

**UNIVERSITY of LOUISVILLE**

*Graduate Catalog*

*Summer 2016 – Spring 2017*



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.

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

## Table of Contents

Letter from the Dean.....	2	Administration and Faculty .....	43
Mission Statement of the University of Louisville .....	2	Degree Programs .....	53
History of the University .....	2	<hr/> <b>College of Arts and Sciences</b> <hr/>	
Structure of the University.....	3	Graduate Certificate in African American Theatre.....	57
Mission Statement of the School of Interdisciplinary and Graduate Studies .....	3	Master of Arts in Anthropology .....	59
Application and Admission.....	4	Master of Science in Applied Geography.....	62
New Graduate Student Information .....	7	Doctor of Philosophy in Applied Sociology....	64
Academic Policies, Procedures and Requirements .....	8	Master of Arts in Art (Creative) and Art History .....	70
Policies Governing Graduate Courses .....	11	Doctor of Philosophy in Art History .....	74
Grades and Grading Policies.....	12	Graduate Certificate in Asian Studies.....	77
Leave of Absence.....	14	Master of Science in Biology .....	79
Degree Requirements.....	14	Doctor of Philosophy in Biology .....	82
Requirements for the Doctoral Degree ....	14	Master of Science in Chemistry.....	85
Graduate Student Awards and Honors.....	18	Doctor of Philosophy in Chemistry .....	89
Scholarships and University Fellowships .....	20	Master of Arts in Communication .....	92
University Policies and Procedures.....	21	Master of Science in Criminal Justice .....	95
Academic Freedom at the University.....	21	Doctor of Philosophy in Criminal Justice.....	98
Americans with Disabilities Act .....	22	Graduate Certificate in Diversity Literacy....	100
Code of Student Conduct .....	23	Master of Arts in English.....	103
Graduate Student Academic Grievance Procedure .....	23	Doctor of Philosophy in English Rhetoric and Composition.....	107
Drug-Free Schools and Communities Act Amendments of 1989.....	26	Master of Arts in French, Language and Literature .....	111
Policy on Work-Restricted Religious Holy Days .....	26	Master of Arts in History.....	114
Privacy of Student Records.....	27	Master of Arts in Humanities .....	119
Special Facilities and Services.....	27	Doctor of Philosophy in Humanities .....	123
Financial Aid and Financial Settlement .....	29	Graduate Certificate in Latin American and Latino Studies .....	125
Student Financial Aid Office .....	30	Master of Arts in Mathematics .....	130
Residency Policy and Fees.....	31	Doctor of Philosophy in Applied and Industrial Mathematics.....	133
Academic Calendar .....	40	Graduate Certificate of Medieval and Renaissance Studies.....	138
Institutional and Professional Accreditations ..	42	Graduate Certificate in Pan-African Studies .	141

Master of Arts in Pan-African Studies.....	143	Master of Arts in Teaching in Art Education	226
Doctor of Philosophy in Pan African Studies	145	Graduate Certificate in Autism and Applied Behavior Analysis.....	228
Master of Science in Physics .....	148	Rank I Program in Certified School Counselor.....	230
Doctor of Philosophy in Physics.....	152	Master of Education in Community Health...	233
Graduate Certificate in Police Executive Leadership Development .....	155	Master of Education in Counseling and Personnel Services with a Concentration in Student Personnel Services.....	235
Master of Arts in Political Science .....	156	Doctor of Philosophy of Education Counseling and Personnel Services .....	242
Doctor of Philosophy in Psychology - Clinical.....	159	Doctor of Philosophy in Curriculum and Instruction.....	246
Doctor of Philosophy in Psychology - Experimental.....	162	Master of Arts in Teaching in Interdisciplinary Early Childhood Education.....	249
Master of Public Administration.....	166	Master of Arts in Teaching in Early Elementary Education (P-5).....	251
Graduate Certificate in Public History.....	170	Specialist in Education in Educational Administration .....	253
Graduate Certificate in Real Estate Development.....	172	Doctor of Education in Educational Leadership and Organizational Development .....	256
Master of Arts in Sociology.....	174	Doctor of Philosophy in Educational Leadership and Organizational Development .....	259
Master of Arts in Spanish .....	179	Rank I Program in Elementary Education ....	262
Master of Fine Arts in Studio Art and Design	182	Elementary Mathematics Specialist (P-5) Teaching Endorsement .....	265
Master of Fine Arts in Theatre Arts .....	185	Master of Science in Exercise Physiology.....	267
Certificate in Translation and Interpreting.....	187	Gifted and Talented Education Teaching Endorsement .....	270
Doctor of Philosophy in Urban and Public Affairs .....	189	Master of Arts in Teaching Health and Physical Education .....	272
Master of Urban Planning.....	192	Graduate Certificate in Health Professions Education .....	274
Graduate Certificate in Women's and Gender Studies.....	198	Master of Arts in Higher Education Administration .....	276
Master of Arts in Women's and Gender Studies.....	200	Master of Science in Human Resources and Organization Development.....	279
<hr/> <b>College of Business</b> <hr/>		Rank I Program in Instructional Computer Technology (P-12).....	284
Master of Accountancy .....	205		
Master of Business Administration.....	207		
Doctor of Philosophy in Entrepreneurship.....	212		
<hr/> <b>School of Dentistry</b> <hr/>			
Master of Science in Oral Biology.....	217		
Master of Science in Dentistry.....	221		
<hr/> <b>College of Education and Human Development</b> <hr/>			

Instructional Technology Endorsement (P-12) .....	286
Master of Education in Instructional Technology .....	287
Master of Education in Literacy.....	289
M.Ed. in Literacy with Literacy Specialist (P-12) Endorsement .....	291
Rank I Program in Middle Grades Education	293
Master of Arts in Teaching in Middle School Education .....	296
Masters of Arts in Alternative Route to 5-9 Certification in Middle School.....	300
Master of Arts in Teaching in Music Education .....	302
Rank I Program in School Social Work.....	305
Rank I Program in Secondary Education .....	308
Master of Arts in Teaching in Secondary Education .....	311
Masters of Arts in Alternative Route to 8-12 Certification in Secondary Education .....	314
Rank I Program in Special Education - Advanced Practitioner (P-12).....	316
Master of Education in Special Education.....	318
Master of Education in Special Education with Concentration in Assistive Technology .....	320
Master of Education in Special Education with Concentration in Autism .....	322
Master of Arts in Teaching in Special Education Concentration in Learning and Behavior Disorders (P-12).....	324
Master of Education in Special Education with Concentration in Learning and Behavior Disorders (P-12).....	326
Master of Arts in Teaching in Special Education Concentration in Moderate and Severe Disabilities (P-12) .....	329
Master of Education in Special Education with Concentration in Moderate and Severe Disabilities (P-12) .....	332

Teacher Leadership Endorsement (P-12) .....	337
Master of Education in Teacher Leadership ..	339
Classroom Reading Endorsement (P-12).....	342
English as a Second Language Endorsement (P-12).....	343

---

**School of Interdisciplinary and Graduate Studies**

---

Master of Arts in Interdisciplinary Studies....	345
Master of Science in Interdisciplinary Studies .....	348
Doctor of Philosophy in Interdisciplinary Studies .....	351
Master of Arts in Interdisciplinary Studies with a concentration in Bioethics and Medical Humanities.....	354
Master of Arts/Master of Science in Interdisciplinary Studies: Concentration in Sustainability .....	356
Doctor of Philosophy in Interdisciplinary Studies: Specialization in Bioinformatics.....	361
Doctor of Philosophy in Interdisciplinary Studies: Specialization in Translational Bioengineering.....	366
Doctor of Philosophy in Interdisciplinary Studies: Specialization in Translational Neuroscience .....	370

---

**Kent School of Social Work**

---

Graduate Certificate in School Social Work..	373
Master of Science in Social Work .....	376
Doctor of Philosophy in Social Work.....	391

---

**School of Medicine**

---

Master of Science in Anatomical Science and Neurobiology .....	394
Doctor of Philosophy in Anatomical Science and Neurobiology .....	399
Doctor of Audiology.....	406
Master of Science in Biochemistry and Molecular Biology .....	409

Doctor of Philosophy in Biochemistry and Molecular Biology .....	414
Master of Science in Communicative Disorders .....	418
Master of Science in Microbiology and Immunology .....	422
Doctor of Philosophy in Microbiology and Immunology .....	425
Master of Science in Pharmacology and Toxicology .....	429
Doctor of Philosophy in Pharmacology and Toxicology .....	435
Master of Science in Physiology and Biophysics .....	441
Doctor of Philosophy in Physiology and Biophysics .....	446

---

**School of Music**

Master of Music in Music Composition .....	455
Master of Music in Music History and Literature .....	460
Master of Music in Music Performance .....	465
Master of Music in Music Theory .....	475
Master of Music Education in Music Education .....	480

---

**School of Nursing**

Master of Science in Nursing .....	485
Doctor of Nursing Practice .....	498
Doctor of Philosophy in Nursing .....	504

---

**School of Public Health and Information Sciences**

Graduate Certificate in Clinical Investigation Sciences .....	509
Master of Science in Biostatistics .....	512
Master of Science in Clinical Investigation Sciences .....	517
Master of Science in Epidemiology .....	522
Master of Public Health .....	527

Doctor of Philosophy in Biostatistics .....	537
Doctor of Philosophy in Public Health Sciences .....	544

---

**Speed School of Engineering**

Master of Engineering in Bioengineering .....	570
Master of Engineering in Chemical Engineering .....	574
Master of Science in Chemical Engineering ..	578
Doctor of Philosophy in Chemical Engineering .....	582
Master of Engineering in Civil Engineering ..	586
Doctor of Philosophy in Civil Engineering ...	590
Master of Science in Civil Engineering .....	594
Doctor of Philosophy in Computer Science and Engineering .....	597
Master of Engineering in Computer Engineering Computer Science .....	602
Master of Science in Computer Science .....	606
Graduate Certificate in Data Mining .....	610
Master of Engineering in Electrical Engineering .....	612
Master of Science in Electrical Engineering ..	617
Doctor of Philosophy in Electrical Engineering .....	621
Master of Engineering in Engineering Management .....	625
Graduate Certificate in Environmental Engineering .....	628
Master of Engineering in Industrial Engineering .....	630
Master of Science in Industrial Engineering ..	634
Doctor of Philosophy in Industrial Engineering .....	638
Graduate Certificate in Logistics and Distribution .....	642
Master of Engineering in Mechanical Engineering .....	644

Master of Science in Mechanical  
Engineering ..... 649

Doctor of Philosophy in Mechanical  
Engineering ..... 653

Graduate Certificate in Network and Information  
Security ..... 657

## 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](http://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](http://www.wes.org)) or Educational Credential Evaluators ([www.ece.org](http://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](mailto: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](http://www.toefl.org)) or IELTS examination ([www.ielts.org](http://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](http://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>

# **Academic Policies, Procedures and Requirements**

The general policies, procedures and requirements for advanced degrees are stated below; however, each program has specific degree requirements. These specific requirements are detailed in the program descriptions that follow this section. These requirements must be consulted so that the graduate student can be fully apprised of the conditions he/she must meet in order to receive an advanced degree.

The policies and regulations described in this catalog cannot be superseded or invalidated by either oral or written agreement with faculty, staff, or administrators unless a variance is confirmed in writing by the Vice Provost for Graduate Affairs, in consultation with the Graduate Council.

### **Registration**

The University of Louisville uses an on-line web registration system. The schedule of courses for each term may be reviewed at <http://htmlaccess.louisville.edu/classSchedule/setupSearchClassSchedule.cfm>.

Students must first contact their graduate advisor or graduate program director to discuss course selections. Students in good standing and admitted without conditions may proceed with the registration process. If, however, a student has been admitted with conditions, or is in probationary status, the student must contact the graduate program director regarding the implications of the admission status.

**Full-Time Study**

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:

### **GradesQuality Points GradeQuality Points**

A+	4.0	C	2.0
A	4.0	C-	1.7
A-	3.7	D+	1.3
B+	3.3	D	1.0
B	3.0	D-	0.7

B- 2.7 F 0.0

C+ 2.3

### **C Grades**

The student's academic program may approve six hours of coursework in which a grade of "C+, C, or C-" was received to count toward the completion of degree requirements.

Approval of the 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/>

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 to the chair or graduate advisor of the department

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

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

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

### **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](mailto: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](http://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](mailto: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](http://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

(502) 852-6479 or the HSC Office at (502) 852-6446. The Insurance Advocate can be reached at (502) 852-6519.

### **Student Services**

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

### **Student Life**

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

### **Disability Resource Center**

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

## **Financial Aid and Financial Settlement**

### **Continuing Registration**

Tuition and fees are due on, or before, the designated due date for the semester. Payment may be made by cash, check, money order, charge card (MasterCard, Visa), or financial aid credit. Payments may be made by mail, by use

of the deposit box located in the front entrance of the Houchens Building, or at the Office of the Bursar.

Failure to receive a Statement of Account will not relieve the student of the responsibility for making financial settlement by the designated due date. Continuing registrations which are not financially settled by the designated due date may have their course registration cancelled and/or be assessed financial penalties. The Continuing Registration designated due dates are listed in the current Schedule of Courses and on the Bursar's web site at: [ulink.louisville.edu](http://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/>

### **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/>

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](mailto: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

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

RELATES TO: KRS 13B, 164.020, 164.030, 164A.330 (6), 38 U.S.C. 3301-3325  
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)1. 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
---------------	-------	--------

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 23	Thursday
Independence Day holiday	July 4	Monday
Last day of classes	July 23	Saturday
Degree date	Aug. 9	Tuesday

**Nursing 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 17	Friday
Independence Day holiday	July 4	Monday
Last day of classes	July 15	Friday
Degree Date	August 9	Tuesday

**Fall 2016**

Classes start	August 22	Monday
Last day of registration	August 22	Monday
Last day to add/drop a course	August 26	Friday
Labor Day holiday	September 5	Monday
Last day to apply for degree	September 30	Friday
Mid-Term Break	October 3-4	Monday, Tuesday
Last day to withdraw	October 24	Monday
Presidential Election	November 8	Tuesday
Thanksgiving holiday	Nov. 23- 27	Wednesday-Sunday
Last day of classes	December 6	Tuesday
Reading day	December 7	Wednesday
Final examinations	December 8-14	Thursday - Wednesday
Degree date	December 14	Wednesday
December commencement	December 15	Thursday (Date is Tentative)

**Spring 2017**

Classes start	January 9	Monday
Last day of registration	January 9	Monday
Last day to add/drop a course	January 13	Friday
Martin Luther King, Jr. holiday	January 16	Monday
Last day to apply for degree	February 15	Wednesday
Last day to withdraw	March 9	Thursday
Spring break	March 13–19	Monday–Sunday
Last day of classes	April 24	Monday
Reading day	April 25	Tuesday
Final examinations	April 26-May 2	Wednesday-Tuesday
Degree date	May 13	Saturday
May Commencement	May 13	Saturday (Date is Tentative)

**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>

## 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**

**Neville G. Pinto, Ph.D.**

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**

Jason Abbott	Sarah Emery	Ashok Kumar	Thomas D. Rockaway
Yousef Abu-Kwaik	Jessica Enoch	Anup Kumar	George C. Rodgers
Yousef Abu-Kwiat	David Ensign	Niki Kunene	Regina Roebuck
Said Abusalem	Paul N. Epstein	Nobuyuki Kuwabara	David J. Roelfs
Kamud Acharya	Carmine Esposito	Frank Kuzmits	Fred J. Roisen
Amy Acklin	Stuart Esrock	Yousef Abu Kwait	Gregg Rokosh
David Acland	Edward A. Essock	John LaBarbera	Jesse Roman
Robert Acland	Robert J. Esterhay	George Lager	James Romesburg
David Adamkin	Eileen Estes	Delin Lai	Kevin Rose
Joshua Adams	Paul W. Ewald	A. Scott LaJoie	Paul G. Rosen
Tomarra Adams	Michelle Facos	Tasha Laman	Mary Rosner
Ike Adams	Peter W. Faguy	David Lamb	Edna Ross
Paulette Adams	Sherry Fairchild	Roger G. Lambert	Ann Rothpletz
Ayotunde S. O. Adeagbo	Archie W. Faircloth	Thomas Lambert	Eric Rouchka
Jill Adelson	Jeff C. Falcone	H. Wayne Lambert	Guillermo Rougier
Manju Ahuja	Teresa Fan	Eugene Lamm	Steven Rouse
Madan Ajmani	Aly Farag	Zi-Jian Lan	Lisa A. Ruble
Meera Alagaraja	Allan G. Farman	Timothy Landrum	Kathleen Rudasill
Fawwaz Alaloul	Jasmine Farrier	Andrew Lane	Mark Running
Pascale Alard	Andre Faul	Ann Larson	Matt Ruther
John Alberti	David Faulds	Lee Larson	Susan Ryan
Howard Aldrich	Robert D. Fechtner	Adrian Lauf	Heather A. Rypkema
Timothy Aldrich	Pamela Feldhoff	James Lauroesch	Prasanna Sahoo
James E. Jr. Alexander	Richard C. Feldhoff	Tasha Lavey	Jason Saleem
Suraj M. Alexander	Ronald Fell	Thomas R. Lawson	Shelly Salemsky
Oscar Aliaga	Wenke Feng	Kathy Lay	Paul G. Salmon
Peter R. Almond	Jose Fernandez	Mark Leach	Russell Salter
Bruce Alphenaar	Rafael Fernandez-Botran	Kiseop Lee	David Samuelson
Nihat Altiparmak	John P. Ferre	Donghan Lee	Paloma Fernandez Sanchez
Robert A. Amchin	James O. Fiet	Menq-Jer Lee	Lisa Sandell
Amir Amini	F. John Firriolo	Bomi Lee	William Sanders
Delaina Amos	Patricia FitzGerald	Carlee Lehna	Uma Sankar
David Anderson	R. Christopher Fitzgerald	Greg Leichty	Bibhuti Sar
Keith Anderson	Paula Fleishmann Gillespie	Alan Leidner	Noppadon Sathitsuksanoh
Vivianna Andreescu	Tyler Fleming	Alex B. Lentsch	Marc Satterwhite
Demetra Antimisiaris	John T. Fleming	Catharine Lester	John Sauk
Becky Antle	Bonnie Fonseca-Greber	Kristi Jedlicki Levenhagen	William Scarfe
Farrukh Aqil	Debra Foran	William Levin	Christine Schaner-Tooley
Robert B. Aramant	Robert Forbes	Alan Levitan	Lora Schlewitt-Haynes
John Arnez	Cate Fosl	Richard Lewine	John Schlib
Craig Anthony Arnold	Benjamin P. Foster	James Lewis	Nathan Schmidt

Gavin Arteel	Michael Fowler	Ying Li	Stephen Schneider
Eleanor F. Asher	Stanley R. Frager	Li Li	Rick Schnellmann
Mary Ashlock	Daniel Franco	Bingtuan Li	Stefan Schnitzer
Ronald M. Atlas	James Frank	Jiaxu Li	Judith Schreiber
Sundar Atre	Karen Freberg	Jinjia Li	Ryan Schroeder
Alan N. Attaway	Per Frederiksson	Chi Li	David J. Schultz
Omar Attum	Jonathan Freedman	Bing Li	Dale A. Schuschke
John A. Auchampach	Lauren Freeman	Zhixia Li	Matthew Scobee
D. Mark Austin	Mark French	Hongxiang Li	Terrance Scott
Raymond Austin	Andy Frey	Yongsheng Lian	David A. Scott
Karen Badger	Hermann Friebos	Day Ligon	Mary Secret
Antonio Badia	Joel Fried	James Lillard	Amy Seely-Flint
Ki-Hwan Bae	Hichem Frigui	John H. Lilly	Steven Seif
Lihui Bai	Xiao-An Fu	Kenneth Linfield	Magdalene Seiler
Moon-He Baik	Peter M. Fuller	Amy Shearer Lingo	Cindy Selfe
Luis Baixauli-Olmos	Christopher B. Fulton	Nathan T. Lipscomb	Uptal Sen
Kendal Baker	Russell Funk	Irene Litvan	Sandra Sephton
Charles Baker	Christian Furman	Kenneth Litwak	Daniel Sessler
Barbara Baker	L. Allen Furr	Pat Litzelfelner	Palaniappan Sethu
Richard P. Baldwin	Linda Fuselier	Jinjun Liu	Stacy Deck Shade
Richard Balkin	Allan W. Futrell	Shudun Liu	Mohammad Shafii
James H. Bandoli	Patricia Gagne	Pinghui V. Liu	Patrick Shafto
Mary Bani	Jason Gainous	Yongging Liu	Cynthia Shain
Anslyn Banks	Susan Galandiuk	Kimcherie Lloyd	Scott Shane
Anita Barbee	Stanley Gall	Cynthia Logsdon	Michael Sharp
Gerard M. Barber	Donald L. Gambrall	David Lominadze	Trimbak Shastri
Robert M. Barker	John W. Gamel	James B. Longley	Celeste Shawler
John H. Barker	Arnab Ganguly	Doug Lorenz	Caroline Sheffield
James Barnette	Toni M. Ganzel	Michael Losavio	Dean Shepherd
Jay Barney	Thomas Gardner	Min-Zahn Lu	Neil Shepherd
Robert A. Baron	David Garver	Quingxian Lu	Mary Sheridan
Mike Barone	Jeremy Gaskins	Robert D. Luginbill	Peter T. Sherman
Charles C. Barr	Andrea Gaughan	Robert F. Lundy	Christopher Shields
Lisa Barrett	Adam Gaweda	Karen Luney	Haval Shirwan
Christopher Barton	Monica Gentili	Frederick A. Luzzio	Lawrence R. Shoemaker
Shirish Barve	Elizabeth Gentry	Keith Lyle	Megan Shreffler
D. Michele Basso	Thomas Geoghegan	Mark Lynn	Brad Shuck
Paula Bates	Casey George Jackson	Thomas S. Lyons	Brian Shumway
Catherine Batscha	Erin Gerber	Alexis Lyras	Brett Shuster
Andrew Battjes	Richard Germain	Yuxin Ma	Yasmeen Siddiqui
Debra Bauder	Lawrence Gettleman	Wyatt MacGaffey	Fred Siegel
Kathy Baumgartner	Omid Ghasemi-Fare	Thomas C. Mackey	Curtis Sigdestad

Richard Baumgartner	John Gibson	Brittany MacWilliams	Anibal M. Silveira
Sidney J. Baxendale	Gung-Min Gie	Ajmani Madan	Jay Joseph P. Simala
Jennifer Bay-Williams	Linda Gigante	David Magnuson	Thomas Simmons
Blake R. Beattie	Gail Gilbert	Mary Makris	Paul Simmons
Pamela Beattie	John Gilderbloom	Claudio Maldonado	David M. Simpson
Eric Bednar	Ryan Gill	Stephanie Maloney	Rob Sinclair
James K. Beggan	Keith Gilyard	Thomas S. Maloney	Terry Singer
Andrea Behrman	Raafat Girgis	Julie Manche	Shailesh Singh
Juliane Beier (Arteel)	Guruprasad Giridharan	Henri Mangeot	Jackie Singleton
Anthony Belak	Jon Glassford	John W. Manning	Leah Siskind
Allison Bell	Leila Gobejshvili	Mike Mansfield	Steven Sizemore
Shannon Bell	Frank Goetzke	Jennifer Mansfield-Jones	Steven Skaggs
Richard Benton	Stephan F. Gohmann	Sheron Mark	Jeffrey Skinner
Frederick W. Benz	Seana Golder	Lisa Markowitz	Mark Slaughter
Thomas Berfield	Alan C. Golding	Ra'Chanel Marshall	Chad Sloan
Doug Berg	Frances S. Goldsmith	Gul Marshall	Serban Smadici
Matt Bergman	Richard Goldstein	Gary S. Marshall	Corwin Smidt
Mark Bernstein	Karen Golemboski	Robert Martin	Siobhan Smith
Robert Berson	Rangraj Gopalraj	Mavin Martin	Daniel Smith
Simona Bertacco	M. Douglas Gossman	Robert C. Martin	Patrick Smith
Karen Bertocci	Don Gottlieb	Likoebe Maruping	Felicia Smith
Gina Bertocci	Alan R. Gould	Dismas A. Masolo	Alan Smith
Latrica Best	Evelyne Gozal	Scott Massey	Sandra Smith
Levi Beverly	Carol Grady	Benjamin Mast	Sieglinda Snapp
Nageshwar R. Bhaskar	Kristopher Grady	M. Gay Masters	Kate Snyder
Kunwar Bhatnagar	Jim Graham	Augustus Matri	James W. Snyder
Aruni Bhatnagar	James E. Graham	Susan Matarese	Steve Sohn
Parimal Bhattacharjee	Craig Grapperhaus	Jennifer Mather	Tatjana Soldat-Jaffe
Matthew Biberman	Sarah Graves	Nobuyuki Matoba	Wei Song
Martha Bickford	Karen Gray	Mark Mattes	Yujia Song
James Bielo	Tricia Gray	Stephen Mattingly	Inbum Song
Dale Billingsley	Brian Greene	Muriel Maurer	Zhao-Hui (Joe) Song
Cathy Binkley	John P. Greene	Gabrielle Mayer	Marie Antoinette Sossou
Dror Biran	Robert M. Greene	Lee Mayer	Patricia Soucy
Csaba Biro	Richard Greenlee	Maureen McCall	Garry Sparks
Karen Bishop	Christopher Greenwell	Clinton McCanless	Frederick Speck
Pat B. Blackwell	Ann Greenwell	Justin A. McCarthy	Barbara Speck
Craig Blakely	Henry Greenwell	Jessica McCarty	Gregory Squires
Linda Bledsoe	Gary Gregg	Craig McClain	Sanjay Srivastava
Mark E. Blum	Ron Gregg	Eric McCord	Robert St. Clair
Lisa M. Blum	Ronald G. Gregg	Michael McCormack	Robert H. Staat
Haribabu Bodduluri	Susan M. Griffin	Michael McCoy	Hristomir Stanev

Beth Boehm	Jo Ann Griffin	Laurie McCubbin	Thomas L. Starr
Matt Bohm	Paul Griner	Cynthia A. McCurren	Ruth Staten
Patricia Bolding	Jacob Gross	Justin McFadden	J. Christopher States
Paul Booth	Elizabeth L. Grossi	Maggie B. McGatha	Stephan Staudacher
Puran S. Bora	Frank Groves	William McGinley	Joseph M. Steffen
Douglas Borchman	James T. Grubola	C. Patrick McGraw	Amy Steiger
Kevin Borders	Michael Gruenthal	Monte McGregor	Lisa Stein
Bart Borghuis	Jeff Guan	Edward McInnis	Jill Steinbach
Georgina Borromeo	Kevin Gue	Ellen McIntyre	Rob Steiner
Steven Bourassa	William Guido	Michael McIntyre	Shari Stenberg
Lynn Boyd	Yiri Guo	W. Paul McKinney	Barbara Stetson
Amanda Boyd	Mahesh C. Gupta	Barbara J. McLaughlin	Amy Stevens
Mary Bradley	Ramesh Gupta	John McLeod	Christopher Stewart
Roger D. Bradshaw	Humberto Gutierrez	Kelly M. McMasters	Thomas W. Stewart, Jr.
Jay Brandi	Lutz Habertzelt	Lacey R. McNally	Christian Stilp
Deborah Brandt	Donald W Hackett	Shamus McNamara	Chris Stivers
Adrienne Bratcher	Jafar Hadizadeh	Jacqueline McNeil	Ramona Stone
Ellen G. Brehob	Karen Hadley	Peter M. Mears	Kaila Adia Story
Michael E. Brier	Michael Patrick Hagan	Manuel Medina	William D. Stout
Karen Britt	Michael Hagan	Suzanne Meeks	Robert D. Stout
Shawn Brock	Theo Hagg	Nick Mellen	Svetlana Stoycheva-Anderson
Guy Brock	John Hale	Sergio B. Mendes	Richard W. Stremel
Dorothy Ann Brockopp	Jon Christopher Hall	Michael Merchant	Ted J., Jr. Strickland
Derrick Brooms	Lynne Hall	Melissa Merry	Brent Stucker
David N. Brown	Marion Hambrick	Carolyn B. Mervis	David Suchoff
Garry Brown	Gerald B. Hammond	Mike Mesterton-Gibbons	Richard Sudek
Sherri L. Brown	Carol Hanchette	Peter Meyer	Clare Sullivan
Joseph H. Brown	Terence M. Hancock	Rick Miles	Dana Sullivan
Reginald A. Bruce	Meg Hancock	Phillip Miller	Janice E. Sullivan
Brenda Brueggemann	Barbara L. Hanger	Alica Miller	Gamini U. Sumanasekera
Anna Brzyski	Stephen Hanson	Richard L. Miller	Jeffrey C. Sun
Robert M. Buchanan	Mikkaka Hardaway-Overstreet	Richard D. Miller	Zhihui Sun
Rhonda Buchanan	Patrick H. Hardesty	Donald Miller	Mahendra Sunkara
Robert Buchanan	Carmen Hardin	Frederick N. Miller	Walter W. Surwillo
David Buckley	Susan Harkema	Cynthia Miller	Lyle Sussman
Delinda Buie	Cindy Harnett	Suzanne Mitchell	Richard Sutphen
Julie Bunck	Henry Harpending	Robert A. Mitchell	Jill Suttles
Terry Burden	Ellen Harrington	Thomas C. Mitchell	Holly Swain Ewald
Christopher Burns	Bryan Harris	Riten Mitra	Stephen B. Swan
Todd Burns	Muriel Harris	Maryam Moazzen	Jennifer Swanberg
Vicki Burns	Christopher Harrison	Jeanette Mofield	Ann M. Swank

Nefertiti Burton	Joy Hart	Jafar P. Mohsen	David Swanson
John Busch	D. Alexis Hart	Sri Prakash Mokshagundam	Kristin Swartz
Thomas Byers	Brandon Harwood	Sri Prakash Mokshkagundam	Brock Symons
W. Carson Byrd	Bruce S. Haskell	John Monberg	Yi Tan
Gregory P. Byrne	Kent Hatteberg	Sharon Moore	Tian (Lori) Tang
Kyoungmee Byun	Jonathan Haws	J. Patrick Moore	Hiroimi Taniguchi
William Cahaney	Theresa Hayden	Joseph B. Moore IV	Denise Tanner
Lu Cai	Arthur Hayden	Anita M. Moorman	David Tasman
Jun Cai	Theresa Hayden	Frank Morelli	K. Grant Taylor
Jian Cai	Michael A. Hayes	Joseph Morelli	Kira Taylor
Ricardo Caicedo	Ray Haynes	Peter Morrin	Pamela Booth Teaster
Anne Caldwell	Zijiang He	John C. Morrison	Sucheta Telang
Carolyn Callahan	Barbara Head	Sarah Morsbach-Honaker	David N. Teller
Suresh Canagarajah	Lauren Heberle	Dean Morton	Daniela Terson de Paleville
Timothy Capps	David Bruce Heim	Hunter Moseley	Richard Tewksbury
Rey Carabeo	David W. Hein	Farhad Moshiri	Sherry Thatcher
Christina Carbone	Dawn Heinecken	Tundi-Daro (Daro) Mott	Connie Theado
William B. Carden	Judith Heitzman	Keith Mountain	Nancy M. Theriot
Joy Carew	C. William Helm	George D. Mower	Mary Shelley Thomas
Robert Carini	Ryan Henke	Laura Moyer	Deborah V. Thomas
Genevieve Carlton	Victor Henner	Robin Mozer	William T. Thompson
Mary Carothers	Lindsey C. Henson	Eugene Mueller	Angela Thompson
Bradley Carpenter	Sunderesh Heragu	Susan Muldoon	Edith Davis Tidwell
Margaret M. Carreiro	George H. Herbener	Radha Munagala	Christopher Tillquist
Moises Carreon	Ann Herd	Kevin Murphy	William Tkweme
Melody Carriere	Richard P. Herden	Marvin Murray	David J. Tollerud
Per H. B. Carstens	Carla Hermann	X.J. Musacchia	Gerald H. Tolson
Robert Carter	Marcia A. Hern	Elizabeth Mustaine	James Tompkins
Kathleen Carter	S. Paige Hertweck	Robert C. Myers	Christina Tone
Mary Carter	Ryan Heryford	Steven R. Myers	Michael A. Tracy
John Caruso	Michael Hetman	John F. Naber	Charles A. Trapp
Manny Casanova	Jeffrey Hieb	Babu Nahata	John Trent
Cara Cashon	Richard Higashi	Michael Nantz	Thomas R. Tretter
Matthew Castanier	George E. Higgins	Whitney Nash	Michael Tseng
Matthew C. Cave	Kelly Hilgers	Sena Naslund	Michael H. Tunnell
Brian P. Ceresa	Aaron Hill	Olfa Nasraoui	Joseph Turner
Anees Chagpar	Daniel Hill	Rachel Neal	Suresh C. Tyagi
Ying Kit Chan	Margaret Hill	Cynthia Negrey	Neetu Tyagi
Sunita Chandiramani	Paul Himes	John P. Nelson	Bruce M. Tyler
Karen Chandler	Vicki Hines-Martin	Matthew Nelson	Larry Tyler
Dar-Jen Chang	Regina Hirn	Donald E. Nerland	H. Lewis Ulman
Yong Chao	Amy S. Hirschy	Susan Newkirk-Moore	Harald Unkelbach

Joseph Chappell	William P. Hnat	Seth Newsome	John Usher
Raymond Chastain	Charles Hofer	Tamara L. Newton	John Vahaly
William G. Cheadle	Robin Hognas	Karen Newton	Roland Valdes
Steven Cheek	Seong Ho-Kim	Chin K. Ng	Jeffrey C. Valentine
Guohua Chen	G. Talley Holman	Lori Nicholas	Steven Van Lanen
Theresa S. Chen	James W. Holtsinger	Lee Nickoson	Riaan van Zyl
Shao-Yu Chen	Joshua Hood	Charles Nilon	Russell Vandenbrouke
Alan Cheng	Lisa Hooper	Robert Nixon	David Varady
Jason Chesney	Bruce Horner	Mark E. Noble	Kyle Vaughn
Sufan Chien	Michael Hottois	Nick Noles	Vaclav Vetvicka
Kenneth Chilton	David Houghton	Kim Noltemeyer	Carla Vidoni
James Chisholm	Derek Houston	Lori Norton-Meier	John Virag
Diane Chlebowy	David Howarth	Frank H. Nuessel	Gennaro F. Vito
Namok Choi	Penny Howell	Elizabeth OBrien	Daniel Vivian
Nan-Ting Chou	Gary Hoyle	Allison Ogden	Ron Vogel
Becky Christian	Changbing Hu	Andrea Olinger	Michael J. Voor
Rohan Christie-David	Shiping Hua	Naomi Oliphant	Waldon B. Wacker
Karen Christopher	Ying Huang	Susan Olson Allen	Kim L. Wadlington
William Christopherson	Ruth Huber	Susan Olson-Allen	Lisa Wagner
Kendra Cipollini	Charles H. Hubscher	Ramen Omer-Sherman	Craig Wagner
John Claborn	Christopher Hudson	Carol Stinson O'Neal	Leonard C. Waite
Thomas Clark	Benjamin G. Hufbauer	Seow-Chin Ong	Sarah Wald
Stephen J. Clark	Thomas W. Hughes	Stephen Onifer	Kandi L. Walker
Barbara Clark	Mary A. Hums	Brenda Ortiz-Loyola	Monica Walker
Geoffrey Clark	Lawrence Hunt	Marybeth Orton	Margath Walker
Paul Clark	Luz Huntington-Moskos	Melanie Otis	Sherri Wallace
Dewey M. Clayton	Wendy Hupp	Martin O'Toole	Krista B. Wallace-Boaz
Brian Clem	Harrell E. Hurst	Katie Ovechkin	Kevin M. Walsh
Van G. H. Clouse	Syed Hussaini	Alexander Ovechkin	Bernadette Walter
Richard D. Clover	Gregory Hutcheson	David S. Owen	Richard Walter
Amy Clukey	Marianne Hutti	George R. Pack	Peter Walton
Gary A. Cobbs	Michael Hyman	Robert Page	Eugenia Wang
W. Geoffrey Cobourn	Lateefah Id-Deen	Kenneth Palmer	Jon Warawa
Robert W. Cohn	Suzanne Ildstad	Larry I. Palmer	Deborah Warnock
Marsha Cole	Ibrahim Imam	Ken Palmer	Keith Warren
Rita Colella	David L. Imbroscio	Jason Palmieri	Dawn Warrick
Wanda L. Collins	Jason C. Immekus	Wei-Ping Pan	Ahmad Washington
Henry Combs	Tamer Inanc	Balaji Panchapakesan	Walter H. Watson
Daniel Conklin	W. Kyle Ingle	John R. Pani	Brian Wattenberg
Cynthia Conley	Jay Irby	George Pantalos	James C. Watters
Kevin Connelly	Nat Irvin	Juw Won Park	Lynetta Weathers
Patty Cook	Vasudeva G. Iyer	Sam Park	Timothy Weaver



Larry Cook	Alexei Izyumov	Tommy Parker	Jonetta Weber
L. Andrew Cooper	Jill Jacobi-Vessels	Simon Parker	David Weisrock
Marilyn Cooper	Robert Jacobs	Phyllis Parker	Lee S. Weissbach
Justin Cooper	Aaron Jaffe	Shawn Parkhurst	Karla Conn Welch
Nigel G. F. Cooper	Jason Jagers	Frederick M. Parkins	Samuel Wellhausen
Richard E. Coppage	Elizabeth Jakob	Arthur C. Parola	Monica Wendel
Cynthia Corbitt	Venkatakrishna Jala	Christopher Paterson	Shannon Hensley Wendt
Mary Beth Coty	Susan Jarosi	William Patterson	Jennifer Westerfield
Ginevra Courtade	Chakram Jayanthi	David Patterson	Juanita Westerfield
Tonya Cox	Gaetane Jean-Marie	Pamela Patton	Ryan Wetzler
Dave Coyne	Rebecca Jemian	Elizabeth Patton	Tyrone Wheeler
Thomas H. Crawford	A. Bennett Jenson	Beth Patton	Christopher White
Timothy Nathaniel Crawford	Hwa-Seong Jin	Alexis Paxton	Jerry Whitley
Fabian Crespo	Li Jing	Patricia Payette	Kathy Whitmore
Gary Crim	Adam Jobson	Rodger A. Payne	Michael Whitt
Erin Crites	R. Michael Johmann	Liz Payne	Scott R. Whittemore
Geoffrey Cross	George R. John	William D. Pearson	Vernon Wiehe
A. Glenn Crothers	Timothy Johnson	Diane Pecknold	Johan Wiklund
Philip Crowley	Pearlie Johnson	Robert Pennington	Richard Wilcke
Denise Cumberland	Mark A. Johnson	Margaret Pentecost	Pamela Wilcox
William L. Cunningham	B. Edwin Johnson	Rogelio Pereda	David J. Wildstrom
Michael R. Cunningham	Paul B. Johnston	Daniel Perez	Mickey R. Wilhelm
Albert Cunningham	Yvonne Jones	Michael H. Perlin	Charles Willard
David R. Cunningham	Ricky L. Jones	Julie M. Peteet	Ann Elizabeth Willey
Matthieu Dalle	Johnny Jones	Susan Peters	Bronwyn T. Williams
Joseph D'Ambrosio	Steven P. Jones	Courtney Petrosino	Michael Williams
Caroline Daniels	Veronnie Faye Jones	Jeffrey Petruska	Monnica Williams
Judith Danovitch	Jon W., Jr Jones	Heywood Petry	Walter M. Williams
Udayan B. Darji	Colleen Jonsson	Wendy Pfeffer	Stuart J. Williams
Douglas S. Darling	Swati Joshi-Barve	Selene Phillips	Craig Williamson
Somnath Datta	Irving G. Joshua	Dora Kay Phillips	Gerard Williger
Susmita Datta	Debra Jounet	William M. Pierce	Gerold Willing
Per Davidson	James E. Jumblatt	Peipei Ping	Mark A. Wilson
Christopher L. Davis	Marcia M. Jumblatt	Josh Pinkston	Richard W. Wilson
Deborah Winders Davis	David E. Justus	Neville Pinto	Ian M. Windmill
Mark Davis	Pradeep Kachroo	M. Michele Pisano	Welby Winstead
Tammi Davis	Sham Kakar	David Pisoni	Stephen Winters
Deborah Davis	Ted Kalbfleisch	Patrick Piuma	Norman Wirzba
Keith Davis	Kyung Kang	Barbara Polivka	Elaine O. Wise
Beth Davis-Sramek	Y. James Kang	Hiram C. Polk	Dieter Witt
Donald Dawes	Mehmed Kantardzic	Natalie Polzer	Richard Wittebort
Buddhadab Dawn	Elizabeth Kantzman	Dan Popa	James Wittliff

B. Cherie Dawson-Edwards	Henry Kaplan	Stephen Porter	Krzysztof Wolek
Danielle Day	Victor Kappeler	Patrick Possel	Jean (Hicks) Wolph
C. Andrew Day	Julia Karcher	Jan Potempa	John L. Wong
Michael L. Day	Anoop Karippot	Jennifer Potochnic	Hongryun Woo
William Dean	Kathleen Karr	Nancy L. Potter	Janet Woodruff-Borden
Douglas Dean	Matthew Karr	Deborah Potter	Stefanie Wooten-Burnette
Marci DeCaro	Dennis Keating	Richard Pouyat	Michah Worley
Monica Delano	Robert B. Kebric	Aleeta Powe	Nathaniel Wright
Lindsay Della	Deborah G. Keeling	Robert C. Powers	Andrew L. Wright
Paul J. DeMarco	Andrea Kelecy	Sumanth D. Prabhu	Carol Wright
Donald R. Demuth	Lara Kelland	Patrick Pranke	Elaine Wright
Brendan DePue	Kenneth Keller	Glen Prater	Yian Wu
Gail W. DePuy	Bradley Keller	Dianna C. Preece	Dongfeng Wu
Ahmed Desoky	Brent Kelly	Jill Preminger	Zhongjun Jon Wu
Jaydev N. Dholakia	Baron Kelly	Dianne Prenatt	Reinhold Wurth
Surjit Dhooper	Janet Kelly	Mark A. Priest	Clarence Wyatt
Phil Diblasi	Bruce H. Kemelgor	Russell A. Prough	Marcin Wysoczynski
Pat H. Dickson	Dru Kemp	George Purvis	Bo Xu
Joseph Dien	Kimberly Kempf-Leonard	Sathnur Pushpakumar	Yongzhi (Steve) Xu
Julia Dietrich	Richard N. Kerber	Meng-sheng Qiu	Xiao-Ming Xu
Randall Dills	Jelani Kerr	Peter M. Quesada	Kavitha Yaddanapudi
Ronald Dimock	Sharon Kerrick	Andrew S. Rabin	Lung T. Yam
Jixiang Ding	Robert S. Keynton	J. Patrick Rafferty	Roman V. Yampolskiy
Christopher Doane	Andre E. Kezdy	Shesh Rai	Jun Yan
Christiane Donahue	Zafrulla Khan	Theresa Rajack-Talley	Dongyan Yang
Carrie Donald	La Creis Renee Kidd	Puthankurissi S. Raju	Li Yang
Brian Dos Santos	John F. Kielkopf	Patricia Ralston	Pamela A. Yankeelov
David J. Doukas	Jongwoo Kim	Michael Ramach	Stephen Yanoviak
Guy Dove	Jon-Lark Kim	Allan M. Ramirez	M. Cecilia Yappert
Timothy Dowling	Young Hoon Kim	Madhavi J. Rane	Hong Ye
Steven Drewry	Letitia Kimsey	Audra Rankin	Mark Yeary
Connie Drisko	Shirletta Kinchen	Ch. V. Rao	Wendy Yoder
Thad Druffel	Kristi King	Mariusz Ratajczak	Deborah Yoder-Himes
Margaret L. DSilva	Sidney King	Rebecca Redman	Tamara Yohannes
Stanley DSouza	Irina Kirpich	John Reed	Esma Yolcu
David A. Dubofsky	Doris Kistler	Frederick J. Regennitter	Paul York
Jian Du-Caines	Jon B. Klein	Kenneth H. Reid	William W. Young
Lee Alan Dugatkin	Audrey Kline	Elizabeth Reilly	Sun Youzhong
Thomas Dumstorf	Carolyn Klinge	Susanna Remold	Ming Yu
Donald B. Dupre	Tracy K'Meyer	Laurie A. Rhodebeck	Wolfgang Zacharias
Perri Eason	Steven C. Koenig	Che Rhodes	Pavel Zahorik
John Eaton	Cheryl A. Kolander	Christine Rich	Francis Zamborini

Mitch Eckert	Avery H. Kolers	Christopher Richards	Adriana Zavala
Thomas Edison	Maiying Kong	April Richardson	Li Zeng
Harvey L. Edmonds	Jonathan Kopechek	Ryan Ridge	Wei-bin Zeng
Terry Edwards	Karen L. Kopelson	Glynis Ridley	Xiang Zhang
Robert Edwards	Michele Kosiewicz	Lee Ridner	Haifeng (Charlie) Zhang
Tracy Eells	Girish J. Kotwal	Thomas Riedel	Jian Zhang
Caroline Ehman	Steven Koven	Jon H. Rieger	Zaixin Zhang
Christine T. Ehrick	Pawel Kozlowski	Marilyn Riese	Sumei Zhang
William D. Ehringer	Dallas F., II Kratzer	Lynne Rieske-Kinney	Qunwei Zhang
Barbara Eisenmenger	Daniel Krebs	William R. Rising	Hui Zhang
Sabry El-Baz	Robin F. Krimm	Christine Ritchie	Jianhua (Andrew) Zhao
Imad Elhaj	Ewa Marie Kubicka	John Ritz	Qian Zhao
Andreas Elipidorou	Grzegorz Kubicki	Thomas Robbins	Heshan (Sam) Zhou
Steven R. Ellis	John Randy Kuhn	Andrew M. Roberts	Charles Ziegler
Adel Elmaghraby	Karunarithna Kulasekera	Sara Robertson	Kristina Zierold
Rifaat El-Mallakh	Prasad Kulkarni	David L. Robinson	Wayne Zipperer
Gretchen Ely	Hamid Kulosman	Brian Robinson	Jacek Zurada
	Anna Kumar		Josef M. Zurada

## 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 Webpage:** <http://louisville.edu/theatrearts/academics/master-of-fine-arts-in-theatre-arts/aatp-certificate.html>

## Program Information

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

Requires 15 hours of graduate credit—nine (9) hours in African American Theatre, three (3) hours of theatre-related Community Service, three (3) hours of Electives.

Can be completed as a “stand alone” program or in conjunction with another graduate program (any area).

### Specially designed for:

- Teachers, Government and Community Agency Professionals
- Graduate Students (at U of L or another institution)
- Persons preparing for professional careers in the theatre arts
- Community Residents

## Curriculum

<b>History, Theory, and Literature (6 credits)</b>	6
TA 566 Advanced African American Theatre History	
<i>One of the following:</i>	
TA 664 Approaching African American Theatre	
TA 563 Advanced African American Women in Theatre	
TA 565 Advanced Theatre of the African World	
<b>Performance/Production (3 credits)</b>	3
<i>One of the following:</i>	
TZ 532 Advanced Directing the Black Experience	
Electives (3 credits)	3
<i>One of the following:</i>	
TA 650 Theatre Internship	
TA 655 Independent Study in Performance	
PAS Approved courses in Pan African Studies	
TA 654 Community Service in the Arts	
<b>Independent Study (3 credits)</b>	3
<b>Minimum 15 credits</b>	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. Graduate

Coordinator approval is required. Coursework earned as undergraduate and used to meet the requirements for the undergraduate degree may not be used for graduate credit.

**Degree Options**

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

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

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

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

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

**Course Offerings**

**Core Seminars:**

- 608 Social and Cultural Theory
- 612 Contemporary Issues in Anthropology

**Students must select one of the following courses:**

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

**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**

Associate Professor  
**Yvonne Jones**  
Associate Professor  
**Lisa Markowitz**  
Associate Professor  
Chair  
**Kelly O'Connor**  
Senior Lecturer  
**Shawn Parkhurst**  
Associate Professor  
**Frances Purifoy**

Senior Lecturer  
**Julie Peteet**  
Professor  
**Russell Reid**  
Professor Emeritus  
**Edwin Segal**  
Professor Emeritus  
**Gabriela Stocks**  
Visiting Assistant  
Professor  
**Jay Stottman**

Lecturer  
**Christopher  
Tillquist**  
Associate Professor  
 Director of  
Graduate Studies  
**Jeneen Wiche**  
Lecturer  
**Jianhua Zhao**  
Associate Professor

# 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*

**Don Bierman**  
*Emeritus*

**Terra Clark**  
*Emeritus*

**James Conkin**  
*Emeritus*

**C. Andrew Day**

*Assistant Professor*

**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*

# 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); and
- 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](mailto: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](http://www.WES.org)) or Educational Credentials Evaluators ([www.ECE.org](http://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](mailto: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:

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

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

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

### 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**

ARTH 542: Special Topics	3
CCS 547/647: Introduction to Critical and Curatorial Studies I	3
CCS 648: Critical and Curatorial Studies II	3
600-level Public Administration Management Course (PADM 600, 603, 609, or 612)	3
CCS 649: Curatorial Internship	3

Written Thesis with Exhibition or Curatorial Project

**Total Credit Hours**

**15**

**Concentration in Studio Art**

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

Each student must complete a core curriculum (16 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

**John Begley**

*Assistant Professor  
Emeritus*

**R. Todd Burns**

*Associate Professor*

**Thomas Buser**

*Associate Professor  
Emeritus*

**Mary Carothers**

*Associate Professor*

**Ying Kit Chan**

*Professor*

**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*

**James Grubola**

*Professor*

**Barbara L.**

**Hanger**

*Associate Professor*

**Benjamin**

**Hufbauer**

*Associate Professor*

**Susan Jarosi**

*Associate Professor*

**Jongwoo Kim**

*Associate Professor*

**Jay M. Kloner**

*Associate Professor*

**Delin Lai**

*Associate Professor*

**Stephanie J.**

**Maloney**

*Professor Emerita*

**Scott Massey**

*Associate Professor*

Chair

**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 course work earned for the M.A. degree)
- ARTH 743 and 744: Directed Readings for Comprehensive Exam (3 credit hours maximum for each)
- ARTH 745: Dissertation Research (12 credit hours maximum)
- Comprehensive exam (upon completion of coursework and before beginning the dissertation)
- Dissertation prospectus
- Dissertation and defense

### Course Requirements:

- 500-level electives: 15 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

**John Begley**  
*Assistant Professor*  
*Emeritus*

**R. Todd Burns**  
*Associate Professor*

**Thomas Buser**  
*Associate Professor*  
*Emeritus*

**Mary Carothers**  
*Associate Professor*

**Ying Kit Chan**  
*Professor*

**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*

**James Grubola**  
*Professor*

**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*

Chair

**Gabrielle Mayer**  
*Associate Professor*

**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

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

## 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](mailto: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:

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

### Other Coursework

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

**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

**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*

**Lee A. Dugatkin**  
*Professor*

**Perri K. Eason**  
*Professor*

**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

#### Foundations in Biology

One course to be selected by the student's committee from each category:

	<b>Hours</b>	<b>Total</b>
1. Biostatistics	4	
2. Evolutionary Biology (courses that cover the evolutionary history and/or phylogenetic relationships of molecules or organisms)	4	8

#### Two courses to be selected from within an Area of Focus:

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

1. Population and Community Ecology	4	
2. Ecosystem Ecology or Behavior	4	16

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

1. Genetics/Cellular (courses that discuss the biochemistry and molecular genetics of life or describe the cell as the structural and functional unit of life)	4	
----------------------------------------------------------------------------------------------------------------------------------------------------------------	---	--

2. Physiology (courses that discuss life processes at the level of the organism)	4	16
Advanced Biology Electives	16	32
Dissertation Research	9	41

## 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*

**Lee A. Dugatkin**  
*Professor*

**Perri K. Eason**  
*Professor*

**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*

# 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 student's 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. Kozłowski**  
*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 Yappert**  
*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 10<sup>th</sup> consecutive exam to qualify for the Ph.D. program. Students who fail to accumulate 12 points by the end of the 10<sup>th</sup> 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 4<sup>th</sup> 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*

**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 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>

## 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)	13
605 Communication Theory & Practice	hours
616 Qualitative Communication Research	
617 Quantitative Methods in Communication	

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

580 Interpersonal Communication	
590 Health Communication	3
603 Communication Pedagogy	hours
620 Organizational Communication	
625 Personality and Communication	

650 Corporate Communication

675 Risk Communication

**Area 2: Integrated Communication (One course)**

520 Computer-Mediated Communication

530 Science Communication

3

652 Computer-Mediated Communication in Organizations

hours

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

3

610 Problems of Public Discourse

hours

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

9

courses taken for a non-thesis option. Three hours may be taken outside of the

hours

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

6

**Non-Thesis Option**

hours

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/>.
- \$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 a 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>

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

## Curriculum

Core Courses	Credit Hours Thesis Option	Credit Hours Professional Paper Option
JA 621 The Criminal Justice System	3	3
JA 625 Legal Aspects of Criminal Justice Management	3	3
JA 643 Theories of Crime and Delinquency	3	3
JA 649 Applied Statistics in Criminal Justice	3	3
JA 650 Research Methods in Criminal Justice	3	3
Electives (to be approved by Director of Graduate Studies)	15	18
Thesis	6	
Professional Paper		3
<b>Minimum Total Credit Hours</b>	<b>36</b>	<b>36</b>

## 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

<b>Courses</b>	<b>Credit Hours</b>
CJ 745 Advanced Criminal Behavior	3
CJ 748 Seminar: CJ Program Planning and Evaluation	3
CJ 749 Advanced Statistical Analysis	3
CJ 750 Field Research	3
CJ 751 Computer Applications in Criminal Justice	3
CJ 752 Advanced Research Methods	3
CJ 799 Dissertation	12



**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](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

ANTH 624 Black Cultural Traditions  
 COMM 630 Communication and Multiculturalism  
 ENGL 520 World Englishes  
 ENGL 549 Studies in Post-Colonial and/or Ethnic Literature  
 ENGL 550 Studies in African-American Literature  
 ENGL 554 Women's Personal Narratives  
 ENGL 570 Language and Social Identity  
 ENGL 567 Post-Colonial Voices  
 ENGL 575 Genre Studies in African American Lit  
 ENGL 577; PAS 577 Harlem Renaissance  
 ENGL 660 African-American Lit  
 FREN 506; WGST 571 Francophone Women Writers  
 GOEG 510; LALS 510 Urbanism in the Global South  
 GEOG 529 Geography of Urban Issues  
 HIST 506 Women in 19th Century  
 HIST 512 History of Jews in America  
 HIST 583; WGST 531/631 Women in the 20th Century in Europe and the US  
 HIST 584; WGST 584 Women in East-Asian History  
 HIST 588; WGST 530/630 Feminism in Western Civilization  
 HIST 590 Studies in African History  
 HIST 592 Civilizations of Modern India  
 HIST 593 American Images of the Middle East  
 HUM 513 Topics in Comparative Religions  
 HUM 512/612 Topics in Contemporary Religious Thought  
 HUM 513/613 Topics in Comparative Religions  
 HUM 514/614 Perspectives on Religious Co-Existence and Culture  
 HUM 515/615 Topics in Gender and the Humanities  
 JA 523 Race and Gender Issues in Criminal Justice  
 LALS 680 Issues in Latin American and Latino Studies  
 LING 520; ENGL 520 World Englishes  
 PAS 515/615 Advanced Seminar on Race  
 PAS 520/620 The Black Family  
 PAS 528 History of African-American Education  
 PAS 532 Slavery and Slave Trade  
 PAS 542/643; WGST 543/643 Black Women Voices  
 PAS 562/662; WGST 640 Women's Health in Africa  
 PAS 619 African-American History Seminar  
 PAS 620 Black Literature and Culture  
 PHIL 516/616; PAS 616 African-American Philosophy  
 PHIL 519/619 Topics in Philosophy of Race & Racism  
 PHIL 557/657 African Philosophy  
 PHIL 582/682 WGST 582/682: Gender, Race, and Culture in Health Care  
 POLS 563 WGST 558: Women in Developing Countries  
 POLS 656 WGST 556/656: Feminist Theory  
 PSYCH 566 Race and Gender in Psychological Research  
 SOC 512/612; WGST 512/612 Gender, Race, Work, and Welfare  
 SOC 636 Sociology of Human Sexuality  
 SOC 680 Seminar in Social Stratification  
 SOC 685 Race and Ethnicity  
 SPAN 554 Hispanic Culture through Film and Media

SPAN 644 Origins and Development of Hispanic Culture  
SPAN 648 Contemporary Issues in the Hispanic World  
TA 532 Advanced Directing the Black Experience  
TA 547 Advanced Black Aesthetic on Stage  
TA 562 Advanced Black Dramatic Literature  
TA 563 Advanced African-American Women in Theater  
TA 566 Advanced History of African-American Theater  
TA 656 Advanced Theater of the African World  
TA 664 Approaching African-American Theater  
WGST 512/612; SOC 512/612: Gender, Race, Work, & Welfare  
WGST 513/PAS 513: US Social Justice Movements  
WGST 545/645; PAS 645: Southern Women, Black and White  
WGST 547 Language, Race, Class, Gender  
WGST 513 US Social Justice Movements  
WGST 520/620 Women's Personal Narratives  
WGST 522/622 The Body in Popular Media  
WGST 523 Gender & Popular Music  
WGST 532/632 History of American Sexualities  
WGST 533/633 Women in 19th-Century America  
WGST 535; HSS 564 Women's Health Issues  
WGST 538; SPAD 529 American Women in Sports  
WGST 545/645; PAS 645 Southern Women, Black and White  
WGST 547 Language, Race, Class, Gender  
WGST 615/SOC 642 Seminar in the Sociology of Disabilities

## 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**

**David R. Anderson**  
*Associate Professor*

**S. Matthew Biberman**  
*Professor*

**Dale B. Billingsley**  
*Professor*  
Vice Provost for  
Undergraduate  
Affairs

**Beth Boehm**  
*Professor*  
Dean of the School  
of Interdisciplinary  
Affairs

and Graduate  
Studies

**Brenda**

**Brueggermann**  
*Professor*

Director of  
Composition

**Thomas B. Byers**

*Professor Emeritus*

**Karen M.**

**Chandler**

*Associate Professor*

**Amy Clukey**

*Assistant Professor*

**Geoffrey A. Cross**

*Professor Emeritus*

**Julia C. Dietrich**

*Professor*

Associate Dean for

Undergraduate

Education

**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**

*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 Webpage:** <http://louisville.edu/english/graduate/doctorate-in-rhetoric-and-composition.html>

## 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](mailto: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
ENG 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> 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**

**David R.  
Anderson**  
*Associate Professor*

**S. Matthew  
Biberman**  
*Professor*

**Dale B. Billingsley**  
*Professor*

Vice Provost for  
Undergraduate  
Affairs

**Beth Boehm**

*Professor*

Dean of the School  
of Interdisciplinary  
and Graduate  
Studies

**Brenda**

**Brueggermann**

*Professor*

Director of  
Composition

**Thomas B. Byers**

*Professor Emeritus*

**Karen M.**

**Chandler**

*Associate Professor*

**Amy Clukey**

*Assistant Professor*

**Geoffrey A. Cross**

*Professor Emeritus*

**Julia C. Dietrich**

*Professor*

Associate Dean for  
Undergraduate

Education

**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**

*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**

**Wiley**

*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 be at the 600 level, with at least nine of these hours in the major area of emphasis. The

thesis must be in the major area of emphasis. Following an oral defense, it must be approved by a thesis committee, which consists of the thesis director and at least two other faculty members, one of them from another department. The committee 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*

Director of  
Graduate Studies  
**Yuxin Ma**  
*Associate Professor*  
**Thomas C. Mackey**  
*Professor*

**Katherine  
Massoth**  
*Assistant Professor*

**Justin A.  
McCarthy**  
*Professor*  
**John E. McLeod**  
*Professor*

**Bruce M. Tyler**  
*Associate 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.

**Traditional MA with Thesis**

(minimum of 30 credit hours)  
12-15 credit hours in 1 discipline/area  
9-12 credit hours in 2nd discipline/area  
3 credit hours in Methods  
6 credit hours in Thesis  
Foreign Language Competency\*\*

**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\*\*

**Traditional MA: Non Thesis**

(minimum of 30 credit hours)  
12-15 credit hours in 1 discipline/area  
9-12 credit hours in 2nd discipline/area  
3 credit hours in Methods  
3 credit hours of Directed Study Project  
Foreign Language Competency\*\*

**Example:**

15 credit hours in Philosophy  
9 credit hours in Literature  
3 credit hours of HUM 609  
3 credit hours of Directed Study Project  
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: Choose 1**  
ENG 523 History of the English Language  
LING 621 Sociolinguistics  
LING 623 Culture as the Basis of Foreign Language Teaching  
LING 630 Language and Culture
  - **Language and Structure**  
ENG 522 Structure of Modern American English

LING 535 Applied Linguistics for English Teachers  
LING 603 Syntax  
LING 606 Historical and Comparative Linguistics  
LING 610 Phonetics and Phonology

- **Language and Cognition: Choose1**

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: Choose1**

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>

### **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**

*Assistant Professor*

**Simona Bertacco**

*Associate Professor*

**Terry Burden**

*Assistant Professor*

**Michael Hagan**

*Assistant Professor*

Civic Leadership

MA Concentration

Advisor

**Michael Johmann**

*Assistant Professor*

**Brandon**

**McCormack**

*Assistant Professor*

**Maryam Moazzen**

*Assistant Professor*

**Ranen Omer-**

**Sherman**

*Professor*

JHFE Endowed

Chair in Jewish

Studies

**Natalie Polzer**

*Associate Professor*

**Patrick Pranke**

*Associate Professor*

**Shelley**

**Salamensky**

*Professor*

Director of

Humanities

**Tatjana Soldat-**

**Jaffe**

*Assistant Professor*

Linguistics and

Humanities MA

Concentration

Advisor

**Karl Swinehart**

*Assistant Professor*

**Thomas Stewart**

*Assistant Professor*

**Steven Watkins**

*Assistant Professor*

**Michael Williams**

*Associate Professor*

**Elaine O. Wise**

*Assistant Professor*

*of English*

Chair of

Comparative

Humanities

Traditional MA

Concentration

Advisor



# 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**  
*Assistant Professor*

**Simona Bertacco**  
*Associate Professor*

**Mark Blum**  
*Professor*

**Ying Kit Chan**  
*Professor*

Director of Hite  
Institute

**John Gibson**  
*Associate Professor*

**Aaron Jaffe**  
*Professor*

Director of  
Commonwealth

Center for  
Humanities and  
Social Sciences  
**Dismas Masolo**  
*Professor*  
Distinguished  
University Scholar

**Ranen Omer-  
Sherman**  
*Professor*  
Jewish Heritage  
Fund Endowed  
Chair in Judaic  
Studies

**Natalie Polzer**  
*Associate Professor*  
**Patrick Pranke**  
*Associate Professor*  
**Shelley  
Salamensky**  
*Professor*

Director of Doctoral  
Studies  
**Tatjana Soldat-  
Jaffe**  
*Associate Professor*  
**Elaine O. Wise**  
*Assistant Professor*

# 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/latinamericanstudies>

### 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*

**Denise Martin**  
*Associate Professor*

**Manuel Medina**  
*Associate Professor*

**Dennis Menezes**  
*Associate Professor*

**Gabriela Nuñez**  
*Assistant Professor*

**Theresa Rajack-Talley**  
*Associate Professor*

**Robert St. Clair**  
*Professor*

**Clare Sullivan**  
*Associate Professor*

**Lisa C. Wagner**  
*Associate Professor*

**Margath Walker**  
*Assistant 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**

### **Csaba Biro**

*Assistant Professor*

### **Mary E. Bradley**

*Associate Professor*

### **Udayan B. Darji**

*Professor*

### **Richard M. Davitt**

*Emeritus*

### **Arnab Ganguly**

*Assistant Professor*

### **Roger H. Geeslin**

*Emeritus*

### **Gun-Min Gie**

*Assistant Professor*

### **Ryan S. Gill**

*Associate Professor*

*Graduate Advisor*

### **Aaron Hill**

*Assistant Professor*

### **Changbing Hu**

*Assistant Professor*

### **Chakram S.**

**Jayanthi**

*Adjunct Professor*

### **Thomas M.**

**Jenkins**

*Emeritus*

### **Andre Kezdy**

*Professor*

Director of  
Graduate Studies

### **Lael F. Kinch**

*Emeritus*

**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*

*Department Chair*

**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>

## 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**

**Csaba Biro**

*Assistant Professor*

**Mary E. Bradley**

*Associate Professor*

**Udayan B. Darji**

*Professor*

**Richard M. Davitt**

*Emeritus*

**Arnab Ganguly**

*Assistant Professor*

**Roger H. Geeslin**

*Emeritus*

**Gun-Min Gie**

*Assistant Professor*

**Ryan S. Gill**

*Associate Professor*

*Graduate Advisor*

**Aaron Hill**

*Assistant Professor*

**Changbing Hu**

*Assistant Professor*

**Chakram S.**

**Jayanthi**

*Adjunct Professor*

**Thomas M.**

**Jenkins**

*Emeritus*

**Andre Kezdy**

*Professor*

Director of

Graduate Studies

**Lael F. Kinch**

*Emeritus*

**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

Department Chair

**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*

# 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*

**Dale Billingsley**  
*Professor of  
English*

Vice Provost of  
Undergraduate  
Affairs

**Genevieve Carlton**  
*Assistant Professor  
of History*

**Julia Dietrich**  
*Professor of  
English*

**Christopher  
Fulton**  
*Associate 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 Tkweme**  
*Assistant Professor*

# Doctor of Philosophy in Pan African Studies

**Major:** PAS\_PHD

**Degree Awarded:** Ph.D.

**Unit:** GA

**Program Webpage:** <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.
7. Current curriculum vitae.
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>

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):

Year I & II	Credit Hours	Other Tasks
<b><i>Research Strategies</i></b>		9
Quantitative Research Strategies (PAS 624)	3	
Qualitative Research Strategies (PAS 623)	3	
Research Strategies – Discipline Based (historical, social, cultural – courses not in PAS)	3	9
<b><i>Intellectual Approaches</i></b>	3	
Pan-African Social Thoughts (PAS 622)	3	
Advanced Seminar on Race (PAS 615)	3	
Seminar on Race & Ethnicity in the Diaspora	3	OR
Intellectual Approaches – Discipline Based (historical, social, cultural – courses not in PAS)	3	
<b><i>Major (Track Area/Discipline)*</i></b>		12
<b>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.</b>		
(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) **		6



Professional Development Seminar	0
Reading for Comprehension (Summer Course) Comprehensive	6
<b>TOTAL Credit Hours (Year I &amp; II)</b>	<b>42</b>

\* 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.

<b>Year III</b>	<b>Credit Hours</b>	<b>Other Tasks</b>
<i>Semester 1</i>		
Special Topics Courses Comprehensive & Special Topics Exams	9	
<i>Semester 2</i>		
Dissertation Research	9	
<b>Total Credit Hours (for year III) - Defend dissertation, proposal</b>		<b>18</b>
<b>Year IV</b>		
<i>Semester 1</i>		
Dissertation Research & Writing	2	
<i>Semester 2</i>		
Dissertation Research (Defend dissertation)	2	
<b>Total Credit Hours (for Year IV)</b>	<b>4</b>	
<b>TOTAL CREDIT HOURS (Program)</b>		<b>64</b>

\*\*\* [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*  
**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*

**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:

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

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>
- 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**

*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*

Professor, 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 Theory*

**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*



# 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.

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

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).

<b>Courses</b>	<b>Description</b>	<b>Credit Hours</b>
<b>Thesis Option</b> (6 hours total)		
POLS 670	Scope of Political Science	3
POLS 671	Methods of Political Research	3
<b>Three of the following six courses</b> (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
<b>Electives*</b> (9 hours total, from Political Science or other departments)		
POLS 699	Thesis	6

### 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

**Jason Abbott**  
*Associate Professor*

**David Buckley**  
*Assistant Professor*

**Julie M. Bunck**  
*Professor*

**Anne I. Caldwell**  
*Associate Professor*

**Dewey M. Clayton**  
*Professor*

**Jasmine I. Farrier**  
*Associate Professor*

**Michael R. Fowler**  
*Professor*

**Jason Gainous**  
*Associate Professor*

**Kristopher Grady**  
*Assistant Professor*  
*Term*

**Tricia J. Gray**  
*Assistant Professor*

**Shiping Hua**  
*Professor*

Calvin and Helen  
Lang Distinguished  
Chair in Asian  
Studies

**David L.  
Imbroscio**  
*Professor*

**Aung San Suu Kyi**  
*Endowed Chair in  
Asian Democracy*

**Tasha Lavey**  
*Instructor (Term)*

**Susan M.  
Matarese**  
*Professor*

**Melissa K. Merry**  
*Assistant Professor*  
Graduate Advisor

**Laura P. Moyer**  
*Assistant Professor*

**Rodger A. Payne**  
*Professor*  
Department Chair

**Laurie A.  
Rhodebeck**  
*Associate Professor*

**Sherri L. Wallace**  
*Associate Professor*

**Tim Weaver**  
*Assistant Professor*

**Okbazghi  
Yohannes**  
*Professor*

**Charles E. Ziegler**  
*Professor*  
Director of  
Grawemeyer Award  
for Ideas Improving  
World Order

# Doctor of Philosophy in Psychology - Clinical

**Major:** CPSY

**Degree Awarded:** Ph.D.

**Unit:** GA

**Program Webpage:** <http://louisville.edu/psychology>

## Program Information

### Mission Statement

The mission of the Clinical Psychology Doctoral Program at the University of Louisville is to produce 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>) 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>. 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

### Clinical Psychology Core Faculty

**Cheri Levinson**  
*Assistant Professor*

**Richard Lewine**  
*Professor*

Director of  
Undergraduate  
Studies

**Benjamin Mast**  
*Professor*

Vice Chair

**Suzanne Meeks**  
*Professor*

Chair

**Tamara Newton**  
*Associate Professor*

**Paul Rosen**  
*Associate Professor*

**Paul G. Salmon**  
*Associate Professor*

**Sandra Sephton**  
*Associate Professor*

**Barbara Stetson**  
*Associate Professor*

**Bernadette Walter**

*Associate Professor*

**Janet Woodruff-  
Borden**

*Professor*

Director of Clinical  
Training

**Other Department  
Faculty**

**Cara Cashion**

*Associate Professor*

Director of  
Experimental

Psychology

Doctoral Program

**Judith Danovitch**

*Associate Professor*

**Marci DeCaro**

*Assistant Professor*

**Paul J. DeMarco**

*Professor*

**Brendan Depue**

*Assistant Professor*

**Lora Haynes**

*Associate Professor*

**Zijiang He**

*Professor*

**Jay Irby**

*Assistant Professor*

**Maria**

**Kondaurova**

*Assistant Professor*

**Melinda Leonard**

*Associate Professor*

**Keith Lyle**

*Associate Professor*

**Carolyn B. Mervis**

*Professor*

**Nicholaus Noles**

*Assistant Professor*

**John R. Pani**

*Professor*

**Heywood M. Petry**

*Professor*

**Christian Stilp**

*Assistant Professor*

**Pavel Zahorik**

*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](mailto: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](mailto:CarolynMask).
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](mailto: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

---

### Experimental Psychology Core Faculty

---

**Cara Cashion**  
*Associate Professor*  
Director of  
Experimental  
Psychology  
Doctoral Program

**Judith Danovitch**  
*Associate Professor*

**Marci DeCaro**  
*Assistant Professor*

**Paul J. DeMarco**  
*Professor*

**Brendan Depue**  
*Assistant Professor*

**Zijiang He**  
*Professor*

**Maria  
Kondaurova**  
*Assistant Professor*

**Melinda Leonard**  
*Associate Professor*

**Keith Lyle**  
*Associate Professor*

**Carolyn B. Mervis**  
*Professor*

**Nicholaus Noles**  
*Assistant Professor*

**John R. Pani**  
*Professor*

**Heywood M. Petry**  
*Professor*

**Christian Stilp**  
*Assistant Professor*

**Pavel Zahorik**  
*Associate Professor*

---

### Other Department Faculty

---

**Lora Haynes**  
*Associate Professor*

**Jay Irby**  
*Assistant Professor*

**Cheri Levinson**  
*Assistant Professor*

**Richard Lewine**  
*Professor*  
Director of  
Undergraduate  
Studies

**Benjamin Mast**  
*Professor*  
Vice Chair

**Suzanne Meeks**  
*Professor*  
Chair

**Tamara Newton**  
*Associate Professor*

**Paul Rosen**  
*Associate Professor*

**Edna Ross**  
*Associate Professor*

**Paul G. Salmon**  
*Associate Professor*

**Sandra Sephton**  
*Associate Professor*

**Barbara Stetson**  
*Associate Professor*

**Bernadette Walter**  
*Associate Professor*

**Janet Woodruff-  
Borden**  
*Professor*  
Director of Clinical  
Training

# 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 web page <http://supa.louisville.edu/>.

### Program Admission Procedures

The procedures for admission into the MPA program are as follows:

1. Submit a completed graduate application to the University of Louisville Office of Graduate Admissions. There is a \$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 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.

	<b>Semester Hours</b>
PADM 600 Foundations of Public Administration	3
PADM 601 Statistics for Public Affairs	3
PADM 682 Practicum/Internship or PADM 695 Thesis	3
<b>Total from core</b>	<b>12</b>

### 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

	<b>Semester Hours</b>
PADM 604 Public Budgeting and Finance	3
PADM 605 Public Management	3
PADM 606 Urban Policy and Administration	3
PADM 607 Planning Theory	3
PADM 610 Administrative Law and Process	3
PADM 624 Ethics in Public Administration	3
PADM 625 Organizational Behavior	3
PADM 642 Human Resources Management	3
PADM 680 Independent Research in Public Administration	1-3
PADM 683 Topical Seminar in Public Administration	1-3

#### Nonprofit Management Specialization

	<b>Semester Hours</b>
PADM 603 Policy Analysis and Evaluation	3
PADM 606 Urban Policy and Administration	3

PADM 609 Financial Management of Nonprofits	3
PADM 612 Nonprofit Grantsmanship and Fundraising	3
PADM 615 Theories of the Nonprofit and Voluntary Sector	3
PADM 680 Independent Research in Public Administration	1-3
PADM 683 Topical Seminar in Public Administration	1-3

### **Community and Economic Development Specialization**

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

### **Human Resources Specialization**

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

### **Urban Policy Specialization**

	<b>Semester Hours</b>
PADM 603 Policy Analysis and Evaluation	3
PADM 606 Urban Policy and Administration	3
PADM 621 Urban Demography	3
PADM 627 Environmental Policy	3
PADM 640 Urban Economics	3
PADM 645 Economic Development	3
PADM 680 Independent Research in Public Administration	1-3
PADM 683 Topical Seminar in Public Administration	1-3

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 Imbroscio**

*Professor*

**Janet Kelly**

*Professor*

Director

**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

Introduction to Public History	3
Public History Practicum (Internship)	3
Two 600 level non-public history courses in the Department of History	3, 3
Two public history electives at the 500 level or above	3, 3
<b>Total Credit Hours</b>	<b>18</b>

[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:

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

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

**Tony Arnold**  
*Boehl Chair in  
Property and Land  
Use*

**William J.  
Cahaney**  
*Lecturer in Urban  
and Public Affairs*

**J. Michael McCoy**  
*Lecturer in Urban  
and Public Affairs*

**Sumei Zhang**  
*Assistant Professor  
of Urban and  
Public Affairs*

# 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](http://www.WES.org)) or Educational Credentials Evaluators ([www.ECE.org](http://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](mailto: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)

- 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**

**John A. Busch**  
*Associate Professor*  
**Robert M. Carini**  
*Associate Professor*

**Karen Christopher**  
*Associate Professor*

**Patricia Gagne**  
*Professor*  
**Lauren Heberle**  
*Associate Professor*

**Robin Hognas**  
*Assistant Professor*

**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**  
*Emeritu*



# 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

the paper-based test. Applicants holding a bachelor's or advanced degree from an accredited institution in the United States are exempt from this requirement.

**NOTE:** While submission of GRE scores is not required for admission to the Spanish M.A. program, it is strongly recommended for applicants who wish to be considered for a graduate teaching assistantship or other university-awarded fellowship.

All application materials 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 at <http://louisville.edu/graduate/apply>.

### **GRADUATE TEACHING ASSISTANTSHIPS**

Graduate teaching assistantships most often take the form of a two-year appointment awarded to students just beginning the Spanish M.A. program. GTAs are expected to perform a variety of duties (including teaching) in conjunction with a full-time load of nine (9) credit hours per semester, completing their degree at the end of their second year.

Exceptionally, the program awards one-year assistantships to current Spanish M.A. students who will have completed 18 credit hours of graduate credit by the start date of the appointment. Such GTAs are assigned immediately to teach basic language and are expected to complete their degree by the end of the appointment year.

Competition for graduate teaching assistantships takes place in the spring, with appointments beginning in fall of the next academic year. Applicants to the Spanish M.A. program who wish to be considered for a graduate teaching assistantship 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.

<b>Courses</b>	<b>Description</b>	<b>Credit Hours</b>	<b>Total</b>
SPAN 524	Introduction to Hispanic Linguistics	3	
SPAN 554	Hispanic Culture through Film and Media	3	
SPAN 611	Introduction to Methods and Research in Hispanic Studies	3	
SPAN 624	Special Topics in Hispanic Linguistics	3	
SPAN 634	Spanish for the Workplace and Community	3	
SPAN 644	Approaches to Hispanic Literatures	3	
SPAN 648	Hispanic Cultural Studies	3	
SPAN 661	Foundations of Translation and Interpreting	3	
SPAN 5XX or SPAN 6XX	Two electives in Spanish or in contingent fields (with Director of Graduate Studies' approval)	6	
	Directed Research Project	No credit	
	<b>Total Credit Hours</b>		<b>30</b>

## Faculty

**Lluís Baixauli  
Olmos**

*Assistant Professor*

**Rhonda L.  
Buchanan**

*Professor*

Director Latin

American Studies

**Thomas Wayne  
Edison**

*Assistant Professor*

**Gregory S.  
Hutcheson**

*Associate Professor*

Director of

Graduate Studies

**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  
Chair*

**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*

Associate Dean for  
International,  
Diversity, and  
Outreach Programs  
**Erin Crites**  
*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

**Lluís Baixauli-Olmos**

*Assistant Professor*

**Simona Bertacco**

*Assistant Professor*

**Rhonda Buchanan**

*Professor*

**Bonnie Fonseca-Greber**

*Assistant Professor*

**Carlton Hornung**

*Professor*

**Gregory**

**Hutcheson**

*Associate Professor*

**Mary Makris**

*Associate Professor*

**Julio Ramirez**

*Professor*

**Jesse Roman**

*Professor*

**Madalena Sánchez Zampaulo**

*Consultant*

**Clare Sullivan**

*Associate Professor*

Director of

Graduate Services

# 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*

Director of Ph.D.

Program in Urban  
and Public Affairs

**Janet Kelly**

*Professor*

**Kelly Kinahan**

*Assistant Professor*

**Steven G. Koven**

*Professor*

**Cynthia Negrey**

*Professor*

**Aaron Rollins**

*Assistant Professor*

**Mathew Ruther**

*Assistant Professor*

**Hank Savitch**

*Professor Emeritus*

**David M. Simpson**

*Professor*

Chair of

Department of

Urban and Public

Affairs

**Wei Song**

*Associate Professor*

**Margath Walker**

*Associate Professor*

**Sumei Zhang**

*Associate 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)

PLAN 613 Public Administration and Organizational Theory (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 Biostatistics
- Intro to Epidemiology
- Issues in Public Health
- Intro 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.

## Faculty

**Tomarra Adams**  
*Affiliated Faculty*  
Assistant Professor

**Ann Allen**  
*Affiliated Faculty*  
Professor

**Annette Allen**  
*Affiliated Faculty*  
Associate Professor

**Beth Boehm**  
*Affiliated Faculty*  
Professor

**Thomas B. Byers**  
*Affiliated Faculty*  
Professor

**Anne Caldwell**  
*Affiliated Faculty*  
Associate Professor

**Karen Chandler**  
*Affiliated Faculty*  
Associate Professor

**Karen Christopher**  
*Associate Professor*

**Julia Dietrich**  
*Affiliated Faculty*  
Professor

**Christine Ehrick**  
*Affiliated Faculty*  
Associate Professor

**Cate Fosl**  
*Associate Professor*

**Rinda Frye**  
*Affiliated Faculty*  
Associate Professor

**Patricia Gagne**  
*Affiliated Faculty*  
Associate Professor

**Alan Golding**  
*Affiliated Faculty*  
Professor

**Trish Gray**  
*Affiliated Faculty*  
Assistant Professor

**Susan Griffin**  
*Affiliated Faculty*  
Professor

**Karen Hadley**  
*Affiliated Faculty*  
Associate Professor

**Dawn Heinecken**  
*Professor*

**Susan Herlin**  
*Affiliated Faculty*

Associated  
Professor Emerita

**Suzette Henke**  
*Affiliated Faculty*  
Professor

**Katherine Johnson**  
*Affiliated Faculty*  
Associate Professor

**Cheryl Kolander**  
*Affiliated Faculty*  
Professor

**Karen L. Kopelson**  
*Affiliated Faculty*  
Associate Professor

**Gul Marshall**  
*Affiliated Faculty*  
Assistant Professor

**Carol Mattingly**  
*Affiliated Faculty*  
Professor

**Diane Pecknold**  
*Associate Professor*

**Wendy Pfeffer**  
*Affiliated Faculty*  
Professor

**Natalie Polzer**  
*Affiliated Faculty*  
Assistant Professor

**Nancy Potter**  
*Affiliated Faculty*  
Professor

**Theresa Rajack-Talley**  
*Affiliated Faculty*  
Professor

**Edwin S. Segal**  
*Affiliated Faculty*  
Professor Emeritus

**Arthur Slavin**  
*Affiliated Faculty*  
Professor Emeritus

**Mary Ann Stenger**  
*Affiliated Faculty*  
Professor Emerita

**Kaila Story**  
*Associate Professor*

Audre Lorde  
Endowed Chair in  
Race, Class,  
Gender, and  
Sexuality

**Nancy M. Theriot**  
*Professor*  
Chairperson

**Tamara Yohannes**  
*Affiliated Faculty*  
Assistant Professor

# 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**  
*Associate Professor*  
(Affiliated Faculty  
of Political Science)

**Karen Chandler**  
*Associate Professor*  
(Affiliated Faculty  
of English)

**Karen  
Christopher**  
*Associate Professor*

**Julia Dietrich**  
*Professor*  
(Affiliated Faculty  
of English)

**Christine Ehrick**  
*Associate Professor*  
(Affiliated Faculty  
of History)

**Cate Fosl**  
*Associate Professor*

**Lauren Freeman**  
*Assistant Professor*  
(Affiliated Faculty  
of Philosophy)

**Patricia Gagne**  
*Professor*  
(Affiliated Faculty  
of Sociology)

**Alan Golding**  
*Professor*  
(Affiliated Faculty  
of English)

**Trish Gray**  
*Assistant Professor*  
(Affiliated Faculty  
of Political Science)

**Susan Griffin**  
*Professor*  
(Affiliated Faculty  
of English)

**Karen Hadley**  
*Associate Professor*  
(Affiliated Faculty  
of English)

**Dawn Heinecken**  
*Professor*

**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 Marshall**  
*Associate Professor*  
(Affiliated Faculty  
of Sociology)

**Maryam Moazzen**  
*Assistant Professor*  
(Affiliated Faculty  
of Humanities)

**Laura Moyer**  
*Assistant Professor*  
(Affiliated Faculty  
of Political Science)

**Diane Pecknold**  
*Associate Professor*

**Wendy Pfeffer**  
*Professor*  
(Affiliated Faculty  
of Classical and  
Modern Languages)

**Natalie Polzer**  
*Professor*  
(Affiliated Faculty  
of Humanities)

**Nancy Potter**  
*Professor*  
(Affiliated Faculty  
of Philosophy)

**Theresa Rajack-  
Talley**  
*Professor*  
(Affiliated Faculty  
of Pan-African  
Studies)

**Edwin S. Segal**  
*Professor Emeritus*  
(Affiliated Faculty  
of Anthropology)

**Mary P. Sheridan**  
*Associate Professor*  
(Affiliated Faculty  
of English)

**Arthur Slavin**  
*Professor Emeritus*  
(Affiliated Faculty  
of Humanities)

**Mary Stenger**  
*Professor Emerita*  
(Affiliated Faculty  
of Humanities)

**Kaila Story**  
*Associate  
Professor*

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 be 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.

Semester	Course Number and Name	Credit Hours
<b>Fall I</b>	MAC 620, Advanced Audit	3.0
	MAC 622, Advanced AIS	3.0
	MAC 630, Ethics	1.5
	MAC 632, Leadership	1.5
	MAC 640, CPA Exam Preparation (AUD)	1.5
	MAC 648, Statistics	1.5
<b>Spring I</b>	MAC624, Advanced Federal Taxation	3.0
	MAC 638, Data Analytics	3.0
	MAC 642, CPA Exam Preparation (REG)	1.5
	MAC 644, CPA Exam Preparation (BEC)	1.5
	MAC 650, White Collar Crime	3.0
<b>Summer I</b>	MAC 626, Advanced Corp. Accounting	3.0
	MAC 634, User Perspective on Fin. Rprt.	1.5
	MAC 646, CPA Exam Preparation (FAR)	1.5
	<b>Total Credit Hours</b>	<b>30</b>

**NOTE:** Courses and timing are subject to change.

## Faculty

**Lisa Blum**

*Instructor*

**Richard Coppage**

*Professor*

**Jian (Jeff) Guan**

*Associate Professor*

**Julia N. Karcher**

*Associate Professor*

**Alan S. Levitan**

*Professor*

**Elizabeth Payne**

*Associate Professor*

**William D. Stout**

*Associate Professor*

**Director**

**Lyle Sussman**

*Professor*

# 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/>

Semester	Course Number and Name	Credit Hours	
		Internship Track	Non-Internship Track
<b>Fall I</b>	MBA 601 Strategic Analysis	1.5	1.5
	MBA 602 Decision Analysis	1.5	1.5
	MBA 604 Economics I	1.5	1.5
	MBA 607 Economics II	1.5	1.5
	MBA 608 Technology Management	1.5	1.5
	MBA 609 Financial Accounting	1.5	1.5
	MBA 611 Managerial Accounting I	1.5	1.5
	MBA 612 Finance I	1.5	1.5
<b>Spring I</b>	MBA 613 Managerial Accounting II	1.5	1.5
	MBA 603 Organizational Behavior	1.5	1.5
	MBA 606 Leadership	1.5	1.5
	MBA 614 Operations Management	1.5	1.5
	MBA 616 Finance II	1.5	1.5
	MBA 617 Marketing I	1.5	1.5
	MBA 618 Finance III	1.5	1.5

	MBA 619 Marketing II	1.5	1.5
	MBA 621 Global Business	1.5	1.5
	MBA 622 Project Management	1.5	1.5
<b>Summer I</b>	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
	<b>Total Credit Hours</b>	<b>48</b>	<b>45</b>

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/>

<b>Semester</b>	<b>Course Number and Name</b>	<b>Credit Hours</b>
<b>Fall Semester I</b>	MBA 601 Strategic Analysis	1.5
	MBA 602 Decision Analysis	1.5
	MBA 604 Economics I	1.5
	MBA 607 Economics II	1.5
	MBA 608 Technology Management	1.5
	MBA 609 Financial Accounting	1.5
<b>Spring Semester I</b>	MBA 611 Managerial Accounting I	1.5
	MBA 612 Finance I	1.5
	MBA 613 Managerial Accounting II	1.5
	MBA 616 Finance II	1.5
	MBA 618 Finance III	1.5
	MBA 614 Operations Management	1.5
<b>Summer I</b>	MBA 603 Organizational Behavior	1.5
	MBA 617 Marketing I	1.5
	MBA 619 Marketing II	1.5
	MBA 621 Global Business	1.5
<b>Fall Semester II</b>	MBA 623 Global Learning	1.5
	MBA 606 Leadership	1.5
	MBA 622 Project Management	1.5
	MBA 624 Strategic Management	1.5
	MBA 680 Electives	4.5

<b>Spring II</b>	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
	<b>Total Credit Hours</b>	<b>45</b>

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/>

<b>Semester</b>	<b>Course Number and Name</b>	<b>Credit Hours</b>	
		<b>Competition Track</b>	<b>Consulting Track</b>
<b>Fall Semester I</b>	IMBA 615 Opportunity Discovery	1.5	1.5
	IMBA 612 Economics of Strategy	3.0	3.0
	IMBA 611 Financial Accounting	1.5	1.5
	IMBA 613 Finance	1.5	1.5
	IMBA 622 New Venture Creation	3.0	3.0
	IMBA 614 Marketing	1.5	1.5
	IMBA 658 Brand Building	1.5	1.5
	IMBA 626 Team Dynamics I	1.5	1.5
<b>Spring Semester I</b>	IMBA 632 Business Plan Development	3.0	3.0
	IMBA 634 Financial Strategy	3.0	3.0
	IMBA 630 Project Management	1.5	1.5
	IMBA 636 Team Dynamics II	1.5	1.5
<b>Summer I</b>	IMBA 623 Global Learning	1.5	1.5
	IMBA 620 Leadership	1.5	1.5
	IMBA 624 Organizational Behavior	1.5	1.5
	IMBA 652 Business Plan Competition I	3.0	
	IMBA 657 Sales management	1.5	1.5
	IMBA 646 Operations Management	1.5	1.5
<b>Fall Semester II</b>	IMBA 656 Managerial Accounting	3.0	3.0
	IMBA 654 Business Plan Competition II	3.0	
	IMBA 644 IT Strategy	1.5	1.5
	IMBA 642 Franchising	1.5	1.5
	IMBA 648 Managing in the Future	1.5	1.5
	IMBA 660 Corporate Entrepreneurship	1.5	1.5
<b>Spring II</b>	IMBA 662 Corporate & Global Strategy	3.0	3.0
	IMBA 680 Social Entrepreneurship	1.5	1.5
	IMBA 664 Business Plan Competition III	3.0	
	IMBA 668 Business Consulting		3.0
	<b>Total Credit Hours</b>	<b>54</b>	<b>48</b>

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/>

Semester	Course Number and Name	Credit Hours
<b>Fall Semester I</b>	EMBA 602 Business Model for Quantitative Analysis	2.0
	EMBA 604 Strategic Analysis	2.0
	EMBA 603 Economics I	2.0
	EMBA 605 Economics II	2.0
	EMBA 610 Marketing Management I	2.0
	EMBA 613 Leading Organizations	2.0
<b>Spring Semester I</b>	EMBA 606 Financial Accounting	2.0
	EMBA 607 Business Intelligence	2.0
	EMBA 608 Managerial Accounting I	2.0
	EMBA 609 Financial Management I	2.0
	EMBA 612 Marketing Management II	2.0
	EMBA 614 Managing Global Challenges	2.0
<b>Summer I</b>	EMBA 617 Global Learning	2.0
<b>Fall Semester II</b>	EMBA 601 Managing People	2.0
	EMBA 611 Financial Management II	2.0
	EMBA 615 Operations Management	2.0
	EMBA 616 Operations Management II	2.0
	EMBA 618 Change Management	2.0
<b>Spring II</b>	EMBA 619 Negotiations	2.0
	EMBA 620 Strategic Management	2.0
	EMBA 650 Special Topics	2.0
	EMBA 650 Special Topics	2.0
	<b>Total Credit Hours</b>	<b>44.0</b>

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/>

Semester	Location	Course Number and Name	Credit Hours
<b>Summer I</b>	University of Louisville  (United States)	MBA 602 Decision Analysis	1.5
		MBA 604 Economics I	1.5
		MBA 607 Economics II	1.5
		MBA 609 Financial Accounting	1.5
		MBA 612 Finance I	1.5
		MBA 611 Managerial Accounting I	1.5
		MBA 616 Finance II	1.5
		MBA 616 Managerial Accounting II	1.5
<b>Fall / Spring</b>	Akademie Würth  Business School  (Germany)	MBA 655 Strategic Management	3.0
		MBA 640 Marketing and Distribution Management	3.0
		MBA 680 Innovation and New Product Development	3.0
		MBA 680 International Accounting	3.0
		MBA 630 Operations Design and Analysis	3.0
		MBA 650 Global Business	3.0
		MBA 622 New Venture Creation	3.0
		<b>Total Credit Hours</b>	<b>42.0</b>
<b>Summer II</b>	University of Louisville  (United States)	MBA 603 Organization Behavior	1.5
		MBA 680 Advanced Corporate Finance	1.5
		IMBA 632 Business Plan Development	3.0
		MBA 680 Social Media Marketing	1.5
		MBA 606 Leadership	1.5
		<b>Total Credit Hours</b>	<b>42.0</b>

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 Garret, 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<sup>1</sup>

**FALL II**

Dissertation Proposal  
Potential Student Teaching<sup>1</sup>

**SPRING III**

Dissertation Proposal  
Potential Student Teaching<sup>1</sup>

**YEARS IV and V (if necessary)**

Dissertation Proposal  
Potential Student Teaching<sup>1</sup>

<sup>1</sup> Four courses

**Faculty**

**Manju Ahuja**  
*Professor*

**Robert E. Carter**  
*Associate Professor*

**Yong Chao**  
*Assistant Professor*

**David Dubofsky**  
*Professor*

**James O. Fiet**  
*Professor*

Brown-Forman  
Chair in  
Entrepreneurship  
Chair of Ph.D.  
Program Committee  
Program Director

**Robert Garrett,  
Jr.**  
*Associate Professor*

**Bruce Kemelgor**  
*Associate Professor*  
**Ryan Quinn**

*Associate Professor*  
Term Appointments

**Howard Aldrich**  
*Distinguished  
Faculty Instructor*

**James J.  
Chrisman**  
*Distinguished  
Faculty Instructor*

**Per Davidsson**  
*Distinguished  
Faculty Instructor*

**Simon Parker**  
*Distinguished  
Faculty Instructor*

**Pankaj Patel**  
*Distinguished  
Faculty Instructor*

**Scott Shane**  
*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; craniomaxillofacial 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; prosthodontics; and health services research related to dentistry. Developmental biology, oral microbiology and innate immunology are particular strengths of the program.

A minimum of 30 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:**

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

**Major subject selective courses:**

Courses	Description	Credit Hours
OBIO 600	Concepts in Oral Immunology	2
OBIO 604	Oral Microbiology	3
OBIO 611	Craniofacial Osteology	1-3
OBIO 612	Craniomaxillofacial Diagnostic Imaging	2-4
OBIO 613	Diagnosis and Treatment of Temporomandibular Disorders	1
OBIO 614	Advanced Oral Diagnosis/Oral Medicine	1
OBIO 615	Advanced Clinical Pharmacology	1
OBIO 616	Overview of Medical Genetics in Oro-facial Disease	1.5
OBIO 617	Advanced Oral Pathology	1
ASNB 670	Dental Gross Anatomy	6
ASNB 671	General and Oral Histology	5
ASNB 675	Advanced Head and Neck Anatomy	2



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*

**Huizhi 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.

M.S.D./Specialty Programs	Credit Hours	Time to Completion
Endodontics	69	2 years
Orthodontics	72	2 years
Pediatric Dentistry	70	2 years
Periodontics	103.5	3 years
Prosthodontics	94	3 years

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:

Course Description	Credit Hours
OBIO-501 Biomedical Data Analysis	3
OBIO-601 Introduction to Oral Biology Research	2
OBIO-606 Oral Biology Seminars and Communication	2
OBIO-617 Advanced Oral Pathology	1
OBIO-622 Multidisciplinary Seminars	1
ASNB 675 Advanced Head and Neck Anatomy	2

All of the specialty programs are also required to take at least eight (8) credits hours from the following list of electives:

Course Description	Credit Hours
OBIO-600 Concepts in Oral Immunology	2
OBIO-604 Oral Microbiology	3
OBIO-605 Oral Health Seminars	1
*OBIO-610 Advanced Topics in Oral Biology	1-4

\*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
<b>Curriculum Credit Hours</b>	<b>19</b>

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.

<b>Course Description</b>	<b>Credit Hours</b>
OBIO-0635-619 Research	1-8
OBIO-620 Thesis/Publication	1-8
<b>Total credit hours for Master of Science in Dentistry</b>	<b>31</b>

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](mailto: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](mailto:linda.klump@louisville.edu)

## Faculty

**Brian Alpert**  
*Professor*  
**Bruno Azevedo**  
*Assistant Professor*

**Eric Bednar**  
*Clinical Assistant Professor*

**Mark Bernstein**  
*Professor*  
**Ricardo Caicedo**  
*Associate Professor*

**Sunita Chandiramani**  
*Clinical Associate Professor*

**Jangching Chou**  
*Assistant Professor*  
**Stephen Clark**  
*Professor*  
**Gary A. Crim**  
*Professor*  
**Douglas S. Darling**  
*Professor*  
**Don R. Demuth**  
*Professor*  
**Juliet Dunaway**  
*Assistant Professor*  
**Marcelo Durski**  
*Assistant Professor*

**Eiad Elathamna**  
*Assistant Professor*  
**Carmine Esposito**  
*Professor*  
**John Firriolo**  
*Professor*  
**Robert Flint**  
*Assistant Professor*  
**Ann Greenwell**  
*Associate Professor*  
**Henry Greenwell**  
*Professor*  
**Bryan Harris**  
*Associate Professor*

**Margaret Hill**  
*Associate Professor*  
**Wendy Hupp**  
*Associate Professor*  
**Lewis Jones**  
*Assistant Professor*  
**Zafrulla Khan**  
*Professor*  
**George Kushner**  
*Professor*  
**Richard Lamont**  
*Professor*  
**Shuang Liang**  
*Assistant Professor*

**Wei-Shao Lin**  
*Associate Professor*  
**Hector Martinez**  
*Assistant Professor*  
**Michael Metz**  
*Assistant Professor*  
**Joseph Morelli**  
*Associate Professor*  
**Jan Potempa**  
*Professor*  
**Lisa Sandell**  
*Assistant Professor*  
**John J. Sauk**  
*Professor*

# Master of Arts in Teaching in Art Education

**Major:** EDAR

**Degree Awarded:** MAT

**Unit:** GE

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

## 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 <sup>2</sup>	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 <sup>1</sup>	
ART 5xx Academic support course <sup>1</sup>	3
ART 6xx Academic support course <sup>1</sup>	3



EDTP 620 Reading and Writing Across the Curriculum<sup>1</sup> 3

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

<sup>2</sup> 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

**Barbara Hanger**  
*Associate Professor*

**Penny Howell**  
*Associate Professor*

**Maggie McGatha**  
*Associate Professor*

**Susan Peters**  
*Assistant Professor*

**Caroline Sheffield**  
*Assistant Professor*

**Steve Swan**  
*Instructor*  
**Shelley Thomas**

*Associate Professor*

**Tom Tretter**  
*Professor*

**Jean Wolph**  
*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](http://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).

<b>Courses</b>	<b>Credit Hours</b>
EDSP 671 Autism: Methods and Teaching Strategies	3
EDSP 669 Single Subject Research Methods and Designs	3
EDSP 646 AAC and a Behavior Analytic Approach to Communication	3
Midpoint Assessment	
EDSP 650 Advanced Applied Behavior Analysis	3
EDSP 651 Behavior Consultation	3
EDSP 673 Supporting Individuals with HFA/Asperger's Syndrome	3
<b>Total minimum credit hours</b>	<b>18</b>

## 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
<b>Inquiry</b> (Select one of the following) (3 credit hours) ELFH 600 Introduction to Research and Statistics OR EDAP 639 Education Research in P-12 Setting	3
<b>Advocacy</b> (Professional Leader) (6 credit hours)	6
<b>Leadership:</b> (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	
<b>Diversity:</b> (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	
<b>AREA OF EMPHASIS</b> (at least 12 credit hours) (May be chosen from courses above that are NOT taken to meet the Advocacy requirement)	12
<b>Electives</b> (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*

**Patrick Possel**

*Professor*

**Katie Snyder**

*Assistant Professor*

**Jeff Valentine**

*Professor*

Program Coordinator  
of EPME

**Ahmad**

**Washington**

*Assistant Professor*

**Hongryun Woo**

*Assistant Professor*

# 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

<b>Core Curriculum</b>	<b>Hours</b>
HSS 675 Health Promotion and Disease Prevention at the Individual Level	3
HSS 676 Community Health Promotion and Disease Prevention	3
HSS 684 Program Planning in Health Education and Promotion	3
HSS 655 Current Trends and Issues in Health and Sport Sciences	3
HSS 631 Leadership in Health Promotion	3
<b>Research Methods</b>	
ELFH 600 Introduction to Research Methods and Statistics	3
HSS 604 Research Methods in Health and Sport Sciences	3
Internship/Practicum – Location approved by advisor.	
HSS 692 Cooperative Internship/Practicum	6
Electives – Courses approved by advisor.	9
<b>Minimum total hours:</b>	<b>36</b>

**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 1<sup>st</sup> for the summer and fall semesters and October 1<sup>st</sup> 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 <sup>1</sup>

**Core Professional Area** (total 30 hours)

ELFH 600 Introduction to Research Methods and Statistics <sup>2</sup>

3

ECPY 540	Evaluation & Measurement	3
ECPY 605	Human Development	3
ECPY 619	Empirical and Theoretical Foundations of Counseling & Psychotherapy	3
ECPY 629	Theories and Techniques of Counseling & Psychotherapy	3
ECPY 650	Group Process & Practice	3
ECPY 663	Multicultural & Diversity Issues	3
ECPY 670	Career Counseling	3
ECPY 730	Social, Legal & Ethical Issues	3
<b>Mid-Point Assessment:</b> Prior to ECPY 672 Practicum: Must complete ECPY 629 with at least a grade of "B".		
ECPY 672	Practicum in Clinical Mental Health Counseling <sup>3</sup>	3
<b>Clinical Mental Health Counseling Concentration</b> (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 <sup>3</sup> (Two internships are required for CACREP accreditation)	3
ECPY 682	Internship in Clinical Mental Health Counseling <sup>3</sup>	3
ECPY 601	Introduction to Clinical Mental Health Counseling	3
ECPY 639	Prevention and Treatment of Substance Abuse	3
ELFH 601	Applied Statistics	3
<b>Professional Electives from the 9 areas designated in Curriculum Guidelines for CACREP and LPCC</b> (total 6 hours) <sup>4</sup>		6
<b>Minimum total hours:</b>		<b>60</b>
<b>Degree Assessment:</b> All program coursework with a 3.0 cumulative GPA.		

<sup>1.</sup> *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.*

<sup>2.</sup> *ELFH 600 must be taken within the first 9 hours.*

<sup>3.</sup> *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)

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

**Mid-Point Assessment:** Prior to Practicum in School Counseling: Students must earn at least a grade of "B" in ECPY 630 & satisfactory completion of midpoint portfolio to be completed in ECPY 624

ECPY 674	Practicum in School Counseling	3
----------	--------------------------------	---

**School Counseling Concentration** (total 21 hours)

ECPY 611	Learning Systems: Theory and Practice	3
ECPY 624	Foundations of School Counseling	
ECPY 626	Consultation	3
ECPY 639	Prevention and Treatment of Substance Abuse	3
ECPY 640	Assessment Methods for Counselors	3
ECPY 684	Internship in School Counseling (Two internships are required for CACREP accreditation)	3
ECPY 684	Internship in School Counseling	3

**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)

ELFH 600	Introduction to Research Methods and Statistics	3
ECPY 660	Introduction to Student Personnel Works	3
ECPY 661	Theories of College Student Development	3
ECPY 623	Helping Skills for Student Affairs Professionals	3
ECPY 662	Student Affairs Programs, Policies, and Practices	3
ECPY 663	Multicultural and Diversity Issues	3
ECPY 664	College Student Sub-Cultures	3
ECPY 670	Career Counseling	3
ECPY 761	Program development & Evaluation in Student Affairs	3

**Mid-Point Assessment:** Prior to Internship in College Student Personnel Services: Must complete ECPY 660

ECPY 681	Internship in College Student Personnel Services	3
----------	--------------------------------------------------	---

### **College Student Personnel Concentration** (total 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. <sup>1</sup>

### **Core Professional Area** (total 30 hours)

ECPY 540	Evaluation & Measurement	3
ECPY 605	Human Development	3
ECPY 619	Empirical and Theoretical Foundations of Counseling & Psychotherapy	3
ECPY 629	Theories and Techniques of Counseling & Psychotherapy	3
ECPY 650	Group Process & Practice	3
ECPY 663	Multicultural & Diversity Issues	3
ECPY 670	Career Counseling	3
ECPY 730	Social, Legal & Ethical Issues	3
ELFH 600	Introduction to Research Methods and Statistics <sup>2</sup>	3

**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 <sup>3</sup>	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 <sup>3</sup>	3
ECPY 683	Internship in Counseling Psychology <sup>3</sup>	3
ECPY 775	Biological Bases of Behavior	3
ELFH 601	Applied Statistics	3
<b>Professional Electives (6 hours)</b>		<b>6</b>
<b>Minimum total hours:</b>		<b>60</b>

**Degree Assessment:** All program coursework with a 3.0 cumulative GPA.

<sup>1</sup>. *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.*

<sup>2</sup>. *ELFH 600 must be taken within the first 9 hours.*

<sup>3</sup>. *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. <sup>1</sup>

### Core Professional Area (total 30 hours)

ECPY 540	Evaluation & Measurement in Education	3
ECPY 605	Human Development	3
ECPY 619	Empirical and Theoretical Foundations of Counseling & Psychotherapy	3
ECPY 629	Theories and Techniques of Counseling & Psychotherapy	3
ECPY 650	Group Process & Practice	3
ECPY 663	Multicultural & Diversity Issues ( <i>section taught by an ATR</i> )	3
ECPY 670	Career Counseling	3
ECPY 730	Social, Legal & Ethical Issues ( <i>section taught by an ATR</i> )	3
ELFH 600	Introduction to Research Methods and Statistics	3

**Mid-Point Assessment:** Prior to ECPY 676 Practicum: Must complete ECPY 643 with at least a grade of "B".

ECPY 676	Practicum in Art Therapy - Counseling <sup>2</sup>	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 <sup>2</sup>	3
<b>Minimum total hours</b>	<b>60</b>

**Professional Elective from the educational areas designated in Curriculum Guidelines for LPCC and ATR (6 hours) <sup>3</sup>**

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.

<sup>1</sup> *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.*

<sup>2</sup> *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: <sup>3</sup>**

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**

**Jill Adelson**  
*Assistant Professor*

*Assistant*  
*Department Chair*

**Eugene Foster**  
*Instructor*

**Patrick Hardesty**  
*Associate Professor*

**Richard Balkin**  
*Professor*

**Eileen Estes**  
*Assistant Professor*

Director of  
Shawnee Center

**Amy Hirschy**  
*Assistant Professor*

**Lisa Hooper**  
*Professor*  
Program Director of  
Clinical Mental  
Health Counseling  
**Kathryn Hopkins**  
*Clinical Assistant  
Professor*

**Mark Leach**  
*Professor*  
Interim Department  
Chair  
**Marybeth Orton**  
*Adjunct Faculty*  
**Patrick Possel**  
*Professor*

**Katie Snyder**  
*Assistant Professor*  
**Jeffrey Valentine**  
*Professor*  
Program  
Coordinator of  
Educational  
Psychology,

Measurement, and  
Evaluation (EPME)  
**Ahmad  
Washington**  
*Assistant Professor*  
**Hongryun Woo**  
*Assistant Professor*

# 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

The Doctor of Philosophy with an emphasis in Counseling and Personnel Services encompasses 4 specialties: 1) College Student Personnel, 2) Counseling Psychology, 3) Evaluation and Measurement, and 4) Counselor Education and Supervision.>

### **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.

<b>Specialty Components</b> (33 credit hours minimum) <i>Selected with Program Committee Approval</i>	33
<b>Research Methodology</b> (27 credit hours minimum) <i>Selected with Program Committee Approval</i>	
Statistics and Methodology I ( <i>ELFH 601 or equivalent required</i> )	3
Statistics and Methodology II <sup>b</sup> ( <i>ELFH 701 – Intermediate Multiple Regression</i> )	3
Statistics and Methodology III ( <i>ELFH 703 - Multivariate educational statistics</i> )	3
Research Electives:	6
<i>e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.</i> <sup>a,b</sup>	
Dissertation/Portfolio Research	12
<b>Elective Component or Master's Degree</b> Master's Degree comprises Elective component of program.	
<i>a. Selected with Program Committee Approval within program guidelines/framework</i>	
<i>b. ELFH 600 may not be used for this course.</i>	
<b>Minimum total credit hours:</b>	<b>60</b>

### 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.

<b>SPECIALTY COMPONENTS</b> (60 credit hours minimum) <i>Selected with Program Committee Approval.</i>	
Includes Counseling Core -- 12 credit hours	12
Foundations -- 18 credit hours	18
<b>RESEARCH METHODOLOGY</b> (27 credit hours minimum) <i>Selected with Program Committee Approval</i>	

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
<b>Evaluation and Measurement</b> (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
<b>ELECTIVE COMPONENT</b> (21 credit hours Minimum) <i>Selected with Program Committee Approval</i> Counseling Psychology Specialty - 21 credit hours	21
<i>a. Selected with Program Committee Approval within program guidelines/framework</i>	
<i>b. ELFH 600 may not be used for this course.</i>	

**Minimum total 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 ( <i>ELFH 601 or equivalent required</i> )	3
Statistics and Methodology II ( <i>ELFH 701 Intermediate Multiple Regression</i> )	3
Statistics and Methodology III ( <i>ELFH 703 - Multivariate Educational Statistics</i> )	3
<b>Research Electives:</b> <i>e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies.</i> <sup>a,b</sup>	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*

**Richard Balkin**  
*Professor*  
Assistant Chair

**Eileen Estes**  
*Assistant Professor*

**Gene Foster**  
*Instructor*  
Director 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 Director  
Chair

**Laurie McCubbin**  
*Associate Professor*

**Marybeth Orton**  
*Adjunct Faculty*

**Patrick Possel**  
*Associate Professor*

**Katie Snyder**  
*Assistant Professor*

**Jeffrey Valentine**  
*Professor*  
Program  
Coordinator of Educational Psychology, Measurement, and Evaluation (EPME)

**Ahmad Washington**  
*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.

#### 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 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.*<sup>a,b</sup>

**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*

<i>ELFH 601 Applied Statistics</i>	3
ELFH 701 – Intermediate Statistics	3
ELFH 703 - Multivariate Educational Statistics	3
<b>Research Electives:</b>	6
<i>e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies. a,b</i>	
EDAP 795 Dissertation Research	12-15
<b>ELECTIVE COMPONENT</b> (21 credit hour minimum) <i>Selected with Program Committee Approval</i>	21
<i>a. Selected with Program Committee Approval within program guidelines/framework</i>	
<i>b. ELFH 600 may not be used for these courses.</i>	
<b>Minimum total credit hours:</b>	<b>90</b>

## 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*  
Assistant Chair Special Education Department

**Monica E. Delano**  
*Associate Professor*  
Director of Doctoral Programs

**Penny Howell**  
*Associate Professor*

**Timothy J. Landrum**  
*Professor*

Chair of Special Education Department

**Ann Elisabeth Larson**  
*Professor*  
Dean of the College of Education and Human Development

**Amy Lingo**  
*Professor*  
Associate Dean of Academic Affairs and Unit Effectiveness

**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
<b>Minimum total credit hours:</b>	<b>36</b>

**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> for current requirements.

## Faculty

<b>Kathryn Whitmore Barten</b> <i>Professor</i> Endowed Chair	<b>Ginevra Courtade</b> <i>Associate Professor</i> Assistant Chair of Special Education Department	Elementary Education Department	Chair of Special Education Department
<b>Sherri Brown</b> <i>Associate Professor</i> Assistant Chair of Early Childhood and Elementary Education Department	<b>Betty Doyle</b> <i>Instructor</i>	<b>Jill Jacobi-Vessels</b> <i>Assistant Professor</i> Interim Director of Early Learning Campus	<b>Lori Norton-Meier</b> <i>Professor</i>
	<b>Amy Seely Flint</b> <i>Professor</i> Chair of Early Childhood and	<b>Timothy Landrum</b> <i>Professor</i>	<b>Amy Stevens</b> <i>Instructor</i>



# 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
<i>(NOTE: The above three courses must be taken prior to any of the next 4 courses)</i>	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 <sup>1</sup> 3

EDTP 580 Digital Citizenship: Teaching with Technology <sup>1</sup> 3

<sup>1</sup> 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](http://www.epsb.ky.gov) or [www.ets.org/praxis](http://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*

Endowed Chair

**Sherri Brown**  
*Associate Professor*

Director Early  
Childhood and  
Elementary  
Program

**Tammi Davis**  
*Instructor*

**Betty Doyle**  
*Instructor*

**Tia Dumas**  
*Clinical Assistant  
Professor*

**John Finch**  
*Instructor*

**Amy Seely Flint**  
*Professor*

Chair of Early  
Childhood and  
Elementary

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*  
Director of  
Minority Teacher  
Recruitment Project

**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	Credit Hours
ELFH 633 Organizational Structures and Operations	3
ELFH 634 P-12 Leadership for Curriculum, Instruction, and Assessment	3
ELFH 635 P-12 Human Resources: Securing and Developing Staff	3
ELFH 636 Shaping School Culture and Community	3

### 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/](http://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*

**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*  
**Brad Shuck**  
*Associate Professor*  
**Jeffrey Sun**  
*Professor*

# Doctor of Education in Educational Leadership and Organizational Development

**Major:** ELOD

**Degree Awarded:** Ed.D.

**Unit:** GE

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

<b>SPECIALTY COMPONENTS</b> (33 credit hours minimum), <i>selected with Program Committee Approval</i>	30
ELFH 715 Advanced Organizational Theory	3
<b>RESEARCH METHODOLOGY</b> (27 credit hours minimum), <i>selected with Program Committee Approval</i>	
Statistics and Methodology I ( <i>ELFH 601 or equivalent required</i> )	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
<b>RESEARCH ELECTIVES:</b>	
<i>e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies. a,b</i>	
ELFH 777 Capstone for Education Doctorate Degree	12
<b>MASTER'S DEGREE OR ELECTIVE COMPONENT</b> <i>Master's Degree comprises Elective component of program.</i>	30
<i>a. Selected with Program Committee Approval within program guidelines/framework</i>	
<i>b. ELFH 600 may not be used for this course.</i>	
<b>Minimum total credit hours:</b>	<b>60</b>

### 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.

<b>SPECIALTY COMPONENTS</b> (42 credit hours minimum), <i>selected with Program Committee Approval</i>	39
ELFH 715 Advanced Organizational Theory	3
<b>RESEARCH METHODOLOGY</b> (27 credit hours minimum), <i>selected with Program Committee Approval</i>	
Statistics and Methodology I ( <i>ELFH 601 or equivalent required</i> )	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
<b>RESEARCH ELECTIVES:</b>	3
<i>e.g., Field Survey Research, additional qualitative methodologies and/or quantitative methodologies. a,b</i>	
ELFH 777 Capstone for Education Doctorate Degree	12
<b>ELECTIVE COMPONENT</b> <i>selected with Program Committee Approval</i>	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**

**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*



# 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

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.

CORE AND ELECTIVE COGNATE COMPONENTS (33 credit hours minimum), selected with Program Committee Approval	Credit Hours
ELEOD Core (ELFH 710 -- Introduction to Doctoral Studies Seminar)	3
ELEOD Core (ELFH 674 -- Advanced Leadership Theory)	3
ELEOD Core (ELFH 715) -- Advanced Organization Theory)	3
ELEOD Core (ELFH 780) -- Problem Analysis	3
Electives	21
<b>RESEARCH METHODOLOGY (27 credit hours minimum), selected with Program Committee Approval</b>	
<i>Research Core</i> (ELFH 601 or equivalent required)	3
Research Core (ELFH 701 -- Intermediate Multiple Regression) <sup>a</sup>	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
<b>ELECTIVE COMPONENT OR MASTER'S DEGREE</b> Master's Degree comprises Elective component of program.	
<i>a. ELFH 600 may not be used for this course.</i>	
<b>Minimum total credit hours</b>	<b>60</b>

### 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	Credit Hours
ELEOD Core (ELFH 710 -- Introduction to Doctoral Studies Seminar)	3
ELEOD Core (ELFH 674 -- Advanced Leadership Theory)	3
ELEOD Core (ELFH 715 -- Advanced Organization Theory)	3

ELEOD Core (ELFH 780 -- Problem Analysis)	3
Electives	30
<b>RESEARCH METHODOLOGY</b> (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
<b>ELECTIVE COMPONENT</b> (21 credit hours Minimum), selected with Program Committee Approval	21
<b>Minimum total credit hours</b>	<b>90</b>

## 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*

**Jacob Gross**  
*Assistant Professor*

**W. Blake Haselton**  
*Associate Professor*

**Ann Herd**  
*Assistant Professor*

**Amy Hirschy**  
*Assistant Professor*

**Jason Immekus**  
*Associate Professor*

**Kyle Ingle**  
*Associate Professor*

**Carlos McCray**  
*Associate Professor*  
Department Chair

**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)

Courses	Credit Hours
EDAP 606 Orientation and Readings (take in first semester of enrollment)	3
ELFH 600 Introduction to Research Methods & Statistics	3
<b>Leadership and change:</b> (select one of the following courses)	3
EDAP 607 Leadership and Change	
ELFH 603 Administrative Leadership in a Reform Environment	
EDAP 624 Curriculum Theory	
EDAP 625 Social and Ethical Development of Teaching	
<b>Success for All Learners:</b> (select one of the following courses)	3
EDAP 642 Literacy Learning & Cultural Differences	
EDAP 626 Affirming Diversity	
EDTP 503 Developing Cross-Cultural Competence	
<b>AREA OF EMPHASIS</b>	12
EDAP 680 Capstone Course	3
Elective	3
Exit Requirement: Portfolio or Master's Thesis (EDAP 699)	
<b>Minimum total hours</b>	<b>30</b>

**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".

5. 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)**

<b>Courses</b>	<b>Credit Hours</b>
Leading Change (Select one of the following courses)	3
EDAP 606 Orientation and Readings (take in first semester of enrollment)	
EDAP 607 Leadership and Change	
EDAP 624 Curriculum Theory	
EDAP 625 Social and Ethical Development of Teaching	
ELFH 603 Administrative Leadership in a Reform Environment	
ELFH 600 Introduction to Research Methods & Statistics OR FROM Leadership and change category	
The Multicultural Learner: (select one of the following courses)	3
EDAP 642 Literacy learning & Cultural Differences	
EDTL 626 Affirming Diversity	
EDTP 503/403 Developing Cross-Cultural Competence	
SOC 630 Sociology of Education	
WMST 532 History of American Sexualities	
WMST 556 Feminist Theory	
PAS 529 Teacher Institute on African-American Issues	
Area of Emphasis	12
EDAP 680 Capstone Course	3
Electives	9
Exit Requirement: Portfolio or National Board Certification	

**Minimum total hours** **30**

**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**

**Kathryn  
Whitmore Barten**  
*Professor*  
Endowed Chair

**Sherri Brown**  
*Associate Professor*  
Director of Early  
Childhood and

Elementary  
Education Program  
**Tammi Davis**  
*Instructor*

**Betty Doyle**  
*Instructor*  
**Tia Dumas**  
*Clinical Assistant  
Professor*

**John Finch**

*Instructor*

**Amy Seely Flint**

*Professor*

Department Chair

**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.

COURSE	COURSE TITLE	CREDIT HOURS
<b>Core –9 hours</b>		
EDAP 646	Advanced Methods: Number & Algebra	3
EDAP 647	Advanced Methods: Geometry and Data	3
EDAP 640	Cognitive Coaching	3

**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)

EDAP 604	Formative Assessments in Mathematics	3
EDAP 674	Math for Girls and other Problem Solvers	3
EDAP 694	Culture and Language in P-12 Math and Science Teaching	3

**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)**

**First Year:**  
*Fall*

**Credit Hours**

EXP 501 Applied Exercise Physiology	3
EXP 601 Lab Methods in Exercise Physiology	3
<i>Spring</i>	
EXP 502 Principles of Exercise Testing & Prescription	3
EXP 600 Physiology of Exercise	3
HSS 604 Research Methods in HSS	3
<i>Summer</i>	
EXP 603 Seminar in Exercise Physiology	3
EXP 699 Thesis	6

<b>Pre-PHD Concentration (18 credit hours)</b>	<b>Credit Hours</b>
PHZB 605 Systemic Physiology I	5
PHZB 606 Systemic Physiology II	5
BIOCH 645 Advanced Biochemistry I	4
<i>BIOCH 647 Advanced Biochemistry II</i>	4
<b>Minimum Total Credit Hours</b>	<b>42</b>

#### **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.

<b>Core (24 credit hours)</b>	<b>Credit Hours</b>
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

<b>Clinical Concentration (12 credit hours)</b>	<b>Credit Hours</b>
EXP 503 Clinical Exercise Physiology	3
EXP 611 Principles of Electrocardiography	3
EXP 620 Exercise Physiology Clinical Internship	6
<b>Minimum Total Credit Hours</b>	<b>36</b>

#### **THESIS OPTION - CONCENTRATION IN STRENGTH AND CONDITIONING**

**This option is suspended as of Spring 2016. No applications are being taken.**

<b>Core (24 credit hours)</b>	
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
<b>Strength and Conditioning Concentration</b> Thesis option (10-15 credit hours)	<b>Credit Hours</b>
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
<b>Minimum Total Credit Hours</b>	<b>36-39</b>

### 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) **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
<b>Minimum Total Credit Hours</b>	<b>36-39</b>

## Faculty

### **Adrienne Bratcher**

*Assistant Professor*

M.S. Program

Coordinator

### **Kathy Carter**

*Assistant Professor*

### **John Caruso**

*Professor*

### **Daniela Terson de**

**Paleville**

*Assistant Professor*

### **Jessica Gibb**

*Instructor*

### **Tiffany Isaac**

*Instructor*

### **Michael Jett**

*Instructor*

### **Ann Swank**

*Professor*

Exercise

Physiology

Program Director

### **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

**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

COURSE	COURSE TITLE	CREDIT HOURS
--------	--------------	--------------

**Gifted & Talented Core - 9 hours (6 hours to be completed before CARDS 5 Midpoint Assessment listed above)**

EDAP 581	Introduction to Gifted Education (Must be completed 1st semester of program)	3
EDAP 682	Responding to Needs of Gifted and Talented Students	3
EDAP 683	Curriculum and Instruction for Gifted Students	3

**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)

EDAP 684	Practicum in Gifted Education	3
----------	-------------------------------	---

**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).

<b>Minimum total hours:</b>	<b>12</b>
-----------------------------	-----------

**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.

HSS 605	Teaching and Learning for Elementary Physical Education	6
HSS 606	Teaching and Learning for Secondary Physical Education	6
HSS 609	Methods in Practical Living: Health	6

**Mid-point assessment:** Prior to Student Teaching: All content methods classes listed above passed with a cumulative 3.0 GPA; Positive recommendation from the Health and Physical Education Program Committee (includes assessment and mid-point portfolio). Electronic documentation of 200 hours of diverse and approved field experiences.

HSS 611	Seminar in Student Teaching in Health and Physical Education	3
HSS 612	Student Teaching in Elementary Physical Education I*	4
HSS 613	Student Teaching in Middle/Secondary Physical Education II*	4

HSS 614 Action Research Project	3
HSS 615 Student Teaching in Health Education	4
<b>Minimum total credit hours</b>	<b>36</b>

\*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](http://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 for 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

<b>General Requirements</b> (3 credit hours)	<b>Credit Hours</b>
ELFH 600 Introduction to Research Methods and Statistics	3
<b>Professional Area</b> (15 credit hours)	
ELFH 678 The American College and University	3
ELFH 681 Philosophy of Higher Education	3
ELFH 682 Organization and Administration of Higher Educational 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
<b>Electives</b> (approved by advisor) (6 credit hours)	6
<b>Exit Requirements</b> (3 credit hours)	
ELFH 690 Internship in Post-secondary Education	3
<b>Minimum total credit hours</b>	<b>36</b>
<b>CONCENTRATION IN SPORT ADMINISTRATION</b>	
<b>Professional Area</b>	
ELFH 607 Principles of Educational Leadership	3
ELFH 620 Legal Issues in Education	3

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	
SPAD 625 Sport Administration	3
<b>Specialization Area</b>	
SPAD 618 Rise of the Sport System in America OR	3
SPAD 680 Athletic in Higher Education	
SPAD 505 Sport Facility Management OR	3
HSS 575 Administration of P.E. Programs & Athletics	
SPAD 684 Current Trends & Issues in Sport Administration	3
SPAD Elective as approved by the advisor	3
<b>Exit Requirements</b> , 4-6 credit hours	
ELFH 699 Thesis or Professional Paper OR	1-6
SPAD 692 Internship in Sport Administration	
<b>Minimum Total Credit Hours</b>	<b>31-33</b>
<b>CONCENTRATION FOR FORT KNOX</b>	
<b>General Requirements</b> (3 credit hours)	
ELFH 689 Special Problems in Educational Leadership	3
<b>Professional Area</b> (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
<b>Electives</b> (approved by advisor) (6 credit hours)	
ELFH 683 College Teaching	3
ELFH 623 Special Problems in Leading Instructional Improvements	3
<b>Exit Requirements</b> (3 credit hours)	
ELFH 690 Internship in Postsecondary Education	3
<b>Minimum total credit hours:</b>	<b>36</b>

## 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*  
**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
<b>Concentration: Health Professions Education (12 hours)</b>		
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
<b>Elective (3 hours)</b>		
ELFH 684	Organizational Change and Consulting	3
ELFH 612	Talent Acquisition and Management	3
<b>Minimum total</b>		<b>33-36</b>

**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)	
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)**

ELFH 611	Strategic Human Resources	3
ELFH 612	Talent Acquisition and Management	3
ELFH 631	Performance Management and Rewards	3
ELFH 664	Organizational Change and Consulting	3
ELFH 671	Performance Improvement	3
<b>Minimum total</b>		<b>33-36</b>

**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)	
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
<b>Minimum</b>		<b>33-36</b>
<b>total hours</b>		

**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 <b>OR</b>	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* <b>OR</b>	3
ECPY 607*	Learning Theory and Human Growth and Development* <b>OR</b>	3
ECPY 540*	Introduction to the Exceptional Child* <b>OR</b>	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

Courses	Credit Hours
<b>Inquiry</b> (Critical Thinker) (3 credit hours) ELFH 600 Introduction to Research Methods and Statistics	3
<b>Advocacy</b> (Professional Leader) (3 credit hours) EDAP 677 Teacher Leadership: Mentoring and Coaching EDAP 642 Literacy, Learning, and Cultural Differences OR EDSP 618 Instructional Technology for Students with Special Needs	3
<b>Action</b> (Problem Solver) (3 credit hours) EDAP 680 Capstone Seminar <sup>2</sup>	3
<b>Area of Emphasis</b> (18 credit hours) EDAP 688 Designing a Technology Integrated Curriculum <sup>1</sup> EDAP 689 Using the Internet in P-12 Teaching <sup>1</sup> EDAP 587 Teaching and Learning Online <sup>1</sup> EDAP 601 Teaching with Emerging Technologies <sup>1,2</sup> EDAP 585 Intro to Education Technology: Integrating Technology into Instruction EDAP 624 Curriculum Theory EDAP 629 Teaching Mathematics with Technology, P-8 EDAP 687 Literacy, Teaching and Technology	18
<b>Elective:</b> To be selected with advisor's approval (3 credit hours)	3
<b>Minimum total credit hours</b>	<b>30</b>

<sup>1</sup> Denotes courses that are required for the Instructional Technology endorsement.

<sup>2</sup> Denotes courses that must be taken in the last 6 hours of program study.

**Mid-Point Assessment:** Review program on KY Experienced Teacher standards, U of L Program Themes, Conceptual Framework, and ISTE Technology Facilitation Standards (2002) Half of required KETS and ISTE Technology Facilitation standards and indicators met within portfolio work.

**Degree Assessment:** Minimum GPA of 3.0; no grade lower than "C", acceptable portfolio.

### Endorsement Assessment:

1. All Endorsement coursework completed.
2. No lower than 3.0 GPA in endorsement courses, no credit accepted for grade lower than C.
3. Review of Portfolio which includes Post-Program Self-Assessment.

## Faculty

**Jenny Bay-Williams**

*Professor*  
Chair of Middle and  
Secondary  
Education  
Department

**Amy Seely Flint**

*Professor*  
Chair of Early  
Childhood and

Elementary  
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*

**Caroline Sheffield**

*Associate Professor*

**Steve Swan**

*Instructor*

Coordinator of  
Instructional  
Technology  
program

**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:

Course	Core (required) courses	Credit Hours
EDAP 585	Intro to Education Technology; Integrating Technology Tools into Instruction	3
EDAP 587	Teaching and Learning Online	3
EDAP 688	Designing a Technology Integrated Curriculum	3
EDAP 690	Teaching with Multimedia Authoring Tools	3
	<b>Total Required Credits</b>	<b>12</b>
Course	Electives (only 3 credit hours required)	Credit Hours
EDAP 601	Emerging Technologies	3
EDAP 689	Using the Internet in P-12 Teaching	3
	<b>Total Required Credits</b>	<b>3</b>
<b>Total Required Credit Hours (for program)</b>		<b>15</b>

## 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.

	<b>Credit Hours</b>
<b>Research</b> (3 credit hours)	
ELFH 600 Introduction to Research Methods and Statistics <b>OR</b>	3
EDAP/EDSP 639 Education Research in the P-12 Setting	3
<b>Leadership</b> (6 credit hours) Instructor Permission required	
EDAP 677 Teacher Leadership: Mentoring and Coaching	3
EDAP 607 Teacher Leadership in Practice	3
<b>Area of Emphasis</b> (15 credit hours)	
EDAP 688 Designing a Technology Integrated Curriculum <sup>1</sup>	3
EDAP 690 Teaching with Multimedia Tools <sup>1</sup>	3
EDAP 587 Teaching and Learning Online <sup>1</sup>	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.	
<b>Electives</b> (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 Department

**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.

	<b>Credit Hours</b>
<b>Research (3 hours)</b>	
EDAP 639 Education Research in the P-12 Setting	3
<b>Teaching Reading Core (15 hours) (9 hours should be completed before EDAP 615/CARDS 5)</b>	
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

<b>Reading Specialist/Literacy Coach Focus (15 hours)</b>	
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
<b>Minimum total hours</b>	<b>36</b>

**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  
Department  
**Penny Howell**  
*Associate Professor*

**Pamela Jett**  
*Instructor*  
**Ann Larson**  
*Professor*  
Dean of the College  
of Education and  
Human  
Development

**Lori Norton-Meier**  
*Professor*  
**Amy Stevens**  
*Instructor*  
**Jean Wolph**  
*Instructor*  
Director of  
Louisville Writing  
Project



# 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

<b>COURSE PREFIX</b>	<b>COURSE NUMBER</b>	<b>COURSE TITLE</b>	<b>CREDIT HOURS</b>
EDAP	639	Education Research in the P-12 Setting	3
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
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
<b>Minimum total hours:</b>			<b>36</b>

**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](http://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>

## 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)

Courses	Credit Hours
<b>Leading Change</b> (Select one of the following)	3
EDAP 606 Orientation and Reading (take in first semester of enrollment)	
ELFH 600 Introduction to Research Methods & Statistics	
<b>Leadership and Change</b> (Select one of the following)	3
EDAP 607 Leadership and Change	
ELFH 603 Administrative Leadership in a Reform Environment	
EDAP 624 Curriculum Theory	
EDAP 625 Social and Ethical Development of Teaching	
<b>The Multicultural Learning</b> (Select one of the following)	3
EDAP 624 Literacy Learning & Cultural Differences	
EDAP 626 Affirming Diversity	
EDTP 503 Developing Cross-Cultural Competence	
SOC 630 Sociology of Education	
WGST 532 History of American Sexualities	
WGST 556 Feminist Theory	
PAS 529 Teacher Institute on African-American Issues	
<b>Area of Emphasis</b>	12
<b>Electives</b>	9
<b>Minimum total hours:</b>	<b>30</b>

**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)**

<b>Courses</b>	<b>Credit Hours</b>
EDAP 606 Orientation and Readings (take in first semester of enrollment)	3
ELFH 600 Introduction to Research Methods & Statistics	3
<b>Leadership and change:</b> (select one of the following courses)	3
EDAP 607 Leadership and Change	
ELFH 603 Administrative Leadership in a Reform Environment	
EDAP 624 Curriculum Theory	
EDAP 625 Social and Ethical Development of Teaching	
<b>Success for All Learners:</b> (select one of the following courses)	3
EDAP 642 Literacy Learning & Cultural Differences	
EDAP 626 Affirming Diversity	
EDTP 503 Developing Cross-Cultural Competence	
<b>AREA OF EMPHASIS</b>	12
EDAP 680 Capstone Course	3
<b>Elective</b>	3
<b>Exit Requirements:</b> Portfolio or Master's Thesis (EDAP 699)	2-5
<b>Minimum total hours</b>	<b>30</b>

## 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 Department

**Peggy Brooks**  
*Instructor*  
Coordinator of KTIP Program  
**James Chisholm**  
*Assistant Professor*  
**Penny Howell**  
*Associate Professor*

**Lateefah Id-Deen**  
*Assistant Professor*  
**Pam Jett**  
*Instructor*  
**Ann Larson**  
*Professor*  
Dean

**Robin Lipsey**  
*Instructor*  
Field and Clinical Coordinator  
**Sheron Mark**  
*Assistant Professor*

**Maggie McGatha**  
*Associate Professor*  
Assistant Chair of  
Middle and  
Secondary  
Education  
Department  
**Lori Norton-Meier**  
*Professor*

**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 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 <sup>3</sup>

\*EDTP 608 Middle School Math Methods <sup>3</sup>

\*EDTP 609 Middle School Science Methods <sup>3</sup>

\*EDTP 610 Middle School Social Studies Methods <sup>3</sup>

\*EDSP 545 Exceptional Child in the Regular Classroom <sup>3</sup> 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 <sup>2</sup> 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 <sup>1</sup>	3
EDTP 620 Reading and Writing Across the Curriculum <sup>1</sup>	3
Choose the technology course <sup>1</sup> 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)	

<sup>1</sup> Can be taken at any point in the program.

<sup>2</sup> Must be taken concurrent with student teaching.

<sup>3</sup> 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 at [www.epsb.ky.gov](http://www.epsb.ky.gov) or <http://www.ets.org/praxis/ky> for current requirements.

**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 <sup>3</sup>	
*EDTP 608 Middle School Math Methods <sup>3</sup>	
*EDTP 609 Middle School Science Methods <sup>3</sup>	
*EDTP 610 Middle School Social Studies Methods <sup>3</sup>	

\*EDSP 545 Exceptional Child in the Regular Classroom <sup>3</sup>

**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 <sup>2</sup> 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 <sup>1</sup> 3

EDTP 620 Reading and Writing Across the Curriculum <sup>1</sup> 3

Choose the technology course <sup>1</sup> 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)

<sup>1</sup> Can be taken at any point in the program

<sup>2</sup> Must be taken concurrent with student teaching.

<sup>3</sup> 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](http://www.epsb.ky.gov) or <http://www.ets.org/praxis/ky> for current requirements.

## Faculty

**Jennifer Bay-**  
**Williams**

*Professor*

Chair of Middle and

Secondary

Education

Department

**Peggy Brooks**

*Instructor*

KTIP Coordinator

**James Chisholm**

*Assistant Professor*

**Ginevra Courtade**

*Associate Professor*

Assistant Chair of

Special Education

Department

**Penny Howell**

*Associate Professor*

**Lateefah Id-Deen**

*Assistant Professor*

**Ann Larson**

*Professor*

Dean of the College

of Education and

Human

Development



**Sheron Mark**  
*Assistant Professor*  
**Justin McFadden**  
*Assistant Professor*  
**Maggie McGatha**  
*Associate Professor*  
Assistant Chair of  
Middle and  
Secondary

Education  
Department  
**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
<b>Choose one from the following courses (3 credit hours)</b>	3
EDTP 607 Middle School Language Arts Methods <b>OR</b>	
EDTP 608 Middle School Math Methods <b>OR</b>	
EDTP 609 Middle School Science Methods <b>OR</b>	
EDTP 610 Middle School Social Studies Methods <b>OR</b>	
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
-----------------------------------------------	---

<b>Choose the technology course appropriate for your content certification area:</b>	<b>3</b>
EDTP 581 Technology Applications for Math Teachers (Math) <b>OR</b>	
EDTP 582 Technology Applications for Science Teachers (Science) <b>OR</b>	
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
<b>Minimum total credit hours</b>	<b>30</b>

**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/graduatedcatalog/degree-requirements>, 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](http://www.ets.org/praxis/ky?WT.ac=praxishome_states_150414) for current requirements.

## Faculty

**Jenny Bay-Williams**  
*Professor*  
Chair of Middle and Secondary Education Department  
**Peggy Brooks**  
*Instructor*  
KTIP Coordinator  
**Janet Calvert**  
*Instructor*  
Coordinator of Alternative Certification Program

**James Chisholm**  
*Assistant Professor*  
**Penny Howell**  
*Associate Professor*  
**Ann Larson**  
*Professor*  
Dean  
**Justin McFadden**  
*Assistant Professor*  
**Maggie McGatha**  
*Associate Professor*  
Assistant Chair of Middle and Secondary Education Department

**Danna Morrison**  
*Instructor*  
Coordinator of Field & Clinical Placements  
**Mikkaka Overstreet**  
*Instructor*  
Director of Minority Teacher Recruitment Project  
**Susan Peters**  
*Associate Professor*  
**Caroline Sheffield**  
*Associate Professor*

**Steve Swan**  
*Term Instructor*  
Director of the Instructional Technology Program  
**Shelley Thomas**  
*Associate Professor*  
**Thomas Tretter**  
*Professor*  
Director of Gheens Science Hall and Rauch Planetarium  
**Jean Wolph**  
*Instructor*

# 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 <b>OR</b>	2

MUS 659 Conducting	
MUS 512/612 Applied Music <b>OR</b>	2
MUS 660 Conducting	

**Exit Requirements:**

MUED 607 Student Teaching Seminar	3
MUED 609 Capstone Seminar ( <i>Second semester of student teaching</i> )*	3
MUED 610 Music Student Teaching in the Elementary/Secondary Schools I ( <i>CE</i> )*	6
MUED 611 Music Student Teaching in the Elementary/Secondary Schools II ( <i>CE</i> )*	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 completed 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/graduatedcatalog/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.ets.org/praxis/ky](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*

**Doane**  
*Professor*

Dean

**Caroline Ehman**  
*Assistant Professor*

**R. Christopher Fitzgerald**  
*Assistant Professor*

**Donn Everette**  
*Professor*

**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*

*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*

# Rank I Program in School Social Work

**Major:** SW\_RK1

**Degree Awarded:** NON

**Unit:** GE

**Program Webpage:** <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.

Courses	Credit Hours
<b>Inquiry</b> (Critical Thinker) (6 credit hours)	6
SW 668 Advanced Research Practice I AND	
SW 669 Advanced Research Practice II	
<b>Leadership:</b> (Select one of the following) (3 credit hours)	3
EDSP 652 Academic and Behavior Response to Intervention	
ECPY 740 Instrument Development	
ELFH 575 Instructional Technology	
ELFH 607 Principles of Educational Leadership	
<b>Diversity:</b> (Select one of the following) (3 credit hours)	3
EDSP 545 Exceptional Child in the General Classroom** OR	
EDSP 540 Introduction to the Exceptional Child**	

(\*\*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)

<b>Courses</b>	<b>Credit Hours</b>
<b>Inquiry</b> (3 hours) ELFH 600 Introduction to Research Methods & Statistics	3
<b>Advocacy Leadership</b> (3 hours) EDAP 606 (take in first semester of enrollment) ELFH 603 Administrative Leadership in a Reform Environment	
EDAP 624 Curriculum Theory EDAP 625 Social and Ethical Development of Teaching EDAP 677 Teacher Leader: Coaching	
The Multicultural Learner (3 hours) EDAP 642 Literacy learning & Cultural Differences	3
EDAP 626 Affirming Diversity EDTP 503 Developing Cross-Cultural Competence SOC 630 Sociology of Education PAS 529 Teacher Institute on African-American Issues Or other diversity course in consultation with advisor	
<b>AREA OF EMPHASIS</b>	12
EDAP 680 Capstone Course	3
<b>Electives</b> (6 hours)	6
<b>Minimum total hours:</b>	<b>30</b>

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 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)

<b>Courses</b>	<b>Credit Hours</b>
<b>Inquiry</b> (6 hours) EDAP 606 Orientation and Readings ELFH 600 Introduction to Research Methods & Statistics	6
<b>Leadership and change</b> (3 hours) EDAP 607 Leadership and Change ELFH 603 Administrative Leadership in a Reform Environment EDAP 624 Curriculum Theory EDAP 625 Social and Ethical Development of Teaching	3
<b>Diversity</b> (3 hours) EDAP 642 Literacy Learning & Cultural Differences EDTL 626 Affirming Diversity EDTP 503 Developing Cross-Cultural Competence	3
<b>AREA OF EMPHASIS</b> EDAP 680 Capstone Course	12 3
<b>Electives</b>	3
<b>Minimum total hours</b>	<b>30</b>

**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  
**James Chisholm**  
*Assistant Professor*

**Penny Howell**  
*Associate Professor*  
**Lateefah Id-Deen**  
*Assistant Professor*  
**Ann Larson**  
*Professor*  
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.

<b>Courses</b>	<b>Credit Hours</b>
*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)	
<b>Choose from one of the following courses (3 credit hours):<sup>3</sup></b>	<b>3</b>
*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 <sup>3</sup>	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) 6  
 \*EDTP 619 Student Teaching High School  
 \*EDTP 618 Student Teaching: Middle and High School  
 \*EDTP 677 Capstone Seminar: Initial Certification <sup>2</sup> 3

**Certification Assessment: After Student Teaching:** Satisfactory dispositions assessment; all certification course work\* completed with 2.5 cumulative GPA; 2.5 cumulative GPA in content course requirements; 2.0 or higher in student teaching; satisfactory certification teacher performance assessment (TPA); passing scores on PRAXIS content and PLT exams; positive recommendation from Middle/Secondary Program Committee.

**Academic support course<sup>1</sup>:**  
 EDTP 503 Developing Cross-Cultural Competence<sup>1</sup> 3  
 EDTP 620 Reading and Writing Across the Curriculum<sup>1</sup> 3

**Choose the technology course <sup>1</sup> appropriate for your content certification area:** 3

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)

<sup>1</sup> Can be taken at any point in the program.

<sup>2</sup> Must be taken concurrently with student teaching.

<sup>3</sup> 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](http://www.epsb.ky.gov) or <http://www.ets.org/praxis/ky> for current requirements.

## Faculty

**Jenny Bay-**  
**Williams**  
*Professor*

Chair of Middle and  
Secondary

Education  
Department

**Peggy Brooks**  
*Instructor*

Coordinator of  
KTIP Program  
**James Chisholm**  
*Assistant Professor*  
**Ginevra Courtade**  
*Associate Professor*  
Assistant Chair of  
Special Education  
Department  
**Penny Howell**  
*Associate Professor*  
**Lateefah Id-Deen**  
*Assistant Professor*  
**Tasha Laman**  
*Associate Professor*

Director of the  
Nystrand Center of  
Excellence in  
Education  
**Ann Larson**  
*Professor*  
Dean of the College  
of Education and  
Human  
Development  
**Sheron Mark**  
*Assistant Professor*  
**Justin McFadden**  
*Assistant Professor*

**Maggie McGatha**  
*Associate Professor*  
Assistant Chair of  
Middle and  
Secondary  
Education  
Department  
**Danna Morrison**  
*Instructor*  
Coordinator of  
Field and 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 Center and  
Rauch Planetarium  
**Jean Wolph**  
*Instructor*

# 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
<b>Choose one methods course from the following</b> (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
<b>Choose the technology course appropriate for your content certification area:</b>	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
<b>Minimum total credit hours</b>	<b>30</b>

**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](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

Certification Program  
**James Chisholm**  
*Assistant Professor*  
**Penny Howell**  
*Associate Professor*  
**Lateefah Id-Deen**  
*Assistant Professor*  
**Ann Larson**  
*Professor*  
Dean  
**Sheron Mark**  
*Assistant Professor*  
**Justin McFadden**

*Assistant Professor*  
**Maggie McGatha**  
*Associate Professor*  
Assistant Chair of Middle and Secondary Education Department  
**Danna Morrison**  
*Instructor*  
Coordinator of Field & Clinical Placements  
**Susan Peters**  
*Associate Professor*

**Caroline Sheffield**  
*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

Courses	Credit Hours
<b>Inquiry</b> (Critical Thinker) (3 credit hours)	3
ELFH 600 Introduction to Research Methods & Statistics	
EDAP 606 Orientation in Reading (take first semester of enrollment)	
EDSP 639 Research in Special Education	
<b>Advocacy</b> (Professional Leader) (6 credit hours)	
<b>Leadership</b> (Select one of the following) (3 hours)	3
EDSP 597 Issues in Special Education	
EDAP 606 Orientation and Readings (take in first semester of enrollment)	
EDAP 607 Leadership and Change	
EDAP 624 Curriculum Theory	
EDAP 625 Social and Ethical Development of Teaching	
ELFH 603 Administrative Leadership in a Reform Environment	
ELFH 613 Administration and Supervision in Special Education	
<b>Diversity</b> (Select one of the following) (3 hours)	3
EDSP 537 Language Learning	

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	
<b>Action</b> (Problem Solver) (3 credit hours)	3
EDSP 669 Single Subject Research Design	
<b>Area of Emphasis</b> (at least 15 credit hours)	15
<b>Electives</b> (3 credit hours)	3
<b>Minimum Hours Required</b>	<b>30</b>

**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](http://www.kyepsb.org) or [www.ets.org/praxis.ky](http://www.ets.org/praxis.ky) for current requirements."

## 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

**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) 15

**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
<b>Exit Requirement:</b>	
EDSP 639 Research Analysis in Special Education	3
<b>Minimum total hours</b>	<b>33</b>

## 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:

Courses	Credit Hours
EDSP 540 Introduction to Exceptional Children or equivalent	3

## Curriculum

Courses	Credit Hours
<b>Inquiry</b> (Critical Thinker) (9 credit hours)	9
EDSP 644 Applied Behavior Analysis	
EDSP 639 Research Analysis in Special Education	
EDSP 669 Single Subject Research Methods and Designs	
<b>Advocacy:</b> (Professional Leader) (6 credit hours)	6
EDSP 652 Academic and Behavior Response to Intervention	
EDSP 627 Applications of Assistive Technology	
<b>Action</b> (Problem Solver) (3 credit hours)	3
EDSP 668 Assistive Technologies Seminar	
<b>Midpoint Assessment:</b> Completion of ½ of Experienced Teacher Standards, with ¾ of indicators for each standard	
<b>Area of Emphasis</b> (18 credit hours)	18
EDSP 663 Low Tech Assistive Technologies	
EDSP 664 Assistive Technology: Computer Access and Switches and Toys	
EDSP 672 Assistive Technology: Autism	
EDSP 661 Assistive Technology: Assessment Data Collection and Decision-Making	
EDSP 665 Assistive Technology: Multimedia and the Classroom Integration	
EDSP 632 Assistive Technology: Universal Design for Learning	
<b>Minimum total credit hours:</b>	<b>36</b>
<b>CARDS 6 (Exit Assessment):</b> 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:**

**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

<b>Inquiry</b> (Critical Thinker) (9 credit hours)	<b>Credit Hours</b>
EDSP 644 Applied Behavior Analysis	3
EDSP 654 Radical Behaviorism	3
EDSP 669 Single Subject Research Designs	3
<b>Advocacy:</b> (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
<b>Action</b> (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.

<b>Area of Emphasis</b>	<b>Credit Hours</b>
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*

**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**  
*Associate 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 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>

## 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.

<b>Courses</b>	<b>Credit Hours</b>
<b>Student Characteristics</b> (6 hours)	6
EDSP 540 Introduction to Exceptional Children	
EDSP 675 Characteristics, Needs, & Responses to Students with EBD	
<b>Pedagogy</b> (30 hours)	30
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	
<b>Research</b> (3 hours)	3
EDSP 639 Research Methods in Special Education ( <i>Must be taken in last six hours</i> )	
<b>Elective:</b> Choose from one of the following courses (3 hours)	3

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/graduatedcatalog/toc#Academic Policies](http://louisville.edu/graduatedcatalog/toc#Academic_Policies), under the section called academic policies and requirements.

## 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 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

**CARDS 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

<b>Courses</b>	<b>Credit Hours</b>
<b>Inquiry</b> (Critical Thinker) (9 credit hours)	9
EDSP 644* Applied Behavior Analysis	
EDSP 639 Research Analysis in Special Education	
EDSP 669 Single Subject Research Methods and Designs	
<b>Advocacy</b> (Professional Leader) (6 credit hours)	6
EDSP 652 Academic and Behavior Response to Intervention	
EDSP 627 Applications of Assistive Technology	
<b>Action</b> (Problem Solver)(3 credit hours)	3
EDSP 645* Learning and Behavioral Disorders Practicum	
<b>CARDS 5: (Midpoint Assessment):</b> 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.	
<b>Area of Emphasis</b> (At least 18 credit hours)	<b>18</b>
EDTP 647 Teaching Mathematics to Students with Disabilities	
EDSP 512* Methods for Students with Learning and Behavior Disorders	

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) **3**

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 18 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. 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 <http://www.epsb.ky.gov/> or [http://www.ets.org/praxis/ky?WT.ac=praxishome\\_states\\_150414](http://www.ets.org/praxis/ky?WT.ac=praxishome_states_150414) 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

**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 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>

## 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.

<b>Courses</b>	<b>Credit Hours</b>
<b>Student Characteristics</b> (6 hours)	6
EDSP 540 Introduction to Exceptional Children	
EDSP 594 Foundational Concept in Intellectual and Physical Disabilities	
<b>Pedagogy</b> (27 hours)	27
EDSP 644 Applied Behavior Analysis	
EDSP 609 MSD Curriculum and Methods I	
EDSP 520 Assessment of Students with Moderate and Severe Disabilities	
EDSP 611 MSD Curriculum and Methods II	
EDSP 614 Transition Programs and Services for Children and Youth with Disabilities	

**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.

<b>Courses</b>	<b>Credit Hours</b>
EDSP 647 Teaching Mathematics to Students with Disabilities	
EDSP 546 Behavior Analytic Approach to Communication	
EDSP 570 Autism: Introduction and Understanding	
EDSP 608 Student Teaching in Moderate and Severe Disabilities	
<b>Research</b> (3 hours)	3
EDSP 639 Research Analysis in Special Education ( <i>Must be taken in last 6 hours</i> )	
<b>Elective:</b> Choose from one of the following courses. (3 hours)	3
EDSP 627 Applications of Assistive Technology	
EDSP 650 Advanced Applied Behavior Analysis	
EDSP 671 Autism: Strategies and Techniques	
EDSP 669 Single Subject Research Methods	
<b>Minimum total hours</b>	<b>39</b>

**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](http://www.epsb.ky.gov) or <http://www.ets.org/praxis/ky> for current requirements.

**Degree Assessment:** See CARDS 3 above.

## 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 Moderate and Severe Disabilities (P-12)

**Major:** SPE

**Degree Awarded:** MED

**Unit:** GE

**Program Webpage:** <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.

Courses	Credit Hours
<b>Inquiry</b> (Critical Thinker) (9 credit hours)	9
EDSP 644* Applied Behavior Analysis	
EDSP 639 Research Analysis in Special Education	
EDSP 669 Single Subject Research Methods and Designs	
<b>Advocacy:</b> (Professional Leader) (6 credit hours)	6
EDSP 652 Academic and Behavior Response to Intervention	
EDSP 627 Applications of Assistive Technology	
<b>Action</b> (Problem Solver) (3 credit hours)	3
EDSP 635* Moderate and Severe Disabilities Practicum	

**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.

<b>Courses</b>	<b>Credit Hours</b>
<b>Area of Emphasis</b> (At least 18 credit hours)	18
EDSP 594* Foundational Concepts in Intellectual and Physical Disabilities	
EDSP 520 Assessment of Students with Moderate and Severe Disabilities	
EDSP 609* Moderate/Severe Disabilities Curriculum and Methods I	
EDSP 611* Moderate/Severe Disabilities Methods II	
EDSP 570 Autism: Introduction and Understanding	
EDSP 546* Behavior Analytic Approach to Communication	
<b>Minimum total credit hours:</b>	<b>36</b>

**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> 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

**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 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

Core (27 credit hours)	Credit Hours
SPAD 604 Financial Principles in Sport	3
SPAD 605 Sport Facility Management	3
SPAD 625 Sport Management and Leadership	3
SPAD 635 Research in Sport Administration	3
SPAD 637 Sport Analytics	3
SPAD 683 Sport Marketing	3
SPAD 684 Sport Policy	3
SPAD 689 Legal Aspects in the Sport Industry	3
SPAD 692 Internship in Sport Administration	3

**Electives** (9 Hours) Courses approved by advisor

9

**Minimum Total Credit Hours**

**36**

**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*

Ph.D. Program

Coordinator

**Anita M.**

**Moorman**

*Professor*

**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

**CARDS 4 (Entry Assessment):** (Entry Assessment): Admission to Graduate School and to the Endorsement in the Teacher Leader program; Self-Assessment on Kentucky Guide to Reflective Classroom Practice; Professional Growth Plan, must hold a valid teaching certificate.

COURSE	COURSE TITLE	CREDIT HOURS
<b>Teacher Leadership – Level I (9 hours)</b>		
EDAP 637	Using Assessment to Improve Student Achievement	3
EDAP 638	Instructional Strategies for Diverse Learners	3
EDAP/EDSP 639	Education Research in the P-12 Setting	3

**CARDS 5 (Mid-point Assessment- after Level I Leadership):** 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.

<b>Teacher Leadership – Level III (6 hours)</b>		
EDAP 677	Teacher Leadership Through Coaching and Mentoring	3
EDAP 607	Teacher Leadership in Practice	3

**CARDS 6 (Exit Assessment):** Successful completion of all required coursework, adapted NBPTS Entry #4, updated and revised Professional Growth Plan, final self-assessment on all standards of the Kentucky Guide to Reflective Practice. Scored acceptable or target on Rubrics for Advanced Candidates (by advisor).

**Minimum total hours: 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)**

<b>Courses</b>	<b>Credit Hours</b>
EDAP 637 Using Assessment to Improve Student Achievement	3
EDAP 638 Instructional Strategies for Diverse Learners	3
EDAP/EDSP 639 Education Research in the P-12 Setting	3
<b>CARDS 5 (Mid-point Assessment- after Level I Leadership and 9 credit hours of Level II coursework):</b> 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)**

EDAP 677 Teacher Leadership Through Coaching and Mentoring	3
EDAP 607 Teacher Leadership in Practice	3
<b>CARDS 6(Exit Assessment):</b> 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

**Kathryn Whitmore Barten**  
*Endowed Chair, Early Childhood Education*

Director, Early Childhood Research Center  
**Debra Bauder**  
*Associate Professor*

**Jennifer Bay-Williams**  
*Professor*  
Chair of Middle/Secondary Education Department

**Peggy Brooks**  
*Instructor*  
Coordinator of the Kentucky Teacher Internship Program  
**Sherri Brown**  
*Associate Professor*

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>

## 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

Course	Course Title	Term	Prerequisites	Credit Hours
EDAP 610	Literacy Research and Theory – 12 hours in education	Fall	--	3
EDAP 636	Advanced Reading Methods P-12	Fall	--	3
EDAP 615	Measurement and Diagnosis of Literacy	Spring	EDAP 610	3
EDAP 678	Language Knowledge and Acquisition	Spring	--	3
EDAP 618	Capstone Practicum in Literacy: Reading Specialist	Summer	EDAP 610; EDAP 636	3
EDAP 642	Literacy Learning and Cultural Differences	Summer/Fall	--	3
		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 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

COURSE	COURSE TITLE	CREDIT HOURS
<b>AREA A: Linguistics (3 hours)</b>		
ENGL LING 518	Foundations of Language	3
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.		
<b>AREA B: Applied Linguistics (3 hours)</b>		

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
<b>AREA C: Materials and Methods * (3 hours)</b>			
LING	630		3
EDAP	642		3
EDTP	503		3
<b>Minimum total hours:</b>			<b>12</b>

### 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> 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](mailto: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](mailto: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>

## Program Information

The Interdisciplinary Ph.D. Program provides a mechanism for accommodating the interests of students and faculty in areas in which the faculty expertise is not confined to a department or individual academic unit. It permits students to establish individualized programs and groups of faculty to establish interdisciplinary tracks.

### Requirements for Admission

Applicants for interdisciplinary doctoral programs must present complete admission credentials and have an approved program of study in order to be formally admitted by the School of Interdisciplinary and Graduate Studies. The required credentials are:

1. A 3.25 grade point average.
2. Scores at or above the 60th percentile on the Quantitative, Verbal, Critical Thinking and Analytical portions of the Graduate Record Exam.
3. Proof of a Baccalaureate Degree and official transcripts of all undergraduate and graduate course work.
4. International students for whom English is not their primary language must show English language proficiency by one of the following: a) TOEFL examination score at or above 550 (paper based test and a 5.0 on the TWE test), 213 (computer based test), 79 (internet based test); b) IELTS test score of 6.5 or higher; c) successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville; d) demonstration of a degree award from an acceptable English language institution.
5. Three letters of recommendation from individuals who are able to comment on the student's academic abilities and potential for success in graduate 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](mailto:Paul.DeMarco@louisville.edu)**

## **Curriculum**

Curriculum will be determined by a student's steering committee during the development of each individual's program proposal (see details above). For an Interdisciplinary Track, a core of faculty may propose a curriculum that will form the basis for an area of concentration.

## **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](http://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](http://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](http://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

GEOG 500	Globalization Seminar
HIST 610	Historic Preservation
HIST 611	Advanced Environmental History
HSS 675	Health Promotion and Disease Prevention at the Individual Level
HSS 676	Health Promotion and Disease Prevention at the Social Level
HSS 697	Eating Well and Cooking Healthy
LAW 931	Environmental Law
LAW 939	Water Resources Law and Policy
PHEH 620	Global Issues in Environmental and Occupational Health
PHEH 651	Advanced Environmental Health Sciences
PHPB 612	Health Communication Campaigns: Theory and Practice
PHPB 722	Health Risk Communication
PLAN 673	Behavioral Dimensions of Urban Sustainability
PLAN 674	Sustainable Urbanism
PLAN 676	Sustainable Social-Ecological Systems
POLS 639	International Relations Seminar
SOC 610	Environmental Sustainability 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:

<b>Schedule</b>	<b>Course #</b>	<b>Course Title</b>	<b>Credits</b>	<b>Requirement</b>
1 <sup>st</sup> year Fall	SUST 600	Introduction to Sustainability	3	Mandatory
	CEE 680	Green Engineering and Sustainable Design	3	Elective
	UPA 679	Environmental Policy	3	Core
1 <sup>st</sup> year Spring	PLAN 680	Sustainable Development and Planning	3	Core
	GEOS 663	Climate and Environmental Change	3	Elective
	UPA 606	Research Methods	3	Mandatory
2 <sup>nd</sup> year Fall	SOC 610	Environmental Sustainability and Social Change	3	Core
	PLAN 623	Environmental Policy and Natural Hazards	3	Elective
	LAW 902	Land Use and Planning Law	3	Elective

2 <sup>nd</sup> year	CEE 697	Thesis in Civil Engineering -	6	Mandatory
Spring	CEE 680	OR- CEE Capstone Design		

**TOTAL** **33**

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.

Department	Course Title	Course #
Anthropology	Research Design Anthropology	ANTH 609 & 611
Art	None	
Biology	Advanced Experimental Design and Analysis	BIOL 648
Communication	Qualitative Communication Research	COMM 616
Geography/Geosciences	Research Design	GEOG 641
Health and Sports Science	Research Methods	HSS 604
History	Research Methods	HIST 605
Political Science	Methods of Political Research	POLS 671
Public Health	Statistical Foundations for Epidemiology	PHEP 621
Sociology	Seminar in Research Methods	SOC 615
Urban and Public Affairs	Research Methods	UPA 606

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](http://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](mailto:Eric.Rouchka@louisville.edu)

### 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

Department	Course	Description	Credits
CBIOC		Biochemistry I	3
BIOC		Responsible Conduct of Research: Survival Skills and Research Ethics	1
MBIO	667*		3
PSYCH	571/609#	Computational Cognitive Science I	3
CECS	660*	Introduction to Bioinformatics	3
PHBI	750*	Statistical Methods for Bioinformatics	3

\*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

Department	Course	Description	Credits
MATH	505	Introduction to Partial Differential Equations	3
MATH	507	Fourier Series	3
MATH	561#	Probability	3
PHYS	565	Computational Physics	3
MATH	566	Nonparametric Statistical Methods	3
PHYS	625	Statistical Mechanics	3
PHST	630	Applied Statistical Models	3



MATH	636	Mathematical Modeling II	3
MATH	660	Probability Theory	3
PHST	661#	Probability	3
PHST	662#	Mathematical Statistics	3
MATH	562/662#	Advanced Mathematical Statistics	3
MATH	665	Advanced Linear Statistical Models	3
MATH	667*	Methods of Classification	3
MATH	670	Introduction to Stochastic Calculus	3
MATH	681	Combinatorics and Graph Theory I	3
MATH	682	Combinatorics and Graph Theory II	3
PHST	682	Multivariate Statistical Analysis	3
PHST	691	Bayesian Inference and Decision	3
PHST	710	Advanced Statistical Computing	3
PHST	711	Advanced Statistical Computing II	3
PHST	725	Design of Experiments	3
PHBI	751	High-throughput Data Analysis	3
PHBI	752	Statistical Genetics	3
PHST	762	Advanced Statistical Inference	3
PHST	780	Advanced Nonparametric Statistics	3
PHST	781	Advanced Linear Models	3
PHST	782	Generalized Linear Models	3

#Credit only for one: MATH 561/PHST 661; MATH 562/PHST 662

### Courses in Biomedical and Natural Sciences

Department	Course	Description	Credits
BIOL	542	Gene Structure and Function	3
BIOL	569	Evolution	3
BIOC	680	Biomolecular Interactions	3
BIOC	611	Biochemical and Molecular Methods	4
ASNB	614	Molecular Neuroscience	4
BIOC	641	Advanced Eukaryotic Genetics	3
BIOC	647#	Advanced Biochemistry II	4
CHEM	647	Advanced Biochemistry II	4
CHEM	648	Systems Biochemistry Principles and Practices	3
CHEM	652	Practical Approaches to Metabolomics	3
BIOC	661	Molecular Mechanisms of Toxicology	3
BIOC	668	Molecular Biology	3
BIOC	670	Protein Structure and Function	4
CHEM	684	Biophysical Chemistry	3

#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

Department	Course	Description	Credits
------------	--------	-------------	---------

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 Brain 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*

### **Ryan Gill**

*Associate Professor of Mathematics*

### **Gary Hoyle**

*Professor of Environmental and Occupational Health Sciences*

### **Theodore S. Kalbfleisch**

*Assistant Professor of Biochemistry and Molecular Biology*

Executive

Committee Vice-Chair

### **Richard Kerber**

*Associate Professor of Epidemiology and Population Health*

### **Ashok Kumar**

*Professor of Anatomical Sciences and Neurobiology*

### **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*

*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 established 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.)

BE 658	Injury Biomechanics
ME 651	Kinematics & Kinetics of Human Movement
BE 639	Rehabilitation Engineering
ASNB 608	Neural Systems
ASNB 607	Neuroanatomy
ECE 520	Digital Signal Processing
ME 640	Optimal Design Methods
BE 650	Advanced Biomaterials
BE 640	Computational Methods for Medical Image Analysis
OBIO 601	Intro to Oral Biology Research
ECE 614	Artificial Neural Systems
MBIO 602	Immunology
ENTR 600	Business Plan Development
IMBA 652	Business Plan Competition I
BE 696	Evidenced Based Entrepreneurship
BE 692	Clinical Rotation

Dissertation Committee: By the end of the 1<sup>st</sup> semester, it is expected that the student has identified their Dissertation Chair. After the 1<sup>st</sup> 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*

Director of

Graduate Studies

**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*

Chairperson

**Sean Fu***Assistant Professor***Guruprasad****Giridharan***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



- 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).**

PSYC 642	Behavioral Neuroscience
MBIO 667	Cell Biology
PSYC 645	Cognitive Neuroscience
PSYC 621	Cognitive Processes
ASNB 677	Current Topics in Sensory Systems
ASNB 617	Developmental Neurobiology

**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](mailto: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](mailto: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](mailto: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>. 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>. 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*

**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

**Wanda Lott**

**Collins**

*Professor*

Director of BSW

Program

**Crystal Collins-  
Camargo**

*Associate Professor*

**Annatjie Faul**

*Professor*

Associate Dean 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

# 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> **\$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](http://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](mailto: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](mailto: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](mailto: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](mailto: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->

[students](#). A minimum score of 6.5 is required if taking the International English Language Testing System (IELTS). More information at [www.ielts.org](http://www.ielts.org) and [www.ets.org/toefl](http://www.ets.org/toefl)

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>.
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](mailto: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](http://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](http://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>

**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>

Cognitive Flexibility Theory as developed by Spiro (1990) guides the underlying curriculum philosophy. The main premise of the curriculum is to provide students strategies to learn challenging materials, to encourage flexibility in the use of knowledge, and to change the underlying ways of thinking. At the end of their studies students will achieve a deeper, more complex understanding of social work, they will be able to critically evaluate and contemplate the material while experimenting with the flexible application of the knowledge in a variety of contexts. This higher order of thinking that will be developed and promoted with the curriculum is referred to as critical thinking.

This curriculum philosophy responds well to social work as an ever changing and evolving profession which responds to the radically changing needs and demands of society. It is impossible for any curriculum to address each problem or case example social work graduates may face in their practice. Cognitive flexibility theory provides avenues and tools for students to integrate their learning experiences in such a way as to maximize their potential to meet the demands of the profession upon graduation. The curriculum is designed to enhance students' ability to enable the diverse client systems they work with to make decisions that contribute to the quality and health of these clients systems. The focus will also be on decisions that promote social justice. The curriculum is designed to deliver graduate social workers who think critically about what they do, why they do it, and what outcomes they hope will results from the social work practice they do.

Critical thinking is defined as "the intellectual disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief or action" (Scriven & Paul, 2004). Critical thinking includes specific skills such as problem-solving and the ability to integrate knowledge from multiple disciplines and theories of human behavior. Throughout the curriculum, there is an emphasis on critical reflection, or appraisal of various points of view no matter what the source. The curriculum draws heavily on social science knowledge and integrates this with problem-solving phases such as assessment, intervention, and evaluation. In this respect, the curriculum is designed to teach students to access, integrate, and assess practice and policy related research to solve social problems and to work towards social justice. When critical thinking skills are used effectively, it leads to transparency and promotes social change, particularly with and on behalf of vulnerable and oppressed individuals and groups of people.

Bruner's spiral curriculum format (1991) is used to implement the above mentioned cognitive flexibility philosophy in the development of higher order critical thinking skills. With this format, topics are revisited throughout the curriculum, while increasing the level of difficulty, complexity and depth of the area and linking new knowledge or information to previous levels of learning on the same topic to increase the competency of the students. Students will be introduced in the foundation curriculum to different strategies on how to develop critical thinking. In the advanced curriculum, students will move towards a higher level of complexity in their thinking because they will be required to analyze problems from multiple perspectives, evaluate multiple sources of evidence, and address complex issues and problems incorporating multiple level forces on client systems.

**M.S.S.W. Foundation Curriculum**

The foundation curriculum promotes a generalist perspective in which the simultaneous impact of many systemic levels (individuals, families, groups, organizations, and communities) on clients' lives is critically analyzed and recognized. The foundation builds upon a liberal arts base that fosters an understanding of society as a complex organization of diverse people and ideas. Social problems are understood as occurring within the nexus of culture, conflict, development, ecology, and systems and as such, efforts to help or intervene must include consideration of these forces. Students will be able to critically identify and assess social problems, specifically attending to 1) how such problems are maintained, 2) how they impact the quality of people's life, 3) cultural sensitivity and appreciation of marginalized people, and 4) how to actively promote social and economic justice. In the foundation year, the focus is on the development of critical thinking skills in all the areas mentioned.

**M.S.S.W. Advanced Curriculum - Advanced Social Work Practice**

The advanced curriculum seeks to develop the utilization and application of critical thinking on all levels - in reading professional writing and research, in students' practica, in the classroom, and in the students' own thinking. Consistently monitoring practice ethically, evaluating theoretical principles and epistemologies, and utilizing technological advances become basic practice patterns. Specific skill sets developed include: 1) Creating, organizing and integrating ideas and action on engaging diverse client systems effectively in change; 2) Assessing, conceptualizing and analyzing theoretical, practice and research problems from multiple perspectives and utilize critical thinking skills to formulate impressions based upon the data; 3) Analyzing, synthesizing and evaluating the evidence available to guide advanced social work practice; 4) Synthesizing, formulating and implementing a plan of action for social work practice that addresses complex issues and problems, builds consensus and incorporates multiple-level forces on client systems; 5) Analyzing and evaluating data of client progress and outcomes and assess implications and consequences of this progress and outcomes; 6) Synthesizing, creating, and organizing ideas from theory, research and practice for social justice; and 7) Demonstrating the ability to integrate culturally competent skills into all aspects of social work practice.

These skills will be used to actively pursue social change, particularly with and on behalf of vulnerable and oppressed client systems. Students will learn how to become leaders in social change efforts focused primarily on issues of poverty, discrimination, and other forms of social injustice.

To assist graduates in their future professional careers, these skills are organized around three practice foci: 1) children and families, 2) health and mental health, and 3) community and international practice. These domains give opportunity for students to focus on clustered learning within the context of these fields of practice. Recognizing that the employment of students after graduation is often a function of geography and personal circumstance, the school allows students the programmatic option of combining interests among focus areas.

While curricular options do exist for students to develop a certain subject-matter expertise, the recognition of the School that it needs to prepare students more broadly places the principal focus of the concentration work on a high-level critical thinking about social work engagement and also on the translational knowledge and skills that support the graduates' movement from one field of practice to another. Once students learn how to learn and how to think about social work practices, and they understand the components of ethical practice and the responsibility to increase specific field-of-practice expertise, they will be better equipped to practice in a world where knowledge changes and transforms what we do on a rapidly accelerating curve.



**M.S.S.W. Practicum Education**

For additional information, please go to: <http://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>. 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*  
Associate Dean 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

Core Courses	Semester Hours	Cumulative Total Hours
Advanced Research Design & Analysis I	6	6
Advanced Research Design & Analysis II	6	12
Advanced Research Design & Analysis III	3	15
Professional Seminar I	1	16
Professional Seminar II	1	17
Teaching in Social Work	3	20
Theory I: Change Theories in Social Work	3	23
Ethics, Social Work, and Society	3	26
Theory II: Theory Development	3	29
Theory III: Advanced Analysis of Social Welfare Problems	3	32
Advanced Measurement in Social Work Research	3	35
Advanced Qualitative Research	3	38
Research Practicum	3	41
Individualized Studies and Dissertation Hours		
Individualized Studies	9	50
Dissertation	6	56

## Doctoral 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

**Adrian Archuleta**

*Professor*

**Anita Barbee**

*Professor*

**Crystal Collins-**

**Camargo**

*Associate Professor*

**Anna C. Faul**

*Professor*

Associate Dean for

Academic Affairs

**Andy Frey**

*Professor*

**Lesley Harris**

*Professor*

**Karen Kayser**

*Endowed Chair*

**Thomas R.**

**Lawson**

*Professor*

**Bibhuti K. Sar**

*Director of Ph.D.*

*Program in Social*

*Work*

**Terry L. Singer**

*Professor*

Dean

**Riaan van Zyl**

*Professor*

Associate Dean for

Research

# Master of Science in Anatomical Science and Neurobiology

**Major:** ASNB

**Degree Awarded:** MS

**Unit:** GM

**Program Webpage:** <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> 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, of which 15 semester hours must be in courses of the major subject area. At least one-half of the credits counted toward the degree must be 600 level courses or above. This does not include research credit hours. The department imposes the following additional requirements:

Students will successfully complete at least two of the following courses within the department:

Course	Description	Credit Hours
ASNB 601	Gross Anatomy	6.5
ASNB 603	Microscopic Anatomy	5
	Fundamentals of Neuroscience	4
ASNB 605	Human Embryology	3
ASNB 617	*Developmental Neurobiology	3
ASNB 614	*Molecular Neurobiology	4
ASNB 666	*Synaptic Organization of the Brain	3
ASNB 672	Survey of Dental Gross and Neuroanatomy	7
ASNB 671	Dental Microscopic Anatomy	5

\* 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. All applications

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:

Course	Description	Credit Hours
BIOC /CHE 545	Biochemistry I or equivalent	3
BIOC 667	Cell Biology or equivalent	3
ASNB 610	Methods & Analysis in the Biomedical Sciences	2
BIOC 630	Research Ethics	1
- 1 of the following required IPIBS Graduate electives:		
MBIO 602	Introductory Immunology	2
Bioch/Che54	Biochemistry II (7)	3
MBIO 658	Cellular and Molecular Immunology	3
	Fundamentals of Neuroscience (TBD)	4
PHY 605	Physiology I	3
PHY 606	Physiology II	3

ASNB Course Requirements:

- Students must earn at least 9 additional credits by successfully completing any of the following Departmental core courses:

ASNB 601	Gross Anatomy	6.5
ASNB 603	Microscopic Anatomy	5
ASNB 605	Human Embryology	3
	Fundamentals of Neuroscience	4
ASNB 617	*Developmental Neurobiology	3
ASNB 614	*Molecular Neurobiology	4
ASNB 666	*Synaptic Organization of the Brain	3
ASNB 671	Dental Microscopic Anatomy	5
ASNB 672	Survey of Dental Gross & Neuroanatomy	7

\* 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 \(PDF\)](#)

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*

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 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.

Year	Semester	Course#	Title	Credit Hours
1	Fall	AUDI 600	Anatomy & Physiology for Communication Sciences	3
		AUDI 604	Essential Techniques in Audiometry for Pediatrics and Adults	3
		AUDI 606	Acoustics	3
		AUDI 614	Clinical Techniques I	1
		AUDI 610	Clinical Clerkship I	1
			<b>Total Credit Hours</b>	<b>11</b>
	Spring	AUDI 626	Assessment & Management of Vestibular Disorders	3
		AUDI 624	Amplification Technology	3
		AUDI 622	Electrophysiologic Techniques in Audiology	3
		AUDI 615	Clinical Techniques II	2
		AUDI 610	Clinical Clerkship I	1
			<b>Total Credit Hours</b>	<b>12</b>
	Summer	AUDI 654	Assessment & Management of Auditory Processing Disorders	3
		AUDI 630	Amplification Selection & Fitting	3
AUDI 625		Audiologic Counseling	2	
AUDI 610		Clinical Clerkship I	1	
		<b>Total Credit Hours</b>	<b>9</b>	
2	Fall	AUDI 650	Research Methods	3
		AUDI 629	Cochlear Implants & Implantable Devices	4
		PSYC 646	Hearing Science I	3
		AUDI 620	Clinical Clerkship II	2
			<b>Total Credit Hours</b>	<b>12</b>
	Spring	AUDI 646	Medical Audiology	3
		AUDI 652	Prevention of Hearing Loss	2
		AUDI 638	Educational Audiology	3
		AUDI 620	Clinical Clerkship II	2
		AUDI 660	Investigation in Audiologic Practice	1-3
			<b>Total Credit Hours</b>	<b>11</b>
	Summer	AUDI 616	Genetics and Hearing Loss	2
		AUDI 632	Professional Issues in Audiology	2
AUDI 635		Audiology Internship	4	
AUDI 660		Investigation in Audiologic Practice	1-3	
		<b>Total Credit Hours</b>	<b>9</b>	
3	Fall	AUDI 656	Practice Management in Audiology	3
		AUDI 679	Independent Study in Audiology	2
		AUDI 635	Internship	4
		AUDI 660	Investigation in Audiologic Practice	1
			<b>Total Credit Hours</b>	<b>10</b>
	Spring	AUDI 612	Pathology of the Auditory-Vestibular System	3
		AUDI 621	Audiologic Rehabilitation	3
		AUDI 634	Electrophysiologic Techniques in Audiology II	1

	AUDI 635 Internship	4
	AUDI 660 Investigation in Audiologic Practice	1
	<b>Total Credit Hours</b>	<b>12</b>
	Summer DOCT 600 (Externship)	1**
4	Fall DOCT 600 (Externship)	1**
	Spring DOCT 600 (Externship)	1**
** Full Time Status		

## Faculty

**Lynzee Cornell**  
*Assistant Professor*  
**Sharon Miller**  
*Assistant Professor*

**Jill Preminger**  
*Professor*  
Director

**George Purvis**  
*Associate Professor*  
**Jeffrey Weihing**  
*Assistant Professor*

**Pavel Zahorik**  
*Associate Professor*  
*Term*

# 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**

<b>course #</b>	<b>course name</b>		<b>hr</b>
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

course #	course name		hr
BIOC 647	Adv Biochemistry II	Required	4
BIOC 667	Cell Biology	Elective	3
BIOC 675	Cancer Biology	Elective	4
BIOC 661	Molecular Toxicology	Elective	3
BIOC 630	Responsible Conduct of Research	Required	1
BIOC 606	seminar		1
BIOC 603	Sp. Topics -Grant Writing	Elective	2
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)

## 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*

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*

**Qiutang 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**  
*Associate Professor*

**Christine Schaner-  
Tooley**  
*Assistant Professor*

**Sanjay Srivastava**  
*Professor*

**Joseph Steffen**  
*Professor*

**Sucheta Telang**  
*Assistant Professor*

**John O. Trent**  
*Associate 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	Title	Hours	Other Requirements	Electives
BIOC 645	Biochemistry I	4	Student Journal Club	
BIOC 610	Methods & Analysis in Biomed Sci	2	Seminar attendance	
BIOC 611	Adv Techniques in BMB	4		
BIOC 613	Lab Rotation	2		

#### Year 1 Spring

BIOC 647	Biochemistry II	4	Student Journal Club	
BIOC 667	Cell Biology	3	Seminar attendance	
BIOC 630	Responsible Conduct of Research	1		
BIOC 613	Lab Rotation	2		

#### Year 1 Summer

BIOC 619	Research	6		
----------	----------	---	--	--

#### Year 2 Fall

BIOC 668	Mol Biol/Genetics	4		
BIOC 680	Biomolecular Interactions	2		
BIOC 606	seminar I	1		
BIOC 619	Research	3		

#### Year 2 Spring

BIOC 603	Sp. Topics -Grant Writing	2	seminar attendance	BIOC 675 Cancer Biol.
BIOC 619	Research	7	Ph.D. Qualifying Exam	BIOC 661 Mol. Toxicol

#### 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

**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*

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*

**Qiutang 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**

*Associate Professor*

**Christine Schaner-Tooley**

*Assistant Professor*

**Sanjay Srivastava**

*Professor*

**Joseph Steffen**

*Professor*

**Sucheta Telang**

*Assistant Professor*

**John O. Trent**

*Associate 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*

# 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

Year	Semester	Course#	Title	Credits
1	Fall	CMDS 572	Anatomy & Physiology for Communication Sciences	4
		CMDS 681	Assessment and Clinical Methods	3
		CMDS 620	Neurological Disorders of Speech Production	3
		CMDS 602	Articulation/Phonology	3
			Total Credits	13
Spring	CMDS 696	Augmentative/Alternative Communication	3	
	CMDS 667	Aphasia	3	
	CMDS 612	Preschool Language Intervention	3	

		CMDS 669 Cognitive Disorders	3
		CMDS 695 Special Topics (0) 2-Day Seminar TBA	0
		CMDS 652 School Age Language and Phonology Intervention	3
		CMDS 611 Practicum: Speech Pathology	1
		<b>Total Credits</b>	<b>16</b>
Summer		CMDS 671 Clinical Methods in Speech Language Pathology	2
		CMDS 690 Dysphagia	3
		CMDS 663 Voice Disorders	3
		CMDS 611 Practicum: Speech Pathology	2
		EDSP 637 Transdisciplinary Collaboration for Inclusion	3
		<b>Total Credits</b>	<b>10</b>
2	Fall	CMDS 668 Professional Issues in Audiology and Speech Pathology	3
		AUDI 605 Intro to Audiological Techniques and Rehab	3
		OBIO 501 Biomedical Data Analysis: Experimental Design and Statistics	3
		CMDS 699 Research Project	1-3
		CMDS 611 Practicum: Speech Pathology	3
		CMDS 595 Special Topics: Statistical Techniques	3
		CMDS 665 Fluency Disorders	3
		<b>Total Credits</b>	<b>9</b>
Spring		CMDS 695 Special Topics 3-Day Seminar TBA	3
		CMDS 611 Practicum: Speech Pathology	5
		CMDS 610 Practicum: Audiology	1
		CMDS 699 Project	1-3
		EDSP 540 Introduction to Exceptional Children	3
		<b>Total Credits</b>	<b>8-9</b>

**Speech Language Pathology M.S. Degree Program - PREPARATORY PROGRAM**

<b>Semester</b>	<b>Course#</b>	<b>Title</b>	<b>Credits</b>
Fall	CMDS 572	Anatomy & Physiology for Communication Sciences	4
	CMDS 605	Intro to Audiological Techniques and Rehab	3
	CMDS 563	Clinical Phonetics	3
		<b>Total Credits</b>	<b>10</b>
Spring	CMDS 570	Clinical Observation in Speech Pathology and Audiology	1
	CMDS 564	Normal Speech & Language Development	3
	CMDS 545	Survey of Communication Processes and Disorders	3
	LING 522	<b>OR</b>	
	ENG 522	Structure of Modern American English	3
	EDSP 540	Intro to Exceptional Children	3
	EDSP 637	Transdisciplinary Collaboration	3
		<b>Total Spring Semesters</b>	<b>10</b>
		<b>Total Credits (Required)</b>	<b>10</b>
Summer	EDSP 540	Intro to Exceptional Children	2
	EDSP 637	Transdisciplinary Collaboration	3

\*If necessary

\*\*Teacher Certification Program (optional)

## Faculty

**Barbara M. Baker**  
*Professor*  
Director

**Elizabeth A.  
Katzman**  
*Clinical Supervisor*

**M. Gay Masters**  
*Assistant Professor*  
**Rhonda Mattingly**  
*Lecturer*

Clinical  
Coordinator  
**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

	course title	credit hours	semester
BIOC 645	Biochemistry I	4	Fall
either -	Molecular Microbiology	2	Fall
MBIO 601			
-or-	Immunology	3	Fall
MBIO 602			
MBIO 606	Seminar/Journal Club	1(x2)	Fall & Spring
MBIO 610	Methods and Analysis in the Biomedical Sciences	2	Fall
BIOC 606-03	Survival Skills and Research Ethics	1	Spring
MBIO 619	Research	1-12	Fall, Spring & Summer
MBIO 620	Thesis (optional)	1-6	Fall, Spring & Summer

### Electives:

#### Select two courses from the list of suggested electives

	course title	credit hours	semester
MBIO 621	Advanced Immunology: Innate and Adaptive Immunity	2	Fall & Spring
MBIO 622	Advanced Immunology of Disease	2	Spring
MBIO 689	Microbiota in Health and Disease	2	Fall
MBIO 604	General Virology	1	Fall
MBIO 687	Microbial Pathogenesis	2	Spring
MBIO 687	Cell Biology	3	Spring
BIOC 603-03	BMG Statistics	2	Spring

If the student has satisfactorily completed the required courses and total credit hour requirements with an overall and program GPA of 3.0, then the student may register as an M.S. candidate.

### Program of Study

Students admitted to the M.S. Degree Program should select a research advisor, form a thesis committee, and decide upon an area of research in the first semester. The student and advisor should form a committee of three (3), composed of the advisor, one other graduate faculty member of the department, and a third member with graduate faculty status in another department. The second committee member will serve as co-advisor if the advisor does not have primary appointment in the Department of Microbiology and Immunology. The department chair may serve as an ex-officio member of the thesis committees.

Students in the M.S. program are required to submit and defend a thesis. The thesis must conform to the School of Interdisciplinary and Graduate Studies' guidelines. Students, with the consent of the departmental graduate faculty committee, may elect to substitute a written research proposal instead of a traditional thesis, based on laboratory research performed by the student, describing successive research to be pursued. The final oral defense will be preceded by a research seminar open to everyone. The oral examination will be administered by the thesis committee, and will be open to any other interested graduate faculty members. Evaluation of student competence and thesis acceptability, together with

departmental recommendations for graduation, will be forwarded to the Dean of the School of Interdisciplinary and Graduate Studies.

## 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**

*Assistant Professor*

**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*

**Carolyn Roberson**

*Assistant 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:

#### Required Courses

	Course Title	Credit Hours	Semester
MBIO 601	Molecular Microbiology	2	Fall
MBIO 602	Immunology	3	Fall
BIOC 667	Cell Biology	3	Spring
BIOC 645	Biochemistry I	4	Fall
MBIO 606	Seminar/ Journal Club	1(x2)	Fall & Spring
MBIO 600	Lab Rotations in Microbiology and Immunology	1(x2)	Fall & Spring
MBIO 610	Methods and Analysis in the Biomedical Sciences	2	Fall
MBIO 604	General Virology	1	Spring
BIOC 606-03	Survival Skills and Research Ethics	1	Spring
BIOC 603 03	BMG Statistics	2	Summer
MBIO 619	Research	1-12	Fall, Spring & Summer

### Elective Courses:

Select three courses from the list of suggested electives

	Course Title	Credit Hours	Semester
MBIO 621	Advanced Immunology: Innate and Adaptive Immunity	2	Spring
MBIO 622	Advanced Immunology of Disease	2	Fall
MBIO 689	Microbiota in Health and Disease	2	Fall
MBIO 687	Microbial Pathogenesis	2	Spring
Other Approved Graduate Courses:			
BIOC 668	Molecular Biology	4	Fall
BIOC 675	Cancer Biology	4	Spring
BIOC 647	Adv. Biochemistry II	4	Spring
at least 1 elective must be in the Department MBIO			

### Note:

\*\* Students enrolled in the M.D./Ph.D. Joint Degree Program, who have completed step I of NBME, will have satisfied all of the required course requirements except seminar, Research Ethics, Research Methods and research. Three electives will be required. They will be required to satisfactorily complete the Qualifying Exam and successfully defend a dissertation research project, in addition to attending all journal club sessions and seminars.

### Program of Study

Upon successful completion of the 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*

**James B. Hoying**  
*Professor*

**Suzanne Ildstad**  
*Professor*

**Venkatakrishna R. Jala**

*Assistant Professor*

**Henry Kaplan**  
*Professor*

**Michele M.**

**Kosiewicz**  
*Associate Professor*

**Deepa Kolaseri**

**Krishnadas**  
*Assistant Professor*

**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*

**Carolyn Roberson**  
*Assistant 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*

**Esmā 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
- <http://www.gre.org/>

The GRE Advanced Test in a discipline is not required, but if available will be used in admissions and placement decisions.

**NOTE:** GRE Institution Code is R1838-University of Louisville. The GRE major codes are 0216 – Pharmacology or 0219 – Toxicology.

5. **Statement of Experience and Professional Goals.** At the time of application, a two 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](mailto: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> 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](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 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:

- 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;
- 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;
- for individuals interested in progressing through management ranks in Pharmacology or biotech businesses;
- when coupled with extensive scientific writing experience or electives as the basis for a scientific writing career;
- when combined with theoretical and practical training in laboratory analysis as the basis for a career in biotechnology.

### M.S. in Pharmacology and Toxicology Curriculum

Course Number	Course Title	Credit Hours
<i>First Year - Fall Semester</i>		
PHTX 641	Pharmacology I	3
PHTX 643	Toxicology I	3
BIOC 645	Biochemistry I	3
PHZB 616	Special Topics in Physiology	2
Co-curricular		
PHTX 606	Seminar	1
PHTX 619	Research	1
<i>First Year - Spring Semester</i>		
PHTX 642	Pharmacology II	3
PHTX 674/675	Toxicology II	3
Co-curricular		
PHTX 619	Research	3-4
PHTX 606	Seminar	1
BIOC 603	Research Ethics	1
<i>Summer After First Year</i>		
PHTX 619	Research	6
<i>Second Year - Fall Semester</i>		

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**

**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*

**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*



# 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>. 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>

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](mailto: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> 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](#).

**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/iss/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

Course Number	Course Title	Credit Hours
<i>First Year - Fall Semester</i>		
PHTX 641	Pharmacology I	3
PHTX 643	Toxicology I	3
BIOC 645	Biochemistry I	4
PHZB 616	Selected Topics in Physiology	2
Co-curricular		
PHTX 619	Research (Lab rotations 1 & 2)	2
Written qualifying exam 1 (end of semester)		
<i>First Year - Spring Semester</i>		
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
<i>Second Year - Fall Semester</i>		
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)		
<i>Second Year - Spring Semester</i>		
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. 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**

**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*

**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 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  
Surgery*

**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](http://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](http://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 an  
d 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 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 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 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
<b>Total Credit Hours</b>	<b>23</b>

### 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
<b>Total Credit Hours</b>	<b>13</b>
<b>Minimum Total Credit Hours</b>	<b>36</b>

### 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
<b>Total Credit Hours</b>	<b>13</b>
<b>Minimum Total Credit Hours</b>	<b>36</b>

### 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*  
**Anslyn 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  
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 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

<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) hours with any "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted for a course in the student's major subject area. Hours earned beyond the minimum in any curricular areas apply only to that area and cannot be assigned to another area in order to satisfy required credit. At least one-half of the total hours in graduate courses must be at the 600 level. Any exceptions to the program of study must be approved by the Graduate Studies Committee. A student whose cumulative GPA falls below 3.0, or who fails to satisfy the published performance criteria, will be placed on probation. Students are ordinarily not permitted to continue on probation for more than one semester.

6. When all course work and projects have been satisfactorily completed, the student becomes a candidate for the degree and is approved to take the graduate oral examination. A candidate who fails the oral examination at the end of one semester may not be given a second one before the end of the following semester. A candidate who fails the second oral examination will not be granted the degree of M.M. or M.M.E. from the University of Louisville.

7. Upon request, a maximum of six (6) hours of earned graduate credit with a minimum grade of "B" may be transferred from accredited institutions that offer advanced degrees. Credit for applied music will not be transferred, but advanced standing may be awarded at a jury. Ensemble credits appropriate to the student's degree program may be considered for transfer, but not to exceed one (1) hour per semester. Music history and music theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Transfer of more than six (6) hours may be requested provided that they are not earned by extension, or as thesis or practicum hours, and that the residency requirement of 24 semester hours is maintained by the addition of University of Louisville credits to the total program. Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested provided that the minimum residence requirement of 24 hours is maintained.

8. Students receiving a graduate assistantship (teaching, research, or service) will be provided adequate training and will be required to adhere to university policies. Performance of duties in research and service by graduate assistants will be periodically evaluated. Students with teaching assistantships will be evaluated each semester.

9. Part-time students (with the exception of those in the M.M.E. degree program) must participate in one ensemble for each 18 hours of completed course work. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.

### **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;

- elementary counterpoint; and
  - history and literature of music, and analytic understanding of musical forms and genres.
3. Evidence of preparation for advanced work in the area, as follows:
- Applicants for the track in Music History must submit a paper to the Music History faculty demonstrating ability to write efficiently and to do elementary research. In addition, applicants must complete the entrance examination in Music History with an average score of no less than seventy (70) for admission to the Music History curriculum. Before admission to candidacy, students in Music History are required to have a reading ability in one foreign language (preferably German, French, or Italian) demonstrated by examination administered in cooperation with the Department of Classical & Modern Languages (fee \$20.00). The examination must be passed before the student is admitted to candidacy.

4. GRE scores.

### Core Curriculum

Courses	Credit Hours
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
Analysis (MUS 647, 648, 651, or 653)	3
Ensemble (3 semesters of major ensemble)**	3
Thesis	4
<b>Total</b>	<b>23</b>

### Other Requirements

All students must pass an oral examination after all course work is completed.

### Music History and Literature Concentration

Music History Seminars (600 level)	6
Additional Music Theory or Analysis	2
Music Electives	5
Total	13
<b>Minimum Total</b>	<b>36</b>

### 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**  
*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  
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 Music in Music Performance

**Major:** MUSP

**Degree Awarded:** MM

**Unit:** GU

**Program Webpage:** <http://www.louisville.edu/music/>

## Program Information

The School of Music offers training toward two specific graduate degrees in music: Master of Music requiring a minimum of 36 hours of graduate credit, and Master of Music Education requiring 30 hours. All programs require a minimum of 24 hours of residence at the University of Louisville. Major subjects in the Master of Music curriculum are music performance with concentrations in choral, wind or orchestral conducting, instrumental or vocal performance, jazz performance or jazz composition and arranging, piano pedagogy, music history, music theory, and music composition. The Master of Music Education program allows an applied music minor in an instrument, voice, or conducting. Each degree program has specific prerequisites, entrance requirements, and programmatic expectations that are described in the relevant section of the catalog.

## Admission Requirements

1. Applications for admission to a graduate program require the following:
  - (a) a completed application;
  - (b) an application fee;
  - (c) official transcripts for all previous post-secondary course work (all transcripts not in English must be certified as authentic and translated verbatim into English);
  - (d) at least two letters of recommendation;
  - (e) scores from the General Test Section of the Graduate Record Examination (GRE) that must be submitted prior to the beginning of study.
  
2. Applications to specific degree programs require evidence of preparation for advanced study as follows:
  - (a) in performance, an acceptable audition;
  - (b) in academic specializations (music composition, music history, music theory), a portfolio of work appropriate to the field of study;
  - (c) in music education, evidence of classroom teaching experience.
  
3. Applicants whose primary language is not English must show English language proficiency in one of the following ways:
  - (a) a minimum TOEFL examination score of 550 on the paper-based test, 213 on the computer-based test, or 79-80 on the internet-based test;
  - (b) successful completion of the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville;
  - (c) documentation of the award of a degree from a recognized English language institution.

4. Applicants must possess a baccalaureate degree from an accredited institution in the area to be pursued in advanced studies, or they must present evidence of equivalent preparation.
5. Applicants must have a minimum cumulative undergraduate grade point average of 2.75 on a 4-point scale.
6. Applicants who meet the requirements listed in items 1-5 will be considered for conditional admission for graduate study at the School of Music. For additional entrance requirements specific to the degree of interest, consult the section relevant to the degree program below.
7. Entrance examinations in music history, theory and, if appropriate, jazz, will be administered before the first term of study. The School of Music provides guidelines to assist in preparing for the entrance examinations.
8. Any exception to the above expectations will be evaluated individually and will require a statement indicating criteria to be met in a specified time frame with provisions for monitoring progress and performance. Justification must be provided in writing and must be accepted by the faculty of the student's proposed program, the Director of Graduate Studies, and the Dean of the School of Music.
9. Students who fail to meet performance standards or who do not meet other requirements as outlined in the letter of admission, program of study, or the catalog of the University of Louisville are subject to dismissal from their programs.

### **General Information Regarding Academic Policies**

1. Detailed curricular and program offerings, including specific requirements and provisions for degree programs, are published in the university catalog at <http://louisville.edu/graduatecatalog>. Students will be provided with copies of the *Handbook for Graduate Studies in Music*, the "Guidelines for Preparation for the Graduate Music History Entrance Examination," and "Guidelines for Preparation for the Graduate Music Theory Entrance Examination." These documents are also available on the School of Music website at <http://louisville.edu/music/>.
2. Students will be required to address any deficiencies revealed by entrance examinations in courses taken within the first two semesters of study. Credit toward the degree is not granted for review course work.
3. All students are required to complete Bibliography and Research Methods (MUS 607) by the end of the second semester of study (part-time students by the completion of 15 hours of graduate study). Upon satisfactory completion of requirements stated in B.2 and B.3, students will be considered in good standing.
4. Students will complete a project appropriate to the field of study as defined by the faculty of their program. The completion of this project (public recital, thesis, professional paper) normally takes place in the last semester of graduate study. Preparation and presentation of a recital must follow the guidelines in the *Handbook for Graduate Studies in Music* and the preparation of a thesis must follow the "Guidelines for the Preparation and Processing of Theses" issued by the School of Interdisciplinary and Graduate Studies (SIGS). The preparation of a thesis in music composition must also follow the "School of Music Thesis Formatting Guidelines for M.M. in Composition" available at



<http://louisville.edu/music/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) hours with any "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted for a course in the student's major subject area. Hours earned beyond the minimum in any curricular areas apply only to that area and cannot be assigned to another area in order to satisfy required credit. At least one-half of the total hours in graduate courses must be at the 600 level. Any exceptions to the program of study must be approved by the Graduate Studies Committee. A student whose cumulative GPA falls below 3.0, or who fails to satisfy the published performance criteria, will be placed on probation. Students are ordinarily not permitted to continue on probation for more than one semester.
6. When all course work and projects have been satisfactorily completed, the student becomes a candidate for the degree and is approved to take the graduate oral examination. A candidate who fails the oral examination at the end of one semester may not be given a second one before the end of the following semester. A candidate who fails the second oral examination will not be granted the degree of M.M. or M.M.E. from the University of Louisville.
7. Upon request, a maximum of six (6) hours of earned graduate credit with a minimum grade of "B" may be transferred from accredited institutions that offer advanced degrees. Credit for applied music will not be transferred, but advanced standing may be awarded at a jury. Ensemble credits appropriate to the student's degree program may be considered for transfer, but not to exceed one (1) hour per semester. Music history and music theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Transfer of more than six (6) hours may be requested provided that they are not earned by extension, or as thesis or practicum hours, and that the residency requirement of 24 semester hours is maintained by the addition of University of Louisville credits to the total program. Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested provided that the minimum residence requirement of 24 hours is maintained.
8. Students receiving a graduate assistantship (teaching, research, or service) will be provided adequate training and will be required to adhere to university policies. Performance of duties in research and service by graduate assistants will be periodically evaluated. Students with teaching assistantships will be evaluated each semester.
9. Part-time students (with the exception of those in the M.M.E. degree program) must participate in one ensemble for each 18 hours of completed course work. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.

## Curriculum

### Prerequisites

1. Bachelor of Music degree or equivalent.
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

<b>Courses</b>	<b>Credit Hours</b>
MUS 500 - Music History Review*	0
MUS 400 - Music Theory Review*	0
MUS 600 - Graduate Oral Exam Preparation	0
MUS 607 - Bibliography and Research Methods	3
Music History Seminar (500 or 600 level)	3
Music Theory (500 or 600 level)**	4
Applied Study (600 level)***	8
MUS 697 - Graduate Recital****	0
<b>Total</b>	<b>18</b>

### 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

<b>Courses</b>	<b>Credit Hours</b>
MUS 611 - Additional Applied Study*	2
MUS 530, 531 - Choral Literature I & II	4
MUS 559 - Instrumental Conducting and Score Reading	2
Ensemble (one per semester)	4
Music Electives**	6
<b>Concentration Credit Hour Total:</b>	<b>18</b>

**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**

<b>Courses</b>	<b>Credit Hours</b>
MUS 659, 660 - Seminar in Conducting-Instrumental	4
MUS 659, 660 - Seminar in Conducting-Choral*	2-4
MUS 686, 687 - Orchestral Literature I & II	4
Ensemble (two semesters of major ensemble)	2
Music Electives **	4-6
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

**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**

<b>Courses</b>	<b>Credit Hours</b>
MUS 538-06 - Studies in Pedagogy (String Pedagogy)	1
MUS 538 Studies in Pedagogy (Instrument Specific)	1
MUS 678 Advanced Pedagogy (Instrument Specific)	2
MUS 677 Business Aspects of String Studio Teaching	2
MUS 563-02 Literature: String Literature	1
MUS 563 Literature (Instrument Specific)	1
Major or Minor Ensemble*	4
Music Electives**	6
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

**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**

<b>Courses</b>	<b>Credit Hours</b>
----------------	---------------------

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
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

**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**

<b>Courses</b>	<b>Credit Hours</b>
MUS 659, 660 - Seminar in Conducting - (either Instrumental or Choral as per advising)	4
MUS 559 - Instrumental Conducting and Score Reading	2
Band Literature (MUS 561)	2
Ensemble (one per semester)	4
Music Electives *	6
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

**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**

<b>Courses</b>	<b>Credit Hours</b>
MUS 613, 614 - Additional Applied Study	8
Ensemble*	4
Music Electives**	6
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

**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	Credit Hours
MUS 539-01 - Jazz Style and Analysis	2
MUS 539-03 - Standard Jazz Repertoire	2
MUS 655 - Advanced Jazz Improvisation	2
Jazz Combo (one per semester)	2
Jazz Ensemble or Jazz Repertory Ensemble (one per sem)*	4
Music Electives**	6
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

#### 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	Credit Hours
MUS 539-01 - Jazz Style and Analysis	2
MUS 539-03 - Standard Jazz Repertoire	2
MUS 655 - Advanced Jazz Improvisation	2
Jazz Combo (one per semester)	2
Jazz Ensemble or Jazz Repertory Ensemble (one per sem)*	4
Music Electives**	6
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

#### 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	Credit Hours
MUS 613-614 - Additional Applied Study	8
Ensemble	2
Major Subject and Music Electives*	8
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

**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**

<b>Courses</b>	<b>Credit Hours</b>
MUS 671, 672, 673, 674 - Piano Pedagogy	8
MUS 561, 562 - Piano Literature I & II	4
Ensemble *	2
Music Electives**	4
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

**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**

<b>Courses</b>	<b>Credit Hours</b>
MUS 613, 614 - Additional Applied Study	8
MUS 561, 562 - Piano Literature I & II	4
Piano Pedagogy (500 or 600 level)	2
Ensemble *	2
Music Electives **	2
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

**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	Credit Hours
MUS 613, 614 - Additional Applied Study	8
MUS 561, 562, 661 or 662 - Vocal Literature (4 hours of literature chosen from list)	4
MUS 640-01 - Advanced Vocal Pedagogy	2
Ensemble *	2
Music Electives**	2
<b>Concentration Credit Hour Total:</b>	<b>18</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

#### 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*  
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 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 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 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

<b>Courses</b>	<b>Credit Hours</b>
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, or 653 - Analysis	3

MUS 509 - Ensemble (3 semesters of major ensemble)	3
Thesis	4
<b>Core Curriculum Credit Hour Total:</b>	<b>23</b>

### Other Requirements

All students must pass an oral examination after all course work is completed.

### Music Theory Concentration

Courses	Credit Hours
MUS 641 - Pedagogy of Theory	2
MUS 651 - Schenkerian Analysis	3
MUS 694 - Research (2 semesters)	4
MUS 665 - Theory Seminar (4 semesters)	0
Music Electives	4
<b>Track Credit Hour Total:</b>	<b>13</b>
<b>Minimum Credit Hour Total:</b>	<b>36</b>

### 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*  
**Anslyn 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  
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 Music Education in Music Education

**Major:** MUED

**Degree Awarded:** MME

**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 catalog at <http://louisville.edu/graduatecatalog>. Students will be provided with copies of the *Handbook for Graduate Studies in Music*, the “Guidelines for Preparation for the Graduate Music History Entrance Examination,” and “Guidelines for Preparation for the Graduate Music Theory Entrance Examination.” These documents are also available on the School of Music website at <http://louisville.edu/music/>.
2. Students will be required to address any deficiencies revealed by entrance examinations in courses taken within the first two semesters of study. Credit toward the degree is not granted for review course work.
3. All students are required to complete Bibliography and Research Methods (MUS 607) by the end of the second semester of study (part-time students by the completion of 15 hours of graduate study). Upon satisfactory completion of requirements stated in B.2 and B.3, students will be considered in good standing.
4. Students will complete a project appropriate to the field of study as defined by the faculty of their program. The completion of this project (public recital, thesis, professional paper) normally takes place in the last semester of graduate study. Preparation and presentation of a recital must follow the guidelines in the *Handbook for Graduate Studies in Music* and the preparation of a thesis must follow the “Guidelines for the Preparation and Processing of Theses” issued by the School of Interdisciplinary and Graduate Studies (SIGS). The preparation of a thesis in music composition must also follow the "School of Music Thesis Formatting Guidelines for M.M. in Composition" available at

<http://louisville.edu/music/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) hours with any "C" or "C+" grade will be accepted toward a degree, and no grade below a "B-" will be accepted for a course in the student's major subject area. Hours earned beyond the minimum in any curricular areas apply only to that area and cannot be assigned to another area in order to satisfy required credit. At least one-half of the total hours in graduate courses must be at the 600 level. Any exceptions to the program of study must be approved by the Graduate Studies Committee. A student whose cumulative GPA falls below 3.0, or who fails to satisfy the published performance criteria, will be placed on probation. Students are ordinarily not permitted to continue on probation for more than one semester.
6. When all course work and projects have been satisfactorily completed, the student becomes a candidate for the degree and is approved to take the graduate oral examination. A candidate who fails the oral examination at the end of one semester may not be given a second one before the end of the following semester. A candidate who fails the second oral examination will not be granted the degree of M.M. or M.M.E. from the University of Louisville.
7. Upon request, a maximum of six (6) hours of earned graduate credit with a minimum grade of "B" may be transferred from accredited institutions that offer advanced degrees. Credit for applied music will not be transferred, but advanced standing may be awarded at a jury. Ensemble credits appropriate to the student's degree program may be considered for transfer, but not to exceed one (1) hour per semester. Music history and music theory credits will be evaluated for transfer by the Director of Graduate Studies and the respective faculty. Transfer of more than six (6) hours may be requested provided that they are not earned by extension, or as thesis or practicum hours, and that the residency requirement of 24 semester hours is maintained by the addition of University of Louisville credits to the total program. Transfer of graduate hours within the University of Louisville toward a graduate degree in music may be requested provided that the minimum residence requirement of 24 hours is maintained.
8. Students receiving a graduate assistantship (teaching, research, or service) will be provided adequate training and will be required to adhere to university policies. Performance of duties in research and service by graduate assistants will be periodically evaluated. Students with teaching assistantships will be evaluated each semester.
9. Part-time students (with the exception of those in the M.M.E. degree program) must participate in one ensemble for each 18 hours of completed course work. If part-time study precludes completing ensemble degree requirements, other course work may be substituted.

### **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. 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.

<b>Courses</b>	<b>Credit Hours</b>
MUS 500 - Music History Review *	0
MUS 400 - Music Theory Review *	0
MUS 600 - Graduate Oral Exam Preparation	0
MUS 607 - Bibliography and Research Methods	3
MUED 628 - Qualitative Research Methods	2
MUED 629 - Foundations of Music Education	2
MUED 630 - Quantitative Research Methods	2
MUED 639 - Learning Theories in Music Education	2
Music Education and Related Courses	5-6
Applied Music (chosen from major or minor performance fields, including Conducting)	4
Music History (500 or 600 level)	3
Music Theory (500 or 600 level)	2-3
Thesis**	4
<b>Minimum Total</b>	<b>30</b>

### Other Requirements

It is recommended that full-time MME students enroll in ensembles during their degree program. All students must pass an oral examination after all course work is completed.

### Notes:

\* These course may be satisfied by passing the entrance examinations in these areas.

\*\* Students are required to prepare either a thesis (4 semester hours of credit) or a professional paper (without credit). In the latter case, 4 hours of coursework will be determined by the student and graduate advisor in order to achieve the 30-hour minimum requirement.

## Faculty

**Amy Acklin**  
*Associate Professor*  
Director of  
Marching Band  
**Robert Amchin**  
*Professor*  
Distinguished  
Teaching Professor  
**Jack Ashworth**  
*Professor Emeritus*

**Jerry W. Ball**  
*Professor Emeritus*  
**Anslyn 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  
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>

## 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](http://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

<b>Core Classes</b>		<b>Credit Hours</b>
NURS 605	Foundations for Advanced Practice	3
NURS 607	Research and Evidence Based Practice Nursing	3
NURS 608	Issues in Economic and Information Mgt.	3
NURS 611	Graduate Nursing Pharmacology for Advanced Practice Nurses	3
NURS 613	Intro to Health Care Policy and Systems	3
NURS 652	Statistics	3
NURS 655	Advanced Pathophysiology for Clinical Decision Making	3
NURS 656	Advanced Clinical Assessment	3
NURS 657	Clinical Prevention and Populations Health	3
<b>TOTAL CORE CREDIT HOURS</b>		<b>27</b>

<b>Concentration Classes</b>		<b>Credit Hours</b>
NURS 601	Primary Care I	3
NURS 602	Primary Care II	3
NURS 604	Transition to Practice	2
NURS 624	Gerontology Primary Care Nurse Practitioner I	3



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
<b>TOTAL SPECIALTY CREDIT HOURS</b>	<b>17</b>
<b>TOTAL CREDIT HOURS 44</b>	
<b>Clinical Hours Required:672</b>	

**MSN, Adult Gerontology Acute Care Nurse Practitioner Concentration**

<b>Core Classes</b>	<b>Credit Hours</b>
NURS 605 Foundations for Advanced Practice	3
NURS 607 Research and Evidence Based Practice Nursing	3
NURS 608 Issues in Economic and Information Mgt.	3
NURS 611 Graduate Nursing Pharmacology for Advanced Practice Nurses	3
NURS 613 Intro to Health Care Policy and Systems	3
NURS 652 Statistics	3
NURS 655 Adv. Pathophysiology for Clinical Decision Making	3
NURS 656 Advanced Clinical Assessment	3
NURS 657 Clinical Prevention and Populations Health	3
<b>TOTAL CORE CREDIT HOURS</b>	<b>27</b>

<b>Concentration Classes</b>	<b>Credit Hours</b>
NURS 604 Transition to Practice	2
NURS 667 Applied Geriatric Pharmacology in Nursing Practice	1
NURS 674 Adult Gerontology Acute Care NP I	4
NURS 675 Adv. Clinical Practice: Adult Gerontology Acute Care Practitioner, Clinical I	4
NURS 676 Adult Gerontology Acute Care Practitioner II	3
NURS 677 Adv. Clinical Practice: Adult Gerontology Acute Practitioner, Clinical II	3
<b>TOTAL SPECIALTY CREDIT HOURS</b>	<b>17</b>
<b>TOTAL CREDIT HOURS</b>	<b>44</b>
<b>Clinical Hours Required:672</b>	

**MSN, Family Nurse Practitioner Concentration**

<b>Core Classes</b>	<b>Credit Hours</b>
NURS 605 Foundations for Advanced Practice	3
NURS 607 Research and Evidence Based Practice Nursing	3
NURS 608 Issues In Economic and Information Mgt.	3
NURS 611 Graduate Nursing Pharmacology for Advanced Practice Nurses	3
NURS 613 Intro to Health Care Policy and Systems	3
NURS 652 Statistics	3
NURS 655 Adv. Pathophysiology: Clinical Decision Making	3
NURS 656 Advanced Clinical Assessment	3
NURS 657 Clinical Prevention and Populations Health	3
<b>TOTAL CORE CREDIT HOURS</b>	<b>27</b>

<b>Concentration Classes</b>		<b>Credit Hours</b>
NURS 601	Primary Care I	3
NURS 602	Primary Care II	3
NURS 604	Transition to Practice	2
NURS 660	Family Nursing	2
NURS 661	Adv. Clinical Practice: FNP Clinical I	3
NURS 662	Advanced Clinical Practice: FNP Clinical II	3
NURS 664	Common Health Problems of the Pediatric Client	1
<b>TOTAL SPECIALTY CREDIT HOURS</b>		<b>17</b>
<b>TOTAL CREDIT HOURS</b>		<b>44</b>
<b>Clinical Hours Required:</b>		<b>672</b>

**MSN, Family Nurse and Women's Health Nurse Practitioner Concentration**

<b>Core Classes</b>		<b>Credit Hours</b>
NURS 605	Foundations for Advanced Practice	3
NURS 607	Research and Evidence Based Practice Nursing	3
NURS 608	Issues In Economic and Information Mgt.	3
NURS 611	Graduate Nursing Pharmacology for Advanced Practice Nurses	3
NURS 613	Intro to Health Care Policy and Systems	3
NURS 652	Statistics	3
NURS 655	Adv. Pathophysiology: Clinical Decision Making	3
NURS 656	Adv. Clinical Assessment	3
NURS 657	Clinical Prevention and Populations Health	3
<b>TOTAL CORE CREDIT HOURS</b>		<b>27</b>

<b>Concentration Classes</b>		<b>Credit Hours</b>
NURS 601	Primary Care I	3
NURS 602	Primary Care II	3
NURS 604	Transition to Practice	2
NURS 615	Advanced Clinical Practice WHNP I	2
NURS 616	WHNP I	3
NURS 617	Advanced Clinical Practice WHNP II	1
NURS 618	WHNP II	4
NURS 619	WHNP Skills Lab	1
NURS 660	Family Nursing	2
NURS 661	Adv. Clinical Practice : FNP Clinical I	3
NURS 663	Advanced Clinical Practice: FNP	2.5
NURS 664	Common Health Problems of the Pediatric Client	1
<b>TOTAL SPECIALTY CREDIT HOURS</b>		<b>27.5</b>
<b>TOTAL CREDIT HOURS</b>		<b>54.5</b>
<b>Clinical Hours Required:</b>		<b>952</b>

**MSN, Neonatal Nurse Practitioner Concentration**

<b>Core Classes</b>		<b>Credit Hours</b>
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	Intro to Health Care Policy and Systems	3
NURS 629	Advanced Health Assessment	3
NURS 652	Statistics	3
NURS 655	Adv. Pathophysiology: Clinical Decision Making	3
NURS 657	Clinical Prevention and Populations Health	3
NURS 658	Adv. Neonatal Pharmacology	3
<b>TOTAL CORE CREDIT HOURS</b>		<b>27</b>

<b>Concentration Classes</b>		<b>Credit Hours</b>
NURS 604	Transition to Practice	2
NURS 633	Adv. Neonatal Pathophysiology and Clinical Mgt. I	4
NURS 635	Advanced Neonatal Pathophysiology and Clinical Mgt. II	4
NURS 636	Neonatal Nurse Practitioner Residency I	3
NURS 637	Neonatal Nurse Practitioner Residency II	3
<b>TOTAL SPECIALTY CREDIT HOURS</b>		<b>16</b>
<b>TOTAL CREDIT HOURS</b>		<b>43</b>

**Clinical Hours Required: 693**

**MSN, Psych/Mental Health Nurse Practitioner Concentration**

<b>Core Classes</b>		<b>Credit Hours</b>
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 611	Graduate Nursing Pharmacology for Advanced Practice Nurses	3
NURS 613	Intro to Health Care Policy and Systems	3
NURS 652	Statistics	3
NURS 655 or 659	Adv. Lifespan Pathophysiology	2-3
NURS 656	Adv. Clinical Assessment	3
NURS 657	Clinical Prevention and Populations Health	3
<b>TOTAL CORE CREDIT HOURS</b>		<b>26-27</b>

<b>Concentration Classes</b>		<b>Credit Hours</b>
NURS 604	Transition to Practice	2
NURS 638	Adv. Psychiatric Assessment & Clinical Interview Tech.	1
NURS 639	Advanced Psych NP Mental Health Assessment Clinical	1
NURS 641	Adv. Psychiatric MH NP I: Theory	3
NURS 642	Adv. Psychiatric MH Nurse Practitioner II: Theory	3
NURS 645	Advanced Psychiatric Mental Health NP I: Clinical	3

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
<b>TOTAL SPECIALTY CREDIT HOURS</b>		<b>19</b>
<b>TOTAL CREDIT HOURS</b>		<b>45-46</b>
<b>Clinical Hours Required: 672</b>		

**MSN, Certificate in Health Professions Education**

<b>Core Classes</b>	<b>Credit Hours</b>
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 611 Graduate Nursing Pharmacology for Advanced Practice Nurses	3
NURS 613 Intro to Health Care Policy and Systems	3
NURS 652 Statistics	3
NURS 655 Adv. Pathophysiology: Clinical Decision Making	3
NURS 656 Advanced Clinical Assessment	3
NURS 657 Clinical Prevention and Populations Health	3
<b>TOTAL CORE CREDIT HOURS</b>	<b>27</b>

<b>Concentration Classes</b>	<b>Credit Hours</b>
NURS 610 Nurse Educator Practicum	2
ELFH 614 Program Evaluation and Planning	3
ELFH 661 Adult Development and Learning	3
ELFH 675 College Teaching (must be taken on Health Science Campus)	3
<b>TOTAL SPECIALTY CREDIT HOURS</b>	<b>11</b>
<b>TOTAL CREDIT HOURS</b>	<b>38</b>

**Post-Master Certificate: Adult Gerontology Primary Care Nurse Practitioner**

<b>Prerequisite Classes</b>	<b>Credit Hours</b>
NURS 611 Graduate Nursing Pharmacology for Advanced Practice Nurses	3
NURS 655 Adv. Pathophysiology: Clinical Decision Making	3
NURS 656 Adv. Clinical Assessment	3

<b>Certification Classes</b>	<b>Credit Hours</b>
NURS 601 Primary Care I	3
NURS 602 Primary Care II	3
NURS 624 Gerontology Primary Care Nurse Practitioner I	3
NURS 625 Adv. Clinical Practice Adult Gerontology Primary Care NP II	3
NURS 666 Primary Care of the Older Adult	2
NURS 667 Applied Geriatric Pharmacology in Nursing Practice	1
<b>TOTAL CREDIT HOURS</b>	<b>15</b>
NURS 604 Transition to Practice may be required	2

**Clinical Hours Required:** **672**

**Post-Master's Certificate: Adult Gerontology Acute Care Nurse Practitioner**

<b>Prerequisite Classes</b>	<b>Credit Hours</b>
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

<b>Certification Classes</b>	<b>Credit Hours</b>
NURS 667 Applied Geriatric Pharmacology in Nursing Practice	1
NURS 674 Adult Gerontology Acute Care NP I	4
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
<b>TOTAL CREDIT HOURS</b>	<b>15</b>

NURS 604 Transition to Practice may be required 2  
**Clinical Hours Required:** **672**

**Post-Masters Certificate: Family Nurse Practitioner**

<b>Prerequisite Classes</b>	<b>Credit Hours</b>
NURS 611 Graduate Nursing Pharmacology for Advanced Practice Nurses	3
NURS 655 Adv. Pathophysiology: Clinical Decision Making	3
NURS 656 Adv. Clinical Assessment	3

<b>Certification Classes</b>	<b>Credit Hours</b>
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
<b>TOTAL SPECIALTY CREDIT HOURS</b>	<b>15</b>

NURS 604 Transition to Practice may be required 3  
**Clinical Hours Required:** **672**

**Post-Masters Certificate: Neonatal Nurse Practitioner**

<b>Prerequisite Classes</b>	<b>Credit Hours</b>
NURS 629 Adv. Health Assessment of the Neonate	3
NURS 655 Adv. Lifespan Pathophysiology	3
NURS 658 Adv. Neonatal Pharmacology	3

<b>Certification Classes</b>	<b>Credit Hours</b>
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
<b>TOTAL SPECIALTY CREDIT HOURS</b>	<b>14</b>
NURS 604 Transition to Practice may be required	2
<b>Clinical Hours Required:</b>	<b>693</b>

**Post-Master's Certificate: Psychiatric Mental Health Nurse Practitioner**

<b>Prerequisite Classes</b>		<b>Credit Hours</b>
NURS 611	Graduate Nursing Pharmacology for Advanced Practice Nurses	3
NURS 656	Adv. Clinical Assessment	3
NURS 655 or NURS 659	Lifespan Pathophysiology	2-3
<b>Certification Classes</b>		<b>Credit Hours</b>
NURS 638	Adv. Psychiatric Assessment & Clinical Interview Tech.	1
NURS 639	Adv. Psychiatric NP MH Assessment Clinical	1
NURS 641	Adv. Psychiatric MH Nurse Practitioner I: Theory	3
NURS 642	Adv. Psychiatric MH Nurse Practitioner II: Theory	3
NURS 645	Adv. Psychiatric MH Nurs Practitioner I: Clinical	3
NURS 646	Adv. Psychiatric MH Nurse Practitioner II: Clinical	2
NURS 647	Adv. Psychopathology Across the Lifespan	2
NURS 649	Adv. Psychopharmacology Across the Lifespan	2
<b>TOTAL SPECIALTY CREDIT HOURS</b>		<b>17</b>
NURS 604 Transition to Practice may be required		2
<b>Clinical Hours Required:</b>		<b>672</b>

**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)**

		<b>Credit Hours</b>
NURS 401	Introduction to Professional Nursing Practice	1
NURS 402	Therapeutic Nursing Intervention	5

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
<b>TOTAL CREDIT HOURS:</b>		<b>72.5</b>

\*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*

Director of Office  
of Health

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

**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 course work 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

	<b>Core Courses Required for Specialties</b>	<b>Credit Hours</b>
605	Theoretical Applications for Practice	3
607	Foundational Concepts of EBP	3
608	Healthcare Systems and Economics	3
652	Statistics	3
657	Health Promotion and Disease Prevention	3
725	Leadership & Health Policy for Doctorally Prepared Nurse	3
*740	Advanced Pharmacology	3
741	Advanced Pathophysiology	4
*742	Advanced Clinical Assessment	3
743	Epidemiology	3
744	Synthesis & Evaluation of EBP	3
745	Health Information Technology	3
746	Program Development & Evaluation	3
747	Finance Mgt. in Health Care Delivery	2
748	Transformational Leadership	3
750	DNP Project I	3
751	DNP Project II	3
752	DNP Project III	3
*787	Clinical Practicum I	2
*788	Clinical Practicum II	3
*789	Clinical Practicum III	3
	<b>TOTAL CREDIT HOURS, Core Classes</b>	<b>62</b>
	*Not required for Neonatal	

### Adult Gerontology Acute

	<b>Specialty Courses</b>	<b>Credit Hours</b>
754	Differential Diagnosis	1
756	Procedures & Diagnostics for Adult Health	2
760	Gerontology Pharmacology	1
779	Diagnosis & Management for Adult Acute I	3
780	Procedures & Diagnostics for Acute Care	2
781	Diagnosis & Management for Adult Acute II	3
783	Diagnosis & Management for Adult Acute III	2
	<b>TOTAL CREDIT HOURS, Specialty Courses</b>	<b>14</b>

### Adult Gerontology Primary Care

	<b>Specialty Courses</b>	<b>Credit Hours</b>
753	Adolescent Well Child Theory	1
754	Differential Diagnosis	1
755	Diagnosis & Management for Adult Health	4
756	Procedures Adult Health	2
757	Diagnosis & Management for Women's Health	2
758	Diagnosis & Management for Mental Health	2
759	Diagnosis & Management for Geriatric Health	2
760	Gerontology Pharmacology	1
	<b>TOTAL CREDIT HOURS, Specialty Courses</b>	<b>15</b>

**Family Nurse Practitioner**

	<b>Specialty Courses</b>	<b>Credit Hours</b>
754	Differential Diagnosis	1
755	Diagnosis & Management for Adult Health	4
756	Procedures Adult Health	2
757	Diagnosis & Management for Women's Health	2
758	Diagnosis & Management for Mental Health	2
760	Gerontology Pharmacology	1
761	Pediatric & Adolescent Well Child Theory	2
762	Diagnosis & Management for Pediatric Health	2
	<b>TOTAL CREDIT HOURS, Specialty Courses</b>	<b>16</b>

**Neonatal Nurse Practitioner**

	<b>Specialty Courses</b>	<b>Credit Hours</b>
761	Pediatric & Adolescent Well Child Theory	2
763	Neonatal Advanced Physiology & Pathophysiology I	3
764	Diagnostic Reasoning	1
765	Neonatal Advanced Physiology & Pathophysiology II	3
766	Diagnostic Reasoning II	1
767	Neonatal Residency I	3
768	Neonatal Residency II	3
769	Neonatal Residency III	3
784	Neonatal Advanced Pharmacology	3
785	Neonatal Advanced Health Assessment	3
786	Human Embryology & Genetics	3
	<b>TOTAL CREDIT HOURS, Specialty Courses</b>	<b>28</b>

**Psychiatric Mental Health**

	<b>Specialty Courses</b>	<b>Credit Hours</b>
770	Advanced Psych Assessment & Clinical Interview	2
771	Psychopathology	2
772	Psychopharmacology	2
773	Psych Mental Health I	3
774	Psych Mental Health II	3
775	Psych Mental Health III	3
	<b>TOTAL CREDIT HOURS, Specialty Courses</b>	<b>15</b>

**MSN-DNP**

		<b>Credit Hours</b>
608	Healthcare Systems & Economics	3
652	Statistics	3
725	Leadership & Health Policy for the Doctorally Prepared Nurse	3
743	Epidemiology	3
744	Synthesis & Evaluation of EBP	3
745	Health Information Technology	3
746	Program Development	3
747	Finance Management in Healthcare Delivery	2
748	Transformational Leadership	3
750	DNP Project I	3
751	DNP Project II	3

752 DNP Project III  
**TOTAL CREDIT HOURS**

3  
**35**

## 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*  
Director of Office  
of Health  
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

**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 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  
NURSPHDMSN- 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.**

<b>Courses</b>	<b>Credit Hours</b>
NURS 605 Foundations for Advanced Practice	3
NURS 607 Research and Evidence Based Practice	3
NURS 608 Economic & Info. Mgt. in Complex Health Care Systems <b>OR</b>	3
NURS 741 Advanced Pathophysiology, 4 credits	
NURS 652 Statistics <b>OR equivalent</b>	3
NURS 657 Clinical Prevention and Population Health	3
<b>Total Credit Hours:</b>	<b>15</b>

**B.S.N. and M.S.N. Students will complete the following required doctoral level courses, qualifying exam and dissertation:**

<b>Courses</b>	<b>Credit Hours</b>
NURS 700 Theoretical Basis of Nursing	3
NURS 702 Philosophy of Science	3
NURS 710 Research Methods I: Qualitative Research Methods	3
NURS 711 Research Methods II: Quantitative Design	3
NURS 712 Research Methods III: Nursing Measurement	3
NURS 714 Research Methods IV: Analysis of Existing Data	3
NURS 725 Leadership and Health Policy for the Nurse Scientist	3
NURS 735 PhD Seminar I	1
NURS 736 PhD Seminar II	1
NURS 737 PhD Seminar III	1
NURS 738 PhD Seminar IV	1
Advanced Statistics Courses	6
Three Cognates	9
DOCT 600 Doctoral Candidacy **	2

\*\*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 Hammash**  
*Assistant Professor*

**Carla Hermann**  
*Professor*

**Marcia Hern**  
*Professor*

Dean

**Vicki Hines-  
Martin**  
*Professor*

Director of Office  
of Health  
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

**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:

Course #	Course Title	Credit Hours
PHST 624	Clinical Trials I	2
PHST 500	Introduction to Biostatistics for Public Health I	3
PHST 501	Introduction to Biostatistics for Public Health II	3
PHST 631	Data Collection for Clinical Research	2
PHPH 601	Evaluating Health Care Literature	1
PHPH 632	Ethical Conduct of Research	2
PHST 625	Clinical Trials II	2
PHEP 614	Introduction to Clinical Epidemiology	2
PHPH 699	Mentored Research	1
Total		18

#### *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

Course No.	Course Title	Credits
PHST 661	Probability	3
PHST 680	Biostatistical Methods I	3
PHST 624	Clinical Trials I	2
PHMS 523	Public Health in the U.S. <sup>1</sup>	2
<b>Semester Total</b>		<b>10</b>

#### Spring 1

PHST 662	Mathematical Statistics	3
PHST 681	Biostatistical Methods II	3
PHST 684	Categorical Data Analysis	3
PHST 625	Clinical Trials II	2
<b>Semester Total</b>		<b>11</b>

#### Fall 2

PHST 683	Survival Analysis	3
PHST xxx	Biostatistics Elective <sup>2</sup>	3
PHEP xxx	Epidemiology Elective <sup>3</sup>	3
PHST 675	Independent Study in Biostatistics	2
<b>Semester Total</b>		<b>11</b>

**Degree Total** **30**

#### Spring 2

PHST 666	Master's Thesis Research (optional)	6
----------	-------------------------------------	---

**Total** **6**

**Degree Total with Optional Thesis** **36**

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

**Jack Barnette**

*Professor*

Associate Dean

**Guy Brock**

*Associate Professor*

**Jeremy Gaskins**

*Assistant Professor*

**Maiying Kong**

*Associate Professor*

**K.B. Kulasekera**

*Professor and*

*Chair*

**Doug Lorenz**

*Assistant Professor*

**Riten Mitra**

*Assistant Professor*

**Shesh Rai**

*Associate Professor*

Wendell Cherry

Chair in Clinical

Trial Research

**Dongfeng Wu**

*Associate Professor*

**Qi Zheng**

*Assistant Professor*

# 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

#### Required Coursework

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall I	PHST-500	Introduction to Biostatistics for Public Health I	3
	PHMS-523	Public Health in the U.S.*	2
		Elective	3
<b>Semester Total</b>			<b>7</b>
Spring I	PHPH-601	Evaluating Health Care Literature	1
	PHST-501	Introduction to Biostatistics for Public Health II	3
	PHEP-614	Introduction to Clinical Epidemiology	2
		Elective	3
<b>Semester Total</b>			<b>9</b>
Fall II	PHST-631	Data Collection for Clinical Research	2
	PHST-624	Clinical Trials I	2
		Elective	3
<b>Semester Total</b>			<b>8</b>
Spring II	PHST-625	Clinical Trials II	2

**Required Coursework**

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
	PHPH-632	Ethical Conduct of Research	2
	PHPH-699	Mentored Research	3

**Semester Total 7**  
**Degree Total 31**

**Electives:**

*Semester Credit Hours*

**Nine hours of electives from the following (other courses on approval of Offered program advisor)**

PHST-XXX	Advanced Coursework in Biostatistics	Variable	
PHEP-XXX	Advanced Coursework in Epidemiology	Variable	
PHPB-604	Health Decision Risk Analysis	Spring	3
PHPB-501	Introduction to Health Behavior	Fall	2
PHPH-610	New Drug and Device Development	Fall	2
ENGL-599	Advanced Academic Writing Across Disciplines	Spring	3
CECS-536	Data Management and Analysis	Fall	3
SOC- 618	Qualitative Field Research Methods	Spring	3

\* 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**

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall	PHST-624	Clinical Trials I	2
	PHMS-523	Public Health in the U.S.*	2
	PHST-500	Introduction to Biostatistics for Public Health I	3
	PHST-631	Data Collection for Clinical Research	2
		Elective(s)	6
<b>Semester Total</b>			<b>15</b>
Spring	PHPH-601	Evaluating Health Care Literature	1
	PHST-501	Introduction to Biostatistics for Public Health II	3
	PHPH-632	Ethical Conduct of Research	2
	PHST-625	Clinical Trials II	2
	PHEP-614	Introduction to Clinical Epidemiology	2
	Elective(s)	3	
<b>Semester Total</b>			<b>13</b>
	PHPH-699	Mentored Research	3
	<b>Semester Total</b>		<b>3</b>

**Required Coursework**

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
			<b>Degree Total</b>
			<b>31</b>

**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

<i>Required Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall I	PHEP-618	Epidemiologic Methods II	3
	PHEP-622	Population Pathology	3
	PHEP-648	Data Management and Analysis for Epidemiology I	1
	PHxx-xxx	Elective course	3
	Semester Total		
Spring I	PHEP-702	Epidemiologic Research Management I	3
	PHEP-701	Advanced Epidemiologic Methods	3
	PHEP-649	Data Management and Analysis for Epidemiology II	1
	PHxx-xxx	Elective course	3
	Semester Total		
Fall II	PHxx-xxx	Elective course	3
	PHxx-xxx	Elective course	3
	PHEP-666	Thesis Research in Epidemiology	3
	Semester Total		
Spring II	PHxx-xxx	Elective course	3
	PHEP-666	Thesis Research in Epidemiology	6
	Semester Total		
<b>Degree Total</b>			<b>38</b>

### **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>.

### **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 Webpage:** <http://louisville.edu/sphis/academics/master-of-public-health.html>

## 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](http://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 application 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](mailto: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.

#### ***Concentration***

Biostatistics  
Environmental and occupational health  
Epidemiology  
Population Health management  
Health Policy  
Health promotion and behavior

#### ***Department***

Bioinformatics and Biostatistics  
Environmental and Occupational Health Sciences  
Epidemiology and Population Health  
Health Management and Systems Sciences  
Health Management and System Sciences  
Health Promotion and Behavioral Sciences

Requirements for acceptance to the concentrations in the MPH program are:

**Concentration**

**Concentration Acceptance Requirements**

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

Epidemiology and Population Health  
Health Management and System  
Sciences

No additional requirements

No additional requirements

Health Promotion and Behavioral  
Sciences

No additional requirements

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 50<sup>th</sup> percentile), GMAT (at least 50<sup>th</sup> 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

### **Required Coursework**

<i>Semester</i>	<i>Course #</i>	<i>Course Title (and Area, as needed)</i>	<i>Credit Hours</i>
Fall I	PHEH-500	Introduction to Environmental Health Sciences (core)	2
	PHMS-501	Introduction to Public Health Practice and Administration (core)	2
	PHPB-501	Introduction to Health Behavior (core)	2
	PHEP-501	Introduction to Epidemiology (core)	2
	PHST-500	Introduction to Biostatistics for Public Health I (core)	3
		Semester Total	11
Spring I	PHST-501	Introduction to Biostatistics for Public Health II (core)	3
		Concentration Course #1	3
		Concentration Course #2	3
		Selected elective course	1
	Semester Total	10	
Summer I	PHPH-679	Public Health Practicum Experience	1
	Semester Total	1	
Fall II		Concentration course #3	3
		Concentration course #4	3
		Selected elective courses (note: can be 1, 2, or 3 hrs – Total 3hrs)*	3
		PHPH-679 Public Health Practicum Experience	1
		Semester Total	10
Spring II		Concentration course #5	3



**Required Coursework**

<i>Semester</i>	<i>Course #</i>	<i>Course Title (and Area, as needed)</i>	<i>Credit Hours</i>
		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
		<b>Degree Total</b>	<b>44</b>

\*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***

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
	PHST-501	Introduction to Biostatistics for Public Health II (core)	3
Spring I	PHST 640	Statistical Methods for Research Design in Human Studies	3
	PHST 620	Introduction to Statistical Computing	3

***Bioinformatics and Biostatistics Concentration Coursework***

<b><i>Semester</i></b>	<b><i>Course #</i></b>	<b><i>Course Title</i></b>	<b><i>Credit Hours</i></b>
		Selected elective courses (note: these can be 1, 2, or 3 hrs. for a total of 3 hrs.)	1
		Semester Total	10
Summer	PHPH-679	Public Health Practicum Experience	1
		Semester Total	1
	PHST 680	Biostatistical Methods I	3
		Epi Elective or A 3 hour Epi Course OR Epi SAS (2) + PHST 602(1) OR	3
Fall II		Epi SAS (2) + PHST 624 (Clinical Trials I) (2) + PHST 602 Biostatistics PHST 602(1) Seminar. (1)	
		Selected elective course	3
	PHPH-679	Public Health Practicum Experience	1
		Semester Total	10
	PHST 681	Biostatistical Methods II	3
	PHST 684	Categorical Data Analysis	3
Spring II	PHST 671	Special Topics in Biostatistics and Decision Science	3
	PHPH-679	Public Health Practicum Experience	1
	PHPH-697	Integrating Learning and Experience in Public Health	2
		Semester Total	12
		<b>Concentration Total</b>	<b>33</b>

**Environmental and Occupational Health Concentration**

**Coursework**

***Environmental and Occupational Health Sciences Concentration Coursework***

<b><i>Semester</i></b>	<b><i>Course #</i></b>	<b><i>Course Title</i></b>	<b><i>Credit Hours</i></b>
	PHST-501	Introduction to Biostatistics for Public Health II (core)	3
	PHEH 640	Risk Assessment and Environmental Policy	3
Spring I	PHEH 651	Advanced Environmental Health	3
		Selected elective courses (note: these can be 1, 2, or 3 hrs. for a total of 3 hrs.)	1
		Semester Total	10
Summer	PHPH-679	Public Health Practicum Experience	1
		Semester Total	1
	PHEH 610	Occupational Safety and Health	3
	PHEH XXX	Nutrition (new course)	3
Fall II		Selected approved elective course	3
	PHPH-679	Public Health Practicum Experience	1
		Semester Total	10
	PHEH XXX	Pulmonary Toxicology (new course)	3
	PHEH XXX	Shared SPHIS Course or Environmental Sampling and Analysis	3
Spring II		Selected approved elective	3
	PHPH-679	Public Health Practicum Experience	1
	PHPH-697	Integrating Learning and Experience in Public Health	2
		Semester Total	12

***Environmental and Occupational Health Sciences Concentration Coursework***

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
<b>Concentration Total</b>			<b>33</b>

**Epidemiology Concentration**

**Coursework**

***Epidemiology and Population Health Required Coursework***

<i>Semester</i>	<i>Course #</i>	<i>Course Title (and Area, as needed)</i>	<i>Credit Hours</i>
Spring I	PHST-501	Introduction to Biostatistics for Public Health II (core)	3
	PHEP 619	Biology of Disease in Populations (to be required for epi students, elective to others)	3
	PHEP 602	Epidemiology Methods	3
		Selected approved elective course	1
		Semester Total	10
Summer I	PHPH-679	Public Health Practicum Experience	1
	Semester Total		1
Fall II	PHEP 616	Disease Surveillance/Health Statistics	3
	PHEP xxx	Survey and Sampling Methods	3
		Selected approved elective courses (note: can be 1, 2, or 3 hrs – Total 3hrs)	3
	PHPH-679	Public Health Practicum Experience	1
		Semester Total	10
Spring II	PHEP 617	Field Epidemiology	3
	PHEP 655	Emerging Issues in Epidemiology	3
	PHEP xxx	Epidemiology and Public Health Policy	3
	PHPH-679	Public Health Practicum Experience	1
	PHPH-697	Integrating Learning and Experience in Public Health	2
	Semester Total	12	
<b>Degree Total</b>			<b>44</b>

**Population Health Management Concentration**

**Coursework**

***Population Health Management Concentration Coursework***

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Fall I	PHMS-680	Health Management Leadership Seminar	1
		Semester Total (Including Fall I core courses listed above)	12
	PHST-501	Introduction to Biostatistics for Public Health II (core)	3
Spring I	PHMS-710	Health Policy & Analysis	3
	PHMS-609	Health Finance and Financial Management	3
	PHMS-XXX	Quality Assessment and Information Management	3
		Semester Total	12

**Population Health Management Concentration Coursework**

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Summer	PHPH-679	Public Health Practicum Experience	1
	Semester Total		1
	PHMS-615	Introduction to Health Systems	3
	PHMS-620	Healthcare Strategic Planning & Marketing	3
	PHMS-605	Governance and Management of Healthcare Organizations	3
Fall II	PHMS-662	Health Economics	3
	PHMS-679	Public Health Practicum Experience	1
	Semester Total		13
	PHMS-XXX	Health Law and Ethics	3
	PHMS-XXX	Population Health Management	3
	PHMS-XXX	Human Resource Management in the Health Sector	3
Spring II	PHPH-679	Public Health Practicum Experience	1
	PHPH-697	Integrating Learning and Experience in Public Health	2
	Semester Total		12
Degree Total			50
<b>Concentration Total</b>			<b>36</b>

**Health Policy Concentration**

**Coursework**

**Health Policy Concentration Coursework**

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Spring I	PHST-501	Introduction to Biostatistics for Public Health II (core)	3
	PHMS-609	Health Finance and Financial Management	3
	PHMS-710	Health Policy and Analysis	3
	PHMS-XXX	Health Services Research Methods I	3
	Semester Total		12
Summer	PHPH-679	Public Health Practicum Experience	1
	Semester Total		1
Fall II	PHMS-XXX	Health Services Research Methods II	3
	PHMS-662	Health Economics	3
	PHPB-611	Community Organization & Assessment	3
		Health Policy Elective	3
	PHPH-679	Public Health Practicum Experience	1
	Semester Total		13
Spring II	PHMS-704	Health Impact Assessment	3
		Health Policy Elective	3
	PHPH-679	Public Health Practicum Experience	1
	PHPH-697	Integrating Learning and Experience in Public Health	2
	Semester Total		9
Degree Total			46
<b>Concentration Total</b>			<b>32</b>

**Health Promotion and Behavior Concentration**

**Coursework**

***Health Promotion and Behavioral Sciences Concentration Coursework***

<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
	PHST-501	Introduction to Biostatistics for Public Health II (core)	3
	PHPB-611	Community Organization and Assessment	3
Spring I	PHPB-604	Health Decision and Risk Analysis	3
		Selected elective courses (note: these can be 1, 2, or 3 hrs. for a total of 3 hrs.)	1
	Semester Total		10
Summer	PHPH-679	Public Health Practicum Experience	1
	Semester Total		1
	PHPB-612	Health Communication Campaigns	3
	PHPB-614	Critical Thinking and Program Evaluation	3
Fall II		Selected elective course	3
	PHPH-679	Public Health Practicum Experience	1
	Semester Total		10
	PHPB-XXX	Policy Development and Advocacy	3
	PHPB-615	Advanced Program Evaluation	3
Spring II	PHPB-XXX	Social Determinants of Health	3
	PHPH-679	Public Health Practicum Experience	1
	PHPH-697	Integrating Learning and Experience in Public Health	2
	Semester Total		12
<b>Concentration Total</b>			<b>33</b>

**Faculty**

**DEPARTMENT OF BIOINFORMATICS AND BIOSSTATISTICS**

**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**

*Professor*  
**Dongfeng Wu**  
*Associate Professor*  
**Qi Zheng**  
*Assistant Professor*

**DEPARTMENT OF ENVIRONMENTAL & OCCUPATIONAL HEALTH SCIENCES**

**David J. Tollerud**  
*Professor*  
Chair  
**Gary Hoyle**  
*Professor*  
**Robert J. Jacobs**  
*Professor*  
Director of MPH Program  
**Rachel Neal**

*Assistant Professor*  
**Zhang Qunwei**  
*Associate Professor*

**DEPARTMENT OF EPIDEMIOLOGY & POPULATION HEALTH**

**Richard N. Baumgartner**  
*Professor*  
Chair  
**Kathy B. Baumgartner**  
*Professor*  
Associate Dean  
**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*  
**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*

---

**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*

*Associate Dean*

**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

Emphasis	Course #	Course Title	Credit Hours
All	PHST-691	Bayesian Statistics	3
	PHST-710	Advanced Statistical Computing I	3
	PHST-762	Advanced Statistical Inference	3
	PHST-781	Advanced Linear Models	3
	<b>Subtotal Credit Hours</b>		<b>12</b>

### Elective Coursework

Emphasis	Course #	Course Title	Credit Hours
None	PHST-703	Doctoral Practicum in Consulting	1
	PHST-724	Advanced Clinical Trials	3
	PHST-780	Advanced Nonparametrics	3
	PHST-782	Generalized Linear Models	3
	PHST-783	Advanced Survival Analysis	3
	Various	Additional Electives	9
	<b>Subtotal Credit Hours</b>		<b>22</b>

Bioinformatics	PHST-703	Doctoral Practicum in Consulting	1
	PHST-750	Statistics for Bioinformatics	3
	PHST-751	High-Throughput Data Analysis	3
	PHST-752	Statistical Genetics	3
	CECS-660	Introduction to Bioinformatics	3
	BIOC-545	Advanced Biochemistry I	3



-or-	Graduate Cell Biology	3
	MBIO-667	
	Various Additional Electives	6
	<b>Subtotal Credit Hours</b>	<b>22</b>
	<b>Degree Total Credit Hours</b>	<b>34</b>

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.

		<b>Electives</b>		
<b>Emphasis</b>		<b>Course #</b>	<b>Course Title</b>	<b>Credit Hours</b>
--	<b>B</b>			
X	X	PHST-675	Independent Study in Biostatistics	1-3
X	X	PHST-682	Multivariate Analysis	3
X	X	PHST-704	Mixed Effect Models and Longitudinal Data Analysis	3
X	X	PHST-711	Advanced Statistical Computing II	3
X	X	PHST-725	Design of Experiments	3
X		PHST-750	Statistics for Bioinformatics	3
X		PHST-751	High-Throughput Data Analysis	3
X		PHST-752	Statistical Genetics	3
	X	PHST-780	Advanced Nonparametrics	3
	X	PHST-782	Generalized Linear Models	3
X	X	PHST-785	Nonlinear Regression	3
	X	CECS-632	Data Mining	3

"--" 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.

<b>Sample Program of Study – Year 1</b>			
<b>Semester</b>	<b>Emphasis</b>	<b>Courses</b>	<b>Credit Hours</b>
Fall	All	PHST-710, 762, 781	9
	No Emphasis	PHST-691 Any TWO of PHST-724, 780, 782, 783	9
Spring		PHST-691	
	Bioinformatics	Any TWO of PHST-750, PHST-752,	9

Summer	All	CECS-660, BIOC-545, MBIO-667 PHST-703	1
--------	-----	------------------------------------------	---

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**

### **Jack Barnette**

*Professor*  
Associate Dean

### **Guy Brock**

*Associate Professor*

### **Jeremy Gaskins**

*Assistant Professor*

### **Maiying Kong**

*Associate Professor*

### **K.B. Kulasekera**

*Professor and*  
*Chair*

### **Doug Lorenz**

*Assistant Professor*

### **Riten Mitra**

*Assistant Professor*

### **Shesh Rai**

*Associate Professor*

Wendell Cherry

Chair in Clinical

Trial Research

### **Dongfeng Wu**

*Associate Professor*

### **Qi Zheng**

*Assistant Professor*

# 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:

- 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.

Professional quality peer-review, oral and poster presentation, report, grant, and manuscript writing.

Mentoring of junior peers.

**Demonstrated by**

- Successful completion and defense of dissertation
- Successful development, conduct, completion, and defense of the dissertation
- Successful completion of assignments to work with master's students on their research, theses, presentations, and posters

**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 > 60<sup>th</sup> 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  $\geq 3.0$  on 4.0 scale
- GRE performance in 50<sup>th</sup> 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 60<sup>th</sup> 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](mailto:muriel.harris@louisville.edu) or (502)852-4061, or the Department Chair, Dr. Richard Wilson, at [richard.wilson@louisville.edu](mailto: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

<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
BIOC-645	Advanced Biochemistry I	4
BIOC-647	Advanced Biochemistry II	4
BIOC-668	Molecular Biology	4
PHEH-750	Seminar 1 in Environmental and Occupational Health	1
PHEH-751	Seminar 2 in Environmental and Occupational Health	1

<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
PHEH-752	Seminar 3 in Environmental and Occupational Health	1
PHEP-602	Epidemiological Methods	3
PHEP-620	Environmental and Occupational Epidemiology	3
PHST-620	Introduction to Statistical Computing	3
PHST-680	Biostatistical Methods I	3
PHTX-625	Scientific Writing	2
	Elective courses	9
Degree Total		38

#### 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*

<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
PHEH-753	Independent Study in Environmental and Occupational Health	1-3
PHST-650	Advanced Topics in Biostatistics	3
PHST-680	Biostatistical Methods I	3
PHST-681	Biostatistical Methods II	3
PHPB-650	Advanced Topics in Health Promotion and Behavioral Sciences	3
PHMS-650	Advanced Topics in Health Management and Systems Sciences	3
GEOG-657	Geographic Information Systems	3
GEOG-656	Spatial Statistics	3
PHTX-601	Principles of Medical Pharmacology	3
PHTX-630	Toxicology: Principles and Application	3
PHTX-618	Topics in Pharmacology & Toxicology	3

*Approved Electives*

<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
PHTX-607	Seminar in Genetics and Molecular Medicine	3
BIOC-611	Biochemical and Molecular Methods	3
BIOC-640	Principles of Biochemistry	3
BIOC-670	Protein Structure and Function	3
BIOC-660	Molecular Endocrinology	3
BIOC-641	Advanced Eukaryotic Genetics	3
BIOC-668	Molecular Biology	3
BIOC-675	Cancer Biology	3
BIOL-522	Aquatic Ecology	3
BIOL-563	Population and Community Ecology	3
BIOL-562	Ecosystem Ecology	3
BIOL-584	Interdisciplinary Frameworks in Environmental Science and Technology	3
BIOL-608	Ecological Instrumentation	3
BIOL-660	Advanced Ecology of Urban and Suburban Landscapes	3
BIOL-657	Advanced Industrial and Food Microbiology	3
CEE-509	Environmental Processes and Systems	3
CEE-534	Industrial Waste Management	3
CEE-535	Solid Waste Management	3
CEE-574	Water and Wastewater Treatment	3
CEE-581	Environmental Impact Analysis	3
CEE-674	Water Resources Systems	3
CEE-675	Surface Water Quality Modeling	3
CHE-509	Environmental Processes and Systems	3
CHE-533	Chemical Engineering Safety and Health	3
CHE-534	Industrial Waste Management	3
CHE-535	Pollution Prevention	3
<a href="#">EXP-600</a>	Physiology of Exercise	3
<a href="#">EXP-605</a>	Human Physiology	3
GEOG-522	GIS and Public Health	3
GEOG-531	GIS and Urban Demographic Analysis	3
GEOG-561	Urban Environmental Quality	3
GEOS-564	Hydrology	3
GEOS-565	Natural Hazards	3
MBIO-601	Molecular Microbiology (Introductory to Infectious Diseases)	3
MBIO-602	Introduction to Immunology	3
MBIO-670	Molecular Virology	3
MBIO-685	Microbial Physiology	3
MBIO-687	Microbial Pathogenesis	3
MBIO-618	Topics in Advanced Microbiology	3
MBIO-680	Genetics of Infectious Diseases	3
MBIO-667	Cell Biology	3
PHZB-605	Systemic Physiology I	3
PHZB-611	Advanced Human Physiology	3
IE-530	Industrial Safety Engineering	3
UPA-678	Land Use and Planning Law	3
UPA-679	Environmental Policy	3
UPA-687	Environmental Policy and Natural Hazards	3

**Qualifying Examination**

Upon completion of the majority of the required coursework for the Ph.D., the student is eligible to sit for the doctoral qualifying examination. The timing and eligibility for the qualifying examination is determined by the student's faculty advisor and department chair. Successful completion of the examination admits the student to doctoral candidacy. A student who does not successfully complete the exam may be required to take additional or remedial coursework and is allowed one opportunity to retake the exam.

**Dissertation**

A dissertation is required of a candidate for the degree of doctor of philosophy in public health sciences with a 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

<i>Required Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Block 1			
Fall I	PHEP-618	Epidemiologic Methods II	
	-OR-	-OR if already taken -	3
	PHEP-xxx	Epidemiology elective	
	PHEP-648	Data Management and Analysis for Epidemiology I <sup>B1</sup>	1
	PHEP-622	Population Pathology <sup>B1</sup>	3
	PHEP-xxx	Epidemiology elective	
	-OR-	-OR-	3
	PHST-xxx	Biostatistics elective	
	PHEP-750	Seminars in Epidemiology <sup>B1</sup>	3
	Semester total		13
Spring I	PHEP-701	Advanced Epidemiologic Methods <sup>B1</sup>	3
	PHEP-649	Data Management and Analysis for Epidemiology II <sup>B1</sup>	1
	PHEP-702	Epidemiologic Research Management <sup>B1</sup>	3
	PHEP-xxx	Epidemiology elective	
	-OR-	-OR-	3
	PHST-xxx	Biostatistics elective	
	PHEP-750	Seminars in Epidemiology <sup>B1</sup>	3
	Semester total		13
Block 1 total			26

<i>Required Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
Block 2			
Fall II	PHEP-xxx	Epidemiology elective	3
	PHEP-xxx	Epidemiology elective	
	-OR-	-OR-	3
	various	Minor elective	
	various	Minor elective	3
	PHEP-750	Seminars in Epidemiology <sup>B2</sup>	3

<i>Required Coursework</i>			
<i>Semester</i>	<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
	Semester total		12
Spring II	PHEP-xxx	Epidemiology elective	3
	Two of:	Two of:	
	PHEP-xxx	Epidemiology elective	6
	various	Minor Elective	(3 each)
	PHEP-778	Readings and Research in Epidemiology	
	PHEP-778	Readings and Research in Epidemiology <sup>B2</sup>	3
	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.

<i>Approved Electives for Minor Requirement</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
BIOC-641	Advanced Eukaryotic Genetics	3
BIOC-660	Molecular Endocrinology	3
BIOC 661	Molecular Mechanisms of Toxicology (cross-listed as PHTX-661)	3
BIOC-668	Molecular Biology	3
BIOC-675	Cancer Biology	3
EXP-600	Physiology of Exercise	3
EXP-605	Human Physiology	3
GEOG-656	Spatial Statistics	3
GEOG-657	Geographic Information Systems	3
MBIO-687	Microbial Pathogenesis	3

*Approved Electives for Minor Requirement*

<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
MBIO-618	Topics in Advanced Microbiology	3
MBIO-680	Genetics of Infectious Diseases	3
NURS-670	Cancer Epidemiology and Pathophysiology	3
PHCI-602	Health Services and Outcomes Research	2
PHCI-610	New Drug and Device Development	2
PHCI-624	Clinical Trials I: Planning and Design	2
PHCI-625	Clinical Trials II	2
PHCI-632	Ethical Conduct of Healthcare Research	2
PHCI-650	Medical Decision Analysis	2
PHEH-650	Advanced Topics in Environmental and Occupational Health	3
PHMS-650	Advanced Topics in Health Management and Systems Science	3
PHPB-650	Advanced Topics in Health Promotion and Behavioral Science	1-3
PHST-650	Advanced Topics in Biostatistics	3
PHST-680	Biostatistical Methods I	3
PHST-681	Biostatistical Methods II	3
PHST-661	Probability	3
PHST-662	Mathematical Statistics	3
PHST-683	Survival Analysis	3
PHST-682	Multivariate Analysis	3
PHST-684	Categorical Data Analysis	3
PHST-750	Statistics for Bioinformatics	3
PHST-751	High-throughput Data Analysis	3
PHST-785	Nonlinear Regression	3
PHTX-607	Seminar in Genetics and Molecular Medicine	3
PHTX-618	Topics in Pharmacology & Toxicology	3
PHTX-630	Toxicology: Principles and Application	3
PHTX-661	Molecular Mechanisms of Toxicology (cross-listed as BIOC 661)	3
PHZB-605	Systemic Physiology I	3
PHZB-611	Advanced Human Physiology	3

**Proficiency Examination**

Upon successful completion of the first block of required coursework, the student is eligible to sit for the written proficiency examination, which is administered by a committee of departmental faculty appointed by the chair. The timing of the proficiency examination is determined by the student's faculty advisor and the department chair. The subject matter includes basic knowledge of disease biology and pathophysiology; theory and skills in epidemiologic research methods, including study design and management; and quantitative analytic methods. A student who does not successfully pass the proficiency examination is allowed a second opportunity to pass the exam. Failing the proficiency examination the second time results in dismissal from the program.

**Candidacy Examination**

After passing the proficiency examination and upon completion of the second block of coursework, the student is eligible to sit for the written and oral candidacy examination, which is administered by a committee appointed by the department chair and composed of graduate faculty. The subject matter includes knowledge of advanced epidemiologic methods; specialized knowledge pertaining to the minor field of 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).

<i>Area</i>	<i>Course #</i>	<i>Required Coursework Course Title</i>	<i>Credit Hours</i>
<b><i>Core Areas (33 credit hours minimum) Courses offered by SPHIS are preferred whenever possible.</i></b>			
<i>Health Management Context</i>	PHMS-615	Introduction to Health Systems	3
	PHMS-650-04	Advanced Topics in Health Management and Systems Sciences: Evolutionary Forces in Public Health	3
<i>(6 credit hours minimum) Organizational Theory, Dynamics, Behavior, and Leadership</i>	PHMS-607	Managing Healthy Communities	3
	PHMS-605	Governance and Management of Healthcare Organizations	3
<i>(6 credit hours) Health Policy</i>	PADM-600	Public Administration and Organizational Theory	3
	PHMS-603	Legal and Bioethical Aspects of Public Health	3
<i>(6 credit hours) Management and Administrative Processes</i>	PHMS-650-05	Advanced Topics in Health Management and Systems Sciences: Health Policy and Analysis	3
	PHMS-650-03	Advanced Topics in Health Management and Systems Sciences: Health Finance and Financial Management	3
<i>(6 credit hours minimum)</i>	PADM-642	Human Resources Management	3
	PADM-604	Public Budgeting and Finance	3
<i>Research Methods</i>	PHST-680	Biostatistical Methods I	3
	PHST-681	Biostatistical Methods II	3
	PHEP-618	Epidemiologic Methods II	3
	PHMS-702	Methods in Health Services and Outcomes Research	3
<i>(9 credit hours minimum)</i>	PHST-710	Advanced Statistical Computing I	3
	SOC-618	Qualitative Field Research Methods	3
<b><i>Seminars (3 credit hours)</i></b>			
<i>(required)</i>	PHMS-751	Seminar 1 in Public Health Management	1
	PHMS-752	Seminar 2 in Public Health Management	1
	PHMS-753	Seminar 3 in Public Health Management	1

<i>Area</i>	<i>Course #</i>	<i>Required Coursework Course Title</i>	<i>Credit Hours</i>
<b>Capstone(6 credit hours)</b>			
(required)	PHMS-650-07	Advanced Topics in Health Management and Systems Sciences: Health Policy and Management	3
	PHMS-650-06	Advanced Topics in Health Management and Systems Sciences: Health Processes and Systems	3

### **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.

<i>Course #</i>	<i>Course Title</i>	<i>Approved Electives</i>	<i>Credit Hours</i>
<b>Recommended Electives</b>			
PHMS-618	Introduction to Public Health Informatics		3
PHMS-655	Systems Thinking and Dynamic Modeling in Public Health		3
PHMS-702	Methods in Health Services and Outcomes Research		3
PHMS-761	Public Health and the Built Environment		3
PHST-705	Statistical Methods for Cost-Effectiveness Analysis		3
PHPH-630	Geographic Information Systems in Public Health		3
<b>School of Public Health and Information Sciences</b>			
<b>Health Management and Systems Sciences</b>			
PHMS-603	Legal and Bioethical Aspects of Public Health		3
PHMS-605	Governance and Management of Healthcare Organizations		3
PHMS-607	Managing Healthy Communities		3
PHMS-615	Introduction to Health Systems		3
PHMS-618	Public Health Informatics		3

<i>Approved Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
PHMS-650-03	Advanced Topics in Health Management and Systems Sciences: Health Finance and Financial Management	3
PHMS-650-04	Advanced Topics in Health Management and Systems Sciences: Evolutionary Forces in Public Health	3
PHMS-650-05	Advanced Topics in Health Management and Systems Sciences: Health Policy and Analysis	3
PHMS-655	Systems Thinking and Dynamic Modeling in Public Health	3
PHMS-702	Methods in Health Services and Outcomes Research	3
PHMS-761	Public Health and the Built Environment	3
<b><i>Epidemiology and Population Health</i></b>		
PHEP-501	Introduction to Epidemiology	3
PHEP-604	Epidemiology of Acute and Infectious Diseases	2
PHEP-605	Research in Infectious Disease (Laboratory for PHEP-604)	1
PHEP-606	Genetic and Molecular Epidemiology	3
PHEP-611	Nutritional Epidemiology	3
PHEP-612	Epidemiology and Bioterrorism	3
PHEP-613	Epidemiology of Aging	3
PHEP-615	Epidemiology of Maternal and Child Health	3
PHEP-616	Disease Surveillance and Health Statistics	3
PHEP-617	Field Epidemiology	3
PHEP-618	Epidemiologic Methods II	3
PHEP-619	Biology of Disease in Populations	3
<b><i>Bioinformatics and Biostatistics</i></b>		
PHST-500	Introduction to Biostatistics	3
PHST-601	Introduction to Medical Decision Analysis	3
PHST-610	Statistical Computing and Data Management for Public Health	3
PHST-620	Introduction to Statistical Computing	3
PHST-640	Statistical Methods for Research Design in Health Studies	3
PHST-663	Decision Analysis	3
PHST-680	Biostatistical Methods I	3
PHST-681	Biostatistical Methods II	3
PHST-690	Utility Theory and Assessment	3
PHST-701	Advanced Medical Decision Making	3
PHST-705	Statistical Methods for Cost-Effectiveness Analysis	3
PHST-710	Advanced Statistical Computing I	3
<b><i>Environmental and Occupational Health Sciences</i></b>		
PHEH-500	Introduction to Environmental Health Sciences	3
PHEH-610	Occupational Health and Safety	3
PHEH-620	Global Issues in Environmental and Occupational Health	3
<b><i>Health Promotion and Behavioral Sciences</i></b>		
PHPB-501	Introduction to Health Behavior	3
PHPB-604	Health Decision and Risk Analysis	3
PHPB-608	Public Health Program Evaluation	3
PHPB-612	Health Communication Campaigns	3
<b><i>Public Health</i></b>		
PHPH-614	Critical Thinking and Program Evaluation	3
<b><i>College of Business</i></b>		



<i>Approved Electives</i>		
<i>Course #</i>	<i>Course Title</i>	<i>Credit Hours</i>
ACCT-615	Advanced Financial and Governmental Accounting	3
MBA-625	Managerial Accounting	3
MBA-635	Managerial Finance	3
MBA-645	Leadership and Ethics	3
MBA-655	Strategic Management	3
<i>College of Arts and Sciences</i>		
PADM-600	Public Administration and Organizational Theory	3
PADM-601	Statistics for Public Affairs	3
PADM-604	Public Budgeting and Finance	3
PADM-604	Public Budgeting and Finance	3
PADM-605	Strategic Management and Planning	3
PADM-606	Public Policy	3
PADM-607	Planning Theory	3
PADM-608	e-Government	3
PADM-610	Administrative Law and Process	3
PADM-611	Financial Management for Public Administration	3
PADM-620	Intergovernmental Relations	3
PADM-630	Environmental Policy and Natural Hazards	3
PADM-642	Human Resources Management	3
PLAN-611	Human Resources Management	3
PLAN-612	Mediation and Dispute Resolutions	3
SOC-618	Qualitative Field Research Methods	3

### **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]**

<b>Course</b>	<b>Title-Description</b>	<b>Credit Hours</b>
<b>Epidemiological Methods</b>		
PHEP 602	Epidemiologic Methods	3
-OR-	-OR-	

PHEP 618	Epidemiologic Methods II	
<b>Theory/Applied Theory/Approaches/Planning/Interventions</b>		
PHPB 701	Theoretical Basis of Health Promotion	3
PHPB 704	Psycho-Social Foundations of Health Decision Making	3
PHPB 705	Community Organization and Health Policy Advocacy	3
HSS 669	Administering Health Promotion and Disease Prevention Programs	3
<b>Advanced Evaluation</b>		
PHPB 615	Advanced Program Evaluation	3
<b>Policy &amp; Politics</b>		
PHPB 704	Health Care Policy and Politics	3

**METHODS & STATISTICAL ANALYSIS [18-24 hours]**

Course	Title-Description	Credit Hours
<b>Advanced Biostatistics (3 credit hours)</b>		
PHST 630	Applied Statistical Methods	3
PSYC 610	Advanced Statistics I	3
SOC 609	Seminar in Statistics I	3
<b>Measurement (3 credit hours)</b>		
PHST 671	Health Science Instrumentation	3
ECPY 540	Evaluation and Measurement in Education	3
ECPY 740	Psychometrics of Educational and Psychological Testing	3
ELFH 602	Survey Research and Attitude Measurement	3
<b>Quantitative Research Methods (3-9 credit hours)</b>		
ECPY 745	Systematic Reviewing and Meta-Analysis	3
ECPY 746	Secondary Data Analysis	3
ECPY 764/ ELFH 764	Structural Equation Modeling	3
ECPY 765/ ELFH 765	Hierarchical Linear Modeling	3
ECPY 793	Applied Logistic Regression	3
ELFH 601	Applied Statistics	3
ELFH 700	Research Concepts and Design	3
ELFH 701	Intermediate Applied Statistics	3
ELFH 702	Advanced Regression Analysis	3
ELFH 703	Multivariate Statistics	3
PHPB 703	Health Promotion Research Methods and Design	3
PHPH 610	Data Management and Statistics for Public Health using SPSS	3
PHPH 630	Geographic Information Systems in Public Health	3
PHST 630	Applied Statistical Methods	3
PHST 640	Statistical Methods for Research Design in Health Sciences	3
PHST 680	Biostatistical Methods I	3
PHST 681	Biostatistical Methods II	3
PHST 682	Multivariate Statistical Analysis	3
PHST 684	Categorical Data Analysis	3
PHST 704	Mixed Effect Models and Longitudinal Data Analysis	3
PHST 781	Advanced Linear Models	3
PHST 782	Generalized Linear Models	3
PHST 785	Non-Linear Regression	3

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
<b>Qualitative Research Methods (3-9 credit hours)</b>		
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]**

<b>Course</b>	<b>Title-Description</b>	<b>Credit Hours</b>
<b>Seminar-Based Courses</b>		
ELFH 683	College Teaching	3
-OR-	-OR-	
ELFH 607	Principles of Educational Leadership	
-OR-	-OR-	
ELFH 672	Instructional Design and Development	
-OR-	-OR-	
ELFH 661	Adult and Organizational Learning	
-OR-	-OR-	
EDAP 607	Teacher Leadership in Practice	

**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  
SCIENCES**

---

**David J. Tollerud**  
*Professor*

Chair

Distinguished

University Scholar

**Gary Hoyle**

*Professor*

University Scholar

**Robert J. Jacobs**

*Professor*

Director of MPH

Program

**Rachel Neal**

*Assistant Professor*

**Zhang Qunwei**

*Associate Professor*

---

**DEPARTMENT  
OF  
EPIDEMIOLOGY  
& POPULATION  
HEALTH**

---

**Richard N.**

**Baumgartner**

*Professor*

Chair

**Kathy B.**

**Baumgartner**

*Professor*

Associate Dean

**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*

---

**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,

Healthcare

Leadership

**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*

---

**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*

Associate Dean

**Anne B. Wallis**

*Assistant Professor*

**Pete Walton**

*Assistant Professor*

Associate Dean

**Monica Wendel**

*Associate Professor*

Associate Dean

**Richard W.**

**Wilson**

*Professor*

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.

Courses	Credit Hours
BE 621: Bioinstrumentation	4
BE 654: Advanced Physiology for Engineers	3
IE 563: Experimental Design in Engineering	3
BE Electives <sup>1,2</sup>	9
Technical Electives <sup>1,3</sup>	6
Thesis Option: BE 697: MEng Thesis <sup>4</sup>	Non-Thesis Option: BE 691: Biomedical Rotation Technical Elective <sup>1,3</sup>
	6
<b>Total Credit Hours:</b>	<b>31<sup>5</sup></b>

<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, 683, 693, 695

<sup>3</sup> 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

<sup>4</sup> 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.

<sup>5</sup> 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>. 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.

Courses	Credit Hours
CHE 595: Seminar in CHE	1
CHE 610: Advanced Thermodynamics	3
CHE 620: Transport Phenomena	3

CHE 641: Advanced Reactor Design	3	
CHE 686: CHE Analysis	3	
Technical Electives <sup>1,2</sup>	12	
Thesis Alternative: CHE 697: MEng Thesis <sup>3</sup>	Non-thesis Alternative: CHE 698: Engr Project I CHE 699: Engr Project II	6
<b>Total Credit Hours:</b>	<b>31<sup>4</sup></b>	

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**  
*Professor*  
**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.



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.

### **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 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>.

## 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.

Courses	Credit Hours
CHE 610: Advanced Thermodynamics	3
CHE 620: Transport Phenomena	3
CHE 641: Advanced Reactor Design	3
CHE 686: Chemical Engineering Analysis	3
CHE 695: Chemical Engineering Seminar	2
Technical Electives <sup>1,2</sup>	12
Thesis Option: CHE 690: MS Thesis <sup>3</sup>	Non-thesis Option: Technical Electives <sup>1,2</sup> 6
<b>Total Credit Hours</b>	<b>32</b>

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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:

**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**  
*Professor*  
**Gerold A. Willing**  
*Associate Professor*

# 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 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 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:
  - 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.

### **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.

<b>Courses – Post Baccalaureate</b>	<b>Credit Hours</b>
CHE 610: Advanced Thermodynamics	3
CHE 620: Transport Phenomena	3
CHE 641: Advanced Reactor Design	3
CHE 686: CHE Analysis	3
CHE 695: CHE Seminar	3
Technical Electives <sup>1</sup>	18
CHE 693: Research in CHE	21
<b>Total Credit Hours</b>	<b>54</b>

<sup>1</sup> 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.

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**  
*Associate Professor*  
**Kyung A. Kang**  
*Professor*  
**Neville Pinto**  
*Professor*

**Noppadon**  
**Sathitsuksanoh**  
*Assistant Professor*  
**Thomas L. Starr**  
*Professor*  
**Mahendra K.**  
**Sunkara**

*Professor*  
**James Charles**  
**Watters**  
*Professor*  
**Gerold A. Willing**  
*Associate 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<sup>7</sup>. 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.

Courses	Credit Hours
CEE 680: Capstone Design	3
CEE Electives <sup>1,2</sup>	15
Technical Electives <sup>1,3</sup>	6
Thesis Option: CEE 697: MEng Thesis <sup>4</sup>	Non-thesis Option: CEE Electives <sup>1,2</sup> 6
<b>Total Credit Hours:</b>	<b>30<sup>5</sup></b>

<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. All courses must be at the 500-level or higher.

<sup>2</sup> CEE Electives must be approved by the department.

<sup>3</sup> Technical Electives can be CEE or non-CEE courses. Technical Electives must be approved by the department.

<sup>4</sup> 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.

<sup>5</sup> 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:

<b>Courses – Post Bac</b>	<b>Credit Hours</b>
Approved Master's Level Course Work	30
Technical Electives <sup>1</sup>	15
CEE 698: CE PhD Seminar	3
CEE 699: CE PhD Research	12
<b>Total Credit Hours</b>	<b>60<sup>2</sup></b>

<sup>1</sup> Technical electives can be CEE or non-CEE courses. Technical Electives must be approved by the department.

<sup>2</sup> 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:
  - 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.

### **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:

Courses		Hours
CEE Electives <sup>1</sup>		18
Non-CEE Electives <sup>1,2</sup>		6
Thesis Option: CEE 690: MS Thesis <sup>3</sup>	Non-thesis Option: Technical Electives <sup>1,2</sup>	6
<b>Total Credit Hours</b>		<b>30<sup>4</sup></b>

<sup>1</sup> 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.

<sup>2</sup> Technical Electives can be CEE or non-CEE courses. Technical Electives must be approved by the department.

<sup>3</sup> 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.

<sup>4</sup> 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:
  - 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.

### **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.

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:

<b>Courses – Post Bac</b>	<b>Credit Hours</b>
Approved Master's Level Course Work	30
CECS Electives <sup>1</sup>	18
CSE 693: Dissertation Research	9
CSE 695: Seminar in CSE	2
<b>Total Credit Hours</b>	<b>59<sup>1</sup></b>

<sup>1</sup> 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

<sup>2</sup> 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*

**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.
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 Computer Engineering and Computer Science degree requires the following over and above the Bachelor of Science in Computer Engineering and Computer Science Degree.

Courses	Credit Hours
CECS 611: Computer Architecture (3) or CECS/ECE 510: Computer Design (3) and ECE 511: Lab (1)	3 or 4

ECE 511: Computer Design Lab	1	
CECS/IE 563: Experimental Design or CECS 620: Combinatorial Optimization & Modern Heuristics	3	
CECS 622: Discrete Systems	3	
CECS 625: Parallel Programming	3	
CECS Electives <sup>1,2</sup>	9	
Technical Elective <sup>1,3</sup>	3	
Thesis Option: CECS 697: MEng Thesis <sup>4</sup>	Non-Thesis Option: CECS 696: Project CECS Elective <sup>1,2</sup>	6
<b>Total Credit Hours:</b>	<b>30 or 31</b>	

<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> Electives must be approved by the department.

<sup>3</sup> Technical Electives can be CECS or non-CECS courses. Technical Electives must be approved by the department.

<sup>4</sup> 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.

<sup>5</sup> 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:

**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*

**Juw Won Park**

*Assistant Professor*

**Eric Christian**

**Rouchka**

*Associate Professor*

**Roman V.**

**Yampolskiy**

*Assistant Professor*

# 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:
  - 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.

### **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 Disseration \[pdf\]](#), 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:

Courses		Credit Hours
Foundations Course <sup>1</sup>		3
Software Courses <sup>2</sup>		6
Analytic Courses <sup>3</sup>		6
CECS Electives <sup>4</sup>		9
Thesis Option: CECS 690: MS Thesis <sup>5</sup>	Non-thesis Option: CECS 696: Project CECS Elective <sup>4</sup>	6
<b>Total Credit Hours</b>		<b>30<sup>6</sup></b>

**<sup>1</sup> One Foundations Course from the following list is required:**

CECS 504: Automata Theory  
CECS 619: Algorithms

**<sup>2</sup> 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

**<sup>3</sup> 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

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> 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:

**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*

**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

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.

Courses			Credit Hours
ECE Electives <sup>1,2,3</sup>			18
Technical Electives <sup>1,2,3,4</sup>			6
Thesis/Paper Option: <sup>2,3,5</sup> ECE 697: MEng Thesis or ECE 698: MEng Paper	Project Option: <sup>2,3</sup> ECE 699: MEng Project <sup>1</sup> ECE Electives <sup>1,3</sup>	Course Option: <sup>2,3</sup> Research/Project Course/ECE 696 <sup>1,6</sup> ECE Electives <sup>1,3</sup>	8
<b>Total Credit Hours:</b>			<b>32<sup>7</sup></b>

<sup>1</sup> 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.

<sup>2</sup> A minimum of nine (9) hours must be classified as Design Electives. Design Electives must be chosen from the following approved list of regular courses: ECE 510/511, 512/513, 515/514, 516, 520/521, 533/534, 550/551, 560/561, 564/565, 613, 614, 618/635, 619/645, 620/655, 633/634, 636/637, 651, 661, 662, 664, 667.

<sup>3</sup> Requires approval of the student's faculty advisor.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> A list of approved research/project courses is maintained by the Department.

<sup>7</sup> 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:

**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*

# 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:
  - 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.

### **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:

Courses			Credit Hours
ECE Electives <sup>1,2</sup>			15
Technical Electives <sup>1,3</sup>			9
Thesis Option: ECE 690: MS Thesis <sup>4</sup>	Paper Option: ECE 691: MS Paper <sup>4</sup>	Project Option: ECE 692: MS Project or Project Course/ECE 696 <sup>5</sup> ECE Electives <sup>1,3</sup>	6
<b>Total Credit Hours</b>			<b>30<sup>6</sup></b>

<sup>1</sup> 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.

<sup>2</sup> 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

<sup>3</sup> Technical Electives can be ECE or non-ECE courses. Technical Electives must be approved by the department.

<sup>4</sup> 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.

<sup>5</sup> Must include ECE 699 or a course from a list of approved research/project courses, maintained by the Department, and ECE 696.

<sup>6</sup> 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:
  - 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.
    - a. Successfully completing the exit examination for the advanced level of the Intensive English as a Second Language Program at the University of Louisville.
    - b. 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/graduatecatalog/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:

<b>Courses – Post Bac</b>	<b>Credit Hours</b>
Approved Master's Level Course Work	30
Technical Electives <sup>1</sup> (minimum of 15 hours)	15-30
ECE 700: Dissertation Research in EE	0-15
<b>Total Credit Hours</b>	<b>60<sup>2</sup></b>

<sup>1</sup> Technical Electives can be ECE or non-ECE courses. Technical Electives must be approved by the department.

<sup>2</sup> 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:

**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*

**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*

# 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.

Courses	Credit Hours
EM Electives <sup>1</sup>	21
Technical Electives <sup>1</sup>	9
<b>Total Credit Hours</b>	<b>30<sup>2</sup></b>

<sup>1</sup> 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.

<sup>2</sup> 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*  
**Jason Saleem**  
*Assistant Professor*  
**John S. Usher**  
*Professor*

**Mickey R. Wilhelm**  
*Professor*  
**Li Yang**  
*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

	<b>Credit Hours</b>	<b>Total</b>
Environmental Engineering Electives (500-level)	0-6	
Environmental Engineering Electives (600-level)	6-12	12

### Courses are to be selected from the following:

CEE 509 Environmental Process Systems  
 CEE 534 Industrial Waste Management  
 CEE 535 Solid Waste Management  
 CEE 561 Environmental Analysis of Transportation Systems I  
 CEE 570 Applied Hydraulics  
 CEE 571 Applied Hydrology  
 CEE 572 Open Channel Hydraulics  
 CEE 573 Groundwater Hydrology  
 CEE 670 Advanced Hydraulics  
 CEE 673 Advanced Hydrology  
 CEE 674 Water Resource Systems  
 CEE 675 Surface Water Quality  
 CHE 509 Environmental Process Systems  
 CHE 620 Transport Phenomena I  
 CHE 637 Advanced Stagewise Processes  
 CHE 638 Advanced Absorption

CHE 650 Membrane Separations  
CHE 662 Advanced Process Control  
CHE 533 Chemical Engineering Safety and Health  
CHE 534 Industrial Waste Management  
CHE 535 Pollution Prevention (Waste Reduction Treatment and Disposal)  
CHE 572 Plant Process and Project Design  
ME 580 Air Pollution Control  
CHEM 622 Analytical Separations  
BIOL 521 Stream Ecology  
BIOL 522 Aquatic Ecology  
BIOL 568 Conservation Biology  
BIOL 662 Ecosystems Ecology

**Note:**

Graduate courses not shown in the list above require approval from the Certificate Program Director.  
Certificate courses do not constitute a degree program, but may be applied toward M.Eng., M.S., or Ph.D. degree requirements.

**Other requirements:**

Completion of graduate degree program at Speed School of Engineering (M.Eng., M.S., or Ph.D.).

## 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*

*Department Chair*  
**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<sup>7</sup>. 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.

Courses	Credit Hours
IE 657: Logistical Systems	3
IE Electives <sup>1,2</sup>	12
Technical Electives <sup>1,3</sup>	9
Thesis Option: IE 697: MEng Thesis <sup>4</sup>	Non-Thesis Option: IE 699: Masters Project <sup>5</sup> Technical Elective <sup>1,3</sup>
	6
<b>Total Credit Hours:</b>	<b>30<sup>6</sup></b>

<sup>1</sup> Electives must be chosen so that at least one-half of the credits counted toward the degree, exclusive of thesis, are 600-level.

<sup>2</sup> IE Electives must be approved by the department

<sup>3</sup> Technical Electives can be IE or non-IE courses. Technical Electives must be approved by the department.

<sup>4</sup> 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.

<sup>5</sup> 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.

<sup>6</sup> 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  
**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*

# 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:

Courses	Credit Hours
IE 515: Operations Research Methods or IE 610: Foundations of Optimization I	3
IE 561: Stochastic Models	3
IE 563: Experimental Design in Engineering	3
IE 5XX and/or 6XX Electives <sup>1</sup>	6
5XX and/or 6XX Technical Electives <sup>1</sup>	9
Thesis Option: IE 690: MS Thesis <sup>2</sup>	Non-Thesis Option: IE 699: Masters Project 6XX Technical Elective <sup>1</sup>
	6
<b>Total Credit Hours</b>	<b>30<sup>3</sup></b>

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> 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 course work. Students interested in the Ph.D. degree program should consult the Director of Graduate Studies in the Department of Industrial Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award doctoral degrees.

### Admission Standards

The admission standards for the Ph.D. program in Industrial Engineering are as follows:

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:
  - . 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.

### **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:

<b>Courses – Post Bac</b>	<b>Credit Hours</b>
Approved Master's Level Course Work <sup>1,2</sup>	30
Technical Electives <sup>2</sup>	15
IE 700: Dissertation Research in IE	15
<b>Total Credit Hours</b>	<b>60<sup>3</sup></b>

<sup>1</sup> 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.

IE 515: Operations Research Methods or IE 610: Foundations of Optimization

IE 516: Stochastic Models

IE 563: Experimental Design in Engineering

<sup>2</sup> All electives must be approved by the department

<sup>3</sup> 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:

**Suraj M. Alexander**  
*Professor*  
Acting Chair  
**Ki-Hwan Bae**  
*Assistant Professor*

**Lihui Bai**  
*Assistant 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*

# 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

3

## 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/>

## 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.

Courses		Credit Hours
ME Electives <sup>1,2</sup>		18
Technical Electives <sup>1,3</sup>		6
Thesis Option: ME 697: MEng Thesis <sup>4</sup>	Non-Thesis Option: ME 645: MEng Project ME Elective <sup>1,2</sup>	6
<b>Total Credit Hours:</b>		<b>30<sup>5</sup></b>

<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> ME Electives must be approved by the department.

<sup>3</sup> 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.

<sup>4</sup> 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.

<sup>5</sup> 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*

**Ellen G. Brehob**  
*Associate Professor*  
**W. Geoffrey**  
**Cobourn**  
*Professor*  
**Michael L. Day**  
*Professor*

**William P. Hnat**  
*Professor*  
**Yongsheng Lian**  
*Associate Professor*  
**Kevin Murphy**  
*Professor*  
Department Chair

**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*

# 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](mailto:pquesada@louisville.edu)

### General Information

The M.S. degree program is intended for persons having an accredited baccalaureate degree in mechanical engineering, but is available to those with other backgrounds. Applicants with other backgrounds should plan on taking some undergraduate background course work. Students interested in the 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:
  - 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.

### **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:

Courses		Credit Hours
ME Electives <sup>1</sup>		15
Technical Electives <sup>1,2</sup>		9
Thesis Option: ME 690: MS Thesis <sup>3</sup>	Non-Thesis Option: ME Electives <sup>1</sup>	6
<b>Total Credit Hours</b>		<b>30<sup>4</sup></b>

<sup>1</sup> 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.

<sup>2</sup> Technical Electives can be ME or non-ME courses. Technical Electives must be approved by the department.

<sup>3</sup> 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.

<sup>4</sup> 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**  
*Professor*  
**Thomas A.  
Berfield**  
*Assistant Professor*  
**Matt Bohm**  
*Assistant Professor*  
**Roger D.  
Bradshaw**  
*Associate Professor*

**Ellen G. Brehob**  
*Associate Professor*  
**W. Geoffrey  
Cobourn**  
*Professor*  
**Michael L. Day**  
*Professor*  
**William P. Hnat**  
*Professor*

**Yongsheng Lian**  
*Associate Professor*  
**Kevin Murphy**  
*Professor*  
Department Chair  
**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](mailto:pquesada@louisville.edu)

### General Information

The Ph.D. degree program is intended for persons having an accredited masters and/or baccalaureate degree in mechanical engineering, but is available to those with other backgrounds. Applicants with other backgrounds should plan on taking some undergraduate background course work. Students interested in the Ph.D. degree program should consult the Director of Graduate Studies in the Department of Mechanical Engineering. The University of Louisville is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award doctoral degrees.

### Admission Standards

The admission standards for the Ph.D. program in Mechanical Engineering are as follows:

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:

<b>Courses – Post Bac</b>	<b>Credit Hours</b>
Approved Master's Level Course Work	30
Technical Electives <sup>1</sup>	15
ME 700: Dissertation Research	15
<b>Total Credit Hours</b>	<b>60<sup>2</sup></b>

<sup>1</sup> Technical 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.

<sup>2</sup> 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:

**Sundar Atre***Professor***Thomas A.****Berfield***Assistant Professor***Matt Bohm***Assistant Professor***Roger D.****Bradshaw***Associate Professor***Ellen G. Brehob***Associate Professor***W. Geoffrey****Cobourn***Professor***Michael L. Day***Professor***William P. Hnat***Professor***Yongsheng Lian***Associate Professor***Kevin Murphy***Professor*

Department Chair

**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