BIOC  
Degree Awarded: MS  
Unit: GM  
Program Webpage: http://louisville.edu/medschool/biochemistry/

Program Information

As teachers and scientists, the faculty of the Department of Biochemistry and Molecular Genetics subscribe to the following missions:

- Provide up-to-date and high-quality classroom and laboratory instruction in the discipline of biochemistry and molecular biology to students at the University.
- Conduct and publish research or other scholarship in areas that advance knowledge within the discipline, contribute to improving the human condition, and contribute to teaching.
- Train students and post-doctoral fellows in biochemical research.

Application Procedure

All applications must be submitted on-line (http://louisville.edu/graduate/apply). Only complete applications will be reviewed. A complete application must have all the following:

1. Transcript of course work. A two-semester course in organic chemistry is required with a grade of B or better.
2. Grade point average: The Department requires an overall 3.0 grade point average (4.0 system) with an average of 3.0 in science courses.
3. The Graduate Record Examination general test official scores: a minimum combined score of 300 in the QT and VB sections.
4. At least two letters of recommendation, preferably from faculty in biology and/or chemistry.
5. A personal statement of interest.

Applications will be reviewed by the Graduate Program Director and selection for admission into the program will be approved by the Graduate Executive Committee of the Department. Final decisions for admissions will be made in April-May of each year.

MS Program Overview

The Master's Program in Biochemistry and Molecular Genetics is a 2 - 3 year course of study designed for students interested in:

- a terminal master’s degree leading to jobs that do not require extensive research experience or credentials, e.g. pharmaceutical representatives, medical insurance providers, scientific writing
- preparation for professional school, medical-legal
- combined 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
- gaining practical training in laboratory technique and analysis as the basis for a career in biotechnology or academic research.
Requirements for the M.S. Degree in Biochemistry and Molecular Genetics

To fulfill the diverse needs of our MS students, BMG offers three MS options: Non-thesis Course-based M.S., Non-thesis Laboratory technique based M.S., and Thesis-based M.S.

All MS students must complete 30 credit hours. This requirement can be met through coursework, seminar presentation, and research, and will depend on the program option for the student. In addition, a final summative event is required; this will be either a professional paper based on literature or laboratory research or a traditional thesis that will be evaluated by the faculty.

The 30 credit hour requirement will be partially fulfilled by the required courses. The remaining credit hours will be selected based on the program option. The selection of courses to complete the credit requirements will be made in consultation with the Director of Graduate Studies who serves as the advisor for all M.S. students. Students are expected to maintain B (3.0) averages in their course work. A student who fails to maintain a B average will be placed on academic probation for one semester and will be subject to dismissal from the program after a second semester with an average below 3.0.

Required Courses: BIOC 645/647 (Adv. Biochemistry I and II) and BIOC 668 (Molecular Biology & Genetics)

Other Requirements: BIOC 630 (Responsible Conduct of Research). All students will receive mandatory training in ethics as mandated by the NIH and the University of Louisville.

BIOC 606 (Seminar): This requires a formal departmental public presentation. The topic is to be selected by the student and approved by the Director of Graduate Studies in consultation with the seminar director. The student will be advised on seminar preparation. Complete a summative final event. The format of the summative event depends on the MS program option.

Thesis option

A total of 18 credit hours of coursework is required for the MS thesis degree. Completion of the required courses (BIOC 645/647 Advanced Biochemistry I and II, and BIOC 680 Molecular Biology & Genetics) will fulfill 12 credit hours of coursework. The remaining 6 credit hours of coursework requirement can be fulfilled with electives, of which 4 credit hours must be in BIOC courses and 2 credit hours of electives inside or outside of BIOC. One semester of BIOC 611 (Advanced Techniques in BMG Methods I, 4 credit hours) is required for a student entering the thesis-based option and who has no prior research experience. The remaining 12 credit hours requirement will be partially fulfilled with BIOC 606 (seminar) and BIOC 630 (1 credit hour each), and completed with either Biochemistry lab rotation (BIOC 613), or Research (BIOC 619) credit hours.

Students are expected to complete a novel piece of research within a laboratory at the University of Louisville School of Medicine. MS thesis committees shall be composed of the mentor, two other faculty of the Department of Biochemistry and Molecular Genetics (at least two of the Committee members must be primary faculty in the Department), and one member outside of the Department. The role of the Thesis Committee is to help advise students on their research, evaluate research progress, and approve the final thesis. The committee may recommend changes in direction of the research should they feel such changes are necessary for timely completion of a high quality thesis. Specifically, the thesis should contain an original piece of research of high quality and contribute to a publishable paper in a peer reviewed journal. The thesis must conform to the School of Interdisciplinary and Graduate Studies’ Standards for Preparation of Theses and Dissertations.
Non-thesis/laboratory research based option

The 30 credit hour requirement is met by combined coursework (22 credit hours) and laboratory rotations (8 credit hours). Completion of the required courses (BIOC 645/647 Advanced Biochemistry I and II, and BIOC 680 Molecular Biology & Genetics) will fulfill 12 credit hours of coursework and completion of the other requirements (BIOC 606 and BIOC 630) will total 14 credit hours. The remaining 8 credit hours of coursework can be fulfilled with one semester of BIOC 611 (Advanced Techniques in BMB Methods I, 4 credit hours) and/or electives BIOC 611 is required for a student entering the laboratory-based option and who has no prior research experience.

The MS student with a lab-based option is expected to complete 4 rotations (BIOC 613 laboratory rotations for a total of 8 credit hours) with the goal to learn diverse laboratory techniques. Selection of the lab/preceptor will be made in consultation with the Director of Graduate Studies.

Laboratory rotations: Students are expected to spend the equivalent of up to 10 hours per week for 8 weeks learning laboratory techniques and approaches focusing on a research problem. At the end of the rotation, students present their work to the Department in a 15 minute research conference format. They will be expected to understand the background of the work, the specific goals of the project, and have an understanding of the methodological approaches and interpretation. A short written summary of the work is also required.

Summative event: A paper based on literature research or laboratory research (rotation research) is required. The topic will be approved by the Director of Graduate Studies and the paper evaluated by 2 faculty.

Non-thesis/course-based option

Requirements include 22 credit hours of BIOC courses and 8 credit hours of electives inside or outside of BIOC. All students in this option must complete the required courses and other requirements listed above (BIOC 645, 647, 668, 606, and 630) will fulfill 14 credit hours of BIOC courses. Selection from the following courses BIOC 667, 680, 675, 661 can be used to fulfill the BIOC course requirements. Laboratory work (BIOC 613) may be considered an elective to count towards the degree. The student will work with the Director of Graduate Studies to review course enrollment and track their progression towards degree.

Summative event: A paper based on literature research is required. The topic will be approved by the Director of Graduate Studies and the paper evaluated by 2 faculty.

Curriculum

FALL COURSE OFFERING

course # | course name                  | hr
---------|------------------------------|----
BIOC 645 | Adv Biochemistry I           | Required 4
BIOC 610 | Methods & Analysis in Biomed Sci | Elective 2
BIOC 611 | Adv Techniques in BMG        | Elective 4
BIOC 668 | Mol Biol/Genetics            | Required 4
BIOC 680 | Biomolecular Interactions    | Elective 2
BIOC 606 | seminar                      | Required 1
BIOC 603  Special Topics in BMB  Elective (1-4)
BIOC 613  Lab Rotation  Required for lab-based option (1-4)
BIOC 619  Research  Required for thesis-based option (1-9)

SPRING COURSE OFFERING

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<tr>
<td>BIOC 647</td>
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<td>BIOC 667</td>
<td>Cell Biology</td>
<td>3</td>
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<td>BIOC 675</td>
<td>Cancer Biology</td>
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<tr>
<td>BIOC 661</td>
<td>Molecular Toxicology</td>
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<td>BIOC 630</td>
<td>Responsible Conduct of Research</td>
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<tr>
<td>BIOC 606</td>
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<td>BIOC 603</td>
<td>Sp. Topics -Grant Writing</td>
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<tr>
<td>BIOC 603</td>
<td>Special Topics in BMB</td>
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<tr>
<td>BIOC 619</td>
<td>Lab Rotation</td>
<td>1-4</td>
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<tr>
<td>BIOC 619</td>
<td>Research</td>
<td>1-9</td>
</tr>
</tbody>
</table>

Faculty

Shahid Baba  Assistant Professor
Paula J. Bates  Assistant Professor
Aruni Bhatnagar  Professor
Douglas Borchman  Professor
Matt Cave  Associate Professor
Jonathan Chaires  Professor
Endowed Chair in Cancer Biophysics
Alan Cheng  Assistant Professor
Jason Chesney  Associate Professor
Barbara J. Clark  Associate Professor
Director of Graduate Studies
Brian F. Clem  Assistant Professor
Marsha Cole  Assistant Professor
Daniel J. Conklin  Assistant Professor
Douglas S. Darling  Professor
Jaydev N. Dholakia  Associate Professor
Steven R. Ellis  Professor
Pamela W. Feldhoff  Associate Professor
Richard C. Feldhoff  Professor
Ronald G. Gregg  Professor
Jon B. Klein  Professor
Carolyn M. Klinge  Professor
Zhenmin Lei  Professor
Qutang Li  Assistant Professor
Mark Linder  Associate Professor
Qingxian Lu  Assistant Professor
Kenneth R. McLeish  Professor
Donald H. Miller  Professor
Robert A. Mitchell  Associate Professor
Timothy O'Toole  Assistant Professor
David W. Powell  Associate Professor
Russell A. Prough  Professor Emeritus
Madhavi Rane  Assistant Professor
David Samuelson  Associate Professor
Christine Schaner-Tooley  Assistant Professor
Sanjay Srivastava  Professor
Joseph Steffen  Professor
Sucheta Telang  Assistant Professor
John O. Trent  Assistant Professor
Roland Valdes Jr.  Professor
Eugenia Wang  Professor
Gheens Endowed Chair on Aging
Brian W. Wattenberg  Associate Professor
Stephen J. Winters
Professor

James L. Wittliff
Professor Emeritus

Hong Ye
Assistant Professor

Igor Zelko
Assistant Professor
Doctor of Philosophy in Biochemistry and Molecular Biology

Major: BIOC
Degree Awarded: Ph.D.
Unit: GM
Program Webpage: http://louisville.edu/medschool/biochemistry/

Program Information

As teachers and scientists, the faculty of the Department of Biochemistry and Molecular Genetics subscribe to the following missions:

- Provide up-to-date and high-quality classroom and laboratory instruction in the discipline of biochemistry, molecular biology, and genetics to students at the University.
- Conduct and publish research or other scholarship in areas that advance knowledge within the discipline, contribute to improving the human condition.
- Train students and post-doctoral fellows in biochemical research.

Program Admission Procedure

Criteria and Mechanism for Selection

All applications must be submitted on-line (http://louisville.edu/graduate/apply). A complete application must have all the School of Interdisciplinary and Graduate Studies requirements. In addition to the SIGS requirements, the following criteria will be used as the basis for formal acceptance of students to the Ph.D. program in Biochemistry and Molecular Genetics. Acceptance into the program requires approval unanimously by the department’s Graduate Executive Committee and by a majority of the IPIBS Admissions Committee.

1. Transcript of course work. A two-semester course in organic chemistry is required with a grade of B or better.
2. Grade point average: The Department requires an overall 3.0 grade point average (4.0 system) with an average of 3.0 in science courses.
3. The Graduate Record Examination general test.
4. At least two letters of recommendation, preferably from faculty in biology and/or chemistry.
5. A personal statement of interest.
6. Select applicants will be invited for a personal or Skype interview with members of the Department of Biochemistry and Molecular Genetics.

All students accepted into the BMG Ph.D. graduate program enter The Integrated Programs in Biomedical Sciences (IPIBS) program (http://louisville.edu/medicine/ipibs/about).

REQUIREMENTS FOR THE Ph.D. DEGREE IN BIOCHEMISTRY & MOLECULAR GENETICS (BMG)

During Ph.D. training students receive considerable guidance from their mentor, committee, and faculty members of the department. However students need to recognize that individuals who pursue a
biomedical graduate degree are expected to take full responsibility for their own scientific and professional development and to seek out and utilize all available resources for that goal.

Annual progress reports to document that a student is in good standing within the BMG graduate program are required. The criteria for good standing in the graduate program are based on successful completion of milestones that indicate progression towards a degree. These milestones are the successful completion of:

1. all coursework with a minimum GPA of 3.0.
2. a minimum of two laboratory rotations.
3. serve as a teaching assistant for 1 semester.
4. two seminar presentations.
5. Ph.D. qualifying exam.
6. annual committee meetings with documented adequate progress in years 3 and beyond.
7. annual research conferences in years 3 and beyond.

To fulfill all requirements for the Ph.D. degree a student must

1. complete a body of novel research (dissertation).
2. publish at minimum one 1st author manuscript.
3. write and defend a doctoral dissertation that is acceptable by the dissertation committee and School of Interdisciplinary Graduate Studies.

Student Support

An IPIBS Fellowship will provide stipend support for the first 23 months. 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 Genetics Graduate Program will serve as the first year advisor to all incoming graduate students until a dissertation advisor (mentor) is selected. During the first year, all students will meet with all available faculty to discuss research projects and complete a minimum of two laboratory rotations to help select a lab and mentor. After completion of lab rotations and before beginning the second year, the student will select a mentor, subject to the approval of the Graduate Executive Committee and the department Chair.

All required classes should be taken before the end of the student’s second year and must be completed before taking the Ph.D. Qualifying Exam (QE). Upon successful completion of all coursework the student will move into MS candidacy. The format of the QE requires the student to write and orally defend a NIH-style grant proposal on a topic different from their own research. The purpose of this exam is to evaluate the student's assimilation of the fundamental principles of biochemistry and molecular biology and their ability to interpret literature, independently develop a research plan, integrate material from the graduate curriculum, write clearly, organize a proposal, and orally defend their ideas. After successful completion of the QE, the student will be awarded a MS degree and move into Doctoral candidacy. A Dissertation Committee will be formed which will serve as the Reading Committee and Examining Committee. This Committee will consist of the mentor, three other faculty of the Department of Biochemistry and Molecular Genetics (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 give an annual presentation to the department. In year 1 this is a short lab rotation report, years 2 and 3 a formal seminar, and years 3 and beyond a research conference. In years 3 and beyond the student must have an annual meeting with his/her Dissertation Committee. This meeting may occur immediately after the student presents his or her annual research conference. After each meeting, the mentor will complete the Annual Progress Report and provide copies to the Committee members, the student and the Director of the Biochemistry and Molecular Genetics Graduate Program. To remain in good standing in the program the report from the mentor and Dissertation Committee must reflect satisfactory progress towards the degree.

**Curriculum**

**Timeline to Ph.D. degree**

**Year 1**  
**Fall**  
Required Courses  
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<tr>
<th>Title</th>
<th>Hours</th>
<th>Other Requirements</th>
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<tr>
<td>BIOC 645</td>
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<td>Student Journal Club</td>
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<td>BIOC 610</td>
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**Year 1**  
**Spring**  
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<tr>
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<tr>
<td>BIOC 647</td>
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**Year 1**  
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**Year 2**  
**Spring**  
<table>
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<tr>
<td>BIOC 619</td>
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**Year 2**  
**Summer**  
MAST600 Master's candidacy

**Years 3-5**
DOCT 600  Doctoral candidacy  Annual Dissertation Advisory Comm Mtg
Annual Presentation (seminar II & Research Conferences)

Faculty

Shahid Baba  
Assistant Professor

Paula J. Bates  
Assistant Professor

Aruni Bhatnagar  
Professor

Douglas Borchman  
Professor

Matt Cave  
Associate Professor

Jonathan Chaires  
Professor
Endowed Chair in Cancer Biophysics

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Associate Professor

Steven R. Ellis  
Professor

Pamela W. Feldhoff  
Associate Professor

Ronald G. Gregg  
Professor
Chair

Bradford Hill  
Assistant Professor

Kyung Hong  
Assistant Professor

Gary W. Hoyle  
Professor

Alfred Jensen  
Professor

Ted Kalbfleisch  
Assistant Professor

Jon B. Klein  
Professor

Carolyn M. Klinge  
Professor

Zhenmin Lei  
Professor

Qutang Li  
Assistant Professor

Mark Linder  
Associate Professor

Qingxian Lu  
Assistant Professor

Kenneth R. McLeish  
Professor

Donald H. Miller  
Professor
Director of James Graham Brown Cancer Center

Robert A. Mitchell  
Associate Professor

Timothy O’Toole  
Assistant Professor

David W. Powell  
Associate Professor

Russell A. Prough  
Professor Emeritus

Madhavi Rane  
Assistant Professor

David Samuelson  
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Assistant Professor

Sanjay Srivastava  
Professor

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Professor

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Roland Valdes Jr.  
Professor

Eugenia Wang  
Professor
Gheens Endowed Chair on Aging

Brian W. Wattenberg  
Associate Professor

Stephen J. Winters  
Professor

James L. Wittliff  
Professor Emeritus

Hong Ye  
Assistant Professor

Igor Zelko  
Assistant Professor
Master of Science in Communicative Disorders

Major: CMDS
Degree Awarded: MS
Unit: GM
Program Webpage: http://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 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 300. 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 School of Interdisciplinary and Graduate Studies.

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 research project is encouraged, but is optional. Research project students will take at least one statistics course above the introductory level. Students will take a comprehensive oral examination that will focus primarily, but not exclusively, on the research project itself. The above mentioned written and oral comprehensive exam is not required for research project students.

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.

Curriculum

Speech Language Pathology M.S. Degree - CORE PROGRAM

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester</th>
<th>Course#</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>1</td>
<td>Fall</td>
<td>CMDS 572</td>
<td>Anatomy &amp; Physiology for Communication Sciences</td>
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<td></td>
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<td>CMDS 681</td>
<td>Assessment and Clinical Methods</td>
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<td>CMDS 620</td>
<td>Neurological Disorders of Speech Production</td>
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<td>CMDS 602</td>
<td>Articulation/Phonology</td>
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<tr>
<td></td>
<td>Spring</td>
<td>CMDS 696</td>
<td>Augmentative/Alternative Communication</td>
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<td>CMDS 667</td>
<td>Aphasia</td>
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<td>CMDS 612</td>
<td>Preschool Language Intervention</td>
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Speech Language Pathology M.S. Degree Program - PREPARATORY PROGRAM

<table>
<thead>
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<th>Semester</th>
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<th>Title</th>
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<td>Fall</td>
<td>CMDS 572 Anatomy &amp; Physiology for Communication Sciences</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CMDS 605 Intro to Audiological Techniques and Rehab</td>
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<td></td>
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<tr>
<td></td>
<td>CMDS 563 Clinical Phonetics</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credits</strong></td>
<td><strong>10</strong></td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>CMDS 570 Clinical Observation in Speech Pathology and Audiology</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CMDS 564 Normal Speech &amp; Language Development</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CMDS 545 Survey of Communication Processes and Disorders</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LING 522 OR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ENG 522 Structure of Modern American English</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EDSP 540 Intro to Exceptional Children</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EDSP 637 Transdisciplinary Collaboration</td>
<td>3</td>
<td></td>
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<tr>
<td></td>
<td><strong>Total Spring Semesters</strong></td>
<td><strong>10</strong></td>
<td></td>
</tr>
</tbody>
</table>

| Summer   | EDSP 540 Intro to Exceptional Children                               | 2       |
|          | EDSP 637 Transdisciplinary Collaboration                             | 3       |
|          | **Total Credits (Required)**                                         | **10**  |
*If necessary
**Teacher Certification Program (optional)

Faculty

Barbara M. Baker  
Professor  
Director

Elizabeth A. Katzman  
Clinical Supervisor

M. Gay Masters  
Assistant Professor  
Clinical Coordinator

Rhonda Mattingly  
Lecturer

Alan F. Smith  
Lecturer
Master of Science in Microbiology and Immunology

Major: MBIO  
Degree Awarded: MS  
Unit: GM  
Program Webpage: http://louisville.edu/medschool/microbiology/

Program Information

The Department of Microbiology and Immunology, in the School of Medicine, offers a program of study leading to the degree of Master of Science. The M.S. program includes training in a broad range of research areas using state-of-the-art immunological, microbiological, and molecular technologies.

Program Admission Procedure

For admission to the M.S. program, the applicant must have attained a B.S or B.A. degree with a minimum grade-point average of 3.0 (on a 4.0 point scale). All applicants accepted into the Master's Program must be self-supporting, as financial assistance is not available. In addition, the following should be submitted online directly to Graduate Admissions: http://louisville.edu/graduate/apply/

- A completed application form and $60 application fee
- Official scores of the General Test Section of the Graduate Record Examination and the TOEFL (when applicable)
- Three letters of recommendation
- A brief statement of purpose describing interests and career goals
- A current resume or curriculum vitae
- A letter of scientific support from a Department of Microbiology and Immunology faculty member (faculty agreement to mentor student in lab)
- Official transcripts of all undergraduate and graduate course work (mailed to School of Interdisciplinary and Graduate Studies)

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 undergraduate courses prior to admission to the graduate program: 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 admissions committee and departmental faculty as part of the application process.
Curriculum

Required Courses

<table>
<thead>
<tr>
<th>course title</th>
<th>credit hours</th>
<th>semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOC 645  Biochemistry I</td>
<td>4</td>
<td>Fall</td>
</tr>
<tr>
<td>either -  Molecular Microbiology</td>
<td>2</td>
<td>Fall</td>
</tr>
<tr>
<td>MBIO 601  Immunology</td>
<td>3</td>
<td>Fall</td>
</tr>
<tr>
<td>MBIO 602  Seminar/Journal Club</td>
<td>1(x2)</td>
<td>Fall &amp; Spring</td>
</tr>
<tr>
<td>MBIO 610  Methods and Analysis in the Biomedical Sciences</td>
<td>2</td>
<td>Fall</td>
</tr>
<tr>
<td>BIOC 606-03 Survival Skills and Research Ethics</td>
<td>1</td>
<td>Spring</td>
</tr>
<tr>
<td>MBIO 619  Research</td>
<td>1-12</td>
<td>Fall, Spring &amp; Summer</td>
</tr>
</tbody>
</table>

MBIO 620  Thesis (optional)

Electives:

Select two courses from the list of suggested electives

<table>
<thead>
<tr>
<th>course title</th>
<th>credit hours</th>
<th>semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBIO 621  Advanced Immunology: Innate and Adaptive Immunity</td>
<td>2</td>
<td>Fall &amp; Spring</td>
</tr>
<tr>
<td>MBIO 622  Advanced Immunology of Disease</td>
<td>2</td>
<td>Spring</td>
</tr>
<tr>
<td>MBIO 689  Microbiota in Health and Disease</td>
<td>2</td>
<td>Fall</td>
</tr>
<tr>
<td>MBIO 604  General Virology</td>
<td>1</td>
<td>Fall</td>
</tr>
<tr>
<td>MBIO 687  Microbial Pathogenesis</td>
<td>2</td>
<td>Spring</td>
</tr>
<tr>
<td>MBIO 687  Cell Biology</td>
<td>3</td>
<td>Spring</td>
</tr>
<tr>
<td>BIOC 603-03 BMG Statistics</td>
<td>2</td>
<td>Spring</td>
</tr>
</tbody>
</table>

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.

Faculty

Pascale Alard  
Associate Professor

Haribabu Bodduluri  
Professor

Carolyn Casella  
Assistant Professor

Donghoon Chung  
Associate Professor

Donald R. Demuth  
Professor

Nejat Egilmez  
Professor

Chair

G. Rafael Fernandez-Botran  
Associate Professor

James E. Graham  
Associate Professor

James B. Hoying  
Professor

Suzanne Ildstad  
Professor

Venkatakrishna R. Jala  
Assistant Professor

Henry Kaplan  
Professor

Michele M. Kosiewicz  
Associate Professor

Deepa Kolaseri  
Krishnadas

Yousef Abu Kwaik  
Professor

Richard J. Lamont  
Professor

Matthew Lawrenz  
Associate Professor

Bing Li  
Associate Professor

Pinghui Liu  
Professor

Ken Lucas  
Professor

Igor Lukashevich  
Professor

Gary S. Marshall  
Professor

Nobuyuki Matoba  
Associate Professor

Richard D. Miller  
Associate Professor

Robert Mitchell  
Associate Professor

Thomas C. Mitchell  
Professor

Director of Graduate Studies

Kenneth E. Palmer  
Professor

Jan S. Potempa  
Professor

David Powell  
Associate Professor

Julio Ramirez  
Professor

Jill Steinbach Rankins  
Assistant Professor

Mariusz Ratajczak  
Professor

Susanna K. Remold  
Associate Professor

Russell D. Salter  
Professor

Nathan Schmidt  
Assistant Professor

David Scott  
Professor

Hui Shao  
Professor

Haval Shirwan  
Professor

James W. Snyder  
Professor

David Stirling  
Assistant Professor

Uldis N. Streips  
Professor

James T. Summersgill  
Professor

Jill Suttles  
Professor

Silvia M. Uriarte  
Associate Professor

Huizhi Wang  
Assistant Professor

Jonathan Warawa  
Associate Professor

Micah Worley  
Associate Professor

Kavitha Yaddanapudi  
Assistant Professor

Jun Yan  
Professor

Debbie Yoder-Himes  
Assistant Professor

Esma Yolcu  
Associate Professor

Huang-Ge Zhang  
Professor

Heshan Sam Zhou  
Associate Professor
Doctor of Philosophy in Microbiology and Immunology

Major: MBIO
Degree Awarded: Ph.D.
Unit: GM
Program Webpage: http://louisville.edu/medschool/microbiology/

Program Information

The Department of Microbiology and Immunology, in the School of Medicine, offers a program of study leading to the degree of Doctor of Philosophy. The Ph.D. program includes training in a broad range of research areas using state-of-the-art immunological, microbiological, and molecular technologies. A competitive stipend, health care benefits, a full waiver of tuition and fees are provided to all applicants accepted into the Ph.D. Program.

Program Admission Procedure

For admission to the Ph.D. program, the applicant must have attained a B.S or B.A. degree with a minimum grade-point average of 3.0 (on a 4.0 point scale). In addition, the following should be submitted online directly to the School of Interdisciplinary and Graduate Studies, Graduate Admissions: http://louisville.edu/graduate/apply

- A completed application form and $60 application fee
- Official scores of the General Test Section of the Graduate Record Examination and the TOEFL (when applicable)
- Three letters of recommendation
- A brief statement of purpose describing interests and career goals
- A current resume or curriculum vitae
- Official transcripts of all undergraduate and graduate course work (mailed to the School of Interdisciplinary and Graduate Studies, Graduate Admissions)

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 undergraduate courses prior to admission to the Ph.D. program: 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 admissions committee and departmental faculty as part of the application process.
Curriculum

Required Courses:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBIO 601 Molecular Microbiology</td>
<td>2</td>
<td>Fall</td>
</tr>
<tr>
<td>MBIO 602 Immunology</td>
<td>3</td>
<td>Fall</td>
</tr>
<tr>
<td>BIOC 667 Cell Biology</td>
<td>3</td>
<td>Spring</td>
</tr>
<tr>
<td>BIOC 645 Biochemistry I</td>
<td>4</td>
<td>Fall</td>
</tr>
<tr>
<td>MBIO 606 Seminar/ Journal Club</td>
<td>1(x2)</td>
<td>Fall &amp; Spring</td>
</tr>
<tr>
<td>MBIO 600 Lab Rotations in Microbiology and Immunology</td>
<td>1(x2)</td>
<td>Fall &amp; Spring</td>
</tr>
<tr>
<td>MBIO 610 Methods and Analysis in the Biomedical Sciences</td>
<td>2</td>
<td>Fall</td>
</tr>
<tr>
<td>MBIO 604 General Virology</td>
<td>1</td>
<td>Spring</td>
</tr>
<tr>
<td>BIOC 606-03 Survival Skills and Research Ethics</td>
<td>1</td>
<td>Spring</td>
</tr>
<tr>
<td>BIOC 603 03 BMG Statistics</td>
<td>2</td>
<td>Summer</td>
</tr>
<tr>
<td>MBIO 619 Research</td>
<td>1-12</td>
<td>Fall, Spring &amp; Summer</td>
</tr>
</tbody>
</table>

Elective Courses:

Select three courses from the list of suggested electives

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credit Hours</th>
<th>Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBIO 621 Advanced Immunology: Innate and Adaptive Immunity</td>
<td>2</td>
<td>Spring</td>
</tr>
<tr>
<td>MBIO 622 Advanced Immunology of Disease</td>
<td>2</td>
<td>Fall</td>
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<td>MBIO 689 Microbiota in Health and Disease</td>
<td>2</td>
<td>Fall</td>
</tr>
<tr>
<td>MBIO 687 Microbial Pathogenesis</td>
<td>2</td>
<td>Spring</td>
</tr>
<tr>
<td>MBIO 688 Molecular Biology</td>
<td>4</td>
<td>Fall</td>
</tr>
<tr>
<td>BIOC 675 Cancer Biology</td>
<td>4</td>
<td>Spring</td>
</tr>
<tr>
<td>BIOC 647 Adv. Biochemistry II</td>
<td>4</td>
<td>Spring</td>
</tr>
</tbody>
</table>

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 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 first year. Selection of the Research Advisor and formation of the Dissertation Committee must be approved by the Department Chair and the Dean of the School of Medicine (or their designees). The potential advisor must agree, in writing, to provide stipend and candidacy fee support from his/her research funds, following fellowship support. Upon approval of the Research Advisor, the student will formally decide upon a dissertation research project. The student and Research Advisor 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 (at least once per year). 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.

Faculty

Pascale Alard  
Associate Professor

Haribabu Bodduluri  
Professor

Carolyn Casella  
Assistant Professor

Donghoon Chung  
Associate Professor

Donald R. Demuth  
Professor

Nejat Egilmez  
Professor

Chair

G. Rafael  
Fernandez-Botran  
Associate Professor

James E. Graham  
Associate Professor

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Suzanne Ildstad  
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Venkatakrishna R. Jala  
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Henry Kaplan  
Professor

Michele M. Kosiewicz  
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Deepa Kolaseri  
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Krishnadas  
Assistant Professor

Yousef Abu Kwaik  
Professor

Richard J. Lamont  
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Matthew Lawrenz  
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Bing Li  
Associate Professor

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Russell D. Salter  
Professor

Nathan Schmidt  
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David Scott  
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Hui Shao  
Professor

Haval Shirwan  
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James W. Snyder  
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David Stirling  
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Assistant Professor
Jonathan Warawa
Associate Professor
Micah Worley
Associate Professor
Kavitha Yaddanapudi
Assistant Professor
Jun Yan
Professor
Debbie Yoder-Himes
Assistant Professor
Esma Yolcu
Associate Professor
Huang-Ge Zhang
Professor
Heshan Sam Zhou
Associate Professor
Master of Science in Pharmacology and Toxicology

Major: PHTX
Degree Awarded: MS
Unit: GM
Program Webpage: http://louisville.edu/medicine/departments/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://louisville.edu/graduate/apply/. This may be completed online or may be submitted via mail to:

   School of Interdisciplinary and Graduate Studies
   Office of Graduate Admissions
   Houchens Bldg, Rm 105
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 $60.00 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

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 to three page typed statement should be sent 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 gradadm@louisville.edu or via mail to:

School of Interdisciplinary and Graduate Studies  
Office of Graduate Admissions  
Houchens Bldg, Rm 105  
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 79 or higher on the internet-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](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.** Three letters of recommendation from persons familiar with the applicant's research and/or academic work are required. These recommendations will ideally include a letter attached to the recommendation form (pdf form), or may be completed electronically via the online application.

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.

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.

- Transcripts must be evaluated by a credential evaluation service such as World Education Services (www.wes.org) or Educational Credential Evaluators (www.ece.org) for admission.
- If on a Visa that requires an I-20 or IAP-66, the applicant is required to complete an Application Supplement/Financial Declaration form and submit appropriate financial documentation.

**Curriculum**

The Master of Science 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 Pharmacology 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. in Pharmacology and Toxicology Curriculum**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year - Fall Semester</td>
<td>Pharmacology I</td>
<td>3</td>
</tr>
<tr>
<td>PHTX 641</td>
<td>Toxicon I</td>
<td>3</td>
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<tr>
<td>PHTX 643</td>
<td>Biochemistry I</td>
<td>3</td>
</tr>
<tr>
<td>BIOC 645</td>
<td>Special Topics in Physiology</td>
<td>2</td>
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<td>PHZB 616</td>
<td>Co-curricular</td>
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<tr>
<td>PHTX 606</td>
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<tr>
<td>PHTX 619</td>
<td>Research</td>
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<tr>
<td>First Year - Spring Semester</td>
<td>Pharmacology II</td>
<td>3</td>
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<td>PHTX 642</td>
<td>Toxicology II</td>
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<td>Co-curricular</td>
<td>Research</td>
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<td>BIOC 603</td>
<td>Research Ethics</td>
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<td>Summer After First Year</td>
<td>Research</td>
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<tr>
<td>PHTX 619</td>
<td>Second Year - Fall Semester</td>
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PHTX 625  
Scientific Writing  
2

PHTX  
Electives  
2-5

Co-curricular

PHTX 619  
Research  
2-4

PHTX 606  
Seminar  
1

Second Year - Spring Semester (if required)

Masters Candidacy

Preparation, presentation, and defense of Master's thesis Award of M.S. degree.  
2

Faculty

Demetra Antimisiaris  
Associate Professor

Gavin E. Arteel  
Professor

Juliane I. Arteel  
Assistant Professor

Shirish Barve  
Professor

Levi J. Beverly  
Assistant Professor

Aruni Bhatnagar  
Professor

Haribabu Bodduluri  
Professor

Michael E. Brier  
Professor

Jian Cai  
Assistant Professor

Lu Cai  
Professor

Matthew C. Cave  
Associate Professor

Brian P. Ceresa  
Associate Professor

Shao-yu Chen  
Professor

Jason A. Chesney  
Professor

Geoffrey J. Clark  
Associate Professor

Daniel Conklin  
Professor

Albert R. Cunningham  
Associate Professor

Chendil

Damoradan  
Associate Professor

John W. Eaton  
Professor

Ayman El-Baz  
Associate Professor

Paul N. Epstein  
Professor

Wenke Feng  
Associate Professor

Jonathan H. Freedman  
Professor

Hermann B. Frieboes  
Assistant Professor

Joshua L. Fuqua  
Instructor

Leila Gobejishvili  
Assistant Professor

Evelyne Gozal  
Associate Professor

Yiru Guo  
Professor

Ramesh Gupta  
Professor

David W. Hein  
Professor

Chair

Michal Hetman  
Professor

Kyung Hong  
Assistant Professor

Joshua L. Hood  
Assistant Professor

A. Bennett Jenson  
Professor

Steven P. Jones  
Professor

Swati Joshi-Barve  
Assistant Professor

Y. James Kang  
Professor

Brad B. Keller  
Professor

La Creis R. Kidd  
Associate Professor

Irina Kirpich  
Assistant Professor

Joseph Calvin  
Professor

Kouokam  
Instructor

Chi Li  
Assistant Professor

Igor S. Lukashevich  
Professor

Robert C.G. Martin  
Professor

Nobuyuki Matoba  
Associate Professor

Craig McClain  
Professor

Kelly M. McMasters  
Professor

Lacey R. McNally  
Assistant Professor

Michael L. Merchant  
Associate Professor

Donald M. Miller  
Professor

Steven R. Myers  
Professor

Chin K. Ng  
Associate Professor

Matthew A. Nystoriak  
Assistant Professor

Martin G. O'Toole  
Assistant Professor

Timothy E. O'Toole  
Assistant Professor

Kenneth E. Palmer  
Professor

William M. Pierce  
Professor

M. Michele Pisano  
Professor

Shesh N. Rai  
Professor
<table>
<thead>
<tr>
<th>Faculty Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>George C. Rodgers</td>
<td>Professor</td>
</tr>
<tr>
<td>Jesse Roman</td>
<td>Professor</td>
</tr>
<tr>
<td>David A. Scott</td>
<td>Professor</td>
</tr>
<tr>
<td>Leah J. Siskind</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Zhao-Hui Song</td>
<td>Professor</td>
</tr>
<tr>
<td>Sanjay Srivastava</td>
<td>Professor</td>
</tr>
<tr>
<td>J. Christopher States</td>
<td>Professor</td>
</tr>
<tr>
<td>Jill M. Steinbach-Rankins</td>
<td>Assistant Professor</td>
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<tr>
<td>Janice E. Sullivan</td>
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<tr>
<td>Marcin Wysoczynski</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Jun Yan</td>
<td>Professor</td>
</tr>
<tr>
<td>Hong Ye</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Wolfgang Zacharias</td>
<td>Professor</td>
</tr>
<tr>
<td>Xiang Zhang</td>
<td>Professor</td>
</tr>
</tbody>
</table>
Doctor of Philosophy in Pharmacology and Toxicology

Major: PHTX
Degree Awarded: Ph.D.
Unit: GM
Program Webpage: http://louisville.edu/medicine/departments/pharmacology

Program Information

The Department of Pharmacology and 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 an IPIBS graduate student fellowship. The fellowship pays an annual stipend of $25,000 in addition to payment of student tuition and health insurance. The Department houses a http://louisville.edu/medicine/departments/pharmacology/research/program-description 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 [http://louisville.edu/graduate/apply](http://louisville.edu/graduate/apply). This may be completed online or may be submitted via mail to:

   **School of Interdisciplinary and Graduate Studies**
   
   **Graduate Admissions**
   **Houchens Bldg, Suite 105**
   **University of Louisville**
   **Louisville, KY 40292**
   **United States of America**

   Applications are received at any time for starting dates of approximately August 1, however, for full consideration for IPIBS fellowships, applications should be received by December 1 of the prior calendar year. All credentials and/or communications should be submitted to the School of Interdisciplinary and Graduate Studies, 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. 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 $60.00 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. However, competitive applicants usually score above the 50th percentile. 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](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.
5. **Statement of Experience and Professional Goals.** At the time of application, a two to three page typed statement should be sent 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 gradadm@louisville.edu or via mail to:

**School of Interdisciplinary and Graduate Studies**
Graduate Admissions
Houchens Bldg, Suite 105
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 79 or higher on the internet-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](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.** Three letters of recommendation from persons familiar with the applicant's research and/or academic work are required. These recommendations will ideally include a letter attached to the recommendation form or may be completed electronically via the [online application](http://www.toefl.org).

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.

   - Transcripts must be evaluated by a credential evaluation service such as World Education Services ([www.wes.org](http://www.wes.org)) or Educational Credential Evaluators ([www.ece.org](http://www.ece.org)) for admission.

   - 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/internationalcenter/isss/current-f1-j1-students/forms-and-documents](http://louisville.edu/internationalcenter/isss/current-f1-j1-students/forms-and-documents)) 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 School of Interdisciplinary and Graduate Studies, 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**

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tr>
<td>PHTX 641</td>
<td>Pharmacology I</td>
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<td>PHTX 643</td>
<td>Toxicology I</td>
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<td>BIOC 645</td>
<td>Biochemistry I</td>
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<tr>
<td>PHZB 616</td>
<td>Selected Topics in Physiology</td>
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<tr>
<td>Co-curricular</td>
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<tr>
<td>PHTX 619</td>
<td>Research (Lab rotations 1 &amp; 2)</td>
<td>2</td>
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<tr>
<td>Written qualifying exam 1 (end of semester)</td>
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| **First Year - Spring Semester** |                                                  |              |
| PHTX 642      | Pharmacology II                                  | 3            |
| PHTX 644      | Toxicology II                                    | 3            |
| BIOC 647      | Biochemistry II                                  | 4            |
| BIOC 667      | Cell Biology                                     | 3            |
| Co-curricular |                                                  |              |
PHTX 619  Research  1
PHTX 606  Seminar  1
BIOC 603  Research Ethics  1

Written qualifying exam 2 (end of semester)

Summer After First Year

PHTX 618  Topics (Statistics)  2
PHTX 619  Research  4

Second Year - Fall Semester

PHTX 625  Scientific Writing  2
Students may take 1-3 elective courses for enrichment  0-8

Co-curricular
PHTX 619  Research  4
PHTX 606  Seminar  1

Written qualifying exam 3 (end of semester)

Second Year - Spring Semester

Students may take 1-3 elective courses for enrichment (Masters Candidacy)  0-9
Co-curricular
Submission, presentation, and defense of PhD proposal (NIH grant format) and MS thesis.
Awarding of MS degree and transition to PhD candidacy.

Faculty

Demetra Antimisiaris  Associate Professor
Gavin E. Arteel  Professor
Juliane I. Arteel  Assistant Professor
Shirish Barve  Professor
Levi J. Beverly  Assistant Professor
Aruni Bhatnagar  Professor
Haribabu Bodduluri  Professor
Michael E. Brier  Professor
Jian Cai  Assistant Professor
Lu Cai  Professor
Matthew C. Cave  Associate Professor
Brian P. Ceresa  Associate Professor
Shao-Yu Chen  Professor
Jason A. Chesney  Professor
Geoffrey J. Clark  Associate Professor
Daniel Conklin  Professor
Albert R. Cunningham  Associate Professor
Chendil Damoradan  Associate Professor
John W. Eaton  Professor
Ayman El-Baz  Associate Professor
Paul N. Epstein  Professor
Wenke Feng  Associate Professor
Jonathan H. Freedman  Professor
Hermann B. Friebes  Assistant Professor
Joshua L. Fuqua  Instructor
Leila Gobejishvili  Assistant Professor
Evelyne Gozal  Associate Professor
Yiru Guo  Professor
Ramesh Gupta  Professor
David W. Hein
Professor
Chair
Michal Hetman
Professor
Kyung Hong
Assistant Professor
Joshua L. Hood
Assistant Professor
A. Bennett Jenson
Professor
Steven P. Jones
Professor
Swati Joshi-Barve
Assistant Professor
Y. James Kang
Professor
Brad B. Keller
Professor
La Creis R. Kidd
Associate Professor
Irina Kirpich
Assistant Professor
Joseph Calvin
Instructor
Chi Li
Assistant Professor

Igor S.
Lukashevich
Professor
Robert C.G.
Martin
Professor
Nobuyuki Matoba
Associate Professor
Craig McClain
Professor
Kelly M.
McMasters
Professor
Lacey R. McNally
Assistant Professor
Michael L.
Merchant
Associate Professor
Donald M. Miller
Professor
Steven R. Myers
Professor
Chin K. Ng
Associate Professor
Matthew A.
Nystoriak
Assistant Professor
Martin G. O’Toole
Assistant Professor

Timothy E.
O’Toole
Assistant Professor
Kenneth E.
Palmer
Professor
William M. Pierce
Professor
M. Michele Pisano
Professor
Shesh N. Rai
Professor
George C. Rodgers
Professor
Jesse Roman
Professor
David A. Scott
Professor
Leah J. Siskind
Associate Professor
Zhao-Hui Song
Professor
Sanjay Srivastava
Professor
J. Christopher
States
Professor

Jill M. Steinbach-Rankins
Assistant Professor
Janice E. Sullivan
Professor
Yi Tan
Assistant Professor
Walter (Bert)
Watson
Assistant Professor
Brian (Binks)
Wattenberg
Associate Professor
John P. Wise, Sr.
Professor
Sandra S. Wise
Assistant Professor
Marcin
Wysoczynski
Assistant Professor
Jun Yan
Professor
Hong Ye
Associate Professor
Wolfgang
Zacharias
Professor
Xiang Zhang
Professor
Master of Science in Physiology and Biophysics

Major: PHZB
Degree Awarded: MS
Unit: GM
Program Webpage: http://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: 21 credit hours of basic medical sciences and at least 9 credit hours of 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 (http://louisville.edu/graduate/apply). 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).
4. TOEFL Examination scores for foreign students from non-English speaking countries.
5. A non-returnable application fee to the University of Louisville.

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 4.00 (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 >85 on the internet exam.

C. PROCEDURES FOR DETERMINING ADMISSIONS

1. 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.
2. 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 academic and research interests. The Director of Graduate Studies will serve as a Temporary Advisor until a Permanent Advisor is selected.

During the first semester of their graduate study, beginning graduate students will visit research laboratories in which they have an interest. First-year students must select a principal advisor. 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:

- 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.

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:

- Systemic Physiology I and II (PHZB 605 and 606) (10 CH)
- Biochemistry (BIOC 645, 647) or equivalent (8 CH)
- Research (PHZB 619) (9 CH)
- Seminar (PHZB 617- first fall and spring semesters) (2 CH)
- Experimental Physiology Laboratory (PHZB 625) (1 CH)
D. ACADEMIC PERFORMANCE

A student must have at least a 3.0 accumulated GPA 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.

Faculty

Aruni Bhatnagar
Professor of Department of Medicine

Maxwell Boakye
Associate Professor of Department of Neurological Surgery

Robert Bolli
Director of Institute of Molecular Cardiology

Chief of Division of Cardiology

Douglas Borchman
Professor of Ophthalmology and Visual Sciences

Nolan L. Boyd
Assistant Professor

Marsha P. Cole
Assistant Professor of Department of

Biochemistry and Molecular Biology

Stanley D’ Souza
Professor

Cynthia Downard
Assistant Professor of Department of Surgery

Paul Epstein
Professor of Department of Pediatrics

Jeff C. Falcone
Associate Professor

Susan Galandiuk
Professor of Department of Surgery

Richard N. Garrison
Professor of Department of Surgery

Evelyne Gozal
Associate Professor of Department of Pediatrics

Susan J. Harkema
Associate Professor of Department of Neurological Surgery

Patrick D. Harris
Professor

Bradford G. Hill
Assistant Professor of Department of Medicine

James B. Hoying
Professor

Yiming Huang
Assistant Professor

Suzanne Ildstad
Professor of Department of Surgery

Director of Institute for Cellular Therapeutics

Irving G. Joshua
Professor Chair

Sham Kakar
Professor

Y. James Kang
Professor of Medicine, Department of Pharmacology and Toxicology

Syed Khundmire
Assistant Professor of Kidney Disease Program

Steven C. Koenig
Associate Professor of Department of Bioengineering

Amanda Jo LeBlanc
Assistant Professor
Steven P. Jones  
Associate Professor  
of Department  
Medicine Institute  
of Molecular  
Cardiology  
Eleanor Lederer  
Professor of Kidney  
Disease Program  
David Lominadze  
Associate Professor  
David S.  
Magnuson  
Professor of  
Neurological  
Surgery  
Claudio  
Maldonado  
Associate Professor  
Paul J. Matheson  
Instructor of  
Department of  
Surgery  
Nicholas Mellen  
Assistant Professor  
of Department of  
Pediatrics  
Cynthia J. Miller  
Assistant Professor  
Alexander V.  
Ovechkin  
Assistant Professor  
of Neurological  
Surgery  
George M.  
Pantalos  
Professor of  
Cardiovascular  
Innovation Institute  
Gustavo Perez-Abadia  
Assistant Professor  
D. Gregg Rokosh  
Assistant Professor  
of Department of  
Medicine  
(Cardiology)  
Utpal Sen  
Assistant Professor  
Richard W.  
Stremel  
Professor  
Neetu Tyagi  
Assistant Professor  
Suresh C. Tyagi  
Professor  
Stuart K.  
Williams, II  
Professor  
David L. Wiegman  
Professor  
Hung Xu  
Assistant Professor  
Jerry Yu  
Professor of  
Department of  
Medicine  
Gerald S.  
Zavorsky  
Associate Professor  
of Department of  
Health and Sport  
Sciences
Doctor of Philosophy in Physiology and Biophysics

Major: PHZB  
Degree Awarded: Ph.D.  
Unit: GM  
Program Webpage: http://louisville.edu/medicine/departments/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 an independent 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 (http://louisville.edu/graduate/apply). The following application items must be submitted to the School of Interdisciplinary and Graduate Studies, Graduate Admissions, 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 School of Interdisciplinary and Graduate Studies (referred to as the Personal Statement in the application materials), why they desire a Ph.D. degree in this Department of Physiology and Biophysics.
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:

- A genuine interest in graduate work and the desire for a significant independent research career in the health sciences.
- A cumulative undergraduate grade point average that is usually 3.00 or higher on a scale of 4.00 (A=4, B=3, C=2, D=1),
- 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,
- 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; >85 on the internet exam) 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 graduate 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 Graduate Research Training Faculty of the School of Medicine.
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 independent research design will provide appropriate results for the proposed hypotheses.

After selection of the Principal Advisor, the graduate 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, one of the full time Physiology Faculty will serve as Co-Advisor. 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, semi-annual meetings and 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 Director of Graduate Students 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 credit 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.
Curriculum

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 Human Cardiovascular Physiology (PHZB 611) or equivalent
- Cell Biology (MBIO 667) or equivalent
- Experimental Physiology Laboratory (PHZB 610) or equivalent
- Integrated Systemic Physiology (PHZB 609)
- Seminar (PHZB 617) two 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” in their required courses. 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 independent use and depth of core physiology through its application to the student 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 600" 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 School of Interdisciplinary and Graduate Studies 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). The accepted dissertation, must be submitted electronically, see "Electronic Submission of Thesis or Dissertation" section louisville.edu/graduate/current-students/thesis-dissertation-information, one signed signature page signed by the Dissertation Defense Committee, must be deposited with the School of Interdisciplinary and Graduate Studies by the published deadline (louisville.edu/graduate/current-students/thesis-dissertation-information) and one copy must be given to the Department Chair before graduation. The copy for the Department Chair may be electronic.

F. 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 School of Interdisciplinary and Graduate Studies 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 Credit Hours)
   Systemic Physiology I (PHZB 605 – 5 Credit Hours)
   Seminar (PHZB 617.01 – 1 Credit Hour)
   Experimental Physiology Lab (PHZB 610 – 2 Credit Hours)
   Research (PHZB 619 – 1 Credit Hour)

   Second Semester (1st SPRING)
   Graduate level Biochemistry (BIOC 647 – 4 Credit Hours)
   Systemic Physiology II (PHZB 606 – 5 Credit Hours)
   Seminar (PHZB 617.01 – 1 Credit Hour)
   Cell Biology (MBIO 667 – 3 Credit Hours)
   Responsible Conduct of Research (BIOC 630) – 1 Credit Hour)
   Research (PHZB 619 – 4 Credit Hours)

   Third Semester (1st SUMMER)
   Research (PHZB 619 – 6 Credit Hours)

   Fourth Semester (2nd FALL)
   Advanced Human C V Physiology (PHZB 609 – 3 Credit Hours)
   Research (PHZB 619 – 5 Credit Hours)

   Fifth Semester (2nd SPRING)
   Integrated Systemic Physiology (PHZB 611 – 4 Credit Hours)
   Research (PHZB 619 – 5 Credit Hours)
   Statistics (PHZB 616.02 – 3 Credit Hours)

   M.S. Final Exam (Ph.D. Qualifying Exam)
   Master of Science Degree and Ph.D. Candidacy program

   Sixth Semester (2nd SUMMER) DOCT 600

   Seventh Semester (3rd FALL) DOCT 600
Eighth Semester (3rd SPRING)  DOCT 600

Ninth Semester  (3rd SUMMER) DOCT 600

Tenth Semester (4th FALL)  DOCT 600

Eleventh Semester (4th SPRING)  DOCT 600

Dissertation Defense

If more research/dissertation time is needed, the student will continue to register as DOCT 600 (“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 School of Interdisciplinary and Graduate Studies 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 C V Physiology (PHZB 609 – 3 Credit Hours)
Research (PHZB 619 – 7 Credit Hours)
Seminar (PHZB 617.01 – 1 Credit Hour)

Second Semester (1st SPRING)
Integrated Systemic Physiology (PHZB 611 – 4 Credit Hours)
Responsible Conduct of Research (BIOC 630 – 1 Credit Hour)
Research (PHZB 619 – 5 Credit Hours)
Statistics (PHZB 616.02 – 3 Credit Hours)

Third Semester (1st SUMMER)
Research (PHZB 619 – 6 Credit Hours)

Fourth Semester (2nd FALL)
Research (PHZB 619 – 9 Credit Hours)

Master of Science Degree (Ph.D. Qualifying Exam)

Fifth Semester (2nd SPRING) DOCT 600

Sixth Semester (2nd SUMMER) DOCT 600

Dissertation Defense

If more research/dissertation time is needed, the clinician will continue to register as DOCT 600 (“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.

**Faculty**

- Aruni Bhatnagar  
  Professor of  
  Department of  
  Medicine

- Maxwell Boakye  
  Associate Professor  
  of Department of  
  Neurological Surgery

- Robert Bolli  
  Director of Institute  
  of Molecular Cardiology  
  Chief of Division of Cardiology

- Douglas Borchman  
  Professor  
  of Ophthalmology and Visual Sciences

- Nolan L. Boyd  
  Assistant Professor

- Marsha P. Cole  
  Assistant Professor  
  of Department of Biochemistry and Molecular Biology

- Stanley D’ Souza  
  Professor

- Cynthia Downard  
  Assistant Professor  
  of Department of Surgery

- Paul Epstein  
  Professor of  
  Department of Pediatrics

- Jeff C. Falcone  
  Associate Professor

- Susan Galandiuk  
  Professor of  
  Department of Surgery

- Richard N. Garrison  
  Professor of  
  Department of Surgery

- Evelyne Gozal  
  Associate Professor of Department of Pediatrics

- Susan J. Harkema  
  Associate Professor of Department of Neurological Surgery

- Patrick D. Harris  
  Professor

- Bradford G. Hill  
  Assistant Professor of Department of Medicine

- James B. Hoying  
  Professor

- Yiming Huang  
  Assistant Professor

- Suzanne Ildstad  
  Professor of Department of Surgery  
  Director of Institute for Cellular Therapeutics

- Irving G. Joshua  
  Professor  
  Chair

- Sham Kakar  
  Professor

- Y. James Kang  
  Professor of Medicine, Department of Pharmacology and Toxicology

- Syed Khundmiri  
  Assistant Professor of Kidney Disease Program

- Steven C. Koenig  
  Associate Professor of Department of Bioengineering

- Amanda Jo LeBlanc  
  Assistant Professor

- Steven P. Jones  
  Associate Professor of Department Medicine Institute of Molecular Cardiology

- Eleanor Lederer  
  Professor of Kidney Disease Program

- David Lominadze  
  Associate Professor

- David S. Magnuson  
  Professor of Neurological Surgery

- Claudio Maldonado  
  Associate Professor

- Paul J. Matheson  
  Instructor of Department of Surgery

- Nicholas Mellen  
  Assistant Professor of Department of Pediatrics

- Cynthia J. Miller  
  Assistant Professor

- Alexander V. Ovechkin  
  Assistant Professor of Neurological Surgery

- George M. Pantalos  
  Professor of Cardiovascular Innovation Institute

- Gustavo Perez-Abadia  
  Assistant Professor

- D. Gregg Rokosh  
  Assistant Professor of Department of Medicine (Cardiology)

- Utpal Sen  
  Assistant Professor

- Richard W. Stremel  
  Professor

- Neetu Tyagi  
  Assistant Professor

- Suresh C. Tyagi  
  Professor

- Stuart K. Williams, II  
  Professor

- David L. Wiegman  
  Professor

- Hung Xu  
  Assistant Professor

- Jerry Yu  
  Professor of Department of Medicine

- Gerald S. Zavorsky  
  Associate Professor of Department of Health and Sport Sciences
Master of Music in Music Composition

Major: COMP
Degree Awarded: MM
Unit: GU
Program Webpage: http://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 credit hours of graduate credit, and Master of Music Education requiring 30 credit hours. All programs require a minimum of 24 credit 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 Graduate Catalog. 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 coursework.

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 credit 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
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) credit 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 credit 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) credit 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) credit 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) credit 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 credit 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 credit 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 credit 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.
2. Demonstration, by examination, of skills and capacities in the following fields:
   • written, aural, and keyboard harmony;
   • melodic, harmonic, and rhythmic dictation;
   • elementary counterpoint; and
• history and literature of music, and analytic understanding of musical forms and genres.

3. Evidence of preparation for advanced work in the area, as follows:
   • Applicants for the track in Music Composition must submit original works to indicate ability and technical facility in the field of composition. Students should also have a thorough and practical knowledge of piano as well as a thorough knowledge in the areas of string, brass, woodwind, and percussion instruments.

4. GRE scores.

Core Curriculum

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 Credit Hours | 23

Other Requirements

All students must pass an oral examination after all course work is completed.

Music Composition Concentration

MUS 643, 644, 645 - Advanced Composition**** | 9
MUS 669 - Graduate Composition Seminar - Four semesters required (Co-requisite for MUS 643-645, 646, 669 or 695) | 0
Applied Music ***** | 4
Total Credit Hours | 13
Minimum Total Credit Hours | 36

Electronic Music Composition Concentration

MUS 643 - Advanced Composition**** | 3
MUS 683, 684 - Composition for Digital Media**** | 4
MUS 669 - Graduate Composition Seminar (Co-requisite for MUS 643-645) | 0
Applied Music ***** | 4
Computer Music or New Media Elective****** | 2
Total Credit Hours | 13
Minimum Total Credit Hours | 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).

*** Students in Electronic Music Composition Track should take AUDI 648 Psychoacoustics offered by Heuser Hearing Institute and Audiology Department in lieu of an additional Theory or History Seminar.

*** 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 two semesters; may include Conducting or Seminar in Conducting MUS 659/660 (sections designated for students who are not conducting majors), but excludes additional semesters of Applied Composition

******Must be approved by the Director of Computer Music Studies.

---

**Faculty**

Amy Acklin  
Associate Professor  
Director of  
Marching Band

Robert Amchin  
Professor  
Distinguished  
Teaching Professor

Jack Ashworth  
Professor Emeritus

Jerry W. Ball  
Professor Emeritus

Ansyn Banks  
Associate Professor

Randi Bolding  
Assistant Professor

Paul R. Brink  
Professor Emeritus

Devin Burke  
Assistant Professor

Greg Byrne  
Professor

Jean Christensen  
Professor Emerita

Darcy DeLoach  
Associate Professor

Anne Marie de Zeeuw  
Professor Emerita

Christopher Doane  
Professor  
Dean

Caroline Ehman  
Assistant Professor  
R. Christopher Fitzgerald  
Assistant Professor

Donn Everett Graham  
Professor Emeritus  
Kent Hatteberg  
Professor  
Director of Choral Activities  
University Scholar

D. Bruce Heim  
Professor  
University Scholar

Rebecca Jemian  
Assistant Professor  
Brenda E. Kee  
Professor Emerita

Sidney King  
Assistant Professor

Herbert Koerselman  
Dean Emeritus

John LaBarbera  
Professor Emeritus

W. Reese Land  
Assistant Professor

Kimcherie Lloyd  
Professor  
Director of Orchestral Studies and Opera

Director of Undergraduate Studies

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Professor Emeritus

Stephen Mattingly  
Assistant Professor

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Professor Emeritus

Peter McHugh  
Professor Emeritus

Matthew Nelson  
Assistant Professor

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Professor

Acton Ostling  
Professor Emeritus

J. Patrick Rafferty  
Professor

Steve Rouse  
Professor

Marc Satterwhite  
Professor

Brett Shuster  
Professor

Chad Sloan  
Assistant Professor  
Richard Spalding  
Professor Emeritus

Frederick Speck  
Professor  
Department Chair of Performance Studies

Gerald Tolson  
Professor  
Department Chair of Academic and Professional Studies

Naomi Oliphant  
Associate Dean  
Distinguished Teaching Professor

Krista Wallace-Boaz  
Associate Professor  
Director of Graduate Studies  
Assistant Dean of Student Services

Robert Weaver  
Professor Emeritus

Krzysztof Wolek  
Associate Professor

Mark Yeary  
Assistant Professor

Paul York  
Professor
Master of Music in Music History and Literature

Major: MUHM
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.

General Information Regarding Academic Policies

1. Detailed curricular and program offerings, including specific requirements and provisions for degree programs, are published in the university Graduate 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
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.

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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);
   (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.

**Curriculum**

**Prerequisites**

1. Bachelor of Music degree or equivalent.
2. Demonstration, by examination, of skills and capacities in the following fields:
   - written, aural, and keyboard harmony;
   - melodic, harmonic, and rhythmic dictation;
Core Curriculum

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>MUS 500 - Music History Review*</td>
<td>0</td>
</tr>
<tr>
<td>MUS 400 - Music Theory Review*</td>
<td>0</td>
</tr>
<tr>
<td>MUS 600 - Graduate Oral Exam Preparation</td>
<td>0</td>
</tr>
<tr>
<td>MUS 607 - Bibliography and Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>Music History Seminar (600 level)</td>
<td>3</td>
</tr>
<tr>
<td>Music Theory</td>
<td>4</td>
</tr>
<tr>
<td>Additional Music Theory or Music History Seminar (500 or 600 level)</td>
<td>3</td>
</tr>
<tr>
<td>Analysis (MUS 647, 648, 651, or 653)</td>
<td>3</td>
</tr>
<tr>
<td>Ensemble (3 semesters of major ensemble)**</td>
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</tr>
<tr>
<td>Thesis</td>
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</tr>
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</table>

Other Requirements

All students must pass an oral examination after all course work is completed.

Music History and Literature Concentration

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Music History Seminars (600 level)</td>
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<tr>
<td>Additional Music Theory or Analysis</td>
<td>2</td>
</tr>
<tr>
<td>Music Electives</td>
<td>5</td>
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<tr>
<td>Total</td>
<td>13</td>
</tr>
<tr>
<td>Minimum Total</td>
<td>36</td>
</tr>
</tbody>
</table>

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
Faculty

Amy Acklin  
Associate Professor  
Director of  
Marching Band

Robert Amchin  
Professor

Distinguished  
Teaching Professor

Jack Ashworth  
Professor Emeritus

Jerry W. Ball  
Professor Emeritus

Ansyn Banks  
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Frederick Speck  
Professor  
Department Chair of Performance Studies

Director of Bands  
Edith Davis Tidwell  
Professor Emerita  
Distinguished Teaching Professor

Gerald Tolson  
Professor  
Department Chair of Academic and Professional Studies

Michael Tracy  
Professor

Krista Wallace-Boaz  
Associate Professor  
Director of Graduate Studies  
Assistant Dean of Student Services

Robert Weaver  
Professor Emeritus

Krzysztof Wolek  
Associate Professor

Mark Yeary  
Assistant Professor

Paul York  
Professor
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.

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1. Applications for admission to a graduate program require the following:
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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.

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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.

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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.

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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.
2. Demonstration, by examination, of skills and capacities in the following fields:
   - written, aural, and keyboard harmony;
   - melodic, harmonic, and rhythmic dictation;
   - elementary counterpoint; and
   - history and literature of music, and analytic understanding of musical forms and genres.
3. Audition in major field, demonstrating a level equivalent to the completion of a Bachelor of Music in Performance degree. Students intending to major in voice must have a reading knowledge of one foreign language and satisfactory diction in two others.

4. Students in the Concentration in Jazz must demonstrate a level of competency in improvisation, jazz keyboard, jazz theory, and jazz history. Remedial courses are in place to assist students who do not meet these requirements.

5. GRE scores.

Core Curriculum

<table>
<thead>
<tr>
<th>Courses</th>
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</tr>
</thead>
<tbody>
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<td>MUS 500 - Music History Review*</td>
<td>0</td>
</tr>
<tr>
<td>MUS 400 - Music Theory Review*</td>
<td>0</td>
</tr>
<tr>
<td>MUS 600 - Graduate Oral Exam Preparation</td>
<td>0</td>
</tr>
<tr>
<td>MUS 607 - Bibliography and Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>Music History Seminar (500 or 600 level)</td>
<td>3</td>
</tr>
<tr>
<td>Music Theory (500 or 600 level)**</td>
<td>4</td>
</tr>
<tr>
<td>Applied Study (600 level)***</td>
<td>8</td>
</tr>
<tr>
<td>MUS 697 - Graduate Recital****</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

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/Wind Band Pedagogy/Piano Pedagogy/String 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

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 611 - Additional Applied Study*</td>
<td>2</td>
</tr>
<tr>
<td>MUS 530, 531 - Choral Literature I &amp; II</td>
<td>4</td>
</tr>
<tr>
<td>MUS 559 - Instrumental Conducting and Score Reading</td>
<td>2</td>
</tr>
<tr>
<td>Ensemble (one per semester)</td>
<td>4</td>
</tr>
<tr>
<td>Music Electives**</td>
<td>6</td>
</tr>
<tr>
<td>Concentration Credit Hour Total:</td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>
Minimum Credit Hour 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

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 659, 660 - Seminar in Conducting-Instrumental</td>
<td>4</td>
</tr>
<tr>
<td>MUS 659, 660 - Seminar in Conducting-Choral*</td>
<td>2-4</td>
</tr>
<tr>
<td>MUS 686, 687 - Orchestral Literature I &amp; II</td>
<td>4</td>
</tr>
<tr>
<td>Ensemble (two semesters of major ensemble)</td>
<td>2</td>
</tr>
<tr>
<td>Music Electives **</td>
<td>4-6</td>
</tr>
</tbody>
</table>

Concentration Credit Hour Total: 18

Minimum Credit Hour Total: 36

Note:

* One 2 credit hour course required of all orchestral conducting majors, the second 2 credit hour course optional depending on the individual needs of the student in consultation with their advisor. If the student only needs 2 credits of choral, they will be required to have 2 additional music electives.
** 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 String Pedagogy

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 538-06 - Studies in Pedagogy (String Pedagogy)</td>
<td>1</td>
</tr>
<tr>
<td>MUS 538 Studies in Pedagogy (Instrument Specific)</td>
<td>1</td>
</tr>
<tr>
<td>MUS 678 Advanced Pedagogy (Instrument Specific)</td>
<td>2</td>
</tr>
<tr>
<td>MUS 677 Business Aspects of String Studio Teaching</td>
<td>2</td>
</tr>
<tr>
<td>MUS 563-02 Literature: String Literature</td>
<td>1</td>
</tr>
<tr>
<td>MUS 563 Literature (Instrument Specific)</td>
<td>1</td>
</tr>
<tr>
<td>Major or Minor Ensemble*</td>
<td>4</td>
</tr>
<tr>
<td>Music Electives **</td>
<td>6</td>
</tr>
</tbody>
</table>

Concentration Credit Hour Total: 18

Minimum Credit Hour 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. New Music Ensemble is acceptable.
** Up to 2 additional ensemble credits are acceptable.

Concentration in Wind Band Pedagogy

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MUS 659, 660  Seminar in Conducting (Instrumental) I & II  4
MUS 559  Instrumental Conducting and Score Reading  2
MUS 561  Band Literature  2
MUS 663  Graduate Band Pedagogy and Educational Wind Band Literature  2
MUS 533, 534 or MUS 521, 522 Functional or Secondary Applied Study  2
MUS 563  Literature (Instrument Specific)  2
Major Ensemble (one per semester)  4
Music Electives *  2

**Concentration Credit Hour Total:**  18
**Minimum Credit Hour Total:**  36

Note:

* To be chosen from pedagogy, literature, research methods, learning theories, the student’s principal applied instrument, a maximum of 2 semesters of functional applied study, or a maximum of 2 additional ensemble credits if performing on a secondary instrument.

**Concentration in Wind Conducting**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 659, 660 - Seminar in Conducting - (either Instrumental or Choral as per advising)</td>
<td>4</td>
</tr>
<tr>
<td>MUS 559 - Instrumental Conducting and Score Reading</td>
<td>2</td>
</tr>
<tr>
<td>Band Literature (MUS 561)</td>
<td>2</td>
</tr>
<tr>
<td>Ensemble (one per semester)</td>
<td>4</td>
</tr>
<tr>
<td>Music Electives *</td>
<td>6</td>
</tr>
</tbody>
</table>

**Concentration Credit Hour Total:**  18
**Minimum Credit Hour 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**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 613, 614 - Additional Applied Study</td>
<td>8</td>
</tr>
<tr>
<td>Ensemble*</td>
<td>4</td>
</tr>
<tr>
<td>Music Electives**</td>
<td>6</td>
</tr>
</tbody>
</table>

**Concentration Credit Hour Total:**  18
**Minimum Credit Hour 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

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 539-01</td>
<td>Jazz Style and Analysis</td>
<td>2</td>
</tr>
<tr>
<td>MUS 539-03</td>
<td>Standard Jazz Repertoire</td>
<td>2</td>
</tr>
<tr>
<td>MUS 655</td>
<td>Advanced Jazz Improvisation</td>
<td>2</td>
</tr>
<tr>
<td>Jazz Combo</td>
<td>(one per semester)</td>
<td>2</td>
</tr>
<tr>
<td>Jazz Ensemble or Jazz Repertory Ensemble</td>
<td>(one per sem)*</td>
<td>4</td>
</tr>
<tr>
<td>Music Electives**</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Concentration Credit Hour Total: 18
Minimum Credit Hour 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

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 539-01</td>
<td>Jazz Style and Analysis</td>
<td>2</td>
</tr>
<tr>
<td>MUS 539-03</td>
<td>Standard Jazz Repertoire</td>
<td>2</td>
</tr>
<tr>
<td>MUS 655</td>
<td>Advanced Jazz Improvisation</td>
<td>2</td>
</tr>
<tr>
<td>Jazz Combo</td>
<td>(one per semester)</td>
<td>2</td>
</tr>
<tr>
<td>Jazz Ensemble or Jazz Repertory Ensemble</td>
<td>(one per sem)*</td>
<td>4</td>
</tr>
<tr>
<td>Music Electives**</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Concentration Credit Hour Total: 18
Minimum Credit Hour 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

Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 613-614</td>
<td>Additional Applied Study</td>
<td>8</td>
</tr>
<tr>
<td>Ensemble</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Major Subject and Music Electives*</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

Concentration Credit Hour Total: 18
Minimum Credit Hour 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**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 671, 672, 673, 674 - Piano Pedagogy</td>
<td>8</td>
</tr>
<tr>
<td>MUS 561, 562 - Piano Literature I &amp; II</td>
<td>4</td>
</tr>
<tr>
<td>Ensemble *</td>
<td>2</td>
</tr>
<tr>
<td>Music Electives**</td>
<td>4</td>
</tr>
<tr>
<td><strong>Concentration Credit Hour Total:</strong></td>
<td>18</td>
</tr>
<tr>
<td><strong>Minimum Credit Hour Total:</strong></td>
<td>36</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 613, 614 - Additional Applied Study</td>
<td>8</td>
</tr>
<tr>
<td>MUS 561, 562 - Piano Literature I &amp; II</td>
<td>4</td>
</tr>
<tr>
<td>Piano Pedagogy (500 or 600 level)</td>
<td>2</td>
</tr>
<tr>
<td>Ensemble *</td>
<td>2</td>
</tr>
<tr>
<td>Music Electives**</td>
<td>2</td>
</tr>
<tr>
<td><strong>Concentration Credit Hour Total:</strong></td>
<td>18</td>
</tr>
<tr>
<td><strong>Minimum Credit Hour Total:</strong></td>
<td>36</td>
</tr>
</tbody>
</table>

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

Courses

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 613, 614 - Additional Applied Study</td>
<td>8</td>
</tr>
<tr>
<td>MUS 561, 562, 661 or 662 - Vocal Literature (4 hours of literature chosen from list)</td>
<td>4</td>
</tr>
<tr>
<td>MUS 640-01 - Advanced Vocal Pedagogy</td>
<td>2</td>
</tr>
<tr>
<td>Ensemble *</td>
<td>2</td>
</tr>
<tr>
<td>Music Electives**</td>
<td>2</td>
</tr>
<tr>
<td>Concentration Credit Hour Total:</td>
<td>18</td>
</tr>
<tr>
<td>Minimum Credit Hour Total:</td>
<td>36</td>
</tr>
</tbody>
</table>

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.

Faculty

Amy Acklin
Associate Professor
Director of
Marching Band

Robert Amchin
Professor
Distinguished
Teaching Professor

Jack Ashworth
Professor Emeritus

Jerry W. Ball
Professor Emeritus

Ansyn Banks
Associate Professor

Randi Bolding
Assistant Professor

Paul R. Brink
Professor Emeritus

Devin Burke
Assistant Professor

Greg Byrne
Professor

Jean Christensen
Professor Emerita

Darcy DeLoach
Associate Professor

Anne Marie de Zeeuw
Professor Emerita

Christopher Doane
Professor

R. Christopher Fitzgerald
Assistant Professor

Donn Everette
Graham
Professor Emeritus

Kent Hatteberg
Director of Choral Activities

University Scholar

D. Bruce Heim
Professor

University Scholar

Rebecca Jemian
Assistant Professor

Brenda E. Kee
Professor Emerita

Sidney King
Assistant Professor

Herbert Koerselman
Dean Emeritus

John LaBarbera
Professor Emeritus

W. Reese Land
Assistant Professor

Kimcherie Lloyd
Professor

Director of
Orchestral Studies

and Opera

Director of
Undergraduate
Studies

Lee Luvisi
Professor Emeritus
Stephen Mattingly
Assistant Professor
Daniel McAninch
Professor Emeritus
Peter McHugh
Professor Emeritus
Matthew Nelson
Assistant Professor
Naomi Oliphant
Professor
J. Patrick Rafferty
Professor
Steve Rouse
Professor
Marc Satterwhite
Professor
Brett Shuster
Professor
Chad Sloan
Assistant Professor
Richard Spalding
Professor Emeritus
Frederick Speck
Professor
Department Chair
of Performance
Studies
Director of Bands
Edith Davis
Tidwell
Professor Emerita
Distinguished
Teaching Professor
Gerald Tolson
Professor
Department Chair
of Academic and
Professional Studies
Michael Tracy
Professor
Krista Wallace-
Boaz
Associate Professor
Director of
Graduate Studies
Assistant Dean of
Student Services
Robert Weaver
Professor Emeritus
Krzysztof Wolek
Associate Professor
Mark Yeary
Assistant Professor
Paul York
Professor
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 credit hours of graduate credit, and Master of Music Education requiring 30 credit hours. All programs require a minimum of 24 credit 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. 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 coursework.

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 credit 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/academics/areas-of-study/music-composition/documents/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) credit 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 credit 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) credit 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) credit 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) credit 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 credit 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 credit 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 credit hours of completed course work. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.

**Curriculum**

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 500 - Music History Review*</td>
<td>0</td>
</tr>
<tr>
<td>MUS 400 - Music Theory Review*</td>
<td>0</td>
</tr>
<tr>
<td>MUS 600 - Graduate Oral Exam Preparation</td>
<td>0</td>
</tr>
<tr>
<td>MUS 607 - Bibliography and Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>Music History Seminar (600 level)**</td>
<td>3</td>
</tr>
<tr>
<td>Music Theory</td>
<td>4</td>
</tr>
<tr>
<td>Additional Music Theory or Music History Seminar (500 or 600 level)</td>
<td>3</td>
</tr>
<tr>
<td>MUS 647, 648, or 653 - Analysis</td>
<td>3</td>
</tr>
</tbody>
</table>
MUS 509 - Ensemble (3 semesters of major ensemble)  3  
Thesis   4  
**Core Curriculum Credit Hour Total:**  23  

**Other Requirements**  
All students must pass an oral examination after all course work is completed.  

**Music Theory Concentration**  

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 641 - Pedagogy of Theory</td>
<td>2</td>
</tr>
<tr>
<td>MUS 651 - Schenkerian Analysis</td>
<td>3</td>
</tr>
<tr>
<td>MUS 694 - Research (2 semesters)</td>
<td>4</td>
</tr>
<tr>
<td>MUS 665 - Theory Seminar (4 semesters)</td>
<td>0</td>
</tr>
<tr>
<td>Music Electives</td>
<td>4</td>
</tr>
<tr>
<td><strong>Track Credit Hour Total:</strong></td>
<td>13</td>
</tr>
<tr>
<td><strong>Minimum Credit Hour Total:</strong></td>
<td>36</td>
</tr>
</tbody>
</table>

**Notes:**  
* These courses may be satisfied by passing the entrance examinations in these areas.  
** One course of HUM 661-663 may be substituted for three music elective credits.  

**Faculty**  

Amy Acklin  
Associate Professor  
Director of  
Marching Band  
Robert Amchin  
Professor  
Distinguished  
Teaching Professor  
Jack Ashworth  
Professor Emeritus  
Jerry W. Ball  
Professor Emeritus  
Ansyn Banks  
Associate Professor  
Randi Bolding  
Assistant Professor  
Paul R. Brink  
Professor Emeritus  
Devin Burke  
Assistant Professor  
Greg Byrne  
Professor  
Jean Christensen  
Professor Emerita  
Darcy DeLoach  
Associate Professor  
Anne Marie de Zeeuw  
Professor Emerita  
Christopher Doane  
Professor  
Dean  
Caroline Ehman  
Assistant Professor  
R. Christopher Fitzgerald  
Assistant Professor  
Donn Everette Graham  
Professor Emeritus  
Kent Hatteberg  
Professor  
Director of Choral Activities  
University Scholar  
D. Bruce Heim  
Professor  
University Scholar  
Rebecca Jemian  
Assistant Professor  
Brenda E. Kee  
Professor Emerita  
Sidney King  
Assistant Professor  
Herbert Koerselman  
Dean Emeritus  
John LaBarbera  
Professor Emeritus  
W. Reese Land  
Assistant Professor  
Kimcherie Lloyd  
Professor  
Director of  
Orchestrical Studies and Opera  
D. Bruce Heim  
Professor  
University Scholar  
Rebecca Jemian  
Assistant Professor  
Brenda E. Kee  
Professor Emerita  
Sidney King  
Assistant Professor  
Herbert Koerselman  
Dean Emeritus  
University Scholar  
D. Bruce Heim  
Professor  
University Scholar  
Rebecca Jemian  
Assistant Professor  
Brenda E. Kee  
Professor Emerita  
Sidney King  
Assistant Professor  
Herbert Koerselman  
Dean Emeritus  
Lee Luvisi  
Professor Emeritus  
Stephen Mattingly  
Assistant Professor  
Daniel McAninch  
Professor Emeritus  
Peter McHugh  
Professor Emeritus  
Matthew Nelson  
Assistant Professor  
Naomi Oliphant  
Professor  
Associate Dean  
Distinguished  
Teaching Professor  
Seow-Chin Ong  
Professor  
Acton Ostling  
Professor Emeritus
J. Patrick Rafferty
Professor

Steve Rouse
Professor

Marc Satterwhite
Professor

Brett Shuster
Professor

Chad Sloan
Assistant Professor

Richard Spalding
Professor Emeritus

Frederick Speck
Professor

Department Chair of Performance Studies

Director of Bands

Edith Davis
Professor Emerita

Tidwell

Gerald Tolson
Professor

Department Chair of Academic and Professional Studies

Michael Tracy
Professor

Krista Wallace-Boaz
Associate Professor

Assistant Dean of Student Services

Robert Weaver
Professor Emeritus

Krzysztof Wolek
Associate Professor

Mark Yeary
Assistant Professor

Paul York
Professor

Assistant of Graduate Studies
Master of Music Education in Music Education

Major: MUED  
Degree Awarded: MME  
Unit: GU  
Program Webpage: [http://www.louisville.edu/music/](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.

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/graduatemusic/](http://louisville.edu/graduatemusic/). 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/](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/](http://louisville.edu/music/).
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.

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.

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.

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.

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

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.

**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

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MUS 500 - Music History Review *</td>
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</tr>
<tr>
<td>MUS 400 - Music Theory Review *</td>
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</tr>
<tr>
<td>MUS 600 - Graduate Oral Exam Preparation</td>
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<tr>
<td>MUS 607 - Bibliography and Research Methods</td>
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<tr>
<td>MUED 628 - Qualitative Research Methods</td>
<td>2</td>
</tr>
<tr>
<td>MUED 629 - Foundations of Music Education</td>
<td>2</td>
</tr>
<tr>
<td>MUED 630 - Quantitative Research Methods</td>
<td>2</td>
</tr>
<tr>
<td>MUED 639 - Learning Theories in Music Education</td>
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<tr>
<td>Music Education and Related Courses</td>
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<tr>
<td>Applied Music (chosen from major or minor performance fields, including Conducting)</td>
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</tr>
<tr>
<td>Music History (500 or 600 level)</td>
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</tr>
<tr>
<td>Music Theory (500 or 600 level)</td>
<td>2-3</td>
</tr>
<tr>
<td>Thesis**</td>
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</tr>
<tr>
<td>Minimum Total</td>
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</tr>
</tbody>
</table>

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 courses 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.

Faculty

Amy Acklin  
Associate Professor  
Director of Marching Band

Robert Amchin  
Professor  
Distinguished Teaching Professor

Jack Ashworth  
Professor Emeritus

Jerry W. Ball  
Professor Emeritus

Ansyn Banks  
Associate Professor

Randi Bolding  
Assistant Professor

Paul R. Brink  
Professor Emeritus

Devin Burke  
Assistant Professor

Greg Byrne  
Professor

Jean Christensen  
Professor Emerita

Darcy DeLoach  
Associate Professor

Anne Marie de Zeeuw  
Professor Emerita

Christopher Doane  
Professor  
Dean

Caroline Ehman  
Assistant Professor

R. Christopher Fitzgerald  
Assistant Professor

Christopher Doane  
Professor  
Dean

Caroline Ehman  
Assistant Professor

R. Christopher Fitzgerald  
Assistant Professor

Christopher Doane  
Professor  
Dean

Caroline Ehman  
Assistant Professor

R. Christopher Fitzgerald  
Assistant Professor

Christopher Doane  
Professor  
Dean

Caroline Ehman  
Assistant Professor

R. Christopher Fitzgerald  
Assistant Professor
Donn Everette Graham
Professor Emeritus

Kent Hatteberg
Professor
Director of Choral Activities
University Scholar

D. Bruce Heim
Professor
University Scholar

Rebecca Jemian
Assistant Professor

Brenda E. Kee
Professor Emerita

Sidney King
Assistant Professor

Herbert Koerselman
Dean Emeritus

John LaBarbera
Professor Emeritus

W. Reese Land
Assistant Professor

Kimcherie Lloyd
Professor
Director of Orchestral Studies and Opera
Director of Undergraduate Studies

Lee Luvisi
Professor Emeritus
Stephen Mattingly
Assistant Professor

Daniel McAninch
Professor Emeritus

Peter McHugh
Professor Emeritus

Matthew Nelson
Assistant Professor

Naomi Oliphant
Professor
Associate Dean
Distinguished Teaching Professor

Seow-Chin Ong
Professor

Acton Ostling
Professor Emeritus

J. Patrick Rafferty
Professor

Steve Rouse
Professor

Marc Satterwhite
Professor

Brett Shuster
Professor

Chad Sloan
Assistant Professor

Richard Spalding
Professor Emeritus

Frederick Speck
Professor
Department Chair of Performance Studies
Director of Bands

Edith Davis
Tidwell
Professor Emerita

Distinguished Teaching Professor

Gerald Tolson
Professor
Department Chair of Academic and Professional Studies

Michael Tracy
Professor

Krista Wallace-Boaz
Associate Professor
Director of Graduate Studies
Assistant Dean of Student Services

Robert Weaver
Professor Emeritus

Krzysztof Wolek
Associate Professor

Mark Yeary
Assistant Professor

Paul York
Professor
Master of Science in Nursing

**Major:** NURS  
**Degree Awarded:** MSN  
**Unit:** GN  
**Program Webpage:** [http://louisville.edu/nursing](http://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.

**The School of Nursing offers the following degrees:**

Nursing - Ph.D.  
Nursing- D.N.P.  
Nursing - M.S.N.

**Post-Masters Certificates are available in the following programs:**

Adult Gerontology Acute Nurse Practitioner  
Adult Gerontology Primary Nurse Practitioner  
Family Nurse Practitioner  
Neonatal Nurse Practitioner  
Psychiatric, Mental Health Nurse Practitioner

**M.S.N. Admissions Policies - School of Nursing**

Students may be admitted into the Master of Science in Nursing program for the Master's Entry into Professional Nursing (MEPN) for a summer term only. The Master's Entry into Professional Nursing (MEPN) is a graduate program for entry into practice.

Advanced practice specialties, effective fall 2016, are now available through our Doctor of Nursing Practice (D.N.P.) program.
Application deadline Degree Seeking Students:

Summer Semester for M.S.N./M.E.P.N.: February 1st

Fall 2015 was the last admission cycle for the M.S.N., advanced practice specialties.

Criteria for Admission to the Master of Science in Nursing for the Master's Entry into Professional Nursing (MEPN) Degree Program:

To be considered for admission to Degree Status, the following items must be submitted:

To the School of Interdisciplinary and Graduate Studies:

- Completed University of Louisville Graduate Admissions Application, including $60 application fee (application available online at: http://louisville.edu/graduate/apply)
- Official transcripts representing all college coursework with a cumulative grade point average of at least 3.0 on a 4.0 scale. A bachelor's degree must be earned from a regionally accredited institution.
- Two references from individuals who can speak of academic and/or professional nursing capabilities and potential are required. References should be chosen from: former faculty members, current or immediate past employer, or other nursing/health professionals. Each person providing a reference for you must complete the University of Louisville, School of Interdisciplinary and Graduate Studies, Graduate Admission recommendation form (available online at: http://louisville.edu/graduate/apply)
- Submit a goal statement, 500 words or less, explaining your health care professional goals.
- Resume

To the School of Nursing, Office of Student Services:

- Completed Legal Questionnaire (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 University of Louisville School of Nursing Office of Student Services for an advising appointment.

Conditional Admission to M.S.N. Degree Program:

Students who do not meet these admission requirements may be considered for admission in conditional status.

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.

Post-Masters Certificate Admissions Requirements (considered non-degree status):

Admissions Deadlines:

Summer Semester, February 1
Fall Semester, April 1  
Spring Semester, October 1  

Only Postmasters have a summer, fall or spring admit option. Admit term based upon evaluation of previous coursework. Required courses are determined after a gap analysis of the student's previous coursework and certifications. For students missing a portion of required coursework, missing content may be fulfilled by completing the appropriate NURS 690 Special Topics course(s). A minimum of 25% of credit hours must be completed in residence to be awarded the Postmaster's Certificate. 

The following materials must be submitted for review by the School of Nursing Student Affairs Committee: 

To the School of Interdisciplinary and Graduate Studies: 

- Official transcripts of all college course work including ones verifying completion of accredited B.S.N. and Master's in Nursing programs. Applicants whose prior degree(s) was from the University of Louisville do not need to send official transcripts. However, if the last degree earned was NOT from the University of Louisville, those transcripts must be submitted. All applicants are required to submit transcripts for all college work completed. 
- Completed University of Louisville Graduate Admissions Application, including $60 application fee (application available online at: http://louisville.edu/graduate/apply) 
- Two completed letters of recommendation for the School of Interdisciplinary and Graduate Studies, Graduate Admissions (see the University of Louisville Graduate Admission 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 School of Interdisciplinary and Graduate Studies. 
- A minimum grade point average of 3.0 on a 4.0 scale from Master's in Nursing program. 
- Resume including your RN license number. 

To the School of Nursing: 

- Completed Legal Questionnaire 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 the School of Interdisciplinary and Graduate Studies: 

- Graduate Admissions Application including the $60.00 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 $60.00 is required of all applicants regardless of where previous degrees were 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.

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 first clinical course for each concentration. 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

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 oversees student placement with preceptors, in collaboration with the Clinical Placement Coordinator and course faculty.

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. 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. This is granted only because of illness 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.

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 - Postmasters

Before beginning the first clinical course in the Postmasters 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 University of Louisville 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.
- 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.
- provide evidence of a negative drug screen.

Clinical Requirements - MEPN

Detailed information is provided at student orientations, the School of Nursing MEPN Student Handbook, and is available through the School of Nursing, Office of Student Services.

Repeating Nursing Courses

MSN, advanced practice, and Postmaster students who receive a grade of C+ or below in a required course must repeat the course. Students in the Postmaster's and MSN, advanced practice programs, 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 School of Nursing 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.

For MEPN, the repeat nursing courses policy is detailed in the School of Nursing MEPN Student Handbook.
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 the University of Louisville. If the course is being taken to apply toward the University of Louisville 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 University of Louisville 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 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 Gerontology Primary Care Nurse Practitioner Concentration

<table>
<thead>
<tr>
<th>Core Classes</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 605  Foundations for Advanced Practice</td>
<td>3</td>
</tr>
<tr>
<td>NURS 607  Research and Evidence Based Practice Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608  Issues in Economic and Information Mgt.</td>
<td>3</td>
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<tr>
<td>NURS 611  Graduate Nursing Pharmacology for Advanced Practice Nurses</td>
<td>3</td>
</tr>
<tr>
<td>NURS 613  Intro to Health Care Policy and Systems</td>
<td>3</td>
</tr>
<tr>
<td>NURS 652  Statistics</td>
<td>3</td>
</tr>
<tr>
<td>NURS 655  Advanced Pathophysiology for Clinical Decision Making</td>
<td>3</td>
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<tr>
<td>NURS 656  Advanced Clinical Assessment</td>
<td>3</td>
</tr>
<tr>
<td>NURS 657  Clinical Prevention and Populations Health</td>
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<tr>
<td><strong>TOTAL CORE CREDIT HOURS</strong></td>
<td><strong>27</strong></td>
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<table>
<thead>
<tr>
<th>Concentration Classes</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>NURS 601  Primary Care I</td>
<td>3</td>
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<tr>
<td>NURS 602  Primary Care II</td>
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<tr>
<td>NURS 604  Transition to Practice</td>
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<tr>
<td>NURS 624  Gerontology Primary Care Nurse Practitioner I</td>
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NURS 625  Adv. Clinical Practice Adult Gerontology Primary Care NP II 3
NURS 666  Primary Care of the Older Adult 1
NURS 667  Applied Geriatric Pharmacology in Nursing Practice 2
TOTAL SPECIALTY CREDIT HOURS 17
TOTAL CREDIT HOURS 44
Clinical Hours Required: 672

MSN, Adult Gerontology Acute Care Nurse Practitioner Concentration

<table>
<thead>
<tr>
<th>Core Classes</th>
<th>Credit Hours</th>
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<tr>
<td>NURS 605 Foundations for Advanced Practice</td>
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<tr>
<td>NURS 607 Research and Evidence Based Practice Nursing</td>
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<td>NURS 608 Issues in Economic and Information Mgt.</td>
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<td>NURS 611 Graduate Nursing Pharmacology for Advanced Practice Nurses</td>
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<tr>
<td>NURS 613 Intro to Health Care Policy and Systems</td>
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<tr>
<td>NURS 652 Statistics</td>
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<tr>
<td>NURS 655 Adv. Pathophysiology for Clinical Decision Making</td>
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<tr>
<td>NURS 656 Advanced Clinical Assessment</td>
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<tr>
<td>NURS 657 Clinical Prevention and Populations Health</td>
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TOTAL CORE CREDIT HOURS 27

Concentration Classes

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<tr>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>NURS 604 Transition to Practice</td>
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<tr>
<td>NURS 667 Applied Geriatric Pharmacology in Nursing Practice</td>
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<tr>
<td>NURS 674 Adult Gerontology Acute Care NP I</td>
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<tr>
<td>NURS 675 Adv. Clinical Practice: Adult Gerontology Acute Care Practitioner, Clinical I</td>
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<tr>
<td>NURS 676 Adult Gerontology Acute Care Practitioner II</td>
</tr>
<tr>
<td>NURS 677 Adv. Clinical Practice: Adult Gerontology Acute Practitioner, Clinical II</td>
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</tbody>
</table>
TOTAL SPECIALTY CREDIT HOURS 17
TOTAL CREDIT HOURS 44
Clinical Hours Required: 672

MSN, Family Nurse Practitioner Concentration

<table>
<thead>
<tr>
<th>Core Classes</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 605 Foundations for Advanced Practice</td>
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</tr>
<tr>
<td>NURS 607 Research and Evidence Based Practice Nursing</td>
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</tr>
<tr>
<td>NURS 608 Issues In Economic and Information Mgt.</td>
<td>3</td>
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<tr>
<td>NURS 611 Graduate Nursing Pharmacology for Advanced Practice Nurses</td>
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<tr>
<td>NURS 613 Intro to Health Care Policy and Systems</td>
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TOTAL CORE CREDIT HOURS 27
Concentration Classes

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<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>NURS 601</td>
<td>Primary Care I</td>
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<tr>
<td>NURS 602</td>
<td>Primary Care II</td>
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<td>NURS 604</td>
<td>Transition to Practice</td>
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<tr>
<td>NURS 660</td>
<td>Family Nursing</td>
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<tr>
<td>NURS 661</td>
<td>Adv. Clinical Practice: FNP Clinical I</td>
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<td>NURS 662</td>
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<td>Common Health Problems of the Pediatric Client</td>
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<td>TOTAL SPECIALTY CREDIT HOURS</td>
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TOTAL CREDIT HOURS 44

Clinical Hours Required: 672

MSN, Family Nurse and Women's Health Nurse Practitioner Concentration

Core Classes

<table>
<thead>
<tr>
<th>Course</th>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>NURS 605</td>
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<tr>
<td>NURS 607</td>
<td>Research and Evidence Based Practice Nursing</td>
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<td>NURS 608</td>
<td>Issues In Economic and Information Mgt.</td>
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<td>NURS 611</td>
<td>Graduate Nursing Pharmacology for Advanced Practice Nurses</td>
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<tr>
<td>NURS 613</td>
<td>Intro to Health Care Policy and Systems</td>
<td>3</td>
</tr>
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<td>NURS 652</td>
<td>Statistics</td>
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<tr>
<td>NURS 655</td>
<td>Adv. Pathophysiology: Clinical Decision Making</td>
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<td>NURS 656</td>
<td>Adv. Clinical Assessment</td>
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<td>NURS 657</td>
<td>Clinical Prevention and Populations Health</td>
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Concentration Classes

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<thead>
<tr>
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<tbody>
<tr>
<td>NURS 601</td>
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<tr>
<td>NURS 602</td>
<td>Primary Care II</td>
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<td>Transition to Practice</td>
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<tr>
<td>NURS 615</td>
<td>Advanced Clinical Practice WHNP I</td>
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<td>NURS 616</td>
<td>WHNP I</td>
<td>3</td>
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<td>NURS 617</td>
<td>Advanced Clinical Practice WHNP II</td>
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<td>NURS 618</td>
<td>WHNP II</td>
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<td>NURS 619</td>
<td>WHNP Skills Lab</td>
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<td>NURS 660</td>
<td>Family Nursing</td>
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<td>NURS 661</td>
<td>Adv. Clinical Practice : FNP Clinical I</td>
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<td>NURS 663</td>
<td>Advanced Clinical Practice: FNP</td>
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TOTAL CREDIT HOURS 54.5

Clinical Hours Required: 952
### MSN, Neonatal Nurse Practitioner Concentration

#### Core Classes

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<td>Research and Evidence Based Practice</td>
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<td>Issues in Economic and Information Mgt.</td>
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<td>Intro to Health Care Policy and Systems</td>
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<td>NURS 629</td>
<td>Advanced Health Assessment</td>
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<td>NURS 652</td>
<td>Statistics</td>
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<td>NURS 655</td>
<td>Adv. Pathophysiology: Clinical Decision Making</td>
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<td>NURS 657</td>
<td>Clinical Prevention and Populations Health</td>
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<tr>
<td>NURS 658</td>
<td>Adv. Neonatal Pharmacology</td>
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#### TOTAL CORE CREDIT HOURS

**27**

#### Concentration Classes

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>NURS 604</td>
<td>Transition to Practice</td>
<td>2</td>
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<tr>
<td>NURS 633</td>
<td>Adv. Neonatal Pathophysiology and Clinical Mgt. I</td>
<td>4</td>
</tr>
<tr>
<td>NURS 635</td>
<td>Advanced Neonatal Pathophysiology and Clinical Mgt. II</td>
<td>4</td>
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<tr>
<td>NURS 636</td>
<td>Neonatal Nurse Practitioner Residency I</td>
<td>3</td>
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<tr>
<td>NURS 637</td>
<td>Neonatal Nurse Practitioner Residency II</td>
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</table>

#### TOTAL SPECIALTY CREDIT HOURS

**16**

#### TOTAL CREDIT HOURS

**43**

Clinical Hours Required: **693**

### MSN, Psych/Mental Health Nurse Practitioner Concentration

#### Core Classes

<table>
<thead>
<tr>
<th>Course Code</th>
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<th>Credit Hours</th>
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<tbody>
<tr>
<td>NURS 605</td>
<td>Foundations for Advanced Practice</td>
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<tr>
<td>NURS 607</td>
<td>Research and Evidence Based Practice</td>
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<td>NURS 608</td>
<td>Issues in Economic and Information Mgt.</td>
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<tr>
<td>NURS 611</td>
<td>Graduate Nursing Pharmacology for Advanced Practice Nurses</td>
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<tr>
<td>NURS 613</td>
<td>Intro to Health Care Policy and Systems</td>
<td>3</td>
</tr>
<tr>
<td>NURS 652</td>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>NURS 655 or 659</td>
<td>Adv. Lifespan Pathophysiology</td>
<td>2-3</td>
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<tr>
<td>NURS 656</td>
<td>Adv. Clinical Assessment</td>
<td>3</td>
</tr>
<tr>
<td>NURS 657</td>
<td>Clinical Prevention and Populations Health</td>
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#### TOTAL CORE CREDIT HOURS

**26-27**

#### Concentration Classes

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>NURS 604</td>
<td>Transition to Practice</td>
<td>2</td>
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<tr>
<td>NURS 638</td>
<td>Adv. Psychiatric Assessment &amp; Clinical Interview Tech.</td>
<td>1</td>
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<tr>
<td>NURS 639</td>
<td>Advanced Psych NP Mental Health Assessment Clinical</td>
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<tr>
<td>NURS 641</td>
<td>Adv. Psychiatric MH NP I: Theory</td>
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<tr>
<td>NURS 642</td>
<td>Adv. Psychiatric MH Nurse Practitioner II: Theory</td>
<td>3</td>
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<tr>
<td>NURS 645</td>
<td>Advanced Psychiatric Mental Health NP I: Clinical</td>
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</table>
NURS 646  Adv. Psychiatric MH NP II: Clinical  2
NURS 647  Adv. Psychopathology Across the Lifespan  2
NURS 649  Adv. Psychopharmacology Across the Lifespan  2

TOTAL SPECIALTY CREDIT HOURS  19
TOTAL CREDIT HOURS  45-46

Clinical Hours Required: 672

MSN, Certificate in Health Professions Education

<table>
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<th>Course</th>
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<tbody>
<tr>
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<td>NURS 607 Research and Evidence Based Practice</td>
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<td>NURS 608 Issues in Economic and Information Mgt.</td>
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<tr>
<td>NURS 611 Graduate Nursing Pharmacology for Advanced Practice Nurses</td>
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<td>NURS 613 Intro to Health Care Policy and Systems</td>
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<td>NURS 652 Statistics</td>
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<td>NURS 655 Adv. Pathophysiology: Clinical Decision Making</td>
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<td>NURS 656 Advanced Clinical Assessment</td>
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<td>NURS 657 Clinical Prevention and Populations Health</td>
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TOTAL CORE CREDIT HOURS  27

Concentration Classes

<table>
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<tr>
<td>NURS 610 Nurse Educator Practicum</td>
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<tr>
<td>ELFH 614 Program Evaluation and Planning</td>
<td>3</td>
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<tr>
<td>ELFH 661 Adult Development and Learning</td>
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</tr>
<tr>
<td>ELFH 675 College Teaching (must be taken on Health Science Campus)</td>
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TOTAL SPECIALTY CREDIT HOURS  11
TOTAL CREDIT HOURS  38

Post-Master Certificate: Adult Gerontology Primary Care Nurse Practitioner

Prerequisite Classes

<table>
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<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>NURS 611 Graduate Nursing Pharmacology for Advanced Practice Nurses</td>
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<tr>
<td>NURS 655 Adv. Pathophysiology: Clinical Decision Making</td>
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<tr>
<td>NURS 656 Adv. Clinical Assessment</td>
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Certification Classes

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<tr>
<td>NURS 601 Primary Care I</td>
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</tr>
<tr>
<td>NURS 602 Primary Care II</td>
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<tr>
<td>NURS 624 Gerontology Primary Care Nurse Practitioner I</td>
<td>3</td>
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<tr>
<td>NURS 625 Adv. Clinical Practice Adult Gerontology Primary Care NP II</td>
<td>3</td>
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<tr>
<td>NURS 666 Primary Care of the Older Adult</td>
<td>2</td>
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<tr>
<td>NURS 667 Applied Geriatric Pharmacology in Nursing Practice</td>
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</table>

TOTAL CREDIT HOURS  15
NURS 604 Transition to Practice may be required  2
Clinical Hours Required: 672

Post-Master's Certificate: Adult Gerontology Acute Care Nurse Practitioner

Prerequisite Classes
NURS 611 Graduate Nursing Pharmacology for Advanced Practice Nurses 3
NURS 655 Adv. Pathophysiology for Clinical Decision Making 3
NURS 656 Adv. Clinical Assessment 3

Certification Classes
NURS 667 Applied Geriatric Pharmacology in Nursing Practice 1
NURS 675 Adv. Clinical Practice: Adult Gerontology Acute Care Clinical I 3
NURS 676 Adult Gerontology Acute Care NP II 4
NURS 677 Adv. Clinical Practice: Adult Gerontology Acute Care II 3

TOTAL CREDIT HOURS 15
NURS 604 Transition to Practice may be required 2

Clinical Hours Required: 672

Post-Masters Certificate: Family Nurse Practitioner

Prerequisite Classes
NURS 611 Graduate Nursing Pharmacology for Advanced Practice Nurses 3
NURS 655 Adv. Pathophysiology: Clinical Decision Making 3
NURS 656 Adv. Clinical Assessment 3

Certification Classes
NURS 601 Primary Care I 3
NURS 602 Primary Care II 3
NURS 660 Family Nursing 2
NURS 661 Adv. Clinical Practice: FNP Clinical I 3
NURS 662 Adv. Clinical Practice: FNP Clinical II 3
NURS 664 Common Health Problems of the Pediatric Client 1

TOTAL SPECIALTY CREDIT HOURS 15
NURS 604 Transition to Practice may be required 3

Clinical Hours Required: 672

Post-Masters Certificate: Neonatal Nurse Practitioner

Prerequisite Classes
NURS 629 Adv. Health Assessment of the Neonate 3
NURS 655 Adv. Lifespan Pathophysiology 3
NURS 658 Adv. Neonatal Pharmacology 3

Certification Classes
NURS 633 Adv. Neonatal Pathophysiology and Clinical Mgt. I 4
NURS 635  Adv. Neonatal Pathophysiology and Clinical Mgt. II  2  
NURS 636  Neonatal Nurse Practitioner Residency I  4  
NURS 637  Neonatal Nurse Practitioner Residency II  4  
TOTAL SPECIALTY CREDIT HOURS  14  
NURS 604 Transition to Practice may be required  2  
Clinical Hours Required:  693  

Post-Master's Certificate: Psychiatric Mental Health Nurse Practitioner  

<table>
<thead>
<tr>
<th>Prerequisite Classes</th>
<th>Credit Hours</th>
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<tr>
<td>NURS 611  Graduate Nursing Pharmacology for Advanced Practice Nurses</td>
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<tr>
<td>NURS 656  Adv. Clinical Assessment</td>
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<tr>
<td>NURS 655 or Lifespan Pathophysiology</td>
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<td>NURS 659</td>
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<tr>
<td>NURS 638  Adv. Psychiatric Assessment &amp; Clinical Interview Tech.</td>
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<td>NURS 639  Adv. Psychiatric NP MH Assessment Clinical</td>
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<td>NURS 642  Adv. Psychiatric MH Nurse Practitioner II: Theory</td>
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<td>NURS 645  Adv. Psychiatric MH Nurs Practitioner I: Clinical</td>
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<tr>
<td>NURS 646  Adv. Psychiatric MH Nurse Practitioner II: Clinical</td>
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</tr>
<tr>
<td>NURS 647  Adv. Psychopathology Across the Lifespan</td>
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</tr>
<tr>
<td>NURS 649  Adv. Psychopharmacology Across the Lifespan</td>
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TOTAL SPECIALTY CREDIT HOURS  17  
NURS 604 Transition to Practice may be required  2  
Clinical Hours Required:  672  

Master's Entry into Professional Nursing  
The Master's Entry into Professional Nursing (MEPN) is designed for individuals with a baccalaureate degree in another area who want to pursue a career in nursing. The program provides the student with a general foundation in nursing with additional skills in the application of evidence based practice and leadership. Upon completion of the program, the student receives both Bachelor of Science in Nursing and Master of Science in Nursing Degrees. Students are eligible to take the National Council Licensure Examination (NCLEX-RN) for registered nursing licensure. This is not an advanced practice registered nursing program. Prerequisites must be completed, or in progress, before being considered for admittance into the graduate program. To ensure appropriate preparation for the program, the following prerequisites are required: Chemistry, Nutrition, Developmental Psychology, Microbiology with lab, two semesters of Anatomy and Physiology with lab. A minimum grade of C is required in all prerequisite courses. Students must consult with the program advisor for appropriate equivalencies.  

Master's Entry into Professional Nursing (MEPN)  

<table>
<thead>
<tr>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>NURS 401  Introduction to Professional Nursing Practice</td>
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<tr>
<td>NURS 402  Therapeutic Nursing Intervention</td>
</tr>
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NURS 403 Adult Health 6
NURS 404 Childbearing 3.5
NURS 405 Child Health 4
NURS 406 Psychiatric/Mental Health 4
NURS 407 Community Health 5
NURS 408 Care of the Adult with Complex Health Needs 7
NURS 409 Capstone 2
*NURS 501 Pathophysiology 4
*NURS 502 Pharmacology 3
NURS 503 Health Assessment 3
NURS 504 Leadership 3
NURS 506 Leadership, Evidence Based Practice, Policy 2
NURS 507 Transition to Practice 2
NURS 605 Foundations for Advanced Practice 3
NURS 607 Research and Evidence Based Practice 3
NURS 608 Issues in Economic and Information Mgt. 3
NURS 613 Introduction to Health Care Policy 3
NURS 652 Statistics 3
NURS 657 Clinical Prevention and Population Health 3

TOTAL CREDIT HOURS: 72.5

*Course taken prior to admission into MEPN program.

Faculty

Said Abusalem
Assistant Professor

Paulette Adams
Emerita

Fawwaz Alaloul
Assistant Professor

Catherine Batscha
Assistant Professor

Diane Chlebowy
Associate Professor

Becky Christian
Professor

Mary Beth Coty
Associate Professor

Ruth B. Craddock
Emerita

Tim Crawford
Assistant Professor

Linda Freeman
Emerita

Lynne Hall
Professor

Associate Dean for Research

Muna Hammash
Assistant Professor

Carla Hermann
Professor

Marcia Hern
Professor

Dean

Vicki Hines-Martin
Professor

M. Cynthia Logsdon
Professor

Rosalie Mainous
Emerita

Valerie McCarthy
Assistant Professor

Cynthia McCurren
Emerita

Whitney Nash
Associate Professor

Director of Practice and International Affairs

Barbara Polivka
Professor

S. Lee Ridner
Associate Professor

Associate Dean of Graduate Programs

Kay Roberts
Emerita

Sara Robertson
Assistant Professor

Karen Robinson
Professor

Celeste Shawler
Associate Professor

Sandra Smith
Associate Professor

Barbara Speck
Emerita

Ruth Staten
Associate Professor

Associate Dean for Undergraduate Programs

Deborah V. Thomas
Associate Professor
Doctor of Nursing Practice

Major: NURS  
Degree Awarded: D.N.P.  
Unit: GN  
Program Webpage: http://louisville.edu/nursing

Program Information

The Doctor of Nursing Practice (D.N.P.) is designed to prepare nurse leaders in the clinical and systems arena to meet the challenges of today's health care environment. The D.N.P. is focused on developing the advanced practice knowledge and skills to improve health outcomes of individuals or populations through direct care, management of care, administration of organizations, and implementation of health policy. The University of Louisville offers both the B.S.N.-D.N.P. and the M.S.N.-D.N.P. tracks. The B.S.N.-D.N.P. requires a minimum of three years of full-time study. The last two years of the program include 1,000 clinical and project hours. The M.S.N.-D.N.P is designed for advanced practice nurses and focuses on leadership for population health. A minimum of two years of part-time study is required. Clinical hours vary depending on masters preparation. Students must provide documentation of previous clinical hours and complete a minimum of 330 project hours, for a total of 1,000 hours.

Specialties Available:

Adult Gerontology Acute Care  
Adult Gerontology Primary Care  
Family  
Neonatal  
Psychiatric/Mental Health

Admissions Criteria

Application deadline for fall admissions is March 1st. Fall semester admissions only.

To be considered for admission to the Doctor of Nursing Practice program, the following items must be submitted:

To the School of Interdisciplinary and Graduate Studies:

1. Completed Graduate School Application including $60 application fee.
2. Transcripts  
   If B.S.N.-D.N.P. applicant Official transcripts representing all college coursework from regionally accredited schools with a cumulative undergraduate grade point average of at least 3.0 on 4.0 scale. Completion of an accredited (by NLN or CCNE) baccalaureate program in nursing must be verified. Bachelor's degree from a regionally accredited university is required.  
   If M.S.N.-D.N.P. applicant Official transcripts representing all college coursework with cumulative graduate and undergraduate grade point averages of at least 3.0 on 4.0
scale. Completion of accredited (by NLN or CCNE) graduate and undergraduate programs in nursing must be verified. Bachelor's degree from a regionally accredited university is required.

3. Three letters of recommendation from individuals chosen from among: former faculty, current or immediate past employer, or other nursing/health professional who can speak of academic and/or professional nursing capabilities and potential. At least one recommendation should be from a nurse. These letters should accompany the Letter of Evaluation form required by the School of Interdisciplinary and Graduate Studies.

4. Goal Statement that discusses career goals, areas of expertise, and reasons for pursuing a Doctor of Nursing Practice. Maximum of 3 pages; double spaced; 12 point font.

5. Resume including your RN license number.

To the School of Nursing, Office of Student Services:

1. Completed online Legal Questionnaire
2. A Certified Background Check
3. A personal interview may be required.

*Neonatal specialty requires a minimum of two years of work experience in a Level III or Level IV NICU prior to starting clinicals. Work experience recommended for Psych/Mental Health specialty prior to admission.

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 many 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.

Course Offerings

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 oversees student placement with preceptors, in collaboration with the Clinical Placement Coordinator and course faculty.
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. 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. This is granted only because of illness 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 the 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. 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 in the D.N.P. program, students must be in clinical compliance. Detailed information is provided at student orientations, the School of Nursing Graduate Student Handbook and is available through the School of Nursing, Office of Student Services.

Repeating Nursing Courses

D.N.P. student who receive a grade of C+ or below in a required course must repeat the course. Students 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. Repeating a course is not an automatic privilege, and students may have to petition to the School of Nursing for permission to repeat a nursing course. Students will be allowed to repeat a course on a space available basis.

Probation and Dismissal

If the cumulative grade point average falls below 3.0, the student will be placed on academic probation for the next regular semester. If the cumulative grade point average is not raised to a minimum of 3.0 by the end of the probation semester, the student will be dismissed from the program. The dismissal will be reflected on the student's transcript. If a student wishes to continue at the university, he/she must apply and be accepted to another unit in order to continue to enroll in classes.
## Curriculum

### B.S.N.-D.N.P. Curriculum

<table>
<thead>
<tr>
<th>Core Courses Required for Specialties</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>605 Theoretical Applications for Practice</td>
<td>3</td>
</tr>
<tr>
<td>607 Foundational Concepts of EBP</td>
<td>3</td>
</tr>
<tr>
<td>608 Healthcare Systems and Economics</td>
<td>3</td>
</tr>
<tr>
<td>652 Statistics</td>
<td>3</td>
</tr>
<tr>
<td>657 Health Promotion and Disease Prevention</td>
<td>3</td>
</tr>
<tr>
<td>725 Leadership &amp; Health Policy for Doctorally Prepared Nurse</td>
<td>3</td>
</tr>
<tr>
<td>*740 Advanced Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>741 Advanced Pathophysiology</td>
<td>4</td>
</tr>
<tr>
<td>*742 Advanced Clinical Assessment</td>
<td>3</td>
</tr>
<tr>
<td>743 Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>744 Synthesis &amp; Evaluation of EBP</td>
<td>3</td>
</tr>
<tr>
<td>745 Health Information Technology</td>
<td>3</td>
</tr>
<tr>
<td>746 Program Development &amp; Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>747 Finance Mgt. in Health Care Delivery</td>
<td>2</td>
</tr>
<tr>
<td>748 Transformational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>750 DNP Project I</td>
<td>3</td>
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<tr>
<td>751 DNP Project II</td>
<td>3</td>
</tr>
<tr>
<td>752 DNP Project III</td>
<td>3</td>
</tr>
<tr>
<td>*787 Clinical Practicum I</td>
<td>2</td>
</tr>
<tr>
<td>*788 Clinical Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>*789 Clinical Practicum III</td>
<td>3</td>
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<tr>
<td><strong>TOTAL CREDIT HOURS, Core Classes</strong></td>
<td><strong>62</strong></td>
</tr>
</tbody>
</table>

*Not required for Neonatal

### Adult Gerontology Acute

<table>
<thead>
<tr>
<th>Specialty Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>754 Differential Diagnosis</td>
<td>1</td>
</tr>
<tr>
<td>756 Procedures &amp; Diagnostics for Adult Health</td>
<td>2</td>
</tr>
<tr>
<td>760 Gerontology Pharmacology</td>
<td>1</td>
</tr>
<tr>
<td>779 Diagnosis &amp; Management for Adult Acute I</td>
<td>3</td>
</tr>
<tr>
<td>780 Procedures &amp; Diagnostics for Acute Care</td>
<td>2</td>
</tr>
<tr>
<td>781 Diagnosis &amp; Management for Adult Acute II</td>
<td>3</td>
</tr>
<tr>
<td>783 Diagnosis &amp; Management for Adult Acute III</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL CREDIT HOURS, Specialty Courses</strong></td>
<td><strong>14</strong></td>
</tr>
</tbody>
</table>

### Adult Gerontology Primary Care

<table>
<thead>
<tr>
<th>Specialty Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>753 Adolescent Well Child Theory</td>
<td>1</td>
</tr>
<tr>
<td>754 Differential Diagnosis</td>
<td>1</td>
</tr>
<tr>
<td>755 Diagnosis &amp; Management for Adult Health</td>
<td>4</td>
</tr>
<tr>
<td>756 Procedures Adult Health</td>
<td>2</td>
</tr>
<tr>
<td>757 Diagnosis &amp; Management for Women's Health</td>
<td>2</td>
</tr>
<tr>
<td>758 Diagnosis &amp; Management for Mental Health</td>
<td>2</td>
</tr>
<tr>
<td>759 Diagnosis &amp; Management for Geriatric Health</td>
<td>2</td>
</tr>
<tr>
<td>760 Gerontology Pharmacology</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL CREDIT HOURS, Specialty Courses</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>
### Family Nurse Practitioner

**Specialty Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>754</td>
<td>Differential Diagnosis</td>
<td>1</td>
</tr>
<tr>
<td>755</td>
<td>Diagnosis &amp; Management for Adult Health</td>
<td>4</td>
</tr>
<tr>
<td>756</td>
<td>Procedures Adult Health</td>
<td>2</td>
</tr>
<tr>
<td>757</td>
<td>Diagnosis &amp; Management for Women's Health</td>
<td>2</td>
</tr>
<tr>
<td>758</td>
<td>Diagnosis &amp; Management for Mental Health</td>
<td>2</td>
</tr>
<tr>
<td>760</td>
<td>Gerontology Pharmacology</td>
<td>1</td>
</tr>
<tr>
<td>761</td>
<td>Pediatric &amp; Adolescent Well Child Theory</td>
<td>2</td>
</tr>
<tr>
<td>762</td>
<td>Diagnosis &amp; Management for Pediatric Health</td>
<td>2</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS, Specialty Courses** 16

### Neonatal Nurse Practitioner

**Specialty Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>761</td>
<td>Pediatric &amp; Adolescent Well Child Theory</td>
<td>2</td>
</tr>
<tr>
<td>763</td>
<td>Neonatal Advanced Physiology &amp; Pathophysiology I</td>
<td>3</td>
</tr>
<tr>
<td>764</td>
<td>Diagnostic Reasoning</td>
<td>1</td>
</tr>
<tr>
<td>765</td>
<td>Neonatal Advanced Physiology &amp; Pathophysiology II</td>
<td>3</td>
</tr>
<tr>
<td>766</td>
<td>Diagnostic Reasoning II</td>
<td>1</td>
</tr>
<tr>
<td>767</td>
<td>Neonatal Residency I</td>
<td>3</td>
</tr>
<tr>
<td>768</td>
<td>Neonatal Residency II</td>
<td>3</td>
</tr>
<tr>
<td>769</td>
<td>Neonatal Residency III</td>
<td>3</td>
</tr>
<tr>
<td>784</td>
<td>Neonatal Advanced Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>785</td>
<td>Neonatal Advanced Health Assessment</td>
<td>3</td>
</tr>
<tr>
<td>786</td>
<td>Human Embryology &amp; Genetics</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS, Specialty Courses** 28

### Psychiatric Mental Health

**Specialty Courses**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>770</td>
<td>Advanced Psych Assessment &amp; Clinical Interview</td>
<td>2</td>
</tr>
<tr>
<td>771</td>
<td>Psychopathology</td>
<td>2</td>
</tr>
<tr>
<td>772</td>
<td>Psychopharmacology</td>
<td>2</td>
</tr>
<tr>
<td>773</td>
<td>Psych Mental Health I</td>
<td>3</td>
</tr>
<tr>
<td>774</td>
<td>Psych Mental Health II</td>
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</tr>
<tr>
<td>775</td>
<td>Psych Mental Health III</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDIT HOURS, Specialty Courses** 15

### MSN-DNP

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>608</td>
<td>Healthcare Systems &amp; Economics</td>
<td>3</td>
</tr>
<tr>
<td>652</td>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>725</td>
<td>Leadership &amp; Health Policy for the Doctorally Prepared Nurse</td>
<td>3</td>
</tr>
<tr>
<td>743</td>
<td>Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>744</td>
<td>Synthesis &amp; Evaluation of EBP</td>
<td>3</td>
</tr>
<tr>
<td>745</td>
<td>Health Information Technology</td>
<td>3</td>
</tr>
<tr>
<td>746</td>
<td>Program Development</td>
<td>3</td>
</tr>
<tr>
<td>747</td>
<td>Finance Management in Healthcare Delivery</td>
<td>2</td>
</tr>
<tr>
<td>748</td>
<td>Transformational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>750</td>
<td>DNP Project I</td>
<td>3</td>
</tr>
<tr>
<td>751</td>
<td>DNP Project II</td>
<td>3</td>
</tr>
</tbody>
</table>
Faculty

Said Abusalem  
Assistant Professor
Paulette Adams  
Emerita
Fawwaz Alaloul  
Assistant Professor
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Associate Professor
Becky Christian  
Professor
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Associate Professor
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Emerita
Tim Crawford  
Assistant Professor
Linda Freeman  
Emerita
Lynne Hall  
Professor
Associate Dean for Research
Muna Hammash  
Assistant Professor
Carla Hermann  
Professor
Marcia Hern  
Professor
Vicki Hines-Martin  
Professor
Dean
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Disparities and Community Engagement
Marianne Hutti  
Professor
Carlee Lehna  
Associate Professor
M. Cynthia Logsdon  
Professor
Rosalie Mainous  
Emerita
Valerie McCarthy  
Assistant Professor
Cynthia McCurren  
Emerita
Whitney Nash  
Associate Professor
Director of Practice and International Affairs
Barbara Polivka  
Professor
S. Lee Ridner  
Associate Professor
Associate Dean of Graduate Programs
Professor
Emerita
Professor
Emerita
Emerita
Professor
Emerita
Emerita
Emerita
Emerita
Emerita
Associate Professor
Associate Professor
Associate Dean for Undergraduate Programs
Associate Professor
Doctor of Philosophy in Nursing

Major: NURS  
Degree Awarded: Ph.D.  
Unit: GN  
Program Webpage: http://louisville.edu/nursing/phd

Program Information

The Doctor of Philosophy in Nursing is designed to prepare nurse scientists to assume a variety of roles in education, research, leadership and health policy. The program prepares 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. BSN to PhD students 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 doctoral coursework.

The Ph.D. in Nursing consists of at least 55 credit hours of coursework beyond the baccalaureate degree or 40 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

Application deadline for fall semester admission is January 15th. Completed applications received after the January 15th deadline may be considered on a space available basis.

Submit the following items to:
I. School of Interdisciplinary and Graduate Studies, Graduate Admissions, University of Louisville, Louisville, KY 40292

1. University of Louisville Graduate Application and application fee (Online submission is preferred. Complete online at http://louisville.edu/graduate/apply)  
The online version of the Graduate Application lists codes for the Nursing Ph.D. program. If you are submitting a hard copy application form, please use the following codes:  
NURSPHDMSN- for students who have completed Master's of Nursing degrees  
NURSPHDBSN- for students who have completed only the Bachelor of Science in Nursing Degrees.

2. Transcripts  
   • If B.S.N. applicant: Official transcripts representing all college course work with an undergraduate cumulative grade point average of at least 3.0 on a 4.0 scale. Must verify completion of an accredited baccalaureate program in nursing. A bachelor's degree must be earned from a regionally accredited institution.
If M.S.N. applicant: Official transcripts representing all college course work with a graduate cumulative grade point average of at least 3.25 on a 4.0 scale. Must verify completion of an accredited master's program in nursing.
If a B.S.N. applicant, B.S.N. program must have been accredited by CCNE or NLN.
If a M.S.N. applicant, M.S.N program must have been accredited by CCNE or NLN.

3. Graduate Record Examination (GRE) scores
Successful candidates generally have a combined Verbal and Quantitative score of 1100 or higher, and an Analytical score of 4.0 or higher. Recommended scores on the revised GRE test format and scoring that took effect August 2011 are 156 verbal, 146 quantitative and 4 on the analytical writing score.

4. TOEFL Examination
Foreign student applicants must review the Graduate Catalog TOEFL requirement guidelines. TOEFL scores required in the School of Nursing are:
- Computer-based test minimum score of 220; Written Essay score of 4.0
- Paper-based test minimum score of 560; Written Essay score of 4.0
- Internet based test minimum score of 79; Written Essay score of 4.0

5. 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 School of Interdisciplinary and Graduate Studies recommendation form (available online at: http://louisville.edu/graduate/apply) Recommendation forms must have been completed within the last year.

6. A current curriculum vitae or resume. Include nursing license number on resume. International students need to be licensed as registered nurses in their country of origin, if licensure is available. If direct patient care activities are provided, a Kentucky RN licensure prior to December in their first year of study must be obtained.

7. A written statement of career goals, area(s) of expertise, research interest, and reasons for pursuing doctoral studies. Maximum three pages; double spaced; 12 point font.

Submit the following items to:
II. Office of Student Services, School of Nursing, University of Louisville, Louisville, KY 40292

1. School of Nursing Legal Questionnaire available at http://louisville.edu/nursing
2. Personal interview with School of Nursing faculty will be required.

3. Criminal Background Check required. Information is available on web-site and through the School of Nursing, Office of Student Services.

Applicants accepted into the M.S.N.-Ph.D. program are strongly advised to have completed a three credit masters level statistics course (applied descriptive and inferential statistics) with a grade of B (3.0) or higher within five years before the date of enrollment. Applicants who 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.
Assistantships

A Ph.D. Graduate Student Assistantship is a financial award to a full-time Ph.D. student for the period of one year. To be eligible for the award the student must be admitted to the Ph.D. degree program or be a continuing Ph.D. student. For the full year, the award includes tuition, health insurance, and a monthly stipend. 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 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. Assistantship support is limited to a maximum of five years for B.S.N.-Ph.D. students and four years for M.S.N.-Ph.D. students.

Policies

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 completed 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.

Repeating Nursing Courses

Students who receive a grade of C+ or below in a required 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 received 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. The student may be allowed to repeat the course on a space available basis.

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.

Clinical Compliance Requirements

Students will receive a copy of the Clinical Health Requirements at new student Orientation. Details are also provided in the School of Nursing Ph.D. Student Handbook. Students must turn in all requirements prior to enrolling in any research methods course at the doctoral level. Noncompliance with any health or clinical requirement may preclude the student from participating in courses/research and/or be grounds for dismissal.

Curriculum

Ph.D. in Nursing: Required Courses

B.S.N. Students will complete 15 credit hours of required masters level courses.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 605 Foundations for Advanced Practice</td>
<td>3</td>
</tr>
<tr>
<td>NURS 607 Research and Evidence Based Practice</td>
<td>3</td>
</tr>
<tr>
<td>NURS 608 Economic &amp; Info. Mgt. in Complex Health Care Systems OR</td>
<td>3</td>
</tr>
<tr>
<td>NURS 741 Advanced Pathophysiology, 4 credits</td>
<td></td>
</tr>
<tr>
<td>NURS 652 Statistics OR equivalent</td>
<td></td>
</tr>
<tr>
<td>NURS 657 Clinical Prevention and Population Health</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credit Hours: 15

B.S.N. and M.S.N. Students will complete the following required doctoral level courses, qualifying exam and dissertation:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 700 Theoretical Basis of Nursing</td>
<td>3</td>
</tr>
<tr>
<td>NURS 702 Philosophy of Science</td>
<td>3</td>
</tr>
<tr>
<td>NURS 710 Research Methods I: Qualitative Research Methods</td>
<td>3</td>
</tr>
<tr>
<td>NURS 711 Research Methods II: Quantitative Design</td>
<td>3</td>
</tr>
<tr>
<td>NURS 712 Research Methods III: Nursing Measurement</td>
<td>3</td>
</tr>
<tr>
<td>NURS 714 Research Methods IV: Analysis of Existing Data</td>
<td>3</td>
</tr>
<tr>
<td>NURS 725 Leadership and Health Policy for the Nurse Scientist</td>
<td>3</td>
</tr>
<tr>
<td>NURS 735 PhD Seminar I</td>
<td>1</td>
</tr>
<tr>
<td>NURS 736 PhD Seminar II</td>
<td>1</td>
</tr>
<tr>
<td>NURS 737 PhD Seminar III</td>
<td>1</td>
</tr>
<tr>
<td>NURS 738 PhD Seminar IV</td>
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</tr>
<tr>
<td>Advanced Statistics Courses</td>
<td>6</td>
</tr>
<tr>
<td>Three Cognates</td>
<td>9</td>
</tr>
<tr>
<td>DOCT 600 Doctoral Candidacy **</td>
<td>2</td>
</tr>
</tbody>
</table>

**Prerequisite: Completion of course work and successful completion of qualifying exam.
Faculty

Said Abusalem  
Assistant Professor

Paulette Adams  
Emerita

Fawwaz Alaloul  
Assistant Professor

Catherine Batscha  
Assistant Professor

Diane Chlebowy  
Associate Professor

Becky Christian  
Professor

Mary Beth Coty  
Associate Professor

Ruth B. Craddock  
Emerita

Tim Crawford  
Assistant Professor

Linda Freeman  
Emerita

Lynne Hall  
Professor

Associate Dean for Research

Muna Hammad  
Assistant Professor

Carla Hermann  
Professor

Marcia Hern  
Professor

Vicki Hines-Martin  
Professor

Director of Office of Health

Disparities and Community Engagement

Marianne Hutti  
Professor

Carlee Lehna  
Associate Professor

M. Cynthia Logsdon  
Emerita

Rosalie Mainous  
Emerita

Valerie McCarthy  
Assistant Professor

Cynthia McCurren  
Emerita

Whitney Nash  
Associate Professor

Director of Practice and International Affairs

Barbara Polivka  
Professor

S. Lee Kidner  
Associate Professor

Associate Dean of Graduate Programs

Kay Roberts  
Emerita

Sara Robertson  
Assistant Professor

Karen Robinson  
Professor

Celeste Shawler  
Associate Professor

Sandra Smith  
Associate Professor

Barbara Speck  
Emerita

Ruth Staten  
Associate Professor

Associate Dean for Undergraduate Programs

Deborah V. Thomas  
Associate Professor
Graduate Certificate in Clinical Investigation Sciences

Major: CISCCCI
Degree Awarded: CERT
Unit: GH
Program Webpage: http://louisville.edu/sphis/academics/clinical-investigation-sciences

Program Information

Introduction

The Certificate in Clinical Investigation Sciences is offered by the School of Public Health and Information Sciences. It requires completion of 18 hours of credit.

The Certificate in Clinical Investigation Sciences provides individuals with skills required for a career in a clinical research setting. The curriculum integrates biostatistical and epidemiologic methods. Students pursuing the Certificate take didactic courses while they engage in mentored and independent research that culminates in the preparation of a research paper.

Competencies

The successful student is able to:

- Access and critique the scientific literature.
- Address and discuss methods and issues of clinical epidemiology.
- Identify important clinical research questions and state as testable hypotheses.
- Apply the principles of data collection, monitoring, management and analysis within the context of a multidisciplinary team.
- Analyze human subject issues and apply ethical principles in performing and disseminating clinical research.

It is expected that prior to graduation, students in the program have demonstrated these competencies by completing the curriculum, participating in a collaborative research project, and successfully writing the professional paper.

Admission

Applicants must have completed a baccalaureate degree from an accredited institution with a minimum of 3.0 GPA on a 4.0 scale. Applicants with research experience (e.g. research coordinator) or have completed a professional degree (e.g. DMD, DO, MD) are preferred.

Application requirements are submitted to the Graduate School Office of Admissions and include:

- Formal application
- Curriculum vitae
- Personal statement, a one-page essay that discusses the student’s background and his or her long-term goals in clinical research
- Application fee
- A minimum of two letters of recommendation
- Official transcripts of all postsecondary coursework
- Official scores on the Graduate Record Examination (GRE) General Test (if applicant does not have a doctoral degree)

For specific information about the degree program or the application process, students should contact Dr. Jack Barnette, Interim Program Director, (502) 852-8674. The application for the M.Sc. is found at: http://louisville.edu/graduate/futurestudents/apply-materials/application

**Curriculum**

The typical progression through the Certificate curriculum is:

- Required Coursework (17 credit hours)
- Complete research paper (1 credit hour)

**Advisor/Program of Study**

Upon matriculation in the program, each student will meet with the MSc Program Coordinator and develop a program of study based on the selections 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
1 credit hour of mentored research

Following are the Required Courses for the Certificate in Clinical Investigation Sciences:

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHST 624</td>
<td>Clinical Trials I</td>
<td>2</td>
</tr>
<tr>
<td>PHST 500</td>
<td>Introduction to Biostatistics for Public Health I</td>
<td>3</td>
</tr>
<tr>
<td>PHST 501</td>
<td>Introduction to Biostatistics for Public Health II</td>
<td>3</td>
</tr>
<tr>
<td>PHST 631</td>
<td>Data Collection for Clinical Research</td>
<td>2</td>
</tr>
<tr>
<td>PHPH 601</td>
<td>Evaluating Health Care Literature</td>
<td>1</td>
</tr>
<tr>
<td>PHPH 632</td>
<td>Ethical Conduct of Research</td>
<td>2</td>
</tr>
<tr>
<td>PHST 625</td>
<td>Clinical Trials II</td>
<td>2</td>
</tr>
<tr>
<td>PHEP 614</td>
<td>Introduction to Clinical Epidemiology</td>
<td>2</td>
</tr>
<tr>
<td>PHPH 699</td>
<td>Mentored Research</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>**</td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

*PHPH-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.

**Faculty**

**Jack Barnette**  
*Professor*  
Interim Program Director  
Associate Dean
Master of Science in Biostatistics

Major: BDSCMSBIO  
Degree Awarded: MS  
Unit: GH  
Program Webpage: http://louisville.edu/sphis/bb/academics

Program Information

Introduction

Biostatistics involves the development and application of statistical techniques to scientific research in health-related fields including medicine, nursing, and public health. Students in the M.S. program receive state-of-the-art training in the latest statistical methodologies with focus on the design of research studies, modern statistical data analysis in health sciences research, and research in Biostatistical methodology. In addition, students are provided with tools with which to develop evidence-based clinical and healthcare policies and guidelines.

Competencies

To graduate, a student must be able to demonstrate mastery of the following competencies:

Competency*
1. Evaluate the biostatistics content of scientific and biomedical journal articles. [C6]
2. Analyze moderately complex research data using statistical methods involving common linear statistical models. [C4]
3. Manage data using spreadsheet and database software. [C3]
4. Demonstrate use of standard statistical and graphics computer packages, including SAS, R, Microsoft Excel, and SPSS. [C3]
5. Evaluate new statistical methods presented in the literature. [C6]
6. Investigate the history, theoretic underpinnings, current applications, and active areas of inquiry of biostatistics. [C4]
7. Apply principles and theorems of advanced biostatistical operations. [C3]

* Bracketed codes represent cognitive domain levels from Bloom’s Taxonomy

Demonstration of the competencies is accomplished by successful completion of all M.S. curriculum activities.

Admission

The M.S. program is available to students who have completed an undergraduate degree in biostatistics, statistics, mathematics, or a related discipline and possess competency in college-level calculus, linear algebra, and statistics, as evidenced by transcripts from postsecondary institutions attended. The following are required for admission:

- Graduate application 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, submitted as part of the graduate application.
• Submission of GRE scores to SIGS. Applicants are required to score in the 60th percentile on the Quantitative test to be admitted.
• All postsecondary transcripts. Transcripts from institutions outside of the U.S.A. require a foreign credential evaluation.
• A statement of purpose submitted to the department office, which must include desired degree program.
• If an applicant’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 university in the U.S.A.

Curriculum

Faculty Advisor

Upon admission to the MS program, the program director serves as the student’s faculty advisor until a mentor for the student’s project or thesis is identified. At this milestone, the mentor becomes the student’s faculty advisor.

Program of Study

Upon admission to the MS program, the program director, working with the student as faculty advisor, develops a program of study for the student, which requires agreement by the student and the academic dean. Changes to a student’s program of study, including coursework, milestones, and their anticipated timings, are made by the student’s faculty advisor, working with the student, and formally signed by the student, the faculty advisor, the program director, and, for selected changes, the academic dean. This flexibility allows adapting programs of study to differing student then current capabilities and interests.

Degree Requirements

The MS program in biostatistics is 30 credit hours over three semesters for full-time students. Additional credit hours may be needed for remediation of missing or lacking student capabilities encountered following matriculation or for capabilities outside the standard coursework required for an identified project or thesis.

A student may apply to continue beyond the required coursework to pursue the preparation and defense of a six credit-hour master’s thesis in an additional semester. The optional thesis requires permission of the program director and is available for those students intending to pursue a Ph.D. degree or wanting to pursue a research project that interests them. However, a master’s thesis is not a requirement for the degree. A student who pursues a thesis and subsequently does not successfully complete the thesis remains eligible for award of degree.

Award of degree from an accredited school of public health requires successful completion of the equivalent of three credit hours in:
- Instruction that introduces the students to the breadth of public health
- Instruction in epidemiology

Either or both of these requirements may be determined to have been met prior to matriculation by approval of the academic dean of a variance request submitted by the program director. The request for a variance in one or both requirements must be justified by (1) previous degrees received, such as an MPH or Dr.P.H., (2) previous coursework successfully completed, or (3) extensive experience in the public health workforce. In the absence of a variance for a requirement, the student’s program of study must include successfully completed coursework that satisfies the requirement.

For the MS in Biostatistics, the epidemiology requirement is met by the epidemiology elective included in the required coursework. However, the public health foundation requirement is not included in the required coursework and, in the absence of a variance, is met by including PHMS-523 Public Health in the U.S. on a co-curricular basis prior to graduation.

Coursework

**Fall 1**

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHST 661</td>
<td>Probability</td>
<td>3</td>
</tr>
<tr>
<td>PHST 680</td>
<td>Biostatistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td>PHST 624</td>
<td>Clinical Trials I</td>
<td>2</td>
</tr>
<tr>
<td>PHMS 523</td>
<td>Public Health in the U.S.(^1)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
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</table>

**Spring 1**

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHST 662</td>
<td>Mathematical Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHST 681</td>
<td>Biostatistical Methods II</td>
<td>3</td>
</tr>
<tr>
<td>PHST 684</td>
<td>Categorical Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHST 625</td>
<td>Clinical Trials II</td>
<td>2</td>
</tr>
<tr>
<td><strong>Semester Total</strong></td>
<td></td>
<td><strong>11</strong></td>
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</table>

**Fall 2**

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHST 683</td>
<td>Survival Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHST xxx</td>
<td>Biostatistics Elective(^2)</td>
<td>3</td>
</tr>
<tr>
<td>PHEP xxx</td>
<td>Epidemiology Elective(^3)</td>
<td>3</td>
</tr>
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<td>PHST 675</td>
<td>Independent Study in Biostatistics</td>
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<td><strong>Semester Total</strong></td>
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<td><strong>Degree Total</strong></td>
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</table>

**Spring 2**

<table>
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<tr>
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<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PHST 666</td>
<td>Master’s Thesis Research (optional)</td>
<td>6</td>
</tr>
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<td><strong>Total</strong></td>
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</tr>
<tr>
<td><strong>Degree Total with Optional Thesis</strong></td>
<td></td>
<td><strong>36</strong></td>
</tr>
</tbody>
</table>

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1. PHMS 523 fulfills the accreditation requirement that all graduates from the School of Public Health and Information Science receive foundational instruction in public health
2. The biostatistics elective is chosen with the approval of a faculty advisor, typically from courses offered by the Department of Bioinformatics and Biostatistics (PHST courses)
3. The epidemiology elective is chosen with the approval of a faculty advisor from courses offered by the Department of Epidemiology and Population Health (PHEP courses)

Students in the 3-semester, non-thesis M.S. fulfill their degree requirements after the Fall semester of the second year of study.

Optional Thesis

A student may apply to pursue preparation and defense of a master’s thesis following completion of the required coursework. Pursuing an optional thesis requires permission of the program director. The thesis topic is approved by the major professor and thesis committee, chaired by the major professor. The student identifies a desired mentor to become his or her major professor, who is recommended by the program director and appointed by the academic dean. Following appointment, the major professor becomes the student’s faculty advisor. Procedures for the thesis are given below.

Thesis Committee

Working with the major professor, the student identifies at least two or more desired committee members. Including the major professor, at least two members of the committee are faculty in the Department of Bioinformatics and Biostatistics and at least one member is from outside the department. The committee members are recommended by the program director and appointed by the academic dean.

Thesis Preparation

The thesis is prepared in format and binding according to the guidelines established by the School of Interdisciplinary and Graduate Studies.

Thesis Approval

The thesis is submitted in completed form to the chair of the thesis committee at least fifteen working days before the last day of classes for the term in which the candidate expects to graduate. The candidate is not eligible for the final oral examination until the thesis has been accepted by the committee.

The thesis committee schedules an oral examination of the candidate, to which all faculty and students of the department are invited. The oral examination is scheduled at the convenience of the members of the thesis committee. Approval of the thesis is by majority vote of the committee.

Thesis Submission

The following steps must be taken to submit the final copy of the thesis electronically after oral defense and approval of the committee:
1. Final document must be converted to a PDF (following the guidelines as noted above) and sent to the School of Interdisciplinary and Graduate Studies and the department’s administrative assistant.
2. Submit as advised by the School of Interdisciplinary and Graduate Studies through the ThinkIR repository. Click here to download instructions on this process.
3. The signature page within the electronic version must have the names of your committee members typed under the signature line; the signatures cannot be scanned into the document.
4. Submit a signed signature page on white paper, with original signatures, to the School of Interdisciplinary and Graduate Studies, attention Courtney Kerr.

A copy of the final, signed thesis must also be deposited with the department office.

**Faculty**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack Barnette</td>
<td>Professor</td>
</tr>
<tr>
<td></td>
<td>Associate Dean</td>
</tr>
<tr>
<td>Guy Brock</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Jeremy Gaskins</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Maiying Kong</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>K.B. Kulasekera</td>
<td>Professor and Chair</td>
</tr>
<tr>
<td>Doug Lorenz</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Riten Mitra</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Shesh Rai</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Dongfeng Wu</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Qi Zheng</td>
<td>Assistant Professor</td>
</tr>
</tbody>
</table>

Wendell Cherry
Chair in Clinical Trial Research
Master of Science in Clinical Investigation Sciences

Major: CISCMSC
Degree Awarded: MSc.
Unit: GH
Program Webpage: http://louisville.edu/sphis/academics/clinical-investigation-sciences

Program Information

Introduction

The MSc in Clinical Investigation Sciences is offered by the School of Public Health and Information Sciences. The MSc can be pursued in combination with the M.D. degree from the School of Medicine.

The MSc 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 MSc CISC curriculum integrates biostatistical and epidemiologic methods in a problem-based learning format with additional instruction in several other biomedical and public health topics. 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.

Competencies

The successful student is able to:

- Access and critique the scientific literature.
- Address and discuss methods and issues of clinical epidemiology.
- Identify important clinical research questions and state as testable hypotheses.
- Develop collaborative clinical research studies in accordance with appropriate epidemiologic and biostatistical methodologies.
- Apply the principles of data collection, monitoring, management and analysis within the context of a multidisciplinary team.
- Disseminate study results to professional and lay audiences through oral and written communication.
- Analyze human subjects’ issues and apply ethical principles in performing and disseminating clinical research.
- Discuss and respond to the legal issues in new drug and device development.

It is expected that prior to graduation, students in the program have demonstrated these competencies by completing the curriculum, participating in a collaborative research project, and successfully writing and defending the professional paper.
Admission

Applicants must have completed a baccalaureate degree from an accredited institution with a minimum GPA of 3.0 on a 4.0 scale. Applicants with research experience (e.g. research coordinator) or have completed a professional doctoral degree (e.g., DMD, DO, MD) are preferred.

Application requirements are submitted to the School of Interdisciplinary and Graduate Studies Office of Admissions and include:

- Formal application
- Curriculum vitae
- Personal statement, a one-page essay that discusses the student’s background and his or her long-term goals in clinical research
- Application fee
- A minimum of two letters of recommendation
- Official transcripts of all postsecondary coursework
- Official scores on the Graduate Record Examination (GRE) General Test (if applicant does not have a doctoral degree)

For specific information about the degree program or the application process, students should contact Dr. Jack Barnette, Interim Program Director, (502)852-8674. The application for the MSc is found at: http://louisville.edu/graduate/apply

Curriculum

The MSc curriculum has been designed in such a way that a fulltime student could complete the degree in one Calendar year. However, it is expected that many students will take longer than one year to complete the MSc.

The typical progression through the MSc curriculum is:

- Develop program of study
- Take coursework
- Select research project and begin work
- Do research project and prepare professional paper
- Present and defend research project

Faculty Advisor

The program director serves as faculty advisor for each student until the student begins his or her research for the professional paper, at which time the student selects a Principle Advisor for his or her research with the approval of the program director. The Principle Advisor may be any member of the School’s faculty, or (with approval of the program director) a mentor in the student’s laboratory or employment affiliation that is willing to assume the function of faculty advisor.
Program of Study

Upon matriculation in the program, each student meets with the program coordinator and develops a program of study based on the student’s time availability (e.g., typical two-year program or extended three-year program). The program of study may be modified as the student’s needs change or course availability is altered.

Award of degree from an accredited school of public health requires successful completion of the equivalent of three (3) semester credit hours in each of:

- Instruction that provides a broad overview of public health
- Instruction in epidemiology

Either or both of these requirements may be determined to have been met prior to matriculation by approval of the academic dean of a variance request submitted by the program director. The request for a variance in one or both requirements must be justified by one of: previous degrees received, such as an MPH. or DrPH; previous coursework successfully completed; or extensive experience in the public health workforce. In the absence of a variance for a requirement, the coursework included in the MSc program satisfies both requirements.

Degree Requirements

Coursework

31 total credit hours of required coursework
19 credit hours of required coursework
9 credit hours of elective coursework
3 credit hours of mentored research

Recommended Two-year Plan

<table>
<thead>
<tr>
<th>Required Coursework</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>Course #</td>
<td></td>
</tr>
<tr>
<td>Fall I</td>
<td>PHST-500</td>
<td>Introduction to Biostatistics for Public Health I</td>
</tr>
<tr>
<td>Fall I</td>
<td>PHMS-523</td>
<td>Public Health in the U.S.*</td>
</tr>
<tr>
<td>Fall I</td>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Spring I</td>
<td>PHPH-601</td>
<td>Evaluating Health Care Literature</td>
</tr>
<tr>
<td>Spring I</td>
<td>PHST-501</td>
<td>Introduction to Biostatistics for Public Health II</td>
</tr>
<tr>
<td>Spring I</td>
<td>PHEP-614</td>
<td>Introduction to Clinical Epidemiology</td>
</tr>
<tr>
<td>Spring I</td>
<td>Elective</td>
<td></td>
</tr>
<tr>
<td>Semester Total</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Fall II</td>
<td>PHST-631</td>
<td>Data Collection for Clinical Research</td>
</tr>
<tr>
<td>Fall II</td>
<td>PHST-624</td>
<td>Clinical Trials I</td>
</tr>
<tr>
<td>Fall II</td>
<td>Elective</td>
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<td>Semester Total</td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Spring II</td>
<td>PHST-625</td>
<td>Clinical Trials II</td>
</tr>
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<td></td>
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</tr>
</tbody>
</table>
### Required Coursework

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PHPH-632</td>
<td>Ethical Conduct of Research</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>PHPH-699</td>
<td>Mentored Research</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Semester Total

| Degree Total | 31 |

#### Electives:

Nine hours of electives from the following (other courses on approval of program advisor)

<table>
<thead>
<tr>
<th>Offered</th>
<th>Semester</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHST-XXX</td>
<td>Advanced Coursework in Biostatistics</td>
<td>Variable</td>
</tr>
<tr>
<td>PHEP-XXX</td>
<td>Advanced Coursework in Epidemiology</td>
<td>Variable</td>
</tr>
<tr>
<td>PHPB-604</td>
<td>Health Decision Risk Analysis</td>
<td>Spring 3</td>
</tr>
<tr>
<td>PHPB-501</td>
<td>Introduction to Health Behavior</td>
<td>Fall 2</td>
</tr>
<tr>
<td>PHPH-610</td>
<td>New Drug and Device Development</td>
<td>Fall 2</td>
</tr>
<tr>
<td>ENGL-599</td>
<td>Advanced Academic Writing Across Disciplines</td>
<td>Spring 3</td>
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<tr>
<td>CECS-536</td>
<td>Data Management and Analysis</td>
<td>Fall 3</td>
</tr>
<tr>
<td>SOC-618</td>
<td>Qualitative Field Research Methods</td>
<td>Spring 3</td>
</tr>
</tbody>
</table>

* PHMS-523 is required of students who do not have a broad exposure to public health through experience or coursework. It is offered only in the Fall. Any student who waives out of the course must replace the two semester hours with elective coursework.

The following includes all required courses organized by the semester in which they are offered. Course scheduling does allow for the possibility of completing the degree in one year for a full-time student.

### Course Offerings by Semester

#### Required Coursework

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>PHPH-632</td>
<td>Ethical Conduct of Research</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>PHPH-699</td>
<td>Mentored Research</td>
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</tr>
<tr>
<td></td>
<td>PHST-624</td>
<td>Clinical Trials I</td>
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<td></td>
<td>PHST-500</td>
<td>Introduction to Biostatistics for Public Health I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHST-631</td>
<td>Data Collection for Clinical Research Elective(s)</td>
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</tr>
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<td></td>
<td>PHST-625</td>
<td>Clinical Trials II</td>
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<tr>
<td></td>
<td>PHST-501</td>
<td>Introduction to Biostatistics for Public Health II</td>
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<td></td>
<td>PHEP-614</td>
<td>Introduction to Clinical Epidemiology Elective(s)</td>
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<td></td>
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<td>Semester Total</td>
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</table>
**Required Coursework**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Degree Total</strong> 31</td>
</tr>
</tbody>
</table>

Professional Paper

A 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.* PHMS-523 is required of students who do not have a broad exposure to public health through experience or coursework. It is offered only in the Fall. Any student who waives out of the course must replace the two credit hours with elective coursework.

Professional Paper Committee

The professional paper is read by a reading committee, chaired by the student’s faculty advisor, and appointed by the dean of the school upon the recommendation of the program director. This committee consists of three members, and must include one representative of the School of Public Health and Information Sciences. The professional paper must be approved by the committee and the program director.

Professional Paper Proposal

The proposal for the professional paper is to be developed in written form and presented to the committee for approval.

Professional Paper Approval

The professional paper is to be submitted in completed form to the Principle Advisor of the committee at least fourteen days before the end of the term in which the candidate expects to be graduated, and the candidate is not eligible for the final oral examination until the professional paper has been accepted by the committee.

The committee schedules an oral examination of the candidate during which the student presents his or her professional paper and is asked to defend it and the supporting research. The professional paper is approved by a majority vote of the committee and by the program director.

**Faculty**

**Jack Barnette**  
*Professor*  
Interim Program Director  
Associate Dean
Master of Science in Epidemiology

Major: EPIDMSE  
Degree Awarded: MS  
Unit: GH  
Program Webpage: http://louisville.edu/sphis/departments/epidemiology-population-health

Program Information

Introduction

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.

Competencies

To graduate, students in the M.S. program in Epidemiology must maintain a GPA of 3.0 or higher and demonstrate the following competencies:

1. Mastery of the principles of epidemiologic, observational study design, including:
   - The merits and limitations of cross-sectional, retrospective and prospective designs
   - Methods of disease surveillance and case ascertainment
   - Methods of population-based sampling
   - Sample size and statistical power calculation
   - Issues in the measurement of exposure and disease transmission
   - Identification and correct interpretation of potential biases in study design
   - Knowledge of the socioeconomic and geographic distribution, risk factors, and etiology of major acute, infectious and chronic morbidity and mortality.

2. Mastery of basic methods of analysis of epidemiologic data, including:
   - Measures of disease frequency, prevalence and incidence
   - Methods for adjusting rates for age, gender, etc.
   - Measures of association, odds ratio, relative risk
   - Control of confounding and effect modification through stratification and statistical control
   - Modeling in multiple logistic regression
   - Principles of survival analysis
   - Correct interpretation of results with regard to issues of error, bias and criteria for causality
These competencies are demonstrated through the successful completion of the coursework and the design, execution, documentation, and presentation of the research for the student’s thesis.

Admission

Students with a prior baccalaureate or more advanced degree in an appropriate field of study, from a regionally accredited university or college are 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, and/or microbiology) is strongly recommended. Applicants who are judged to not have sufficient prior coursework or experience in these areas may be required to take additional coursework.

The following are additionally required for admission:

- Undergraduate GPA at least 3.0 on 4.0 scale
- 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.
- If applicable, Test of English as a Foreign Language (TOEFL) score in at least 60th percentile.

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:

14 credit hours of required coursework
15 credit hours of elective coursework
9 credit hours of thesis research

### Required Coursework

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall I</td>
<td>PHEP-618</td>
<td>Epidemiologic Methods II</td>
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</tr>
<tr>
<td></td>
<td>PHEP-622</td>
<td>Population Pathology</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHEP-648</td>
<td>Data Management and Analysis for Epidemiology I</td>
<td>1</td>
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<tr>
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<td>PHEP-702</td>
<td>Epidemiologic Research Management I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHEP-701</td>
<td>Advanced Epidemiologic Methods</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHEP-649</td>
<td>Data Management and Analysis for Epidemiology II</td>
<td>1</td>
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<td>PHxx-xxx</td>
<td>Elective course</td>
<td>3</td>
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<td></td>
<td>Semester Total</td>
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<td>10</td>
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<tr>
<td>Fall II</td>
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</tr>
<tr>
<td></td>
<td>PHxx-xxx</td>
<td>Elective course</td>
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<tr>
<td></td>
<td>PHEP-666</td>
<td>Thesis Research in Epidemiology</td>
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<td>Semester Total</td>
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<td>9</td>
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<tr>
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<td>Elective course</td>
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<tr>
<td></td>
<td>PHEP-666</td>
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<td>6</td>
</tr>
<tr>
<td></td>
<td>Semester Total</td>
<td></td>
<td>9</td>
</tr>
</tbody>
</table>

**Degree Total**  38

### Electives

Program requirements include five elective courses, of which at least one is in epidemiology (PHEP) and each of the remaining four in public health (PHxx). All epidemiology courses above PHEP-602 are pre-approved. All courses offered by other departments and programs in the school are also pre-approved elective courses in public health. Elective courses in epidemiology and biostatistics (PHST) are strongly encouraged.

Students may petition to take elective courses that are not pre-approved with approval of the student’s faculty advisor and the program director or chair of the department or designee.

Selection of electives is done by the student and his or her faculty advisor with approval of the program director or chair of the department.

Elective courses may require prerequisites or permission of the course instructor.

### 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.

**Thesis Committee**

The thesis is read by a reading committee, chaired by the student’s faculty advisor, and appointed by the dean of the school upon the recommendation of the chair of the department. This committee consists of three members and must include one representative of an allied department. The thesis must be approved by the committee and the chair of the department.

**Thesis Proposal**

The thesis proposal is to be developed in written form and presented to the thesis committee for approval. The thesis topic is to be one or more of the following:

- Critical review of the contemporary epidemiologic literature on a specific disease, risk factor, or health related condition.
- Meta-analysis of results from several epidemiologic studies of a specific disease.
- Research report on analysis of collected data.
- Evaluation of epidemiologic statistical methodology.

**Thesis Preparation**

The thesis is to be prepared in format and binding according to the guidelines established by the School of Interdisciplinary and Graduate Studies, available at [http://louisville.edu/graduate/current-students/thesis-dissertation-information](http://louisville.edu/graduate/current-students/thesis-dissertation-information).

**Thesis Approval**

The thesis is to be submitted in completed form to the chair of the thesis committee 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 the final oral examination until the thesis has been accepted by the committee.

The thesis committee schedules an oral examination of the candidate. The thesis is approved by a majority vote of the committee.

**Thesis Submission**

The following steps must be taken to submit the final copy of the thesis electronically after oral defense and approval of the committee:

1. Final document must be converted to a PDF (following the guidelines as noted above) and sent to SIGS and the department’s administrative assistant.
2. Submit as advised by the School of Interdisciplinary and Graduate Studies through the ThinkIR repository.
3. The signature page within the electronic version must have the names of your committee members typed under the signature line; the signatures cannot be scanned into the document.

4. Submit a signed signature page on white paper, with original signatures, to the School of Interdisciplinary and Graduate Studies, attention Courtney Kerr.

A copy of the final, signed thesis must also be deposited with the department office.

Faculty

Kathy B. Baumgartner
Professor and Associate Dean

Richard N. Baumgartner
Professor and Chair

Frank Groves
Associate Professor

Richard Kerber
Associate Professor

Kira Taylor
Assistant Professor

Anne B. Wallis
Assistant Professor

Dongyan Yang
Assistant Professor

Kristina Zierold
Associate Professor
Master of Public Health

Major: PH MPH
Degree Awarded: MPH
Unit: GH

Program Information

Introduction

The Master of Public Health (MPH) degree program is designed to graduate students with skills in the core competencies in public health and additional competencies in one of the following concentrations: biostatistics, environmental and occupational health, epidemiology, health management or health promotion and behavior.

Graduates of the MPH program are prepared for positions in the public health work force, in health-related industries, and in academic organizations and for further professional or academic education.

Competencies

The MPH program has adopted a targeted subset of the competencies published by the Association of Schools of Public Health. (ASPH Education Committee. “Master’s Degree in Public Health Core Competency Development Project, Version 2.3.” http://www.asph.org/userfiles/version2.3.pdf.)

The learning objectives for each course in the MPH curriculum are mapped to these targeted ASPH competencies.

Admission

The ideal candidate for admission to the MPH program has received the equivalent of a bachelor’s degree or higher, 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 on one or more standardized test, and is 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 90 (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)

Applicants must apply through the Centralized Application Service for Public Health (SOPHAS) at WWW.SOPHAS.org.

Students graduating from the University of Louisville and planning to attend the SPHIS MPH program can apply directly to the SPHIS.

An application is considered after the following requirements have been received:

- Three letters of recommendation written within the last twelve months.
- Official transcripts of all degrees.
- One-page personal statement written by the applicant that is a clear, substantive description of his or her goals in public health, noting any professional or research experience.
- Official score from any of the following standardized tests: GRE, MCAT, DAT, GMAT, or LSAT.
- International applicants: Foreign credential evaluation of all degrees from non-U.S. institutions. Please contact the MPH program prior to completing this requirement.

For information on the application process, please contact:

MPH Program
School of Public Health and Information Sciences
University of Louisville
485 East Gray Street
Louisville, KY 40202
sphismph@louisville.edu
Phone: (502)852-3289
Fax: (502)852-3294

Concentrations

Concentrations are offered in each of the five basic areas of public health. Each concentration is designed to develop the competencies needed by a public health worker in the corresponding area.

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biostatistics</td>
<td>Bioinformatics and Biostatistics</td>
</tr>
<tr>
<td>Environmental and occupational health</td>
<td>Environmental and Occupational Health Sciences</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>Epidemiology and Population Health</td>
</tr>
<tr>
<td>Population Health management</td>
<td>Health Management and Systems Sciences</td>
</tr>
<tr>
<td>Health Policy</td>
<td>Health Management and System Sciences</td>
</tr>
<tr>
<td>Health promotion and behavior</td>
<td>Health Promotion and Behavioral Sciences</td>
</tr>
</tbody>
</table>
Requirements for acceptance to the concentrations in the MPH program are:

<table>
<thead>
<tr>
<th>Concentration</th>
<th>Concentration Acceptance Requirements</th>
</tr>
</thead>
</table>
| All                                             | • Student in good standing in MPH program  
• Successful completion of core courses  
• Minimum GPA of 3.0 in core course for targeted concentration unless otherwise noted below |

Pre-requisites:

| Environmental and Occupational Health Sciences   | • Grade of B+ or better in PHEH 500  
• Transcripts showing training in college-level biochemistry and molecular or cell biology |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Epidemiology and Population Health Sciences</td>
<td>No additional requirements</td>
</tr>
<tr>
<td>Health Management and System Sciences</td>
<td>No additional requirements</td>
</tr>
<tr>
<td>Health Promotion and Behavioral Sciences</td>
<td>No additional requirements</td>
</tr>
</tbody>
</table>
| Bioinformatics and Biostatistics                  | • Grade of B+ or above from PHST-500 Introduction to Biostatistics  
• Acceptable quantitative score from at least one of these exams: GRE (at least 50th percentile), GMAT (at least 50th percentile), or DAT (at least 16)  
• 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. |

**Curriculum**

The curriculum consists of a minimum of 44 credit hours through core courses, concentration courses in one of the five core areas of public health, completion of a practicum experience, and completion of an integrating experience. The core courses are generally completed prior to taking concentration courses, the integration experience, and the practicum. At the end of the first semester full-time students identify a concentration and apply for admission to the concentration (see Concentration Acceptance Requirements). Once admitted into a concentration, the student takes concentration courses, completes the practicum experience, and the integrating experience.

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.

After admission into a concentration, each student is assigned a faculty advisor from the Department that houses their concentration. The faculty advisor serves as academic practicum advisor, academic mentor, and counselor on career and employment opportunities, professional development, and opportunities beyond graduate school.

Degree Requirements

Requirements for the MPH degree are:

- Successful completion of core, concentration, practicum experience, and integrating experience coursework

Coursework

44 total credit hours:
- 14 credit hours of core coursework
- 4 credit hours of selected electives
- 3 credit hours of practicum experience
- 2 credit hours of integrating experience
- 21 credit hours of concentration coursework

<table>
<thead>
<tr>
<th>Required Coursework</th>
<th>Course Title (and Area, as needed)</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>Course #</td>
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<tr>
<td>Fall I</td>
<td>PHEH-500 Introduction to Environmental Health Sciences (core)</td>
<td>2</td>
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<tr>
<td></td>
<td>PHMS-501 Introduction to Public Health Practice and Administration (core)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>PHPB-501 Introduction to Health Behavior (core)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>PHEP-501 Introduction to Epidemiology (core)</td>
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<td></td>
<td>PHST-500 Introduction to Biostatistics for Public Health I (core)</td>
<td>3</td>
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<tr>
<td>Spring I</td>
<td>PHST-501 Introduction to Biostatistics for Public Health II (core)</td>
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<td></td>
<td>Concentration Course #1</td>
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<td></td>
<td>Concentration Course #2</td>
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<td></td>
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<td>Semester Total</td>
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<tr>
<td>Summer I</td>
<td>PHPH-679 Public Health Practicum Experience</td>
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<td>Semester Total</td>
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<tr>
<td>Fall II</td>
<td>Concentration course #3</td>
<td>3</td>
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<tr>
<td></td>
<td>Concentration course #4</td>
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<tr>
<td>Spring II</td>
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</table>
## Required Coursework

**Semester** | **Course #** | **Course Title (and Area, as needed)** | **Credit Hours**
--- | --- | --- | ---
Concentration course #6 |  | 3
Concentration course #7 |  | 3
PHPH-679 | Public Health Practicum Experience | 1
PHPH-697 | Integrating Learning and Experience in Public Health | 2
**Semester Total** |  | 12

### Degree Total

**44**

*Elective could be in Spring II*

### Selected Electives (4-6 credit hrs)

Within the curriculum there is a minimum of 4 and a maximum of 8 hours of electives (up to a total of 48 hrs for the MPH degree). A list of selected elective courses is published each fall and may vary from fall to fall. The number of selected elective courses is limited, and some courses may have limited enrollment sizes. Examples of selected elective courses are: geographic information systems in public health; strategic planning and program evaluation in public health; constructing, implementing, and analyzing surveys in public health; and maternal and child health. In addition, selected concentration elective courses may be included that are taken with permission of the instructor and faculty advisor.

**PHPH-679 Public Health Practicum Experience (3 credit hrs)**

The Practicum Experience places the student in a non-academic organization providing public health-related services. The practicum experience and its required deliverables must be completed to fulfill degree program requirements.

**PHPH-697 Integrating Learning and Experience in Public Health (2 credit hrs)**

This course is designed to synthesize and integrate knowledge acquired in coursework and other learning experiences and to apply this knowledge to situations that represent various aspects of professional public health practice. Through the evaluation of previous cases and the development of a new case from current and emerging areas of public health, students working in teams demonstrate their abilities in applying general and specific public health knowledge they have learned through their courses of study.

### Concentration courses (21 credit hrs)

All students seeking an MPH degree in the School of Public Health and Information Sciences (SPHIS) must take a minimum of 21 credit hours in their selected concentration. For a detailed description of coursework for each of the five concentrations, click here.

## Biostatistics Concentration

### Coursework

**Bioinformatics and Biostatistics Concentration Coursework**

**Semester** | **Course #** | **Course Title** | **Credit Hours**
--- | --- | --- | ---
Spring I | PHST-501 | Introduction to Biostatistics for Public Health II (core) | 3
 | PHST 640 | Statistical Methods for Research Design in Human Studies | 3
 | PHST 620 | Introduction to Statistical Computing | 3
### Bioinformatics and Biostatistics Concentration Coursework

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
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<tr>
<td></td>
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<td>Selected elective courses (note: these can be 1, 2, or 3 hrs. for a total of 3 hrs.)</td>
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<tr>
<td>Summer</td>
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<tr>
<td></td>
<td>PHST 680</td>
<td>Biostatistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Epi Elective or A 3 hour Epi Course OR Epi SAS (2) + PHST 602(1) OR Epi SAS (2)</td>
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<td></td>
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<tr>
<td>Fall II</td>
<td>Epi SAS (2) + PHST 624 (Clinical Trials I) (2) + PHST 602 Biostatistics</td>
<td></td>
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<tr>
<td></td>
<td>PHST 602(1)</td>
<td>Seminar. (1)</td>
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</tr>
<tr>
<td></td>
<td>PHST 681</td>
<td>Biostatistical Methods II</td>
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<tr>
<td></td>
<td>PHST 684</td>
<td>Categorical Data Analysis</td>
<td>3</td>
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<tr>
<td></td>
<td>PHST 671</td>
<td>Special Topics in Biostatistics and Decision Science</td>
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<td></td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PHPH-697</td>
<td>Integrating Learning and Experience in Public Health</td>
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<td>Semester Total</td>
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<tr>
<td></td>
<td>PHEH XXX</td>
<td>Nutrition (new course)</td>
<td>3</td>
</tr>
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<td></td>
<td></td>
<td>Selected approved elective course</td>
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<tr>
<td></td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
<td>1</td>
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<tr>
<td></td>
<td>PHEH XXX</td>
<td>Pulmonary Toxicology (new course)</td>
<td>3</td>
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<td></td>
<td>Selected approved elective</td>
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</tr>
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<td></td>
<td>PHPH-697</td>
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<td></td>
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<td>Semester Total</td>
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</tr>
</tbody>
</table>

**Concentration Total** 33

### Environmental and Occupational Health Concentration

#### Coursework

**Environmental and Occupational Health Sciences Concentration Coursework**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring I</td>
<td>PHST-501</td>
<td>Introduction to Biostatistics for Public Health II (core)</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHEH 640</td>
<td>Risk Assessment and Environmental Policy</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHEH 651</td>
<td>Advanced Environmental Health</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Selected elective courses (note: these can be 1, 2, or 3 hrs. for a total of 3 hrs.)</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Semester Total</td>
<td>10</td>
</tr>
<tr>
<td>Summer</td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PHEH 610</td>
<td>Occupational Safety and Health</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHEH XXX</td>
<td>Nutrition (new course)</td>
<td>3</td>
</tr>
<tr>
<td>Fall II</td>
<td>Selected approved elective course</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
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</tr>
<tr>
<td></td>
<td>PHEH XXX</td>
<td>Pulmonary Toxicology (new course)</td>
<td>3</td>
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<tr>
<td></td>
<td>PHEH XXX</td>
<td>Shared SPHIS Course or Environmental Sampling and Analysis</td>
<td>3</td>
</tr>
<tr>
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<td>Selected approved elective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spring II</td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PHEH-697</td>
<td>Integrating Learning and Experience in Public Health</td>
<td>2</td>
</tr>
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<td>Semester Total</td>
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**Environmental and Occupational Health Sciences Concentration Coursework**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
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**Epidemiology Concentration**

**Coursework**

**Epidemiology and Population Health Required Coursework**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Course Title (and Area, as needed)</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Spring I</td>
<td>PHST-501</td>
<td>Introduction to Biostatistics for Public Health II (core)</td>
<td>3</td>
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<tr>
<td></td>
<td>PHEP 619</td>
<td>Biology of Disease in Populations (to be required for epi</td>
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<td>PHEP 602</td>
<td>Epidemiology Methods</td>
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<tr>
<td>Summer I</td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
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<td></td>
<td>Semester Total</td>
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<td>1</td>
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<tr>
<td>Fall II</td>
<td>PHEP 616</td>
<td>Disease Surveillance/Health Statistics</td>
<td>3</td>
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<tr>
<td></td>
<td>PHEP xxx</td>
<td>Survey and Sampling Methods</td>
<td>3</td>
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<td></td>
<td>hrs – Total 3hrs</td>
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<td>Semester Total</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Spring II</td>
<td>PHEP 617</td>
<td>Field Epidemiology</td>
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<td></td>
<td>PHEP 655</td>
<td>Emerging Issues in Epidemiology</td>
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<tr>
<td></td>
<td>PHEP xxx</td>
<td>Epidemiology and Public Health Policy</td>
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<tr>
<td></td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
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<td></td>
<td>PHPH-697</td>
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**Degree Total**

**Population Health Management Concentration**

**Coursework**

**Population Health Management Concentration Coursework**

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<thead>
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<th>Credit Hours</th>
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<td>PHMS-680</td>
<td>Health Management Leadership Seminar</td>
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<td>Introduction to Biostatistics for Public Health II (core)</td>
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<td>PHMS-710</td>
<td>Health Policy &amp; Analysis</td>
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<td>Spring I</td>
<td>PHMS-609</td>
<td>Health Finance and Financial Management</td>
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<td></td>
<td>PHMS-XXX</td>
<td>Quality Assessment and Information Management</td>
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### Population Health Management Concentration Coursework

<table>
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<td></td>
<td>PHMS-615</td>
<td>Introduction to Health Systems</td>
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<td>PHMS-620</td>
<td>Healthcare Strategic Planning &amp; Marketing</td>
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<td></td>
<td>PHMS-605</td>
<td>Governance and Management of Healthcare Organizations</td>
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<tr>
<td>Fall II</td>
<td>PHMS-662</td>
<td>Health Economics</td>
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<td>PHMS-XXX</td>
<td>Health Law and Ethics</td>
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<td>Population Health Management</td>
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<td>Human Resource Management in the Health Sector</td>
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<td>Public Health Practicum Experience</td>
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### Health Policy Concentration

#### Coursework

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<td>Introduction to Biostatistics for Public Health II</td>
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<td>(core)</td>
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<td></td>
<td>PHMS-609</td>
<td>Health Finance and Financial Management</td>
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<tr>
<td></td>
<td>PHMS-710</td>
<td>Health Policy and Analysis</td>
<td>3</td>
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<tr>
<td></td>
<td>PHMS-XXX</td>
<td>Health Services Research Methods I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Semester Total</td>
<td>12</td>
</tr>
<tr>
<td>Summer</td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
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<td></td>
<td></td>
<td>Semester Total</td>
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<tr>
<td>Fall II</td>
<td>PHMS-XXX</td>
<td>Health Services Research Methods II</td>
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<td>PHMS-662</td>
<td>Health Economics</td>
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<td></td>
<td>PHPB-611</td>
<td>Community Organization &amp; Assessment</td>
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<tr>
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<td>PHPH-679</td>
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<td>PHPH-697</td>
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### Health Promotion and Behavior Concentration
Coursework

**Health Promotion and Behavioral Sciences Concentration Coursework**

<table>
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<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Spring I</td>
<td>PHST-501</td>
<td>Introduction to Biostatistics for Public Health II (core)</td>
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<tr>
<td></td>
<td>PHPB-611</td>
<td>Community Organization and Assessment</td>
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<td>PHPB-604</td>
<td>Health Decision and Risk Analysis</td>
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<tr>
<td>Summer</td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
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<td></td>
<td>Semester Total</td>
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<tr>
<td></td>
<td>PHPB-612</td>
<td>Health Communication Campaigns</td>
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<tr>
<td></td>
<td>PHPB-614</td>
<td>Critical Thinking and Program Evaluation</td>
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</tr>
<tr>
<td>Fall II</td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
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<td></td>
<td>PHPB-XXX</td>
<td>Policy Development and Advocacy</td>
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<td>PHPB-615</td>
<td>Advanced Program Evaluation</td>
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<td></td>
<td>PHPB-XXX</td>
<td>Social Determinants of Health</td>
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<td></td>
<td>PHPH-679</td>
<td>Public Health Practicum Experience</td>
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</tr>
<tr>
<td></td>
<td>PHPH-697</td>
<td>Integrating Learning and Experience in Public Health</td>
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</table>

**Concentration Total**

33

Faculty

**DEPARTMENT OF BIOINFORMATICS AND BIOSTATISTICS**

- **K.B. Kulasekera**
  - Professor
  - Chair
- **Jack Barnette**
  - Professor
  - Associate Dean
- **Guy Brock**
  - Associate Professor
- **Jeremy Gaskins**
  - Assistant Professor
- **Maiying Kong**
  - Associate Professor
- **Doug Lorenz**
  - Assistant Professor
- **Riten Mitra**
  - Assistant Professor
- **Shesh N. Rai**
  - Assistant Professor
- **Qi Zheng**
  - Assistant Professor
- **Dongfeng Wu**
  - Associate Professor
- **David J. Tollerud**
  - Professor
  - Chair
- **Gary Hoyle**
  - Professor
- **Robert J. Jacobs**
  - Professor
- **Director of MPH Program**
- **Rachel Neal**

**DEPARTMENT OF ENVIRONMENTAL & OCCUPATIONAL HEALTH SCIENCES**

- **Richard N. Baumgartner**
  - Professor
  - Chair
- **Kathleen B. Baumgartner**
  - Associate Professor
- **Kira Taylor**
  - Assistant Professor

**DEPARTMENT OF EPIDEMIOLOGY & POPULATION HEALTH**

- **Richard Kerber**
  - Associate Professor

**DEPARTMENT OF HEALTH MANAGEMENT & SYSTEMS SCIENCES**

- **Chris Johnson**
  - Professor
  - Chair
- **Susan Olson Allen**
  - Assistant Professor
- **Joseph Benitez**
  - Assistant Professor
- **Lee W. Bewley**
  - Associate Professor
Program Director
Craig Blakely
Dean
Liza Creel
Assistant Professor
Bob Esterhay
Associate Professor
J’Aime Jennings
Assistant Professor
Bert Little
Professor
Rob Steiner
Professor
Barry Wainscott
Assistant Professor

Assistant Professor
Muriel J. Harris
Associate Professor
Jelani Kerr
Assistant Professor
A. Scott LaJoie
Associate Professor
William P. McKinney
Professor
Associate Dean

DEPARTMENT
OF HEALTH
PROMOTION &
BEHAVIORAL
SCIENCES
Richard Clover
Professor
Ryan M. Combs

Anne B. Wallis
Assistant Professor
Pete Walton
Assistant Professor
Associate Dean
Monica Wendel
Associate Professor
Associate Dean
Richard W. Wilson
Professor
Chair
Doctor of Philosophy in Biostatistics

Major: BDSCPHDBIO  
Degree Awarded: Ph.D.  
Unit: GH  
Program Webpage: http://louisville.edu/sphis/departments/bioinformatics-biostatistics/academics/phd

Program Information

The curriculum consists of a minimum of 34 credit hours of coursework and a doctoral dissertation. The student is eligible to sit for comprehensive examinations upon completion of required coursework. Upon passing the comprehensive examinations and completing required and elective coursework, the student enters candidacy to work on the dissertation. After the dissertation is submitted and approved, including an oral defense, the student is eligible to receive the Ph.D. degree in Biostatistics.

Award of a degree from an accredited School of Public Health requires successful completion of the equivalent of three (3) semester credit hours in each of:

- Instruction that introduces the students to the breadth of public health  
- Instruction in epidemiology

Either or both of these requirements may be determined to have been met prior to matriculation by approval of the academic Dean of a variance request submitted by the program director. The request for a variance in one or both requirements must be justified by one of: previous degrees received, such as an M.P.H. or Dr.P.H.; previous coursework successfully completed; or extensive experience in the public health workforce. In the absence of a variance for a requirement, the student’s program of study must include successfully completed coursework that satisfies the requirement. This coursework may be included in the program’s required coursework; if not, the student must complete appropriate coursework on a co-curricular basis.

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 comprehensive examination. Successful completion of the comprehensive 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.

Curriculum

Coursework

34 total credit hours
12 credit hours of required coursework
22 credit hours of elective courses

Required Coursework

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<tr>
<th>Emphasis</th>
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<td>PHST-691</td>
<td>Bayesian Statistics</td>
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<td>PHST-710</td>
<td>Advanced Statistical Computing I</td>
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<td>PHST-762</td>
<td>Advanced Statistical Inference</td>
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<td>PHST-781</td>
<td>Advanced Linear Models</td>
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Subtotal Credit Hours 12

Elective Coursework

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<tr>
<td>None</td>
<td>PHST-703</td>
<td>Doctoral Practicum in Consulting</td>
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<td>PHST-724</td>
<td>Advanced Clinical Trials</td>
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<td>PHST-780</td>
<td>Advanced Nonparametrics</td>
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<td>PHST-782</td>
<td>Generalized Linear Models</td>
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<td>PHST-783</td>
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Subtotal Credit Hours 22

Biinformatics

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<td>Doctoral Practicum in Consulting</td>
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<td>PHST-750</td>
<td>Statistics for Bioinformatics</td>
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<td>PHST-751</td>
<td>High-Throughput Data Analysis</td>
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<td>PHST-752</td>
<td>Statistical Genetics</td>
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<tr>
<td>CECS-660</td>
<td>Introduction to Bioinformatics</td>
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<td>BIOC-545</td>
<td>Advanced Biochemistry I</td>
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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 nine (9) credit hours of Additional Electives listed in the table on the previous page must be taken from the following list. The student’s program of study specifies the particular courses permitted to be taken.

<table>
<thead>
<tr>
<th>Emphasis</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<td>X X B</td>
<td>PHST-675</td>
<td>Independent Study in Biostatistics</td>
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<td>X X</td>
<td>PHST-682</td>
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<td>PHST-704</td>
<td>Mixed Effect Models and Longitudinal Data Analysis</td>
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<td>Design of Experiments</td>
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</tbody>
</table>

"X" indicates the No emphasis option; "B" indicates the Bioinformatics emphasis.

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. Enrollment in other courses such as PHPH 701 may be required to maintain academic status for funding purposes.

**Sample Program of Study – Year 1**

<table>
<thead>
<tr>
<th>Semester</th>
<th>Emphasis</th>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall</td>
<td>All</td>
<td>PHST-710, 762, 781</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PHST-691</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>No Emphasis</td>
<td>Any TWO of PHST-724, 780, 782, 783, PHST-691</td>
<td></td>
</tr>
<tr>
<td>Spring</td>
<td>Bioinformatics</td>
<td>Any TWO of PHST-750, PHST-752,</td>
<td>9</td>
</tr>
</tbody>
</table>
All pre-candidacy Ph.D. students on support of any kind (Fellowship, GRA, TA, Hourly) must be enrolled in the Department’s seminar course (PHST 602) for one (1) credit hour during semesters they are supported.

**Comprehensive Examination**

At the beginning of the student's second year in the Ph.D. program, he/she will take a written Comprehensive Examination. The objective of this examination is for the student to demonstrate a comprehensive knowledge of statistical theory and methods as learned in the courses taken during the first year in the program. This examination is given over two consecutive days shortly before the start of the fall semester. Students will be notified of the dates and location at least one month in advance. Students must have passed PHST-691, PHST-710, PHST-762, and PHST-781 before they may take the comprehensive examination.

The examination will consist of four sections, each corresponding to one of the required courses (PHST-710, PHST-762, PHST-781, PHST-691) and each given individually. Each section is designed to test the student's competency in a core area of the discipline and to assess his/her ability to apply this knowledge to solve new and/or complex problems.

- The Statistical Inference (PHST-762) section will be a two-hour written examination given on the first day.
- The Linear Models (PHST-781) section will be a two-hour written examination taking place on the first day.
- The Bayesian Inference section (PHST-691) will be a one and a half hour written examination and a one and a half hour computing exam, both given on the second day.
- The Computing section (PHST-710) will be a three hour computing examination given on the second day.

Material from courses corresponding to each section of the comprehensive exam will help students prepare for those sections. However, questions from any sources may appear that cover the same topics as listed in the syllabi of PHST 691, PHST 710, PHST 762, and PHST 781. Further, problems on the Computing section of the exam may draw on topics covered in PHST 691, PHST 762, and PHST 781.

Each student receives a grade of either "pass" or "fail" for the entire comprehensive examination and each student must pass all four sections of the comprehensive examination to receive a "pass". Students that pass the exam will be eligible to enter doctoral candidacy upon completion of the remaining, second-year coursework. A failing grade indicates deficiency in one or more areas, and a student with a grade of "fail" will have one opportunity to retake the full Comprehensive Examination (all four sections), typically in the following January. The results from a student’s first attempt at the comprehensive exam will not be considered in the grading of the second attempt and will not factor into the determination of a “pass” or “fail” score for the second attempt at the exam. Students that fail to pass the examination on their second attempt will be dismissed from the program without any further consideration.
Neither scores nor graded copies of completed examinations will be shared with students. Students may review ungraded copies of their own completed comprehensive exams with the exam graders. The ungraded, completed copies will be held in the department office. Students will not be permitted to keep ungraded copies of the completed comprehensive exams.

**Special Notes on the Comprehensive Exam**

- For all the exams, the students will not have access to any course books, notes or any other materials (paper or electronic copies).
- Students will write programs and run code in the Bayesian and non-Bayesian computing examinations of the second day. These examinations will be given either in a computer lab in the SPHIS building or the students will be required to bring their own laptop to run the programs.
- The only materials which can be consulted for the second day examination are R help menus locally available on the specific computer. Students will be asked ahead of time to upload all R packages needed to appear for the exam. Students will not be allowed to avail the internet by any means.
- Any suspected cheating on the Comprehensive Examination will be addressed according to university policies provided in Section 5 of Dean of Students’ document, [Students Rights and Responsibilities](#). Additionally, students found guilty of academic dishonesty on the Comprehensive Examination will be expelled from the Ph.D. program immediately.
- More than one faculty members will grade all the examinations.

**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 comprehensive examinations.

**Dissertation Committee**

The dissertation committee is formed by the candidate’s proposing a major professor (or principal advisor) and at least four 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 Graduate School 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. These guidelines are located at http://louisville.edu/graduate/current-students/thesis-dissertation-information.

Dissertation Approval

The dissertation is submitted in completed form to the dissertation committee at least thirty days before the end of the term in which the candidate expects to be graduated. A candidate is not eligible for the final oral examination until the dissertation has been accepted by the committee.

The dissertation committee schedules an oral examination of the candidate. All faculty and students of the school are invited to attend the presentation portion. The defense is scheduled at the convenience of the members of the dissertation committee. The dissertation must be approved by the full committee.

Dissertation Submission

The following steps must be taken to submit the final copy of the dissertation electronically after oral defense and approval of the committee:

1. Final document must be converted to a PDF (following the guidelines as noted above) and sent to the School of Interdisciplinary and Graduate Studies and the department’s administrative assistant.
2. Submit as advised by the School of Interdisciplinary and Graduate Studies through the ThinkIR repository. Click here to download instructions on this process.
3. The signature page within the electronic version must have the names of your committee members typed under the signature line; the signatures cannot be scanned into the document.
4. Submit a signed signature page on white paper, with original signatures, to the School of Interdisciplinary and Graduate Studies, attention Courtney Kerr.

A bound copy of the final, signed dissertation must also be deposited with the department office.

Applying for a Degree

Students are responsible for completing an “Application for Degree” form at the beginning of the semester in which they will defend their thesis or dissertation. Students may apply for their degree via ULink. The steps are as follows: 1. Log on to your ULink account. 2. Go to Student Services Page. 3. Scroll down and on the right of the screen you will find a column labeled "Registration". 4. Under Registration click on the Degree Application link. 5. Follow the Prompts to complete your application for degree. Once completed, you will receive an e-mail confirmation of submission in your University e-mail. Future deadline dates can be found on the Graduate Academic calendar.

For any questions or concerns students might have during the semester in which they plan to graduate in, students’ best resource is the School of Interdisciplinary and Graduate Studies. The Department of Bioinformatics and Biostatistics faculty and staff are also here to advise and assist you with any questions you might have.

Faculty

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack Barnette</td>
<td>Professor Associate Dean</td>
</tr>
<tr>
<td>Maiying Kong</td>
<td>Associate Professor K.B. Kulasekera Professor and Chair</td>
</tr>
<tr>
<td>Riten Mitra</td>
<td>Assistant Professor Shesh Rai Associate Professor</td>
</tr>
<tr>
<td>Dongfeng Wu</td>
<td>Associate Professor Qi Zheng Assistant Professor</td>
</tr>
<tr>
<td>Jeremy Gaskins</td>
<td>Assistant Professor Doug Lorenz Assistant Professor</td>
</tr>
<tr>
<td>Wendell Cherry</td>
<td>Chair in Clinical Trial Research</td>
</tr>
<tr>
<td>Maiying Kong</td>
<td>Associate Professor Dongfeng Wu Associate Professor</td>
</tr>
<tr>
<td>Riten Mitra</td>
<td>Assistant Professor Qi Zheng Assistant Professor</td>
</tr>
<tr>
<td>Dongfeng Wu</td>
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</tr>
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</tr>
<tr>
<td>Wendy Cherry</td>
<td>Chair in Clinical Trial Research</td>
</tr>
</tbody>
</table>
Doctor of Philosophy in Public Health Sciences

Major: PHSCPHDENV
Degree Awarded: Ph.D.
Unit: GH
Program Webpage: http://louisville.edu/sphis/departments/health-promotion-behavioral-sciences

Program Information

The School of Public Health and Information Sciences offers a doctor of philosophy degree in Public Health Sciences with specialization in the following areas:

- Environmental Health
- Epidemiology
- Health Management
- Health Promotion

Competencies and admissions information for each specialization follow:

PhD in Public Health Sciences Specialization in Environmental Health

Introduction

The specialization 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 specialization 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.

Competencies

To graduate, a student in the Ph.D. specialization in environmental health must demonstrate the following competencies:

Competency
In depth knowledge of the history of environmental health.

Demonstrated by
- Passing qualifying examination
Competency

Mastery of experimental study designs and the ability to identify optimal designs for specific hypotheses.
Ability to critically evaluate published environmental health research.
Expertise in one or more environmental health specialty such as risk assessment, environmental management, environmental and occupational toxicology.
Practical knowledge of issues in research management including:

- Successful completion and defense of dissertation
- Mastery of experimental study designs and the ability to identify optimal designs for specific hypotheses.
- Ability to critically evaluate published environmental health research.
- Expertise in one or more environmental health specialty such as risk assessment, environmental management, environmental and occupational toxicology.
- Practical knowledge of issues in research management including:
  - Successful development, conduct, completion, and defense of the dissertation
  - Practical knowledge of issues in research management including:
    - Formation and leadership of multidisciplinary teams.
    - Staffing, budgeting, tracking.
    - Subject recruitment and retention.
    - Data quality control and data safety management.
    - Funding mechanisms and grantsmanship.
    - Research ethics and regulations.
  - Successful completion of assignments to work with master’s students on their research, theses, presentations, and posters.
- Professional quality peer-review, oral and poster presentation, report, grant, and manuscript writing.
- Mentoring of junior peers.
- 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. specialization 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 38 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
PhD in Public Health Sciences Specialization in Epidemiology

Introduction

The specialization in epidemiology in the Ph.D. program in public health sciences is designed to develop academic researchers in population-based epidemiology.

Competencies

To graduate, students in the Ph.D. specialization in epidemiology must demonstrate the following competencies in addition to those for the M.S. degree:

1. In depth knowledge of the history and philosophy of epidemiology
2. Mastery of experimental and observational study designs and the ability to identify optimal designs for specific hypotheses
3. Ability to develop and apply:
   - Questionnaires
   - Biomarkers for health status, exposure and susceptibility
4. Mastery of multivariable analytic methods for evaluating risk and prognosis
5. Ability to critically evaluate the published epidemiologic research
6. Expertise in one or more epidemiologic specialty such as nutritional, molecular, clinical, genetic, cancer, or chronic disease epidemiology
7. Practical knowledge of issues in research management including:
   - Formation and leadership of multidisciplinary teams
   - Staffing, budgeting, tracking
   - Subject recruitment and retention
   - Data quality control and data safety management
   - Funding mechanisms and grantsmanship
   - Research ethics and regulations
8. Professional quality peer-review, oral and poster presentation, report, grant, and manuscript writing
9. Mentoring of junior peers
10. Development, conduct, completion and defense of a dissertation on an original research project

Competencies are demonstrated by passage of the proficiency and candidacy examinations, by successful mentoring of master’s students or doctoral students not yet in candidacy, and by successful completion and defense of the dissertation.

Admission

Students who have satisfactorily completed the M.S. degree in epidemiology are eligible for the Ph.D. specialization 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 specialization may be required to complete additional coursework to be accepted into the epidemiology Ph.D. specialization.

**PhD in Public Health Sciences Specialization in Health Management**

**Introduction**

The specialization 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 specialization 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.

**Competencies**

To graduate, a student in the Ph.D. specialization in health management must demonstrate the following competencies:

1) In-depth knowledge of the history of public health management
2) Mastery of experimental research study designs, including qualitative as well as quantitative, and the ability to identify optimal designs for specific hypotheses.
3) Ability to critically evaluate published research related to health management.
4) Expertise in one or more health management specialties such as information systems, planning and evaluation, human resource management, health policy analysis, development and implementation, budgeting and financial management, health economics, system dynamics, network science and social network analysis.
5) Practical knowledge of issues in research management including:
   a) Formation and leadership of multidisciplinary teams.
   b) Staffing, budgeting, tracking.
   c) Data quality control and data safety management.
   d) Funding mechanisms and grantsmanship.
   e) Research ethics and regulations.
6) Professional quality peer-review, oral and poster presentation, report, grant, and manuscript writing.
7) Mentoring of junior peers.

Demonstration of Competency 1 is achieved by passing the doctoral qualifying examination and by successful completion and defense of the dissertation. Demonstration of Competencies 2 through 6, inclusive, is achieved by successful development, conduct, completion, and defense of the dissertation. Demonstration of Competency 7 is achieved by successful completion of assignments to work with master’s students on the latter’s research, theses, presentations, and posters.
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 specialization. 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

**PhD in Public Health Sciences Specialization in Health Promotion**

**Introduction**

The PhD in Public Health Sciences, Specialization in Health Promotion degree program at the University of Louisville School of Public Health and Information Sciences 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.

Areas of research for faculty include emergency and disaster response and preparedness, health decision and risk analysis, infection prevention, preventive medicine, cognitive and social influences of health-related decision making on health outcomes, and policy and program evaluation.

Please refer to the Student Handbook for additional information.
Competencies

The successful student is able to demonstrate:

- Advanced knowledge of behavioral and cognitive sciences related to public health education and promotion.
- Expertise in planning, implementing, and evaluating theory-driven health promotion interventions in a variety of community and clinical settings.
- Research, evaluation, scholarship and leadership skills that may be applied in higher education, government, and community health agencies.

It is expected that prior to graduation, students in the program have demonstrated these competencies by completing the curriculum, passing the qualifying exam, successfully defending the dissertation, participating in collaborative research and service projects with public health agencies, and serving as an instructor and mentor for master’s level and beginning doctoral students.

Competency in the basic principles and application of epidemiology is a requirement for all students in the School. If a student has not had sufficient exposure to epidemiology prior to matriculation, he or she is required to take a course in epidemiology as part of the program of study.

Admission

Applicants should have a minimum of 3.0 on a 4.0 scale and, in most cases, should have completed a master’s or other graduate degree related to the theme of the doctoral program. Applicants who have a master’s degree in a different discipline may be admitted with the stipulation that they complete foundation course work during their enrollment for the doctoral degree. This coursework 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 (SIGS) at http://louisville.edu/graduate. 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 50 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 or the application process, students should contact the Director of the PhD Program, Dr. Muriel Harris, at muriel.harris@louisville.edu or (502)852-4061, or the Department Chair, Dr. Richard Wilson, at richard.wilson@louisville.edu or (502)852-3443.
Curriculum

Curricular requirements for each PhD Specialization follow:

**PhD in Public Health Sciences Specialization in Environmental Health**

**Faculty Advisor**

Upon admission to the Ph.D. specialization, 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. specialization in environmental health is designed as a 38 credit hour program (minimum beyond a master’s degree) including the dissertation. Additional hours may be needed for completion of the specialization program.

**Coursework**

38 total credit hours  
26 credit hours of required coursework  
3 credit hours of environmental health seminars  
9 credit hours of elective courses

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOC-645</td>
<td>Advanced Biochemistry I</td>
<td>4</td>
</tr>
<tr>
<td>BIOC-647</td>
<td>Advanced Biochemistry II</td>
<td>4</td>
</tr>
<tr>
<td>BIOC-668</td>
<td>Molecular Biology</td>
<td>4</td>
</tr>
<tr>
<td>PHEH-750</td>
<td>Seminar 1 in Environmental and Occupational Health</td>
<td>1</td>
</tr>
<tr>
<td>PHEH-751</td>
<td>Seminar 2 in Environmental and Occupational Health</td>
<td>1</td>
</tr>
</tbody>
</table>
PHEH-750, -751, -752 Seminars in Environmental and Occupational Health

A student in the Ph.D. specialization 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, nine credit hours of elective coursework is identified. 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.

Approved Electives

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHEH-753</td>
<td>Independent Study in Environmental and Occupational Health</td>
<td>1-3</td>
</tr>
<tr>
<td>PHST-650</td>
<td>Advanced Topics in Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>PHST-680</td>
<td>Biostatistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td>PHST-681</td>
<td>Biostatistical Methods II</td>
<td>3</td>
</tr>
<tr>
<td>PHPB-650</td>
<td>Advanced Topics in Health Promotion and Behavioral Sciences</td>
<td>3</td>
</tr>
<tr>
<td>PHMS-650</td>
<td>Advanced Topics in Health Management and Systems Sciences</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-657</td>
<td>Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-656</td>
<td>Spatial Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHTX-601</td>
<td>Principles of Medical Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>PHTX-630</td>
<td>Toxicology: Principles and Application</td>
<td>3</td>
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<tr>
<td>PHTX-618</td>
<td>Topics in Pharmacology &amp; Toxicology</td>
<td>3</td>
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</tbody>
</table>
## Approved Electives

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<th>Credit Hours</th>
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<td>Seminar in Genetics and Molecular Medicine</td>
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<tr>
<td>BIOC-611</td>
<td>Biochemical and Molecular Methods</td>
<td>3</td>
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<tr>
<td>BIOC-640</td>
<td>Principles of Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>BIOC-670</td>
<td>Protein Structure and Function</td>
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<td>Molecular Endocrinology</td>
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<td>Advanced Eukaryotic Genetics</td>
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<td>Molecular Biology</td>
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<td>BIOC-675</td>
<td>Cancer Biology</td>
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<td>BIOL-522</td>
<td>Aquatic Ecology</td>
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<td>BIOL-563</td>
<td>Population and Community Ecology</td>
<td>3</td>
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<td>BIOL-562</td>
<td>Ecosystem Ecology</td>
<td>3</td>
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<td>BIOL-584</td>
<td>Interdisciplinary Frameworks in Environmental Science and Technology</td>
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<td>BIOL-608</td>
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<td>Advanced Ecology of Urban and Suburban Landscapes</td>
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<td>BIOL-657</td>
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<td>CEE-509</td>
<td>Environmental Processes and Systems</td>
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<td>CEE-534</td>
<td>Industrial Waste Management</td>
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<td>CEE-535</td>
<td>Solid Waste Management</td>
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<tr>
<td>CEE-574</td>
<td>Water and Wastewater Treatment</td>
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<td>CEE-581</td>
<td>Environmental Impact Analysis</td>
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<td>CEE-674</td>
<td>Water Resources Systems</td>
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<tr>
<td>CEE-675</td>
<td>Surface Water Quality Modeling</td>
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<tr>
<td>CHE-509</td>
<td>Environmental Processes and Systems</td>
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<tr>
<td>CHE-533</td>
<td>Chemical Engineering Safety and Health</td>
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<td>CHE-534</td>
<td>Industrial Waste Management</td>
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<td>Pollution Prevention</td>
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<td>EXP-600</td>
<td>Physiology of Exercise</td>
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<td>EXP-605</td>
<td>Human Physiology</td>
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</tr>
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<td>GEOG-522</td>
<td>GIS and Public Health</td>
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<td>GEOG-531</td>
<td>GIS and Urban Demographic Analysis</td>
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<td>GEOG-561</td>
<td>Urban Environmental Quality</td>
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<td>GEOS-564</td>
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<td>GEOS-565</td>
<td>Natural Hazards</td>
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<td>Molecular Microbiology (Introductory to Infectious Diseases)</td>
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<td>Introduction to Immunology</td>
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<td>MBIO-670</td>
<td>Molecular Virology</td>
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<td>MBIO-685</td>
<td>Microbial Physiology</td>
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<td>MBIO-687</td>
<td>Microbial Pathogenesis</td>
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<td>MBIO-618</td>
<td>Topics in Advanced Microbiology</td>
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<td>MBIO-680</td>
<td>Genetics of Infectious Diseases</td>
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<td>Advanced Human Physiology</td>
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<td>IE-530</td>
<td>Industrial Safety Engineering</td>
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<td>Land Use and Planning Law</td>
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<td>UPA-679</td>
<td>Environmental Policy</td>
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</tr>
<tr>
<td>UPA-687</td>
<td>Environmental Policy and Natural Hazards</td>
<td>3</td>
</tr>
</tbody>
</table>
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 specialization 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.

Dissertation Committee

The dissertation shall be read by a reading committee, chaired by the student’s faculty advisor, and appointed by the dean upon the advice of the chair of the department. This committee shall consist of four members, and must include one representative of an allied department. The dissertation must be approved by the committee and the chair of the department.

Dissertation Proposal

A student who successfully completes the qualifying exam must submit a written dissertation proposal to all members of the dissertation committee. The student is then orally examined on the dissertation proposal.

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 (SIGS), available at https://louisville.edu/graduate/current-students/thesis-dissertation-information.

Dissertation Approval

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

The dissertation committee schedules an oral defense by the candidate and notifies SIGS using the form available at https://louisville.edu/graduate/current-students/thesis-dissertation-information. The time and place for the defense is published by SIGS to the general academic community, members of which are free to attend the defense. The dissertation is approved by a majority vote of the committee and the concurrence of the department chair.
Dissertation Distribution

One unbound copy of the dissertation, signed by the dissertation committee, must be deposited with the SIGS prior to graduation.

PhD in Public Health Sciences Specialization in Epidemiology

Faculty Advisor

Upon admission to the specialization, 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 specialization, 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. specialization 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

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 1</td>
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<td><strong>Required Coursework</strong></td>
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<tr>
<td>Fall I</td>
<td>PHEP-618</td>
<td>Epidemiologic Methods II</td>
<td>3</td>
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<tr>
<td></td>
<td>-OR-</td>
<td>-OR if already taken -</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHEP-xxx</td>
<td>Epidemiology elective</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PHEP-648</td>
<td>Data Management and Analysis for Epidemiology I B1</td>
<td>1</td>
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<td></td>
<td>PHEP-622</td>
<td>Population Pathology B1</td>
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<tr>
<td></td>
<td>PHEP-xxx</td>
<td>Epidemiology elective</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-OR-</td>
<td>-OR-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHST-xxx</td>
<td>Biostatistics elective</td>
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<tr>
<td></td>
<td>PHEP-750</td>
<td>Seminars in Epidemiology B1</td>
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<td>Semester total</td>
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<td>Spring I</td>
<td>PHEP-701</td>
<td>Advanced Epidemiologic Methods B1</td>
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<td>PHEP-649</td>
<td>Data Management and Analysis for Epidemiology II B1</td>
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<td>PHEP-702</td>
<td>Epidemiologic Research Management B1</td>
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<td>PHEP-xxx</td>
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<td></td>
<td>-OR-</td>
<td>-OR-</td>
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</tr>
<tr>
<td></td>
<td>PHST-xxx</td>
<td>Biostatistics elective</td>
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</tr>
<tr>
<td></td>
<td>PHEP-750</td>
<td>Seminars in Epidemiology B1</td>
<td>3</td>
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<td>Semester total</td>
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<td>Block 1 total</td>
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<th>Semester</th>
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<th>Course Title</th>
<th>Credit Hours</th>
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<td>Block 2</td>
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<td><strong>Required Coursework</strong></td>
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<td>Fall II</td>
<td>PHEP-xxx</td>
<td>Epidemiology elective</td>
<td>3</td>
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<tr>
<td></td>
<td>PHEP-xxx</td>
<td>Epidemiology elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>-OR-</td>
<td>-OR-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>various</td>
<td>Minor elective</td>
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<tr>
<td></td>
<td>various</td>
<td>Minor elective</td>
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<td></td>
<td>PHEP-750</td>
<td>Seminars in Epidemiology B2</td>
<td>3</td>
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## Required Coursework

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<thead>
<tr>
<th>Semester</th>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>Spring II</td>
<td>PHEP-xxx</td>
<td>Epidemiology elective</td>
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<td></td>
<td>Two of:</td>
<td>Two of:</td>
<td></td>
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<tr>
<td></td>
<td>PHEP-xxx</td>
<td>Epidemiology elective</td>
<td>6</td>
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<tr>
<td></td>
<td>various</td>
<td>Minor Elective</td>
<td>(3 each)</td>
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<td></td>
<td>PHEP-778</td>
<td>Readings and Research in Epidemiology</td>
<td>3</td>
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<tr>
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<td>PHEP-778</td>
<td>Readings and Research in Epidemiology B2</td>
<td>12</td>
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</tbody>
</table>

| Semester total  | 12        |

| Block 2 Total   | 24        |
| Degree Total    | 50        |

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 specialization. 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.

## Approved Electives for Minor Requirement

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>BIOC-641</td>
<td>Advanced Eukaryotic Genetics</td>
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</tr>
<tr>
<td>BIOC-660</td>
<td>Molecular Endocrinology</td>
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</tr>
<tr>
<td>BIOC 661</td>
<td>Molecular Mechanisms of Toxicology (cross-listed as PHTX-661)</td>
<td>3</td>
</tr>
<tr>
<td>BIOC-668</td>
<td>Molecular Biology</td>
<td>3</td>
</tr>
<tr>
<td>BIOC-675</td>
<td>Cancer Biology</td>
<td>3</td>
</tr>
<tr>
<td>EXP-600</td>
<td>Physiology of Exercise</td>
<td>3</td>
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<tr>
<td>EXP-605</td>
<td>Human Physiology</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-656</td>
<td>Spatial Statistics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG-657</td>
<td>Geographic Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>MBIO-687</td>
<td>Microbial Pathogenesis</td>
<td>3</td>
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</table>
### Approved Electives for Minor Requirement

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MBIO-618</td>
<td>Topics in Advanced Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>MBIO-680</td>
<td>Genetics of Infectious Diseases</td>
<td>3</td>
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<tr>
<td>NURS-670</td>
<td>Cancer Epidemiology and Pathophysiology</td>
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<tr>
<td>PHCI-602</td>
<td>Health Services and Outcomes Research</td>
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<td>PHCI-610</td>
<td>New Drug and Device Development</td>
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<td>PHCI-624</td>
<td>Clinical Trials I: Planning and Design</td>
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<td>PHCI-625</td>
<td>Clinical Trials II</td>
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<tr>
<td>PHCI-632</td>
<td>Ethical Conduct of Healthcare Research</td>
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<td>PHCI-650</td>
<td>Medical Decision Analysis</td>
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<td>PHEH-650</td>
<td>Advanced Topics in Environmental and Occupational Health</td>
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<td>PHMS-650</td>
<td>Advanced Topics in Health Management and Systems Science</td>
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<td>Advanced Topics in Health Promotion and Behavioral Science</td>
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<td>PHST-650</td>
<td>Advanced Topics in Biostatistics</td>
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<td>PHST-680</td>
<td>Biostatistical Methods I</td>
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<tr>
<td>PHST-681</td>
<td>Biostatistical Methods II</td>
<td>3</td>
</tr>
<tr>
<td>PHST-661</td>
<td>Probability</td>
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<td>PHST-662</td>
<td>Mathematical Statistics</td>
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<td>PHST-683</td>
<td>Survival Analysis</td>
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<td>PHST-682</td>
<td>Multivariate Analysis</td>
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<td>PHST-684</td>
<td>Categorical Data Analysis</td>
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</tr>
<tr>
<td>PHST-750</td>
<td>Statistics for Bioinformatics</td>
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<td>PHST-751</td>
<td>High-throughput Data Analysis</td>
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<td>PHST-785</td>
<td>Nonlinear Regression</td>
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<td>PHTX-607</td>
<td>Seminar in Genetics and Molecular Medicine</td>
<td>3</td>
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<tr>
<td>PHTX-618</td>
<td>Topics in Pharmacology &amp; Toxicology</td>
<td>3</td>
</tr>
<tr>
<td>PHTX-630</td>
<td>Toxicology: Principles and Application</td>
<td>3</td>
</tr>
<tr>
<td>PHTX-661</td>
<td>Molecular Mechanisms of Toxicology (cross-listed as BIOC 661)</td>
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<tr>
<td>PHZB-605</td>
<td>Systemic Physiology I</td>
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</tr>
<tr>
<td>PHZB-611</td>
<td>Advanced Human Physiology</td>
<td>3</td>
</tr>
</tbody>
</table>

### 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 specialization; 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 specialization 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.”

Dissertation Committee

The dissertation is read by a dissertation committee, chaired by the student’s faculty advisor and appointed by the dean of the school on the recommendation of the program director and chair of the department. The committee consists of at least four members and must include one representative of an allied department. The dissertation must be approved by the committee and the chair of the department.

Dissertation Proposal

After successful completion of the qualifying examination, a doctoral candidate must submit a written dissertation proposal to the members of the dissertation committee. The candidate is then orally examined on the dissertation proposal.

Dissertation Preparation

The dissertation is prepared with the format and binding according to the guidelines of the School of Interdisciplinary and Graduate Studies.

Dissertation Approval

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

The dissertation committee schedules an oral defense by the candidate. The time and place for the defense is published to the general academic community, members of which are free to attend the defense. The dissertation is approved by a majority vote of the committee and the concurrence of the department chair.

Dissertation Distribution

One unbound copy of the dissertation, signed by the dissertation committee, must be deposited with the School of Interdisciplinary and Graduate Studies before graduation.
PhD in Public Health Sciences Specialization in Health Management

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. specialization 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 specialization program.

Faculty Advisor

Upon admission to the Ph.D. specialization, 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. specialization.

The student works with his or her faculty advisor to develop a specific program of study for the student’s coursework based on the required coursework and approved electives (see Coursework, below). The student’s individualized program of study must be approved by the student, faculty advisor, program director, and department chair.

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. specialization 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 specialization 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. The specific coursework for a student is established with the student’s individualized program of study (see **Program of Study**, above).

<table>
<thead>
<tr>
<th>Area</th>
<th>Course #</th>
<th>Required Coursework</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Areas (33 credit hours minimum)</td>
<td></td>
<td>Courses offered by SPHIS are preferred whenever possible.</td>
<td></td>
</tr>
<tr>
<td>Health Management Context</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHMS-615</td>
<td>Introduction to Health Systems</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHMS-650-04</td>
<td>Advanced Topics in Health Management and Systems Sciences: Evolutionary Forces in Public Health</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHMS-607</td>
<td>Managing Healthy Communities</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHMS-605</td>
<td>Governance and Management of Healthcare Organizations</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PADM-600</td>
<td>Public Administration and Organizational Theory</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(6 credit hours minimum)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Health Policy</td>
<td>PHMS-603</td>
<td>Legal and Bioethical Aspects of Public Health</td>
<td>3</td>
</tr>
<tr>
<td>PHMS-650-05</td>
<td>Advanced Topics in Health Management and Systems Sciences: Health Policy and Analysis</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>PHMS-650-03</td>
<td>Systems Sciences: Health Finance and Financial Management</td>
<td>3</td>
<td></td>
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<tr>
<td>PADM-642</td>
<td>Human Resources Management</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(6 credit hours minimum)</td>
<td></td>
<td></td>
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<tr>
<td>Management and Administrative Processes</td>
<td>PADM-604</td>
<td>Public Budgeting and Finance</td>
<td>3</td>
</tr>
<tr>
<td>PHST-680</td>
<td>Biostatistical Methods I</td>
<td>3</td>
<td></td>
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<tr>
<td>PHST-681</td>
<td>Biostatistical Methods II</td>
<td>3</td>
<td></td>
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<tr>
<td>PHEP-618</td>
<td>Epidemiologic Methods II</td>
<td>3</td>
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<tr>
<td>(9 credit hours minimum)</td>
<td>PHMS-702</td>
<td>Methods in Health Services and Outcomes Research</td>
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<tr>
<td>PHST-710</td>
<td>Advanced Statistical Computing I</td>
<td>3</td>
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<tr>
<td>SOC-618</td>
<td>Qualitative Field Research Methods</td>
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<tr>
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<td>PHMS-751</td>
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<tr>
<td>PHMS-752</td>
<td>Seminar 2 in Public Health Management</td>
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<tr>
<td>PHMS-753</td>
<td>Seminar 3 in Public Health Management</td>
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Required Coursework

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<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Capstone (6 credit</td>
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<td>Advanced Topics in Health Management and Systems Sciences: Health Policy and Management</td>
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<tr>
<td>hours)</td>
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<td></td>
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<tr>
<td>(required)</td>
<td>PHMS-650-06</td>
<td>Advanced Topics in Health Management and Systems Sciences: Health Processes and Systems</td>
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Seminars in Public Health Management

A student in the Ph.D. specialization 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.

Approved Electives

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PHMS-618</td>
<td>Introduction to Public Health Informatics</td>
<td>3</td>
</tr>
<tr>
<td>PHMS-655</td>
<td>Systems Thinking and Dynamic Modeling in Public Health</td>
<td>3</td>
</tr>
<tr>
<td>PHMS-702</td>
<td>Methods in Health Services and Outcomes Research</td>
<td>3</td>
</tr>
<tr>
<td>PHMS-761</td>
<td>Public Health and the Built Environment</td>
<td>3</td>
</tr>
<tr>
<td>PHST-705</td>
<td>Statistical Methods for Cost-Effectiveness Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHPH-630</td>
<td>Geographic Information Systems in Public Health</td>
<td>3</td>
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</table>

School of Public Health and Information Sciences

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
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<tr>
<td>PHMS-603</td>
<td>Legal and Bioethical Aspects of Public Health</td>
<td>3</td>
</tr>
<tr>
<td>PHMS-605</td>
<td>Governance and Management of Healthcare Organizations</td>
<td>3</td>
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<tr>
<td>PHMS-607</td>
<td>Managing Healthy Communities</td>
<td>3</td>
</tr>
<tr>
<td>PHMS-615</td>
<td>Introduction to Health Systems</td>
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<tr>
<td>PHMS-618</td>
<td>Public Health Informatics</td>
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### Approved Electives

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<thead>
<tr>
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<tbody>
<tr>
<td>PHMS-650-03</td>
<td>Advanced Topics in Health Management and Systems Sciences: Health Finance and Financial Management</td>
<td>3</td>
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<td>PHMS-650-04</td>
<td>Advanced Topics in Health Management and Systems Sciences: Evolutionary Forces in Public Health</td>
<td>3</td>
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<tr>
<td>PHMS-650-05</td>
<td>Advanced Topics in Health Management and Systems Sciences: Health Policy and Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHMS-655</td>
<td>Systems Thinking and Dynamic Modeling in Public Health</td>
<td>3</td>
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<tr>
<td>PHMS-702</td>
<td>Methods in Health Services and Outcomes Research</td>
<td>3</td>
</tr>
<tr>
<td>PHMS-761</td>
<td>Public Health and the Built Environment</td>
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**Epidemiology and Population Health**

<table>
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<tr>
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<td>PHEP-501</td>
<td>Introduction to Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>PHEP-604</td>
<td>Epidemiology of Acute and Infectious Diseases</td>
<td>2</td>
</tr>
<tr>
<td>PHEP-605</td>
<td>Research in Infectious Disease (Laboratory for PHEP-604)</td>
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</tr>
<tr>
<td>PHEP-606</td>
<td>Genetic and Molecular Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>PHEP-611</td>
<td>Nutritional Epidemiology</td>
<td>3</td>
</tr>
<tr>
<td>PHEP-612</td>
<td>Epidemiology and Bioterrorism</td>
<td>3</td>
</tr>
<tr>
<td>PHEP-613</td>
<td>Epidemiology of Aging</td>
<td>3</td>
</tr>
<tr>
<td>PHEP-615</td>
<td>Epidemiology of Maternal and Child Health</td>
<td>3</td>
</tr>
<tr>
<td>PHEP-616</td>
<td>Disease Surveillance and Health Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHEP-617</td>
<td>Field Epidemiology</td>
<td>3</td>
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<tr>
<td>PHEP-618</td>
<td>Epidemiologic Methods II</td>
<td>3</td>
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<tr>
<td>PHEP-619</td>
<td>Biology of Disease in Populations</td>
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**Bioinformatics and Biostatistics**

<table>
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<tr>
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<tbody>
<tr>
<td>PHST-500</td>
<td>Introduction to Biostatistics</td>
<td>3</td>
</tr>
<tr>
<td>PHST-601</td>
<td>Introduction to Medical Decision Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHST-610</td>
<td>Statistical Computing and Data Management for Public Health</td>
<td>3</td>
</tr>
<tr>
<td>PHST-620</td>
<td>Introduction to Statistical Computing</td>
<td>3</td>
</tr>
<tr>
<td>PHST-640</td>
<td>Statistical Methods for Research Design in Health Studies</td>
<td>3</td>
</tr>
<tr>
<td>PHST-663</td>
<td>Decision Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHST-680</td>
<td>Biostatistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td>PHST-681</td>
<td>Biostatistical Methods II</td>
<td>3</td>
</tr>
<tr>
<td>PHST-690</td>
<td>Utility Theory and Assessment</td>
<td>3</td>
</tr>
<tr>
<td>PHST-701</td>
<td>Advanced Medical Decision Making</td>
<td>3</td>
</tr>
<tr>
<td>PHST-705</td>
<td>Statistical Methods for Cost-Effectiveness Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHST-710</td>
<td>Advanced Statistical Computing I</td>
<td>3</td>
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</table>

**Environmental and Occupational Health Sciences**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PHEH-500</td>
<td>Introduction to Environmental Health Sciences</td>
<td>3</td>
</tr>
<tr>
<td>PHEH-610</td>
<td>Occupational Health and Safety</td>
<td>3</td>
</tr>
<tr>
<td>PHEH-620</td>
<td>Global Issues in Environmental and Occupational Health</td>
<td>3</td>
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*Health Promotion and Behavioral Sciences*

*Public Health*

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>PHPB-501</td>
<td>Introduction to Health Behavior</td>
<td>3</td>
</tr>
<tr>
<td>PHPB-604</td>
<td>Health Decision and Risk Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHPB-608</td>
<td>Public Health Program Evaluation</td>
<td>3</td>
</tr>
<tr>
<td>PHPB-612</td>
<td>Health Communication Campaigns</td>
<td>3</td>
</tr>
<tr>
<td>PHPH-614</td>
<td>Critical Thinking and Program Evaluation</td>
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</table>

*College of Business*
Approved Electives

<table>
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<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>ACCT-615</td>
<td>Advanced Financial and Governmental Accounting</td>
<td>3</td>
</tr>
<tr>
<td>MBA-625</td>
<td>Managerial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>MBA-635</td>
<td>Managerial Finance</td>
<td>3</td>
</tr>
<tr>
<td>MBA-645</td>
<td>Leadership and Ethics</td>
<td>3</td>
</tr>
<tr>
<td>MBA-655</td>
<td>Strategic Management</td>
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College of Arts and Sciences

<table>
<thead>
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<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PADM-600</td>
<td>Public Administration and Organizational Theory</td>
<td>3</td>
</tr>
<tr>
<td>PADM-601</td>
<td>Statistics for Public Affairs</td>
<td>3</td>
</tr>
<tr>
<td>PADM-604</td>
<td>Public Budgeting and Finance</td>
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</tr>
<tr>
<td>PADM-604</td>
<td>Public Budgeting and Finance</td>
<td>3</td>
</tr>
<tr>
<td>PADM-605</td>
<td>Strategic Management and Planning</td>
<td>3</td>
</tr>
<tr>
<td>PADM-606</td>
<td>Public Policy</td>
<td>3</td>
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<tr>
<td>PADM-607</td>
<td>Planning Theory</td>
<td>3</td>
</tr>
<tr>
<td>PADM-608</td>
<td>e-Government</td>
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<td>PADM-610</td>
<td>Administrative Law and Process</td>
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<tr>
<td>PADM-611</td>
<td>Financial Management for Public Administration</td>
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<tr>
<td>PADM-620</td>
<td>Intergovernmental Relations</td>
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<tr>
<td>PADM-630</td>
<td>Environmental Policy and Natural Hazards</td>
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<tr>
<td>PADM-642</td>
<td>Human Resources Management</td>
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<td>PLAN-611</td>
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<td>PLAN-612</td>
<td>Mediation and Dispute Resolutions</td>
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<tr>
<td>SOC-618</td>
<td>Qualitative Field Research Methods</td>
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</table>

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 specialization 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.

Dissertation Committee

The dissertation shall be read by a reading committee, chaired by the student’s faculty advisor, and appointed by the dean of the school upon the advice of the program director and chair of the department. This committee shall consist of at least four members and must include one representative of an allied department. The dissertation must be approved by the committee and the chair of the department.
Dissertation Proposal

A candidate must submit a written dissertation proposal to all members of the dissertation committee. The candidate is then orally examined on the dissertation proposal.

Dissertation Preparation

The dissertation is to be prepared in format and binding according to the guidelines of the School of Interdisciplinary and Graduate Studies.

Dissertation Approval

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

The dissertation committee schedules an oral defense by the candidate. The time and place for the defense is published to the general academic community, members of which are free to attend the defense. The dissertation is approved by a majority vote of the committee and the concurrence of the department chair.

Dissertation Distribution

One unbound copy of the dissertation, signed by dissertation committee, must be deposited with the School of Interdisciplinary and Graduate Studies before graduation.

PhD in Public Health Sciences Specialization in Health Promotion

The typical progression through the health promotion curriculum is:

- Program of Study (year 1)
- Required and elective coursework of 48 credit-hours (years 1 and 2)
- Qualifying examination (year 2)
- Candidacy
- Dissertation research and preparation (within 4 years of entering candidacy)
- Oral examination / dissertation defense

Faculty Advisor

The Director of the PhD program will assign advisors for each doctoral student. Upon matriculation in the program, each student will meet with his or her assigned advisor and develop a program of study, which will include courses in public health theory and principles, research design and statistics as well as selected cognate courses. The program of study will identify a set of courses for the development of competencies in areas of public health knowledge that are relevant to the student’s area of interest. The program of study may be modified as the student’s needs change or course availability is altered.

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 area of interest.

**Degree Requirements**

**Coursework**

Students with a master of public health (MPH) and those with master’s degrees from other disciplines may be admitted to the PhD program. For those students entering from other disciplines, leveling courses will be required. The leveling courses include the MPH core courses, and they must be completed prior to beginning courses in the student’s PhD degree plan.

The PhD curriculum consists of a minimum of 48 hours of course credit, at least one semester of teaching, and a dissertation. The degree plan consists of the following:

Foundational Requirements (15-18 hours)

Epidemiological Methods (3 hours)
Theory, Approaches, Planning, & Interventions (6-9 hours)
Advanced Evaluation (3 hours)
Policy & Politics (3 hours)

Methods & Statistical Analysis (18-24 hours)

Advanced Biostatistics (3 hours)
Measurement (3 hours)
Quantitative Research Methods (3-9 credit hours)
Qualitative Research Methods (3-9 credit hours)

Teaching (3 hours)

Cognate Area of Study (12-15 hours)
To be determined with faculty advisor

Dissertation

**FOUNDATIONAL REQUIREMENTS [15-18 hours]**

<table>
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<tr>
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<th>Credit Hours</th>
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<tr>
<td>PHEP 602</td>
<td>Epidemiologic Methods</td>
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-OR-

-OR-
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<tr>
<th>Course</th>
<th>Title-Description</th>
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<tr>
<td>PHEP 618</td>
<td>Epidemiologic Methods II</td>
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<tr>
<td><strong>Theory/Applied Theory/Approaches/Planning/Interventions</strong></td>
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<tr>
<td>PHPB 701</td>
<td>Theoretical Basis of Health Promotion</td>
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<td>PHPB 704</td>
<td>Psycho-Social Foundations of Health Decision Making</td>
<td>3</td>
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<tr>
<td>PHPB 705</td>
<td>Community Organization and Health Policy Advocacy</td>
<td>3</td>
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<td>HSS 669</td>
<td>Administering Health Promotion and Disease Prevention Programs</td>
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<td><strong>Advanced Evaluation</strong></td>
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<td>PHPB 615</td>
<td>Advanced Program Evaluation</td>
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<td><strong>Policy &amp; Politics</strong></td>
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<td>PHPB 704</td>
<td>Health Care Policy and Politics</td>
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**METHODS & STATISTICAL ANALYSIS [18-24 hours]**

<table>
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<tr>
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<tbody>
<tr>
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<tr>
<td>PHST 630</td>
<td>Applied Statistical Methods</td>
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<td>PSYC 610</td>
<td>Advanced Statistics I</td>
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<td>SOC 609</td>
<td>Seminar in Statistics I</td>
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<td><strong>Measurement (3 credit hours)</strong></td>
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<tr>
<td>PHST 671</td>
<td>Health Science Instrumentation</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 540</td>
<td>Evaluation and Measurement in Education</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 740</td>
<td>Psychometrics of Educational and Psychological Testing</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 602</td>
<td>Survey Research and Attitude Measurement</td>
<td>3</td>
</tr>
<tr>
<td>Quantitative Research Methods (3-9 credit hours)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECPY 745</td>
<td>Systematic Reviewing and Meta-Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 746</td>
<td>Secondary Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 764/ ELFH 764</td>
<td>Structural Equation Modeling</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 765/ ELFH 765</td>
<td>Hierarchical Linear Modeling</td>
<td>3</td>
</tr>
<tr>
<td>ECPY 793</td>
<td>Applied Logistic Regression</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 601</td>
<td>Applied Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 700</td>
<td>Research Concepts and Design</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 701</td>
<td>Intermediate Applied Statistics</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 702</td>
<td>Advanced Regression Analysis</td>
<td>3</td>
</tr>
<tr>
<td>ELFH 703</td>
<td>Multivariate Statistics</td>
<td>3</td>
</tr>
<tr>
<td>PHPB 703</td>
<td>Health Promotion Research Methods and Design</td>
<td>3</td>
</tr>
<tr>
<td>PHPH 610</td>
<td>Data Management and Statistics for Public Health using SPSS</td>
<td>3</td>
</tr>
<tr>
<td>PHPH 630</td>
<td>Geographic Information Systems in Public Health</td>
<td>3</td>
</tr>
<tr>
<td>PHST 630</td>
<td>Applied Statistical Methods</td>
<td>3</td>
</tr>
<tr>
<td>PHST 640</td>
<td>Statistical Methods for Research Design in Health Sciences</td>
<td>3</td>
</tr>
<tr>
<td>PHST 680</td>
<td>Biostatistical Methods I</td>
<td>3</td>
</tr>
<tr>
<td>PHST 681</td>
<td>Biostatistical Methods II</td>
<td>3</td>
</tr>
<tr>
<td>PHST 682</td>
<td>Multivariate Statistical Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHST 684</td>
<td>Categorical Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHST 704</td>
<td>Mixed Effect Models and Longitudinal Data Analysis</td>
<td>3</td>
</tr>
<tr>
<td>PHST 781</td>
<td>Advanced Linear Models</td>
<td>3</td>
</tr>
<tr>
<td>PHST 782</td>
<td>Generalized Linear Models</td>
<td>3</td>
</tr>
<tr>
<td>PHST 785</td>
<td>Non-Linear Regression</td>
<td>3</td>
</tr>
</tbody>
</table>
PSYC 611  Advanced Statistics II  3
PSYC 612  Advanced Statistics III  3
SOC 610  Seminar in Statistics II  3
SOC 615  Seminar in Research Methods  3
SOC 616  Advanced Multivariate Modeling  3

**Qualitative Research Methods (3-9 credit hours)**

PHPB 650  PhotoVoice Methodology  3
PHPB 710  Community-Based Participatory Research  3
PHPB 711  Qualitative Research Methods in Public Health  3
ELFH 704  Qualitative Field Research Methods  3
ELFH 705  Qualitative Data Analysis and Representation  3
SOC 618  Qualitative Field Research Methods  3

**TEACHING [3 hours]**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title-Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELFH 683</td>
<td>College Teaching</td>
<td>3</td>
</tr>
<tr>
<td>-OR-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELFH 607</td>
<td>Principles of Educational Leadership</td>
<td></td>
</tr>
<tr>
<td>-OR-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELFH 672</td>
<td>Instructional Design and Development</td>
<td></td>
</tr>
<tr>
<td>-OR-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELFH 661</td>
<td>Adult and Organizational Learning</td>
<td></td>
</tr>
<tr>
<td>-OR-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EDAP 607</td>
<td>Teacher Leadership in Practice</td>
<td></td>
</tr>
</tbody>
</table>

**Practice**

Undergraduate/Graduate Teaching Experience

**COGNATE** 12-15 hours; courses to be determined with guidance from advisor based on area student chooses to develop content expertise

**DISSERTATION** hours as needed

**Qualifying Examination (See Student Handbook for additional information.)**

Upon completion of all formal course work, typically at the end of the second year of coursework, students will take a written qualifying exam to demonstrate their ability to synthesize and apply concepts from those courses. Results will be given to students within six weeks of completion of the exam. The exam will be evaluated on a pass/fail basis; students who don’t pass the exam on their first attempt will be given time to prepare to sit for the exam one additional time. The retake of the exam must be attempted within 6 months at a regularly scheduled exam date (February, July or October) following the first attempt at the discretion of the specialization and in consultation with the student. If a student fails to pass on the second attempt, the student will be dropped from the program. Once the qualifying exam is successfully completed, students will be admitted to candidacy for the doctoral degree.

**Dissertation (See Student Handbook for additional information.)**

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 specialization in Health Promotion. The
dissertation is to be a scholarly achievement that demonstrates the student’s ability to conduct independent research and a thorough understanding of research principles, concepts and techniques in health promotion. The dissertation must follow the guidelines of the School of Interdisciplinary and Graduate Studies (SIGS) located at http://louisville.edu/graduate/current-students/thesis-dissertation-information.

Dissertation Committee

The student’s dissertation research will be guided by, and the final product approved by, a Dissertation Committee. The Chair of the Committee, who must come from within the department, will be appointed by the Dean of the School of Interdisciplinary and Graduate Studies upon the advice of the Chair of the Department of Health Promotion and Behavioral Sciences.

The Dissertation Committee shall consist of at least four members to a maximum of six members. The Chair of the Committee and at least one other committee member must from the department. Additional members should be from outside of the department or school. Students are encouraged to meet with their committee chair regarding prospective committee members who will mentor them throughout this process. A committee member must have a doctoral degree, be credentialed to teach graduate-level courses relevant to the degree, and have recent involvement in research, scholarship, or creative activity within the previous five years. The Dean of Academic Affairs at SPHIS must approve the members to serve on the committee. The Committee will subsequently be approved by SIGS.

Dissertation Proposal

The student will work with the Dissertation Committee, and especially with the Chair throughout the process of preparing their Dissertation Proposal. The student will schedule meetings to present their dissertation proposal for approval once it has been review by members of the committee. The final oral defense of the dissertation must be completed within four (4) years of entering candidacy after passing the Qualifying Exam.

Dissertation Defense

Once the student has completed work on the dissertation, the student will schedule a date with his/her Dissertation Committee for the final oral examination during which the student will defend the dissertation. The dissertation must be approved by the committee and the Chair of the Department by majority vote before it can be submitted to the School of Interdisciplinary and Graduate Studies (SIGS). The defense is a public event to which members of the University community will be invited as well as those the student worked with on the project.

Dissertation Preparation

The dissertation copy must follow the guidelines of School of Interdisciplinary and Graduate Studies located at https://louisville.edu/graduate/current-students/thesis-dissertation-information

Dissertation Submission

The following steps must be taken to submit the final copy of the dissertation electronically after oral defense and approval of the committee:
1. Final document must be converted to a PDF (following the guidelines as noted above) and sent to SIGS and the department’s administrative assistant.

2. Complete the “Electronic Thesis or Dissertation Submission” form found at https://louisville.edu/graduate/forms/electronic-thesis-or-dissertation-submission-form

3. The signature page within the electronic version must have the names of your committee members typed under the signature line; the signatures cannot be scanned into the document.

4. Submit a signed signature page on white paper, with original signatures, to the School of Interdisciplinary and Graduate Studies, attention Courtney Kerr.

5. Submit the completed form (Nonexclusive License form), which will be provided after the review from the School of Interdisciplinary and Graduate Studies.

**Faculty**

**DEPARTMENT OF ENVIRONMENTAL & OCCUPATIONAL HEALTH**
- David J. Tollerud, Professor
- Kathy B. Baumgartner, Associate Professor
- Frank Groves, Associate Professor
- Anne B. Wallis, Assistant Professor
- Kristina Zierold, Associate Professor

**DEPARTMENT OF EPIDEMIOLOGY & POPULATION HEALTH**
- Richard N. Baumgartner, Professor
- David J. Tollerud, Chair
- Kathy B. Baumgartner, Professor
- Frank Groves, Associate Professor
- Anne B. Wallis, Assistant Professor
- Kristina Zierold, Associate Professor

**DEPARTMENT OF HEALTH MANAGEMENT & SYSTEMS SCIENCES**
- Chris Johnson, Professor
- Richard N. Baumgartner, Chair
- Susan Olson Allen, Assistant Professor
- Joseph Benitez, Assistant Professor
- Lee W. Bewley, Associate Professor
- Craig Blakely, Dean

**DEPARTMENT OF HEALTH PROMOTION & BEHAVIORAL SCIENCES**
- Richard Clover, Professor
- Ryan M. Combs, Assistant Professor
- Muriel J. Harris, Associate Professor
- Jelani Kerr, Assistant Professor
- A. Scott LaJoie, Associate Professor
- William P. McKinney, Professor
- Anne B. Wallis, Assistant Professor
- Liza Creel, Associate Professor
- Bob Esterhay, Associate Professor
- J’Aime Jennings, Assistant Professor
- Bert Little, Professor
- Jelani Kerr, Chair

**DEPARTMENT OF HEALTH PROMOTION & BEHAVIORAL SCIENCES**
- A. Scott LaJoie, Associate Professor
- Anne B. Wallis, Assistant Professor
- Liza Creel, Associate Professor
- J’Aime Jennings, Assistant Professor
- Bert Little, Professor
- Jelani Kerr, Chair
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

Embodying the University, Speed School of Engineering and Department of Bioengineering missions of providing an excellent education through research, innovation and a rigorous curriculum, the Department of Bioengineering Master of Engineering degree program will produce graduates who:

1. Demonstrate advanced level academic expertise and practical engineering experience necessary to function as bioengineering professionals in a modern, ever-changing world. (Advanced Knowledge and Life-long Learning)
2. Display competence by being selected for employment by industrial, academic or government entities or further professional/graduate studies. (Career Opportunities)
3. Understand the broad, social, ethical and professional issues of contemporary engineering practice. (Awareness and Responsibility)

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 Mathematics, Life Sciences, Physical Sciences, and Engineering to advanced bioengineering problems
2. An ability in proficiently designing and validating experiments, systems, components, or processes to meet desired needs
3. An ability for proficiently identifying, formulating, and solving advanced bioengineering problems
4. An ability for proficient contemporary technical and scientific comprehension and lifelong learning
5. An ability for proficient technical and scientific communication
6. An ability to use advance 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:

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 2.75 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 residency. 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 residency, 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 residency 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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit 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.

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.
The Master of Engineering in Bioengineering degree requires the following over and above the Bachelor of Science in Bioengineering Degree.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BE 621: Bioinstrumentation</td>
<td>4</td>
</tr>
<tr>
<td>BE 654: Advanced Physiology for Engineers</td>
<td>3</td>
</tr>
<tr>
<td>IE 563: Experimental Design in Engineering</td>
<td>3</td>
</tr>
<tr>
<td>BE Electives&lt;sup&gt;1,2&lt;/sup&gt;</td>
<td>9</td>
</tr>
<tr>
<td>Technical Electives&lt;sup&gt;1,3&lt;/sup&gt;</td>
<td>6</td>
</tr>
<tr>
<td>Thesis Option:</td>
<td>Non-Thesis Option:</td>
</tr>
<tr>
<td>BE 697: MEng Thesis&lt;sup&gt;4&lt;/sup&gt;</td>
<td>BE 691: Biomedical Rotation</td>
</tr>
<tr>
<td></td>
<td>Technical Elective&lt;sup&gt;1,3&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Total Credit Hours:</strong></td>
<td><strong>31&lt;sup&gt;5&lt;/sup&gt;</strong></td>
</tr>
</tbody>
</table>

<sup>1</sup> Electives must be chosen so that at least one-half of the total credits counted toward the degree, exclusive of thesis, are 600-level.

<sup>2</sup> BE Electives - A minimum of nine (9) credit hours and maximum of fifteen (15) credit hours of electives must be chosen from the following approved list (all prerequisites must be satisfied):
BE 552, 581, 593, 605, 611, 612, 640, 650, 653, 658, 680, 681, 682, 693, 695
The Technical Electives must be chosen from the following approved list. All prerequisites must be satisfied. Please note that all BE Electives can be counted toward Technical Electives. Only three (3) credit hours from EM and six (6) credit hours from BIOC, CHEM or MATH may be used towards degree requirements.

BE 552, 581, 593, 605, 611, 612, 640, 650, 653, 658, 680, 681, 683, 693, 695
BIOC 545/CHEM 545, BIOC 547/CHEM 547
CECS 535, 619, 628, 632, 641, 643, 660
ECE 520, 521, 530, 533, 543, 544, 618, 620, 635, 641, 643, 655, 675
EM 525, 613, 628, 661
IE 580, 581, 631, 681
MATH 501, 502
ME 512, 548, 555, 565, 606, 612, 638, 644, 650, 651, 652, 653, 658

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.

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 (6) credit 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.

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:

Gina E. Bertocci  
Professor
Ayman S. El-Baz  
Associate Professor
Acting Department Chair
Hermann B. Friebos  
Assistant Professor
Guruprasad A. Giridharan  
Associate Professor
Robert S. Keynton  
Professor
Steven C. Koenig  
Professor
Jonathan Kopechek  
Assistant Professor
Martin O'Toole  
Assistant Professor
Patricia Soucy  
Assistant Professor
Jill Steinbach  
Assistant Professor
Master of Engineering in Chemical Engineering

Major: CHE  
Degree Awarded: MEng.  
Unit: GS  
Program Webpage: http://louisville.edu/speed/chemical

Program Information

General Information

The Bachelor of Science Degree in Chemical Engineering 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. program 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 at an advanced level 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 advanced 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](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.

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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit 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.
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.

The Master of Engineering in Chemical Engineering degree requires the following over and above the Bachelor of Science in Chemical Engineering Degree.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 595: Seminar in CHE</td>
<td>1</td>
</tr>
<tr>
<td>CHE 610: Advanced Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>CHE 620: Transport Phenomena</td>
<td>3</td>
</tr>
</tbody>
</table>
CHE 641: Advanced Reactor Design 3
CHE 686: CHE Analysis 3
Technical Electives 1,2 12

Thesis Alternative:
CHE 697: MEng Thesis 3

Non-thesis Alternative:
CHE 698: Engr Project I
CHE 699: Engr Project II 6

Total Credit Hours: 31

1. Electives must be chosen so that at least one-half of the total credits counted toward the degree, exclusive of thesis, are 600-level.
2. Technical Electives can be CHE or non-CHE courses. Non-CHE courses must be approved by the student's research or academic advisor.
3. 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.
4. 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 (6) credit 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.

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:

Delaina A. Amos
Associate Professor

R. Eric Berson
Associate Professor

Joel Fried
Professor
Department Chair

Xiao-An Fu
Assistant Professor

Kyung A. Kang
Professor

Neville Pinto
Professor

Noppadon Sathitsuksanoh
Assistant Professor

Thomas L. Starr
Professor

Mahendra K. Sunkara

Professor

James Charles
Watters

Gerold A. Willing
Associate Professor
Master of Science in Chemical Engineering

Major: CHE  
Degree Awarded: MS  
Unit: GS  
Program Webpage: http://louisville.edu/speed/chemical

Program Information

General Information

The M.S. degree program is intended for persons having an accredited baccalaureate degree in chemical engineering, but is also available to those with other backgrounds. Applicants with other backgrounds should plan on taking some undergraduate background course work. Students interested in the M.S. degree program should consult the 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 Master of Science program in Chemical Engineering are as follows:

1. All admission applications for the program shall include:
   a. a completed application for School of Interdisciplinary and Graduate Studies,  
   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 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 302.
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.
International students whose primary language is not English must show English language proficiency by either:

- total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test or overall IELTS score of 6.5 or higher, or
  - successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
  - 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. Please review the "Academic Standing" Section within this catalog in regard to "Academic Probation" ([http://louisville.edu/graduatecatalog/academic-policies-procedures-and-requirements](http://louisville.edu/graduatecatalog/academic-policies-procedures-and-requirements)).
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 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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit 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 or Dissertation [pdf]
4. Student has six years, after their admission to the M.S. program to complete their degree.

The requirements for the Master of Science degree are discussed in more detail at: [http://louisville.edu/graduatecatalog/degree-requirements](http://louisville.edu/graduatecatalog/degree-requirements).
Curriculum

Graduate Studies - M.S.

The minimum curricular requirements for the master’s program are shown in the table below. For those applicants who, in the opinion of the faculty, do not have a sufficient background, remedial work may be specified.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 610: Advanced Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>CHE 620: Transport Phenomena</td>
<td>3</td>
</tr>
<tr>
<td>CHE 641: Advanced Reactor Design</td>
<td>3</td>
</tr>
<tr>
<td>CHE 686: Chemical Engineering Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CHE 695: Chemical Engineering Seminar</td>
<td>2</td>
</tr>
<tr>
<td>Technical Electives¹,²</td>
<td></td>
</tr>
<tr>
<td>Thesis Option:</td>
<td>12</td>
</tr>
<tr>
<td>CHE 690: MS Thesis³</td>
<td>6</td>
</tr>
<tr>
<td>Non-thesis Option:</td>
<td></td>
</tr>
<tr>
<td>Technical Electives¹,²</td>
<td></td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>32</td>
</tr>
</tbody>
</table>

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 credit hours of coursework must be in CHE.
² At least three (3) credit 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.

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:

<table>
<thead>
<tr>
<th>Delaina A. Amos</th>
<th>R. Eric Berson</th>
<th>Joel Fried</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate Professor</td>
<td>Associate Professor</td>
<td>Professor</td>
</tr>
<tr>
<td>Name</td>
<td>Title</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------</td>
<td></td>
</tr>
<tr>
<td>Xiao-An Fu</td>
<td>Assistant Professor</td>
<td></td>
</tr>
<tr>
<td>Kyung A. Kang</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Neville Pinto</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Noppadon</td>
<td>Assistant Professor</td>
<td></td>
</tr>
<tr>
<td>Sathitsuksanoh</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Thomas L. Starr</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Mahendra K. Sunkara</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>James Charles Watters</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Gerold A. Willing</td>
<td>Associate Professor</td>
<td></td>
</tr>
</tbody>
</table>
Doctor of Philosophy in Chemical Engineering

Major: CHE
Degree Awarded: Ph.D.
Unit: GS
Program Webpage: http://louisville.edu/speed/chemical

Program Information

General Information

The Ph.D. degree program is intended for persons having an accredited masters and/or baccalaureate degree in chemical engineering, but is also 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:

1. All admission applications for the program shall include:
   a. a completed application for the School of Interdisciplinary and Graduate Studies,
   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 Spead School program.
3. 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).
4. The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score 302.
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 overall IELTS score of 6.5 or higher, 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
d. 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. Please review the “Academic Standing” section within this catalog in regard to “Academic Probation” (http://louisville.edu/graduatecatalog/academic-policies-procedures-and-requirements).
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 credit 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 Doctoral Candidacy upon completion of all course work, qualifying exams, required research credit hours and other co-curricular requirements. Students who are enrolled in Doctoral Candidacy are considered full-time students. Enrollment in Doctoral
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/degree-requirements

Curriculum

Graduate Studies - Ph.D.

The Ph.D. program in Chemical Engineering is comprised of 54 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 54 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.

<table>
<thead>
<tr>
<th>Courses – Post Baccalaureate</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHE 610: Advanced Thermodynamics</td>
<td>3</td>
</tr>
<tr>
<td>CHE 620: Transport Phenomena</td>
<td>3</td>
</tr>
<tr>
<td>CHE 641: Advanced Reactor Design</td>
<td>3</td>
</tr>
<tr>
<td>CHE 686: CHE Analysis</td>
<td>3</td>
</tr>
<tr>
<td>CHE 695: CHE Seminar</td>
<td>3</td>
</tr>
<tr>
<td>Technical Electives¹</td>
<td>18</td>
</tr>
<tr>
<td>CHE 693: Research in CHE</td>
<td>21</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>54</strong></td>
</tr>
</tbody>
</table>

¹ At least three (3) credit hours of Technical Electives must be from non-CHE courses, and the student’s research advisor or academic advisor must approve non-CHE courses.

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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The following faculty have permanent appointments as Graduate Faculty of the J.B. Speed School of Engineering:

- **Delaina A. Amos**  
  Associate Professor
- **R. Eric Berson**  
  Associate Professor
- **Joel Fried**  
  Professor  
  Department Chair
- **Xiao-An Fu**  
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  Professor
- **Neville Pinto**  
  Professor
- **Noppadon Sathitsuksanoh**  
  Assistant Professor
- **James Charles Watters**  
  Professor
- **Gerold A. Willing**  
  Associate Professor
- **Mahendra K. Sunkara**  
  Professor
Master of Engineering in Civil Engineering

Major: CE  
Degree Awarded: MEng.  
Unit: SP  
Program Webpage: http://speed.louisville.edu/speed/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.

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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit 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.
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.

The Master of Engineering in Civil Engineering degree requires the following over and above the Bachelor of Science in Civil Engineering Degree.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE 680: Capstone Design</td>
<td>3</td>
</tr>
<tr>
<td>CEE Electives$^{1,2}$</td>
<td>15</td>
</tr>
<tr>
<td>Technical Electives$^{1,3}$</td>
<td>6</td>
</tr>
<tr>
<td><strong>Thesis Option:</strong></td>
<td></td>
</tr>
<tr>
<td>CEE 697: MEng Thesis$^{4}$</td>
<td>Non-thesis Option:</td>
</tr>
<tr>
<td></td>
<td>CEE Electives$^{1,2}$</td>
</tr>
<tr>
<td><strong>Total Credit Hours:</strong></td>
<td>30$^{5}$</td>
</tr>
</tbody>
</table>

$^{1}$ Electives must be chosen so that at least one-half of the total credits counted toward the degree, exclusive of thesis, are 600-level. All courses must be at the 500-level or higher.

$^{2}$ CEE Electives must be approved by the department.

$^{3}$ Technical Electives can be CEE or non-CEE courses. Technical Electives must be approved by the department.

$^{4}$ 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.
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 (6) credit 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.

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:

- **Nageshwar R. Bhaskar**
  *Professor*

- **Mark N. French**
  *Professor of Civil*

- **Omid Ghasemi-Fare**
  *Assistant Professor*

- **Young Hoon Kim**
  *Assistant Professor*

- **Zhixia Li**
  *Assistant Professor*

- **W. Mark McGinley**
  *Professor*

- **J. P. Mohsen**
  *Professor*

- **Department Chair**

- **Arthur C. Parola**
  *Professor*

- **Thomas D. Rockaway**
  *Associate Professor*

- **Zhihui Sun**
  *Associate Professor*

- **Qian Zhao**
  *Assistant Professor*
Doctor of Philosophy in Civil Engineering

Major: CE  
Degree Awarded: Ph.D.  
Unit: GS  
Program Webpage: http://louisville.edu/speed/civil/

Program Information

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:

1. All admission applications for the program shall include:
   a. a completed application for the School of Interdisciplinary and Graduate Studies,  
   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 grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (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 295.
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:
   total score of 80 or higher on the Test of English as a Foreign Language (TOEFL) Internet-based test or overall IELTS score of 6.5 or higher, or
   a. successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or
   b. demonstration of a degree award from an acceptable English language institution.
8. 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. Please review the “Academic Standing” section within this catalog in regard to “Academic Probation” (http://louisville.edu/graduatecatalog/academic-policies-procedures-and-requirements).
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 credit 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 Doctoral Candidacy are considered full-time students. Enrollment in Doctoral
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/degree-requirements.

**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 credit 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:

<table>
<thead>
<tr>
<th>Courses – Post Bac</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Master’s Level Course Work</td>
<td>30</td>
</tr>
<tr>
<td>Technical Electives¹</td>
<td>15</td>
</tr>
<tr>
<td>CEE 698: CE PhD Seminar</td>
<td>3</td>
</tr>
<tr>
<td>CEE 699: CE PhD Research</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>60²</strong></td>
</tr>
</tbody>
</table>

¹ Technical electives can be CEE or non-CEE courses. Technical Electives must be approved by the department.
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.

**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:

- **Nageshwar R. Bhaskar**
  - Professor

- **Mark N. French**
  - Professor of Civil

- **Omid Ghasemi-Fare**
  - Assistant Professor

- **Young Hoon Kim**
  - Assistant Professor

- **Zhixia Li**
  - Assistant Professor

- **W. Mark McGinley**
  - Professor

- **J. P. Mohsen**
  - Professor

- **Department Chair**

- **Arthur C. Parola**
  - Professor

- **Thomas D. Rockaway**
  - Associate Professor

- **Zhihui Sun**
  - Associate Professor

- **Qian Zhao**
  - Assistant Professor
Master of Science in Civil Engineering

Major: CE  
Degree Awarded: MS  
Unit: GS  
Program Webpage: http://louisville.edu/speed/civil/

Program Information

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 M.S. 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 Master of Science program in Civil Engineering are as follows:

1. All admission applications for the program shall include:
   a. a completed application for the School of Interdisciplinary and Graduate Studies,
   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 grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (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 295.
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 overall IELTS score of 6.5 or higher, 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. Please review the "Academic Standing" section within this catalog in regard to "Academic Probation" (http://louisville.edu/graduatecatalog/academic-policies-procedures-and-requirements).
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 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 [pdf], which are located on the website of the School of Interdisciplinary and Graduate Studies.
4. Students have six years, after their admission to the M.S. program to complete their degree.

The requirements for the Master of Science degree are discussed in more detail at: http://louisville.edu/graduatecatalog/degree-requirements
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:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEE Electives</td>
<td>18</td>
</tr>
<tr>
<td>Non-CEE Electives</td>
<td>6</td>
</tr>
<tr>
<td>Thesis Option: CEE 690: MS Thesis</td>
<td>3</td>
</tr>
<tr>
<td>Non-thesis Option: Technical Electives</td>
<td>6</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

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 credit hours of coursework must be in CEE.

2 Technical Electives can be CEE or non-CEE courses. Technical Electives must be approved by the department.

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.

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:

Nageshwar R. Bhaskar  
Professor

Mark N. French  
Professor of Civil

Omid Ghasemi-Fare  
Assistant Professor

Young Hoon Kim  
Assistant Professor

Zhixia Li  
Assistant Professor

W. Mark McGinley  
Professor

J. P. Mohsen  
Professor

Department Chair

Arthur C. Parola  
Professor

Thomas D. Rockaway  
Associate Professor

Zhihui Sun  
Associate Professor

Qian Zhao  
Assistant Professor
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

General Information

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 the School of Interdisciplinary and Graduate Studies,
   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 295.

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 overall IELTS score of 6.5 or higher, 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. Please review the “Academic Standing” section within this catalog in regard to “Academic Probation” (http://louisville.edu/graduatecatalog/academic-policies-procedures-and-requirements).
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 credit 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 Doctoral Candidacy upon completion of all course work, qualifying
exams, required research credit hours and other co-curricular requirements. Students who are enrolled in Doctoral Candidacy are considered full-time students. Enrollment in Doctoral 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/degree-requirements](http://louisville.edu/graduatecatalog/degree-requirements)

**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 credit 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:

<table>
<thead>
<tr>
<th>Courses – Post Bac</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Master’s Level Course Work</td>
<td>30</td>
</tr>
<tr>
<td>CECS Electives(^1)</td>
<td>18</td>
</tr>
<tr>
<td>CSE 693: Dissertation Research</td>
<td>9</td>
</tr>
<tr>
<td>CSE 695: Seminar in CSE</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>59(^1)</strong></td>
</tr>
</tbody>
</table>

\(^1\) Master’s Level Course Work and/or CECS Electives must be chosen so that 18 credit 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  
CECS 660: Introduction to Bioinformatics  
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:**  
IE/CECS 563: Experimental Design in Engineering  
CECS 620: Combinatorial Optimization and Modern Heuristics  
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.

## 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:

- Nihat Altiparmak
  Assistant Professor
- Antonio E. Badia
  Associate Professor
- Dar-Jen Chang
  Associate Professor
- Ahmed H. Desoky
  Associate Professor
- Adel S. Elmaghraby
  Professor
  Department Chair
- Hichem Frigui
  Professor
- Ibrahim N. Imam
  Associate Professor
- Mehmed Kantardzic
  Professor
- Anup Kumar
  Professor
- Adrian Lauf
  Assistant Professor
- Olfa Nasraoui
  Associate Professor
- Adel S. Elmaghraby
  Professor
- Juw Won Park
  Assistant Professor
- Eric Christian Rouchka
  Associate Professor
- Roman V. Yampolskiy
  Assistant Professor
- Hui Zhang
  Assistant Professor
Master of Engineering in Computer Engineering Computer Science

Major: CECS
Degree Awarded: MEng.
Unit: SP
Program Webpage: http://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 M.Eng. 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.

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 residency. 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 residency, 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 residency 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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit hours of graduate credit may be transferred from accredited institutions.
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.**

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.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CECS 611: Computer Architecture (3) or</td>
<td>3 or 4</td>
</tr>
<tr>
<td>CECS/ECE 510: Computer Design (3) and ECE 511: Lab (1)</td>
<td></td>
</tr>
</tbody>
</table>
ECE 511: Computer Design Lab

CECS/IE 563: Experimental Design
or
CECS 620: Combinatorial Optimization & Modern Heuristics

CECS 622: Discrete Systems

CECS 625: Parallel Programming

CECS Electives\(^{1,2}\)

Technical Elective\(^{1,3}\)

Thesis Option:
CECS 697: MEng Thesis\(^4\)

Non-Thesis Option:
CECS 696: Project
CECS Elective\(^{1,2}\)

Total Credit Hours: 30 or 31

\(^1\) Electives must be chosen so that at least one-half of the total credits counted toward the degree, exclusive of thesis, are 600-level.

\(^2\) Electives must be approved by the department.

\(^3\) Technical Electives can be CECS or non-CECS courses. Technical Electives must be approved by the department.

\(^4\) 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 CECS 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 (6) credit 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.

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:

<table>
<thead>
<tr>
<th>Nihat Altiparmak</th>
<th>Adel S. Elmaghraby</th>
<th>Mehmed Kantardzic</th>
<th>Juw Won Park</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant Professor</td>
<td>Professor</td>
<td>Professor</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Antonio E. Badia</td>
<td>Department Chair</td>
<td>Anup Kumar</td>
<td>Eric Christian</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Hichem Frigui</td>
<td>Professor</td>
<td>Rouchka</td>
</tr>
<tr>
<td>Dar-Jen Chang</td>
<td>Professor</td>
<td>Adrian Lauf</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>Ibrahim N. Imam</td>
<td>Assistant Professor</td>
<td>Roman V.</td>
</tr>
<tr>
<td>Ahmed H. Desoky</td>
<td>Associate Professor</td>
<td>Olfa Nasraoui</td>
<td>Yampolskiy</td>
</tr>
<tr>
<td>Associate Professor</td>
<td></td>
<td>Associate Professor</td>
<td>Assistant Professor</td>
</tr>
</tbody>
</table>
Master of Science in Computer Science

Major: CS  
Degree Awarded: MS  
Unit: GS  
Program Webpage: http://louisville.edu/speed/computer

Program Information

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 M.S. 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 master’s degrees.

Admission Standards

The admission standards for the M.S. program in Computer Science are as follows:

1. All admission applications for the program shall include:
   a. a completed application for the School of Interdisciplinary and Graduate Studies,
   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 grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (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 295.

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 overall IELTS score of 6.5 or higher, 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
d. 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. Please review the "Academic Standing" section with this catalog in regard to "Academic Probation" (http://louisville.edu/graduatecatalog/academic-policies-procedures-and-requirements).
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 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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit 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 and Dissertation [pdf], which are located on the website of the School of Interdisciplinary and Graduate Studies.
4. Students have six years, after their admission to the M.S. program to complete their degree.

The requirements for the Master of Science degree are discussed in more detail at: http://louisville.edu/graduatecatalog/degree-requirements.
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:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations Course$^1$</td>
<td>3</td>
</tr>
<tr>
<td>Software Courses$^2$</td>
<td>6</td>
</tr>
<tr>
<td>Analytic Courses$^3$</td>
<td>6</td>
</tr>
<tr>
<td>CECS Electives$^4$</td>
<td>9</td>
</tr>
<tr>
<td>Thesis Option: CECS 690: MS Thesis$^5$</td>
<td>5</td>
</tr>
<tr>
<td>Non-thesis Option: CECS 696: Project CECS Elective$^4$</td>
<td>6</td>
</tr>
</tbody>
</table>

Total Credit Hours 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 625: Parallel Programming
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 522: Performance Evaluation
CECS 563: Experimental Design
CECS 620: Combinatorial Optimization and Modern Heuristics
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 credit 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.

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:

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- Dar-Jen Chang
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  Professor
- Hichem Frigui
  Professor
- Ahmed H. Desoky
  Associate Professor
- Mehmed Kantardzic
  Professor
- Anup Kumar
  Professor
- Adrian Lauf
  Assistant Professor
- Ibrahim N. Imam
  Associate Professor
- Olfa Nasraoui
  Associate Professor
- Juw Won Park
  Assistant Professor
- Eric Christian
  Rouchka
  Associate Professor
- Roman V.
  Yampolskiy
  Assistant Professor
Graduate Certificate in Data Mining

Major: DTMGCDMNON
Degree Awarded: CERT
Unit: GS
Program Webpage: http://louisville.edu/speed/computer/graduate-studies/dataMining

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 credit hours, with three required courses from CECS and three elective courses selected from a list of relevant elective courses in CECS and Mathematics.

Admission Requirements

For continuing studies as non-degree student:

- Undergraduate Degree in technically related field or technical experience
- Knowledge of calculus
- Graduate application and application fee

For degree status (those who want to continue for MS or Ph.D)
Additional Requirements:

- GRE scores
- Two letters of recommendation

Curriculum

Required courses and activities

*Three required Computer Engineering courses:*

CECS 535 Introduction to Databases OR CECS 536 Data Management and Analysis
CECS 632 Data Mining
CECS 635 Data Mining with Linear Models

*Three elective courses chosen from the following list of courses:*

CECS 619 Algorithms
CECS 621 Web Mining for E-commerce
CECS 660 Intro to Bioinformatics
CECS 622 Simulation and Modeling of Discrete Systems
CECS 545 Artificial Intelligence
CECS 522 Performance Evaluation of Computer Systems
CECS 694 Selected Topics in Data Mining: Legal Issues in Data Mining
CECS 694 Selected Topics in Data Mining: BIG DATA: Document-oriented DB
CECS 694 Selected Topics Related Data Mining
CECS 563 Experimental Design
CECS 630 Advanced Databases and Data Warehousing
MATH 560 Intro to Statistical Data Analysis
MATH 561 Probability Theory
MATH 562 Mathematical Statistics
MATH 566 Nonparametric Statistics
MATH 667 Methods of Classification

Faculty

Mehmed Kantardzic
Professor
Director of Graduate Studies
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

Program Webpage: http://louisville.edu/speed/electrical
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. candidacy 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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit 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.
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.

The Master of Engineering in Electrical and Computer Engineering degree requires the following over and above the Bachelor of Science in Electrical and Computer Engineering Degree.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE Electives&lt;sup&gt;1,2,3&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Technical Electives&lt;sup&gt;1,2,3,4&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Thesis/Paper Option:&lt;sup&gt;2,3,5&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Project Option:&lt;sup&gt;2,3&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Research/Project Course/ECE</td>
<td></td>
</tr>
<tr>
<td>696&lt;sup&gt;1,6&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>ECE 697: MEng Thesis or ECE 698: MEng Paper</td>
<td>18</td>
</tr>
<tr>
<td>ECE 699: MEng Project&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>ECE Electives&lt;sup&gt;1,3&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 32<sup>7</sup>

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.
3. Requires approval of the student’s faculty advisor.
4. Technical Electives can be ECE or non-ECE courses. Technical Electives must be approved by the department. Only three (3) credit 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 (6) credit 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.

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:
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Department Chair</th>
<th>Professor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bruce William</td>
<td>Alphenaar</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Amir Amini</td>
<td>Robert W. Cohn</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Aly A. Farag</td>
<td>Cindy K. Harnett</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Tamer Inanc</td>
<td>Hongxiang Li</td>
<td>Associate Professor</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>John H. Lilly</td>
<td>Michael McIntyre</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Shamus McNamara</td>
<td>John F. Naber</td>
<td>Associate Professor</td>
<td>Professor</td>
</tr>
<tr>
<td>Dan Popa</td>
<td>Kevin M. Walsh</td>
<td>Professor</td>
<td></td>
</tr>
<tr>
<td>Karla Conn Welch</td>
<td>Jacek M. Zurada</td>
<td>Professor</td>
<td></td>
</tr>
</tbody>
</table>
Master of Science in Electrical Engineering

Major: EE  
Degree Awarded: MS  
Unit: GS  
Program Webpage: http://louisville.edu/speed/electrical

Program Information

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 M.S. degree program should consult the Director of Graduate Studies in the Department of Electrical and 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 Master of Science program in Electrical Engineering are as follows:

1. All admission applications for the program shall include:
   a. a completed application for the School of Interdisciplinary and Graduate Studies,
   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 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 295.
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 overall IELTS score of 6.5 or higher, or
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   c. demonstration of a degree award from an acceptable English language institution.

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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 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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit 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 and Dissertation [pdf], which are located on the website of the School of Interdisciplinary and Graduate Studies.
4. Students have six years, after their admission to the M.S. program to complete their degree.

The requirements for the Master of Science degree are discussed in more detail at: http://louisville.edu/graduatecatalog/degree-requirements.
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:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECE Electives¹,²</td>
<td>15</td>
</tr>
<tr>
<td>Technical Electives¹,³</td>
<td>9</td>
</tr>
<tr>
<td>Thesis Option: ECE 690: MS Thesis⁴</td>
<td>4</td>
</tr>
<tr>
<td>Paper Option: ECE 691: MS Paper⁵</td>
<td>4</td>
</tr>
<tr>
<td>Project Option: ECE 692: MS Project</td>
<td>6</td>
</tr>
<tr>
<td>or Project Course/ECE 696</td>
<td></td>
</tr>
<tr>
<td>ECE Electives¹,³</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credit Hours** 30

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 credit 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; ECE 532
   - Group 2: ECE 514/515; ECE 533/534; ECE 540; ECE 542; ECE 543; ECE 569
   - Group 3: ECE 520/521; ECE 530; ECE 550/551; ECE 560/561; ECE 625
³ Technical Electives can be ECE or non-ECE courses. Technical Electives must be approved by the department.
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.

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:
Bruce William  
Alphenaar  
Professor  
Department Chair  
Amir Amini  
Professor  
Robert W. Cohn  
Professor  

Aly A. Farag  
Professor  

Cindy K. Harnett  
Associate Professor  

Tamer Inanc  
Associate Professor  

Hongxiang Li  
Assistant Professor  

John H. Lilly  
Professor  

Michael McIntyre  
Assistant Professor  

Shamus McNamara  
Associate Professor  

John F. Naber  
Professor  

Dan Popa  
Professor  

Kevin M. Walsh  
Professor  

Karla Conn Welch  
Assistant Professor  

Jacek M. Zurada  
Professor  


Doctor of Philosophy in Electrical Engineering

Major: EE
Degree Awarded: Ph.D.
Unit: GS
Program Webpage: http://louisville.edu/speed/electrical

Program Information

General Information

The Ph.D. degree program is intended for persons having an accredited masters degree in electrical engineering. Students interested in the Ph.D. degree program should consult the Director of Graduate Studies in the Department of Electrical and 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:

1. All admission applications for the program shall include:
   a. A completed application for the School of Interdisciplinary and Graduate Studies,
   b. An application fee,
   c. Results from the Graduate Record Examination (GRE), and TOEFL/IELTS (when applicable)
   d. at least two letters of recommendation,
   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 masters degree or its equivalent from an accredited institution.
3. The minimum undergraduate grade point average that will be considered for unconditional acceptance and admission to the program is 3.0 (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 295.
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 overall IELTS score of 6.5 or higher, or a minimum score of 6.5 on the IELTS.
   b. Successfully completing the exit examination for the advanced level of the Intensive
      English as a Second Language Program at the University of Louisville.
   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. Please review the “Academic Standing” section within this catalog in regard
   to “Academic Probation” (http://louisville.edu/graduatecatalog/academic-policies-procedures-
   and-requirements).
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 credit 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 a 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 Doctoral Candidacy upon completion of all course work, qualifying
   exam, required research credit hours and other co-curricular requirements. Students who are
   enrolled in Doctoral Candidacy are considered full-time students. Enrollment in Doctoral
Candidacy status must be continuously maintained year round (i.e. Fall, Spring, and Summer) until the degree is awarded.

6. A dissertation proposal defense is required of all candidates.
7. A dissertation is required of all candidates.
8. 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.
9. 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/graduatemcatalog/degree-requirements.

Curriculum

Graduate Studies - Ph.D.

It is expected that the student will complete a Master’s degree before being admitted to the Ph.D. Program.

The minimum curricular requirements for the doctoral program are:

<table>
<thead>
<tr>
<th>Courses – Post Bac</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Master’s Level Course Work</td>
<td>30</td>
</tr>
<tr>
<td>Technical Electives(^1) (minimum of 15 hours)</td>
<td>15-30</td>
</tr>
<tr>
<td>ECE 700: Dissertation Research in EE</td>
<td>0-15</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>60(^2)</strong></td>
</tr>
</tbody>
</table>

\(^1\) Technical Electives can be ECE or non-ECE courses. Technical Electives must be approved by the department.

\(^2\) 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.

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:

<table>
<thead>
<tr>
<th>Bruce William Alphenaar</th>
<th>Aly A. Farag</th>
<th>Michael McIntyre</th>
<th>Dan Popa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor</td>
<td>Professor</td>
<td>Assistant Professor</td>
<td>Professor</td>
</tr>
<tr>
<td>Department Chair</td>
<td>Cindy K. Harnett</td>
<td>Shamus</td>
<td>Kevin M. Walsh</td>
</tr>
<tr>
<td>Amir Amini</td>
<td>Associate Professor</td>
<td>McNamara</td>
<td>Professor</td>
</tr>
<tr>
<td>Professor</td>
<td>Tamer Inanc</td>
<td>Associate Professor</td>
<td>Karla Conn Welch</td>
</tr>
<tr>
<td>Robert W. Cohn</td>
<td>Associate Professor</td>
<td>John F. Naber</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Professor</td>
<td>Hongxiang Li</td>
<td>Professor</td>
<td>Jacek M. Zurada</td>
</tr>
<tr>
<td></td>
<td>Assistant Professor</td>
<td></td>
<td>Professor</td>
</tr>
</tbody>
</table>
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 online program in Engineering Management. The program is designed to build upon the mathematical and analytical expertise gained from prior engineering or related scientific education as well as upon his or her professional experience gained in the course of active engineering employment. 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.Eng. program in Engineering Management are as follows:

1. All admission applications for the program shall include:
   1. a completed application for University of Louisville graduate admission,
   2. an application fee,
   3. at least two letters of recommendation, and
   4. 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 Bachelor of Science degree or its equivalent in engineering or related scientific field from an accredited institution.
3. 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.
4. 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). 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.
5. 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.
6. 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 6.5 or higher on the IELTS, 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.

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 residency. 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 residency, 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 residency 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 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 may be considered for dismissal from the program.
3. 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 3.00 GPA or better for all academic work attempted in Graduate Studies.
2. Masters students must take at least 24 credit hours of course work from the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit hours of graduate credit may be transferred from accredited institutions.
3. 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.

The Master of Engineering in Engineering Management degree requires the following courses.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM Electives</td>
<td>21</td>
</tr>
<tr>
<td>Technical Electives</td>
<td>9</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30</td>
</tr>
</tbody>
</table>

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 may be taken within or outside the Department and up to six (6) credit hours may be from Business Administration programs. All selections require the approval of the student's faculty advisor.

2 Candidates for the Master of Engineering degree must have a minimum final cumulative grade point average of 3.00 for all academic course work attempted in Graduate Studies. A maximum of six (6) credit hours of graduate level courses taken as an undergraduate may be used to satisfy M.Eng. degree requirements; these courses cannot have been used to also satisfy B.S. degree requirements.

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:

- Suraj M. Alexander
  - Professor
  - Department Chair
- Ki-Hwan Bae
  - Assistant Professor
- Lihui Bai
  - Associate Professor
- Gail W. DePuy
  - Professor
- Monica Gentili
  - Associate Professor
- Kevin Gue
  - Professor
- Mickey R. Wilhelm
  - Professor
- Li Yang
  - Assistant Professor
- John S. Usher
  - Assistant Professor
Graduate Certificate in Environmental Engineering

Major: CENVNON
Degree Awarded: CERT
Unit: GS
Program Webpage: http://louisville.edu/speed/academics/programs/certificates

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:

1. Admission to the Speed School of Engineering Division of Higher Studies (M.Eng.) or the Graduate School (M.S. or Ph.D.) in Engineering.
2. Approval of an Application for the Environmental Engineering Certificate Program should be submitted online directly to the School of Interdisciplinary and Graduate Studies, Graduate Admissions: http://louisville.edu/graduate/apply

Curriculum

<table>
<thead>
<tr>
<th></th>
<th>Credit Hours</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Engineering Electives (500-level)</td>
<td>0-6</td>
<td></td>
</tr>
<tr>
<td>Environmental Engineering Electives (600-level)</td>
<td>6-12</td>
<td>12</td>
</tr>
</tbody>
</table>

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.).  

Faculty  

Nageshwar R. Bhaskar  
Professor  
Mark N. French  
Professor of Civil  
Omid Ghasemi-Fare  
Assistant Professor  
Young Hoon Kim  
Assistant Professor  
Zhixia Li  
Assistant Professor  
W. Mark McGinley  
Professor  
J. P. Mohsen  
Professor  
Arthur C. Parola  
Professor  
Thomas D. Rockaway  
Associate Professor  
Zhihui Sun  
Associate Professor  
Qian Zhao  
Assistant 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.

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 residency. 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 residency, 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 residency 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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit 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.

1. 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.

The Master of Engineering in Industrial Engineering degree requires the following over and above the Bachelor of Science in Industrial Engineering Degree.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE 657: Logistical Systems</td>
<td>3</td>
</tr>
<tr>
<td>IE Electives (^1,^2)</td>
<td>12</td>
</tr>
<tr>
<td>Technical Electives (^1,^3)</td>
<td>9</td>
</tr>
<tr>
<td>Technical Elective (^1,^3)</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credit Hours:** 30

\(^1\) Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level.
\(^2\) IE Electives must be approved by the department.
Technical Electives can be IE or non-IE courses. Technical Electives must be approved by the department.

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.

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.

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 (6) credit 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.

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:

- Suraj M. Alexander
  - Professor
  - Department Chair
  - Assistant Professor
- Lihui Bai
  - Associate Professor
- Gail W. DePuy
  - Professor
- Monica Gentili
  - Associate Professor
- Kevin Gue
  - Professor
- Monica Gentili
  - Associate Professor
- Mickey R. Wilhelm
  - Professor
- Li Yang
  - Assistant Professor
- John S. Usher
  - Professor
Master of Science in Industrial Engineering

Major: IE
Degree Awarded: MS
Unit: GS
Program Webpage: http://louisville.edu/speed/industrial/

Program Information

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 M.S. 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 Master of Science program in Industrial Engineering are as follows:

1. All admission applications for the program shall include:
   a) a completed application for the School of Interdisciplinary and Graduate Studies,
   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 grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (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 300.

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: total TOEFL score of 80 or higher or overall IELTS score of 6.5 or higher, or successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville, or 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. Please review the “Academic Standing” section within this catalog in regard to “Academic Probation” (http://louisville.edu/graduatecatalog/academic-policies-procedures-and-requirements).
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 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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) hours of graduate credit may be transferred from accredited institutions.
3. Students following the Thesis Option must follow the Guidelines for the Preparation and Processing of a Theses [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/degree-requirements.


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:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IE 515: Operations Research Methods or</td>
<td>3</td>
</tr>
<tr>
<td>IE 610: Foundations of Optimization I</td>
<td></td>
</tr>
<tr>
<td>IE 561: Stochastic Models</td>
<td>3</td>
</tr>
<tr>
<td>IE 563: Experimental Design in Engineering</td>
<td>3</td>
</tr>
<tr>
<td>IE 5XX and/or 6XX Electives¹</td>
<td>6</td>
</tr>
<tr>
<td>5XX and/or 6XX Technical Electives¹</td>
<td></td>
</tr>
<tr>
<td><strong>Thesis Option:</strong></td>
<td></td>
</tr>
<tr>
<td>IE 690: MS Thesis²</td>
<td></td>
</tr>
<tr>
<td>Non-Thesis Option:</td>
<td>6</td>
</tr>
<tr>
<td>IE 699: Masters Project 6XX Technical Elective¹</td>
<td></td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td>30³</td>
</tr>
</tbody>
</table>

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 credit hours of coursework must be in IE.

² 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. The thesis director must give approval for enrollment in IE 690.

³ 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.

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:
Suraj M. Alexander  
Professor  
Department Chair  
Ki-Hwan Bae  
Assistant Professor  

Lihui Bai  
Associate Professor  

Gail W. DePuy  
Professor  

Monica Gentili  
Associate Professor  

Kevin Gue  
Professor  

Jason Saleem  
Assistant Professor  

John S. Usher  
Professor  

Mickey R. Wilhelm  
Professor  

Li Yang  
Assistant Professor
Doctor of Philosophy in Industrial Engineering

Major: IE  
Degree Awarded: Ph.D.  
Unit: GS  
Program Webpage: http://louisville.edu/speed/industrial/

Program Information

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 coursework. 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:

1. All admission applications for the program shall include:
   a) a completed application for the School of Interdisciplinary and Graduate Studies,  
   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 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 305.

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 overall IELTS score of 6.5 or higher, 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
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. Please review the “Academic Standing” section within this catalog in regard to “Academic Probation” (http://louisville.edu/graduatecatalog/academic-policies-procedures-and-requirements).
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 credit 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 Doctoral Candidacy upon completion of all course work, qualifying
exams, required research credit hours and other co-curricular requirements. Students who are enrolled in Doctoral Candidacy are considered full-time students. Enrollment in Doctoral 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/degree-requirements

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 credit 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:

<table>
<thead>
<tr>
<th>Courses – Post Bac</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Master’s Level Course Work¹²</td>
<td>30</td>
</tr>
<tr>
<td>Technical Electives²</td>
<td>15</td>
</tr>
<tr>
<td>IE 700: Dissertation Research in IE</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>60³</strong></td>
</tr>
</tbody>
</table>

¹ Master’s Level Course Work and/or IE Electives must be chosen so that nine (9) credit hours of core courses are taken. The core courses are listed below.
² IE 515: Operations Research Methods or IE 610: Foundations of Optimization
² IE 516: Stochastic Models
² IE 563: Experimental Design in Engineering
³ 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.

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:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suraj M. Alexander</td>
<td>Professor</td>
</tr>
<tr>
<td></td>
<td>Acting Chair</td>
</tr>
<tr>
<td>Ki-Hwan Bae</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Lihui Bai</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>Gail W. DePuy</td>
<td>Professor</td>
</tr>
<tr>
<td>Monica Gentili</td>
<td>Associate Professor</td>
</tr>
<tr>
<td>Kevin Gue</td>
<td>Professor</td>
</tr>
<tr>
<td>Jason Saleem</td>
<td>Assistant Professor</td>
</tr>
<tr>
<td>John S. Usher</td>
<td>Professor</td>
</tr>
<tr>
<td>Mickey R. Wilhelm</td>
<td>Professor</td>
</tr>
<tr>
<td>Li Yang</td>
<td>Assistant Professor</td>
</tr>
</tbody>
</table>
Graduate Certificate in Logistics and Distribution

Major: LADCLDNON
Degree Awarded: CERT
Unit: GS
Program Webpage: http://louisville.edu/lodi/

This program has been suspended. No applications are being accepted at this time.

Program Information

The Graduate Certificate Program in Logistics and Distribution is offered jointly by the College of Arts and Sciences, the College of Business, and The J. B. Speed School of Engineering. It provides qualified applicants a high-quality program for structured graduate study in this truly interdisciplinary field. The program is designed primarily for people who are currently working in logistics and distribution organizations in the Louisville area, or for those who aspire to gain general knowledge in the field that may lead to career opportunities in logistics and distribution. As a result, the outcomes of the program are to provide, (1) a highly skilled workforce for regional employers; (2) a sought-after academic credential for employee-students; and (3) a career advancement credential for both employers and employees in the logistics and distribution sector.

Admission Requirements

Students who apply for admission to the certificate in logistics and distribution program are expected to meet the following typical U of L Graduate School standards:

- Submission of a University of Louisville Graduate School Application,
- At least two letters of recommendation,
- The possession of at least a baccalaureate degree,
- The submission of an official transcript for each prior degree earned,
- A minimum 2.75/4.0 undergraduate cumulative grade point average, and
- Submission of scores on the Graduate Record Examination (GRE) or the Graduate Management Admissions Test (GMAT)

Curriculum

The curriculum of the Certificate in Logistics and Distribution requires the completion of a total of 18 semester hours of coursework, consisting of six 3-semester hour courses. These courses are:

- MKT 525 Distribution Management 3
- MATH 588 Discrete Mathematics for Logistics and Distribution Applications 3
- ACCT 526 Finance and Accounting Applications in Logistics and Distribution 3
- IE 621 Facilities Planning 3
- IE 651 Warehousing and Transportation 3
MKT 527  Logistics Management

Faculty

Suraj M. Alexander
Professor

Lihui Bai
Assistant Professor

Robert W. Forbes
Director of Center for GIS

Anup Kumar
Professor

Olfa Nasraoui
Associate Professor

Thomas Riedel
Professor
Chairman
Master of Engineering in Mechanical Engineering

Major: ME  
Degree Awarded: MEng.  
Unit: SP  
Program Webpage: [http://louisville.edu/speed/mechanical/](http://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 multimedia 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.

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 residency. 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 residency, 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 residency 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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit 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.
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.

The Master of Engineering in Mechanical Engineering degree requires the following over and above the Bachelor of Science in Mechanical Engineering Degree.

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME Electives(^{1,2})</td>
<td>18</td>
</tr>
<tr>
<td>Technical Electives(^{1,3})</td>
<td>6</td>
</tr>
<tr>
<td>Thesis Option:</td>
<td></td>
</tr>
<tr>
<td>ME 697: MEng Thesis(^4)</td>
<td></td>
</tr>
<tr>
<td>Non-Thesis Option:</td>
<td></td>
</tr>
<tr>
<td>ME 645: MEng Project</td>
<td></td>
</tr>
<tr>
<td>ME Elective(^{1,2})</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Credit Hours:</strong></td>
<td><strong>30(^5)</strong></td>
</tr>
</tbody>
</table>

\(^1\) Electives must be chosen so that at least one-half of the total credits counted toward the degree, exclusive of thesis, are 600-level.

\(^2\) ME Electives must be approved by the department.

\(^3\) Technical Electives can be ME or non-ME courses. Technical Electives must be approved by the student's research advisor or the ME Director of Graduate Studies.

\(^4\) 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 ME 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 (6) credit 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.

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:

- **Sundar Atre**
  - Professor

- **Thomas A. Berfield**
  - Assistant Professor

- **Matt Bohm**
  - Assistant Professor

- **Roger D. Bradshaw**
  - Associate Professor
Master of Science in Mechanical Engineering

Major: ME  
Degree Awarded: MS  
Unit: GS  
Program Webpage: http://louisville.edu/speed/mechanical/

Program Information

Director of Graduate Studies

Dr. Peter M. Quesada, (502)852-5981, Email Dr. Quesada

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 M.S. 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 Master of Science program in Mechanical Engineering are as follows:

1. All admission applications for the program shall include:
   a. a completed application for the School of Interdisciplinary and Graduate Studies,
   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 grade point average that will be considered for unconditional acceptance and admission to the program is 2.75 (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 302.

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 overall IELTS score of 6.5 or higher, 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
d. 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. Please review the “Academic Standing” section within this catalog in regard to “Academic Probation” (http://louisville.edu/graduatecatalog/academic-policies-procedures-and-requirements).
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 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 credit hours of course work at the University of Louisville to satisfy the residency requirement for the master’s degree. A maximum of six (6) credit 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 and Dissertation [pdf], which are located on the website of the School of Interdisciplinary and Graduate Studies.
4. Students have six years, after their admission to the M.S. program to complete their degree.
The requirements for the Master of Science degree are discussed in more detail at: http://louisville.edu/graduatecatalog/degree-requirements.

## 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:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ME Electives¹</td>
<td>15</td>
</tr>
<tr>
<td>Technical Electives¹,²</td>
<td>9</td>
</tr>
<tr>
<td>Thesis Option: ME 690: MS Thesis³</td>
<td>3</td>
</tr>
<tr>
<td>Non-Thesis Option: ME Electives¹</td>
<td>6</td>
</tr>
<tr>
<td>Total Credit Hours</td>
<td>30⁴</td>
</tr>
</tbody>
</table>

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 credit hours of coursework must be in ME.

² Technical Electives can be ME or non-ME courses. Technical Electives must be approved by the department.

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.

## 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:
Sundar Atre  
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Associate Professor

W. Geoffrey Cobourn  
Professor

Michael L. Day  
Professor

William P. Hnat  
Professor

Yongsheng Lian  
Associate Professor

Kevin Murphy  
Professor

Yong (Sam) Park  
Assistant Professor

Glen Prater  
Professor

Peter M. Quesada  
Professor

Christopher Richards  
Associate Professor

M. Keith Sharp  
Professor

Stuart J. Williams  
Assistant Professor
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, Email Dr. Quesada

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:

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 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.

4. The minimum GRE score that will be considered for unconditional acceptance and admission is a combined Verbal and Quantitative Reasoning score of 302.

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 overall IELTS score of 6.5 or higher, 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 credit 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 Doctoral Candidacy upon completion of all course work, qualifying exams, required research credit hours and other co-curricular requirements. Students who are enrolled in Doctoral Candidacy are considered full-time students. Enrollment in Doctoral 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/degree-requirements.

**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 credit 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:

<table>
<thead>
<tr>
<th>Courses – Post Bac</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approved Master’s Level Course Work</td>
<td>30</td>
</tr>
<tr>
<td>Technical Electives ¹</td>
<td>15</td>
</tr>
<tr>
<td>ME 700: Dissertation Research</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total Credit Hours</strong></td>
<td><strong>60²</strong></td>
</tr>
</tbody>
</table>

¹Technical Electives can be ME or non-ME courses. Technical Electives must be approved by the department. Students are allowed to take at most six (6) hours of Independent Study (ME 588/688) as part of the 30 credit hours of coursework.

²Candidates 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.
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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  Professor
- Yongsheng Lian  
  Associate Professor
- Kevin Murphy  
  Professor
- Yong (Sam) Park  
  Assistant Professor
- Glen Prater  
  Professor
- Peter M. Quesada  
  Professor
- Christopher Richards  
  Associate Professor
- M. Keith Sharp  
  Professor
- Stuart J. Williams  
  Assistant Professor
Graduate Certificate in Network and Information Security

Major: NUPR
Degree Awarded: CERT
Unit: GS
Program Webpage: http://louisville.edu/speed/computer/graduate-studies/networkAndInfoSecurity

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

Faculty

Mehmed Kantardzic
Professor
Graduate Coordinator

Anup Kumar
Professor
Certificate Program Coordinator