UNIVERSITY OF KENTUCKY SERIES

THE GRADUATE SCHOOL



UK

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1998-2000
The Graduate School

University of Kentucky Bulletin

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Contents

Calendar 3
The Graduate School 7
Graduate Admission 10
General Regulations 16
Advanced Degrees 20
Academic Resources 29
General Information 36
Degree Requirements 40
Directors of Graduate Studies 44
Graduate Degree Programs 48
Other Graduate Courses 116
Residency Policy 118
Index 122
Campus Map 124

COMPLIANCE WITH REGULATIONS

The University of Kentucky is committed to a policy of providing educational opportunities to all qualified students regardless of economic or social status, and will not discriminate on the basis of race, color, religion, sex, marital status, beliefs, age, national origin, sexual orientation, or physical or mental disability.

Compliance with Title IX of the Educational Amendments of 1972, which prohibits sex discrimination, and with Title VI of the Civil Rights Act of 1964 is coordinated by Mr. Terry Allen, Affirmative Action Office, 8 Administration Building, (606) 257-8927.

Efforts to comply with the laws and regulations applicable to people with disabilities are also coordinated by the Affirmative Action Office, as required by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990.

Questions concerning compliance with regulations may be directed to UK's Affirmative Action Office, or to the Director of the Office for Civil Rights, U.S. Department of Education, Washington, D.C.

The University is in compliance with the Drug-Free Workplace Act of 1988 and the Drug-Free Schools and Communities Act Amendment of 1989. Questions may be directed to the Vice Chancellor for Student Affairs or the Office of the Director of Human Resources Services.

Questions about admission to the University should be directed to the appropriate admissions office.

CALENDAR

Students should check the *Schedule of Classes* each semester for any calendar changes which may have been approved after publication of this Bulletin. The approved Calendar for the academic year 1999-2000 will be published in the *Schedule of Classes.*

1998 Fall Semester

APPLICATION FOR ADMISSION

February 1—Sunday—Deadline for international applications to be submitted to The Graduate School for the 1998 Fall Semester

February 1—Saturday—Deadline for submission of all application materials to the College of Medicine for the 1998 Fall Semester

April 15—Wednesday—Deadline for applying with college deans for reinstatement after a second academic suspension for the 1998 Fall Semester

May 1—Friday—Deadline for undergraduate international applicants to submit 1998 Fall Semester application

June 15—Monday—Earliest date to submit application for regular and Early Decision Program admission to the College of Medicine for the 1999 Fall Semester

July 24—Friday—Deadline for applying for admission to a program in The Graduate School for the 1998 Fall Semester. Applications for readmission, post-baccalaureate status, and visiting student status will be accepted after the deadline.

August 1—Saturday—Deadline for application for Early Decision Program admission to the College of Medicine for the 1999 Fall Semester

August 12—Wednesday—Deadline for applying to The Graduate School for readmission, post-baccalaureate status, and visiting student status for the 1998 Fall Semester in order to register before the beginning of classes and avoid $40 late fee

October 15—Thursday—Deadline for submission of application and all required documents to the Office of Admissions for undergraduate applicants planning to attend November Advising Conference (including registration for spring classes)

October 31—Saturday—Deadline for international applications to be submitted to The Graduate School for 1999 Summer School

November 1—Friday—Deadline for completed AMCAS application for admission to the College of Medicine for the 1999 Fall Semester

December 1—Tuesday—Deadline for submission of application and receipt of all materials for admission, readmission or transfer to the College of Law for the 1999 Spring Semester

December 7—Monday—Deadline for applying for admission to a program in The Graduate School for the 1999 Spring Semester. Applications for readmission, post-baccalaureate status, and visiting student status will be accepted after the deadline.

December 16—Wednesday—Deadline for applying to The Graduate School for readmission, post-baccalaureate status, and visiting student status for the 1999 Spring Semester in order to register before the beginning of classes and avoid $40 late fee

REGISTRATION

August 18-24—Tuesday through Monday—Fall registration for new undergraduate and new program graduate students who entered the University in either the 1998 Four-Week Intersession or Eight-Week Summer Session

August 18-24—Tuesday through Monday—Registration for new program graduate students

August 20-22—Thursday through Saturday—Registration for Evening/Weekend students

August 20-24—Thursday through Monday—Fall registration for new post-baccalaureate students admitted for the Four-Week Intersession, Eight-Week Summer Session or Fall Semester

August 21—Friday—Registration for new international students who have been cleared for admission but did not advance register

August 24—Monday—Registration for new students who have been cleared for admission but did not priority register

August 26—September 1—Wednesday through Tuesday—Late registration for returning students who did not priority register and new applicants cleared late for admission. A $40 late fee is assessed students who register late.

September 16—Wednesday—Last day to change grading option (pass/fail to letter grade or letter grade to pass/fail; credit to audit or audit to credit)

November 2-20*—Friday through Friday—Priority Registration for the 1999 Spring Semester

November 20—Friday—1999 Spring Semester Advising Conference for new and readmitted undergraduate students

ADD/DROP AND WITHDRAWAL

July 25—August 22*—Saturday through Saturday—Add/Drop for registered students

August 25—Tuesday—First day of opening-of-term add/drop for registered students

August 25—Tuesday—Last day a student may officially drop a course or cancel registration with the University Registrar for a full refund of fees

September 1—Tuesday—Last day to enter an organized class for the 1998 Fall Semester

September 1—Tuesday—Last day to officially withdraw from the University or reduce course load and receive an 80 percent refund

September 16—Wednesday—Last day to drop a course without it appearing on the student's transcript

October 23—Friday—Last day to withdraw from a course

October 23—Friday—Last day to withdraw from the University or reduce course load and receive any refund. Students can withdraw or reduce course load after this date only for "urgent non-academic reasons."

December 3—January 19*—Thursday through Saturday—Add/Drop for registered students for the 1999 Spring Semester

FEE PAYMENT

August 5—Wednesday—Last day registered students may pay $50 to confirm their 1998 Fall Semester registration

August 25—Tuesday—Last day a student may officially drop a course or cancel registration with the University Registrar for a full refund of fees

September 1—Tuesday—Last day to officially withdraw from the University or reduce course load and receive an 80 percent refund

September 9—Wednesday—Last day for payment of registration fees and/or housing and dining fees in order to avoid cancellation of registration and/or meal card

September 18—Friday—Last day for reinstatement of students cancelled for nonpayment of registration fees and/or housing and dining fees. Requires payment of fees and may require payment of $50 reinstatement fee.

October 23—Friday—Last day to withdraw from the University or reduce course load and receive any refund. Students can withdraw or reduce course load after this date only for "urgent non-academic reasons."

December 9—Wednesday—Last day registered students may pay $50 to confirm their 1999 Spring Semester registration

DEGREES AND GRADUATION

September 24—Thursday—Last day for filing an application for a December degree in college dean's office

November 5—Thursday—Last day for doctoral candidates for a December degree to submit a Notification of Intent to schedule a final examination in The Graduate School

November 19—Thursday—Last day for candidates for a December degree to schedule a final examination in The Graduate School

December 3—Thursday—Last day for candidates for a December graduate degree to sit for a final examination

December 18—Friday—Last day for candidates for a December degree to submit a thesis/dissertation to The Graduate School

OTHER IMPORTANT DATES—Beginning and End of Semester and Academic Holidays

August 5—Wednesday—Last day for registered students in the Employee Educational Program to submit EEP form to their personnel office to confirm 1998 Fall Semester registration and tuition defrayal

August 22-24—Saturday through Monday—Fall Orientation for all new undergraduate students

August 24-28—Monday through Friday—Approved time period for students to change academic majors (please check with college for admission deadline)

August 26—Wednesday—Class work begins

September 1—Tuesday—Last day for students in the Employee Educational Program who registered in August or September to submit EEP form to their personnel office for tuition defrayal for the 1998 Fall Semester

September 7—Monday—Labor Day—Academic Holiday

September 24—Thursday—Deadline for submission of application and all required documents to the Office of the Registrar for change of residency status for 1998 Fall Semester

October 2—Friday—Fall Break—Academic Holiday

October 19—Monday—Midterm of 1998 Fall Semester

October 20-November 2—Tuesday through Monday—Approved time period for students to change academic majors (please check with college for admission deadline)

November 26-28—Thursday through Saturday—Thanksgiving Holidays—Academic Holidays

December 9—Wednesday—Last day for registered students in the Employee Educational Program to submit EEP form to their personnel office to

confirm 1999 Spring Semester registration and tuition defrayal

December 11—Friday—End of class work

December 14-18—Monday through Friday—Final Examinations

December 18—Friday—End of 1998 Fall Semester

December 21—Monday—Final deadline for submission of grades to the Registrar's Office by 4 p.m.

1999 Spring Semester

APPLICATION FOR ADMISSION

June 15, 1998—Monday—Deadline for international applications to be submitted to The Graduate School for the 1999 Spring Semester

September 1, 1998—Tuesday—Deadline for undergraduate international applicants to submit 1999 Spring Semester application

September 15, 1998—Tuesday—Deadline for applying with college deans for reinstatement after a second academic suspension for the 1999 Spring Semester

October 15, 1998—Thursday—Deadline for submission of application and all required documents to the Office of Admissions for undergraduate applicants planning to attend November Advising Conference (including registration for spring classes)

December 7, 1998—Monday—Deadline for applying for admission to a program in The Graduate School for the 1999 Spring Semester. Applications for readmission, post-baccalaureate status, and visiting student status will be accepted after the deadline.

December 16, 1998—Wednesday—Deadline for applying to The Graduate School for readmission, post-baccalaureate status, and visiting student status for the 1999 Spring Semester in order to register before the beginning of classes and avoid $40 late fee

February 1—Monday—Deadline for international applications to be submitted to The Graduate School for the 1999 Fall Semester

February 1—Monday—Deadline for submission of all application materials to the College of Medicine for the 1999 Fall Semester

March 1—Monday—Last day for submission of application for admission to the College of Law for the 1999 Fall Semester

April 1—Thursday—Preferred deadline for submitting application for admission to the College of Dentistry for the 1999 Fall Semester

April 9 —Friday—Deadline for applying for admission to a program in The Graduate School for the 1999 Summer Sessions. Applications for readmission, post-baccalaureate status, and visiting student status will be accepted after the deadline.

April 28—Wednesday—Deadline for applying to The Graduate School for readmission, post-baccalaureate status, and visiting student status for the 1999 Four-Week Intersession in order to register May 10 and avoid $40 late fee

REGISTRATION

January 5—11—Tuesday through Monday—Registration for new program graduate students

January 8—11—Friday through Monday—Registration for new post-baccalaureate students

January 8 & 9—Friday and Saturday—Registration for Evening/Weekend and new graduate students

January 11—Monday—Registration for new students who have been cleared for admission but did not priority register

January 13-20—Wednesday through Wednesday—Late registration for returning students who did not priority register and new applicants cleared late for admission. A $40 late fee is assessed students who register late.

February 3—Wednesday—Last day to change grading option (pass/fail to letter grade or letter grade to pass/fail; credit to audit or audit to credit)

March 29- April 16*—Monday through Friday—Priority registration for the 1999 Fall Semester and both 1999 Summer Sessions

April 27—May 10*—Tuesday through Monday—Four-Week Intersession registration and add/drop continue for students enrolled in the 1999 Spring Semester

April 27—June 9*—Tuesday through Wednesday—Eight-Week Summer Session registration and add/drop continue for students enrolled in the 1999 Spring Semester

ADD/DROP AND WITHDRAWAL

December 3—January 19*—Thursday through Saturday—Add/Drop for registered students for the 1999 Spring Semester

January 12—Tuesday—First day of opening-of-term add/drop for registered students

January 12—Tuesday—Last day a student may officially drop a course or cancel registration with the University Registrar for a full refund of fees

January 20—Wednesday—Last day to enter an organized class for the 1999 Spring Semester

January 20—Wednesday—Last day to officially withdraw from the University or reduce course load and receive an 80 percent refund

February 3—Wednesday—Last day to drop a course without it appearing on the student's transcript

March 12—Friday—Last day to withdraw from a course

March 12—Friday—Last day to withdraw from the University or reduce course load and receive any refund. Students can withdraw or reduce course load after this date only for "urgent non-academic reasons."

April 27-June 19*—Tuesday through Saturday—Add/Drop for priority registered students for the 1999 Fall Semester

FEE PAYMENT

January 12—Tuesday—Last day a student may officially drop a course or cancel registration with the University Registrar for a full refund of fees

January 20—Wednesday—Last day to officially withdraw from the University or reduce course load and receive an 80 percent refund

January 27—Wednesday—Last day for payment of registration fees and/or housing and dining fees in order to avoid cancellation of registration and/or meal card

February 5—Friday—Last day for reinstatement of students cancelled for nonpayment of registration fees and/or housing and dining fees. Requires payment of fees and may require payment of $50 reinstatement fee.

March 12—Friday—Last day to withdraw from the University or reduce course load and receive any refund. Students can withdraw or reduce course load after this date only for "urgent non-academic reasons."

DEGREES AND GRADUATION

February 11—Thursday—Last day for filing an application for a May degree in college dean's office

March 25—Thursday—Last day for doctoral candidates for a May degree to submit a Notification of Intent to schedule a final examination in The Graduate School

April 8—Thursday—Last day for candidates for a May degree to schedule a final examination in The Graduate School

April 22—Thursday—Last day for candidates for a May graduate degree to sit for a final examination

April 30—Friday—Last day for doctoral candidates for a May degree who wish to receive a diploma at Commencement to submit dissertation to The Graduate School

May 7—Friday—Last day for candidates for a May degree to submit a thesis/dissertation to The Graduate School

May 8—Saturday—Commencement Day

OTHER IMPORTANT DATES—Beginning and End of Semester and Academic Holidays

December 9, 1998—Wednesday—Last day for registered students in the Employee Educational Program to submit EEP form to their personnel office to confirm 1999 Spring Semester registration and tuition defrayal

January 11-15—Monday through Friday—Approved time period for students to change academic majors (please check with college for admission deadline)

January 13—Wednesday—Class work begins

January 18—Monday—Martin Luther King Birthday—Academic Holiday

January 20—Wednesday—Last day for students in the Employee Educational Program who registered in January to submit EEP form to their personnel office for tuition defrayal for the 1999 Spring Semester

February 11—Thursday—Deadline for submission of application and all required documents to the Office of the Registrar for change of residency status for 1999 Spring Semester

March 8—Monday—Midterm of 1999 Spring Semester

March 9-29—Tuesday through Monday—Approved time period for students to change academic majors (please check with college for admission deadline)

March 15-20—Monday through Saturday—Spring Vacation—Academic Holidays

April 30—Friday—End of class work

May 3-7—Monday through Friday—Final Examinations

May 7—Friday—End of 1999 Spring Semester

May 10—Monday—Final deadline for submission of grades to the Registrar's Office by 4 p.m.

May 10-August 21—College of Pharmacy 15-Week

1999 Four-Week Intersession

APPLICATION FOR ADMISSION

October 31, 1998—Saturday—Deadline for international applications to be submitted to The Graduate School for 1999 Summer School

April 9—Friday—Deadline for applying for admission to a program in The Graduate School for the 1999 Summer Sessions. Applications for readmission, post-baccalaureate status, and visiting student status will be accepted after the deadline.

April 28—Wednesday—Deadline for applying to The Graduate School for readmission, post-baccalaureate status, and visiting student status for the 1999 Four-Week Intersession in order to register May 10 and avoid $40 late fee

May 26—Wednesday—Deadline for applying to The Graduate School for readmission, post-baccalaureate status, and visiting student status for the

1999 Eight-Week Summer Session in order to register before the beginning of classes and avoid $40 late fee

REGISTRATION

April 27—May 10*—Tuesday through Monday—Four-Week Intersession registration and add/drop continue for students enrolled in the 1999 Spring Semester

May 10—Monday—Registration for new students

May 11-14 —Tuesday through Friday—Late registration for returning students not already registered and new applicants cleared late for admission. A $40 late fee is assessed students who register late.

May 17—Monday—Last day to change grading option (pass/fail to letter grade or letter grade to pass/fail; credit to audit or audit to credit) in college dean's office

May 19—June 9*—Wednesday through Wednesday—Eight-Week registration and add/drop for students who entered the University in the 1999 Four-Week Intersession

ADD/DROP AND WITHDRAWAL

May 11—Tuesday—Last day a student may officially drop a course or cancel registration with the University Registrar for a full refund of fees

May 14—Friday—Last day to enter an organized class for the 1999 Four-Week Intersession

May 14—Friday—Last day to officially withdraw from the University or reduce course load and receive an 80 percent refund

May 17—Monday—Last day to drop a course without it appearing on the student's transcript

May 25—Tuesday—Last day to withdraw from a course

May 25—Tuesday—Last day to withdraw from the University or reduce course load and receive any refund. Students can withdraw or reduce course load after this date only for "urgent non-academic reasons."

FEE PAYMENT

May 11—Tuesday—Last day a student may officially drop a course or cancel registration with the University Registrar for a full refund of fees

May 14—Friday—Last day to officially withdraw from the University or reduce course load and receive an 80 percent refund

May 24—Monday—Last day to pay registration fees and/or housing and dining fees in order to avoid cancellation of registration and/or meal card

May 25—Tuesday—Last day to withdraw from the University or reduce course load and receive any refund. Students can withdraw or reduce course load after this date only for "urgent non-academic reasons."

June 3—Thursday—Last day for reinstatement of students cancelled for nonpayment of registration fees and/or housing and dining fees. Requires payment of fees and may require payment of $50 reinstatement fee.

OTHER IMPORTANT DATES Beginning and End of Semester and Academic Holidays

May 10—Monday—Beginning of College of Pharmacy 15-Week Summer Term

May 11—Tuesday—Class work begins

May 14—Friday—Last day for students in the Employee Educational Program to submit EEP form to their personnel office for tuition defrayal for the 1999 Four-Week Intersession

May 24—Tuesday—Midterm of 1999 Four-Week Intersession

May 31—Monday—Memorial Day—Academic Holiday

June 8—Tuesday—Final Examinations

June 8—Tuesday—End of the 1999 Four-Week Intersession

June 11—Friday—Final deadline for submission of grades to the Registrar's Office by 12 noon

1999 Eight-Week Summer Session

APPLICATION FOR ADMISSION

October 31, 1998—Saturday—Deadline for international applications to be submitted to The Graduate School for 1999 Summer School

February 1—Monday—Deadline for undergraduate international applicants to submit 1999 Eight-Week Summer Session application

April 9—Friday—Deadline for applying for admission to a program in The Graduate School for the 1999 Summer Sessions. Applications for readmission, post-baccalaureate status, and visiting student status will be accepted after the deadline.

May 26—Wednesday—Deadline for applying to The Graduate School for readmission, post-baccalaureate status, and visiting student status for the 1999 Eight-Week Summer Session in order to register before the beginning of classes and avoid $40 late fee

June 15—Tuesday—Deadline for international applications to be submitted to The Graduate School for the 1998 Spring Semester

July 23—Friday—Deadline for applying for admission to a program in The Graduate School for the 1999 Fall Semester. Applications for readmission, post-baccalaureate status, and visiting student status will be accepted after the deadline

REGISTRATION

April 27—June 9*—Tuesday through Wednesday—Eight-Week Summer Session registration and add/drop continue for students enrolled in the 1999 Spring Semester

May 19—June 9*—Wednesday through Wednesday—Eight-Week registration and add/drop for students who entered the University in the 1999 Four-Week Intersession

June 8—Tuesday—Registration for Evening/Weekend and new graduate students

June 9—Wednesday—Registration for new students

June 10-14—Thursday through Monday—Late registration for returning students not already registered and new applicants cleared late for admission. A $40 late fee is assessed students who register late.

June 21—Monday—Last day to change grading option (pass/fail to letter grade or letter grade to pass/fail; credit to audit or audit to credit)

ADD/DROP AND WITHDRAWAL

June 10—Thursday—Last day a student may officially drop a course or cancel registration with the University Registrar for a full refund of fees

June 14—Monday—Last day to enter an organized class for the 1999 Eight-Week Summer Session

June 14—Monday—Last day to officially withdraw from the University or reduce course load and receive an 80 percent refund

June 21—Monday—Last day to drop a course without it appearing on the student's transcript

July 14—Wednesday—Last day to withdraw from a course

July 14—Wednesday—Last day to withdraw from the University or reduce course load and receive any refund. Students can withdraw or reduce course load after this date only for "urgent non-academic reasons."

FEE PAYMENT

June 10—Thursday—Last day a student may officially drop a course or cancel registration with the University Registrar for a full refund of fees

June 14—Monday—Last day to officially withdraw from the University or reduce course load and receive an 80 percent refund

June 23—Wednesday—Last day to pay registration fees and/or housing and dining fees in order to avoid cancellation of registration and/or meal card

July 2—Monday—Last day for reinstatement of students cancelled for nonpayment of registration fees and/or housing and dining fees. Requires payment of fees and may require payment of $50 reinstatement fee.

July 14—Wednesday—Last day to withdraw from the University or reduce course load and receive any refund. Students can withdraw or reduce course load after this date only for "urgent non-academic reasons."

August 4—Wednesday—Last day registered students may pay $50 to confirm their 1999 Fall Semester registration

DEGREES AND GRADUATION

June 25—Friday—Last day for filing an application for an August degree in college dean's office

June 30—Wednesday—Last day for doctoral candidates for an August degree to submit a Notification of Intent to schedule a final examination in The Graduate School

July 14—Wednesday—Last day for candidates for an August degree to schedule a final examination in The Graduate School

July 28—Wednesday—Last day for candidates for an August graduate degree to sit for a final examination

August 5—Thursday—Last day for candidates for an August degree to submit a thesis/dissertation to The Graduate School

OTHER IMPORTANT DATES—Beginning and End of Semester and Academic Holidays

June 10—Thursday—Class work begins

June 14—Monday—Last day for students in the Employee Educational Program to submit EEP form to their personnel office for tuition defrayal for the 1999 Eight-Week Summer Session

July 5—Monday—Independence Day—Academic Holiday

July 10—Thursday—Midterm of 1999 Eight-Week Summer Session

August 4—Wednesday—Last day for registered students in the Employee Educational Program to submit EEP form to their personnel office to confirm 1999 Fall Semester registration and tuition defrayal

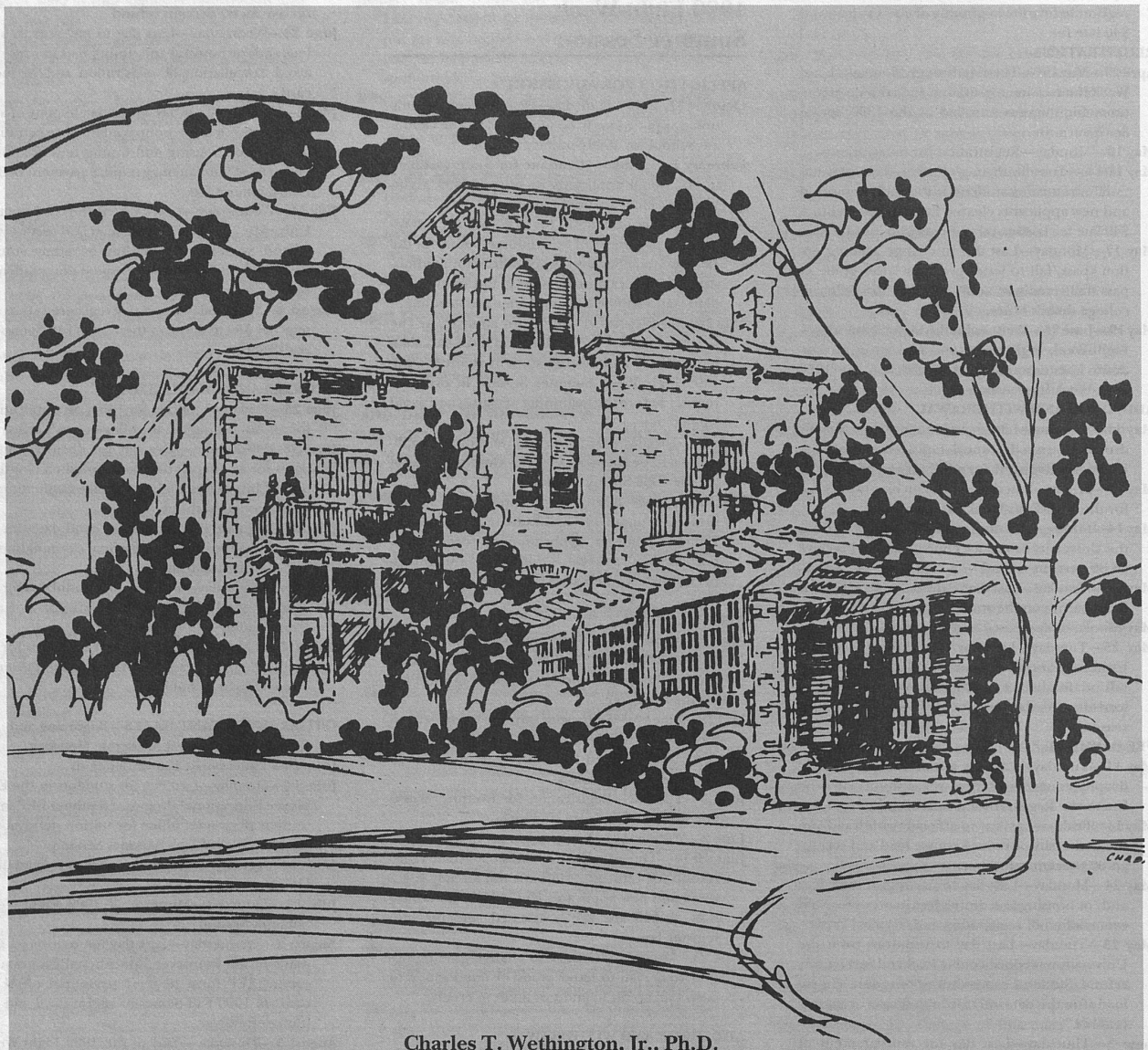
August 5—Thursday—End of the 1999 Eight-Week Summer Session

August 5—Thursday—Final examinations

August 9—Monday—Final deadline for submission of grades to the Registrar's Office by 12 noon

August 21—Saturday—End of College of Pharmacy 15-Week Summer Term

***These dates are subject to change due to continuing development of telephone registration.**



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Dean of The Graduate School

Douglass S. Kalika, Ph.D.
Senior Associate Dean

James E. O'Reilly, Ph.D.
Associate Dean

Deneese L. Jones, Ph.D..
Associate Dean

THE GRADUATE SCHOOL

The University of Kentucky began offering graduate work in 1870 and awarded its first graduate degrees in 1876. The Graduate School became a distinct unit in the University organization in 1912.

The Graduate School is concerned with advanced study, graduate instruction and research conducted by the faculty and students of all colleges and departments. The total graduate resources of the University are merged under it for the purpose of promoting the acquisition of knowledge in an atmosphere of free and lively inquiry.

Graduate work is offered in most colleges in the University. A general description and tabulation of courses for each of the various programs is given in the Graduate Degree Programs section of this bulletin.

Organization of The Graduate School

The Graduate Faculty consists of the Dean of The Graduate School, Associate and/or Assistant Deans of The Graduate School, and Full and Associate Graduate Faculty Members. As the chief University agency for the promotion of the ideals of graduate study, it determines the policies of The Graduate School and makes recommendations to the University Senate and to the President, or to other administrative officials as appropriate. All rules affecting graduate work and the inauguration of new graduate programs must be approved by the Graduate Faculty.

Any proposed change in the rules of the Graduate Faculty must be included in the agenda of its meeting and circulated to the Graduate Faculty at least 10 days prior to the meeting at which it is to be considered.

The Academic Common Market

Kentucky is a participating state in The Academic Common Market, an interstate agreement among Southern states for sharing academic programs. Students who qualify for admission may enroll in a specific program in another Academic Common Market state on an in-state tuition basis. At present, the agreement has been limited to unusual graduate programs. For information, write: Southern Regional Education Board, 130 Sixth Street N.W., Atlanta, Georgia. For information about University of Kentucky programs in the Academic Common Market, contact the Academic Common Market Institutional Coordinator, Academic Affairs Office/Central Administration, 7 Administration Building, University of Kentucky, Lexington, KY 40506-0032, (606) 257-5917.

New Graduate Faculty members may be proposed to the Dean of The Graduate School at any time by the college deans and department chairs concerned, or in the case of persons not attached to a college faculty, by the appropriate chancellors of the University. Eligibility qualifications are as follows:

1. The doctor's degree or its equivalent in scholarly reputation.
2. The rank of assistant professor (or equivalent), or higher.
3. Scholarly maturity and professional productivity as demonstrated by publications, editorial services, research surveys, creative work or patents; and research in progress at the time of appointment.
4. Demonstrated participation in the graduate teaching and research program.

Any faculty member, regardless of specific title series of appointment, should be eligible for consideration for membership on the Graduate Faculty. Appointment should be based on academic credentials, degree of involvement in the graduate degree programs, and departmental recommendation.

Once Full Graduate Faculty status is attained, membership should be continuous unless a change in status is recommended by a graduate program to the Dean of The Graduate School, who will present the recommendation to the Graduate Council. Associate membership should be limited to a term of six years with reappointment possible after departmental review.

Appointment to Full Graduate Faculty membership is made by the Vice President for Research and Graduate Studies on nomination by the Dean of The Graduate School after consultation with the Graduate Council when appropriate.

Full members of the Graduate Faculty are particularly responsible for:

1. Guidance of graduate student research and study to its completion. The finished work should meet or exceed accepted standards for publication, dissemination or performance within the particular discipline
2. Participation in the formulation of graduate curricula and policy.

The Dean of The Graduate School is responsible for appointing and monitoring the progress of Associate Members of the Graduate Faculty. Associate members are authorized to teach graduate courses, direct master's theses, and serve on and co-chair doctoral committees. Associate membership continues for six years with

reappointment possible after departmental review. Membership in the Graduate Faculty is restricted to persons who satisfy the membership criteria and are able to assume the responsibilities in a particular program as set forth above. There is no category for at-large graduate faculty membership.

On recommendation of the Director of Graduate Studies and with the approval of the Dean of The Graduate School, persons who normally do not hold academic appointment in the University, but who have demonstrated an interest in collaborative participation in its graduate programs, may be appointed as Auxiliary Graduate Faculty Members. They should hold the terminal academic degree in the field and possess a record of research or creative experience which would warrant their inclusion on advisory committees to assist graduate students in conducting research. Auxiliary Graduate Faculty may serve only as nonvoting members of the Advisory Committee.

Administrative officers assigning teaching and other duties to members of the Graduate Faculty who are taking an active part in the graduate program (i.e., are heavily engaged in directing theses, carrying on productive research, etc.) should make appropriate reduction in the duties required of such faculty members.

The Role of the Dean

The Dean of The Graduate School is charged with the administration of the policies adopted by the Graduate Faculty and the University Senate relating to graduate studies. The dean presides over all meetings of the Graduate Faculty and calls meetings of this faculty whenever it is advisable or whenever requested to do so by one-fourth of the membership. Recommendations are made by the Dean to the Graduate Faculty regarding the requirements for advanced degrees, the regulations necessary to insure a high standard of graduate work and all other aspects of the graduate program. The graduate programs are administered in the interest of efficient instruction and the highest attainment possible on the part of each graduate student. The Dean is responsible for determining and certifying to the Registrar candidates who have fulfilled requirements for advanced degrees.

The President, Vice President for Research and Graduate Studies, and the Dean of The Graduate School shall be *ex officio* members of all committees of The Graduate School. The Chancellor for the Lexington Campus and the Chancellor for the Medical Center are *ex officio* members of all committees of The Graduate School which affect their respective sectors.

The Graduate Council

The Graduate Council is composed of 18 members and the Dean of The Graduate School, who serves as chair. There are 16 faculty representatives and two student representatives. Associate deans serve in a nonvoting, *ex officio* capacity.

The composition of the Graduate Council is as follows: two members from the College of Agriculture, three members from the College of Arts and Sciences, one member from the College of Business and Economics, two members from the College of Education, one member from the College of Engineering, one member from the Colleges of Communications and Information Studies and Fine Arts, two members from the Colleges of Medicine and Pharmacy, one member from the Colleges of Allied Health Professions, Dentistry, Nursing and Graduate Centers, one member from the Colleges of Human Environmental Sciences, Social Work and Graduate Centers, two members appointed by the Dean of The Graduate School, and two student members selected by the Graduate Council.

Members representing a college or a combination of colleges are elected by the Graduate Faculty in the respective colleges.

The term of office of the elected members is three years and that of the graduate students is one year. Members may not succeed themselves until three years have elapsed following the completion of their last term.

The Graduate Council approves or disapproves proposals concerning courses offered for graduate credit, and advises and lends assistance to the Dean in executing the policies and regulations determined by the Graduate Faculty. Specifically, the Council:

1. Evaluates department requests relating to proposed graduate programs.
2. Reviews existing programs and curricula.
3. In cooperation with the Dean, initiates recommendations to the Graduate Faculty. (This procedure is not intended to prevent a faculty member from bringing any recommendation or request directly before the Graduate Faculty.)

The Graduate Council has such authority as is herein granted, or such as the Dean or the Graduate Faculty may delegate to it. A majority of the Graduate Council constitutes a quorum for the transaction of business.

Directors of Graduate Studies

The Dean of The Graduate School, with the advice of the college dean(s) and the approval of the president, may recommend to the Graduate Faculty the areas of graduate study and research into which the University may be divided. (The logical unit for an area is a department. By common consent, however, certain departments may be grouped into a single area to offer a graduate program; and in exceptional cases a department may be divided into two or more areas to offer programs in the respective areas.) Directors of Graduate Studies (DGSs) are the local representatives of each graduate program; they provide for the program's administration; and they act as the official liaison with The Graduate School. Directors of Graduate Studies are responsible to the Graduate Faculty of their program and to the Dean of The Graduate School for the recruitment, admission, advising, and examining of students in their program. Consequently, they have an important effect on the quality of graduate programs at the University of Kentucky. In addition to Directors of Graduate

GRADUATE COUNCIL

Dr. Mukhtar M. Ali	**2000**
Economics	
Dr. Jonathan Allison	**2001**
English	
Dr. Michael Barrett	**2001**
Agronomy	
Dr. L. Jeannine Blackwell	**2000**
German	
Dr. Robert A. Blouin	**1999**
Pharmacy	
Dr. Laura D. Jolly	**2001**
Interior Design, Merchandising and Textiles	
Dr. Joachim Knuf	**2000**
Communication	
Dr. Richard J. Mitchell	**1999**
Dentistry/Oral Health Science	
Dr. Daniel J. Noonan	**1999**
Biochemistry	
Dr. John M. Rawls	**1999**
Biological Sciences	
Dr. Susan J. Scollay	**1999**
Administration and Supervision	
Dr. John R. Thelin	**2001**
Educational Policy Studies and Evaluation	
Dr. Peter J. Timoney	**2000**
Veterinary Science	
Dr. Grzegorz W. Wasilkowski	**2000**
Computer Science	

APPOINTED MEMBERS

Dr. Paul M. Eakin	**1999**
Mathematics	
Dr. Kathi L. Kern	**1999**
History	

Studies for specific programs, some colleges have designated individual faculty members as Associate Dean for Graduate Studies to serve as the local extension of The Graduate School at the college level.

Directors of Graduate Studies are appointed by the Dean of The Graduate School after consultation with the respective Graduate Faculty and administration in a program. The DGS is normally a tenured faculty member, holding the rank of Associate Professor or above, and is a full member of the Graduate Faculty.

The Director of Graduate Studies of a graduate program reports directly to the Dean of The Graduate School or to the Dean's designee on all matters relating to graduate education in the program. The DGS is responsible to the Dean of The Graduate School for the administration of the specific graduate program, including maintenance of records, administration of graduate program funds, admission of graduate students, the University Scholars' Program, fellowships, program requirement changes and new programs, advising and registration, appointment of advisory and examination committees, and other degree requirements related to the graduate program. Additionally, the DGS serves as the focal point for dissemination of information from The Graduate School and for the gathering of information.

Directors of Graduate Studies serve as program advisers to each student until the student has a thesis or dissertation director. The DGS then recommends that the thesis or dissertation director be appointed the student's adviser or committee chair. In areas where theses are not required, the DGS is the adviser of all students not writing theses. All student schedules should be endorsed by the student's adviser. If it is desirable, a DGS may recommend that additional advisers in the program be appointed. A DGS who is to be absent from the University for as long as a semester must inform the Dean so that a substitute may be appointed.

A more detailed description of the role and responsibilities of the Director of Graduate Studies is available in The Graduate School office.

Establishment and Modification of Graduate Programs

An area which wishes to establish a new graduate program or modify an existing one must submit its program to the Graduate Council, which will make a recommendation concerning it to the Graduate Faculty.

Graduate degree programs to be delivered at extended-campus locations (either on-site or via technology) shall be reviewed and approved by the Graduate Council prior to their submission for appropriate review at higher levels. Extended campus graduate degree programs shall be reviewed periodically and their effectiveness assessed during regular institutional unit reviews, or, when circumstances warrant, by a special review process initiated by the Dean of The Graduate School.

Extended-Campus Graduate Programs

Several departments offer graduate degree programs or courses to extended-campus sites. Instruction is provided by distance education technology and/or on-site meetings of students with the faculty members. Through its Office of Extended-Campus Graduate Programs, The Graduate School provides coordination and support activities for the sites and assures a high standard of graduate work. This office assists with: student recruitment; administration of the extended-campus graduate program sites; liaison among students, programs, and UK support units; and liaison with the cooperating regional universities. All extended-campus graduate programs function within the policies and rules of The Graduate School.

Extended-campus graduate program sites are located at Ashland, Owensboro, Paducah, Prestonsburg, and the UK-Northern Kentucky University Graduate Center.

GRADUATE ADMISSION

Residency Requirements

According to law, the University of Kentucky and all other state-supported institutions of higher education assess tuition fees on the basis of Kentucky or non-Kentucky residence. The policy for determining residence is established by the Commonwealth of Kentucky Council on Postsecondary Education (see Residency Policy on page 118).

Students who are unsure of their residence status should check with the Registrar's Office before applying for admission.

Graduate Record Examination

All applicants for admission to degree programs in The Graduate School must submit scores on the verbal, quantitative and analytical portions of the Graduate Record Examination (GRE). This rule may be waived for one semester in individual cases upon recommendation of the Director of Graduate Studies in the individual department or program. In cases where waivers are granted, however, the GRE scores must be submitted before the end of the first semester of graduate study (see section on Provisional Admission). The advanced portion of the GRE may be required by individual departments or programs if they so desire. (Students who do not plan to work toward a graduate degree, i.e., Visiting Students, Rank I, Fifth-year, other certification and certificate programs, and Post-baccalaureate students, are exempt from this requirement.)

The College of Business and Economics substitutes the Graduate Management Admissions Test (GMAT) for the Graduate Record Examination for M.B.A., Ph.D, and Accounting students. Also, applicants in Public Administration and Health Administration may substitute the GMAT.

Students who have earned an academic doctorate are exempt from the GRE/GMAT requirement.

Admission

The University of Kentucky is committed to a policy of providing educational opportunities to all qualified students regardless of economic or social status, and will not discriminate on the basis of race, color, religion, sex, marital status, beliefs, age, national origin, or physical or mental disability.

Applicants for admission to the University of Kentucky Graduate School must pay an application fee. The fee is $30 for domestic applicants and $35 for international applicants. A check or money order made payable to THE UNIVERSITY OF KENTUCKY should accompany the completed application. NO CASH OR STAMPS, PLEASE.

Students seeking admission to the University of Kentucky Graduate School must hold a baccalaureate degree from a fully accredited institution of higher learning. An overall undergraduate grade point average of 2.75 and 3.0 on all graduate work is required by The Graduate School. Individual departments may require higher grade point averages.

All applicants for admission to degree programs in The Graduate School must submit official scores on the verbal, quantitative and analytical portions of the Graduate Record Examination (GRE) (see Provisional Admission). The College of Business and Economics substitutes the Graduate Management Admission Test (GMAT) for M.B.A., Ph.D. and Accounting applicants. Also, applicants for Public Administration and Health Administration may substitute the GMAT.

New students applying for admission must have two official transcripts sent *by each institution* of higher learning previously attended. All transcripts must be sent to The Graduate School, or transcripts in sealed envelopes obtained from Registrar of each institution may accompany the application.

To be official, records must bear the Registrar's signature and/or official seal of the issuing institution. A summary of credits transferred and recorded on the transcript issued by the institution granting the degree will not suffice.

Application forms can be obtained by writing:

The Graduate School
351 Patterson Office Tower
University of Kentucky
Lexington, Kentucky 40506-0027

or on the World-Wide Web at:
<www.rgs.uky.edu/gs/gsapplication.html>.

Applications must be submitted no later than one month before the beginning of the term the applicant intends to begin graduate work (see Calendar).

Graduate students may not be able to begin immediately a full graduate program leading to the degree they desire; it may be necessary for them to satisfy prerequisites which they omitted in their undergraduate curriculum. Deficiencies are determined by the program in which the major work is to be done. Ordinarily, graduate students may begin a full program in any field in which they have a balanced undergraduate major or its equivalent.

Admission to The Graduate School entitles students to take such courses as they desire, provided they have the necessary prerequisites and departmental approval.

Attendance in The Graduate School at the University of Kentucky is not a right, it is a privilege which may be withdrawn by the University or by any area of graduate study if it is deemed necessary by the Dean of The Graduate School in order to safeguard the University's standards.

Additional Procedures for International Applicants

All non-U.S. citizens, except Permanent Residents of the U.S., should request an Application Form for International Students. Applicants must have excellent grades and rank in the top quarter of their classes. To be considered for entry as a graduate student, an applicant must hold a four-year Bachelor's degree. (**Indian students**: a first-class record is normally expected although high second-class holders in non-science areas may be considered if they can offer further evidence of having been in at least the top 10 percent of their graduating class.)

When credentials are submitted in support of any application, they should be either the original documents or certified copies (i.e., copies certified or attested as "true copies" by a notary public). An official translation must be attached to these records if they are in a language other than English. Credentials should include a record of all degrees earned, detailing all subjects taken and grades obtained. Grades must be listed in the indigenous system.

GRE/GMAT Requirement. Applications will not be considered without official scores on the verbal, quantitative, and analytical portions of the Graduate Record Examination (GRE). Business and Accounting applicants must substitute the Graduate Management Admissions Test (GMAT). Also, applicants for Public Administration and Health Administration may substitute the GMAT. If the GRE or the GMAT have not been taken, write to the Educational Testing Service (ETS), Box 6000, Princeton, NJ 08541, for information concerning the appropriate examination. The tests are administered throughout the year and test scores generally require six weeks for delivery. It is important, therefore, that the applicant take the appropriate test well in advance of the application deadline in order to allow ample time for scores to be received in The Graduate School.

Test scores must be sent directly to the University of Kentucky Graduate School from ETS. Photocopies can be submitted for use in a preliminary evaluation until official scores are received from ETS.

Application Fee. International applicants for admission to The University of Kentucky Graduate School must pay a $35 application fee. A check or money order in United States funds made payable to THE UNIVERSITY OF KENTUCKY should accompany the completed application. Applications will be processed upon receipt of the fee. NO CASH OR STAMPS, PLEASE.

English Proficiency Requirement. The University of Kentucky requires a minimum score of 550 on the Test of English as a Foreign Language (TOEFL) for all applicants whose native language is not English. (The equivalent score on the new "computer" version of the TOEFL is 213.) The test is administered by the Educational Testing Service (ETS), which publishes the TOEFL Bulletin. The TOEFL Bulletin includes a registration form. Bulletins are available in many locations outside the U.S., usually at American embassies and consulates, offices of the United States Intercultural Communications Agency (ICA), United States educational commissions and foundations, bi-national centers, and many private organizations such as the Institute of International Education (IIE), African-American Institute (AAI), America-Mideast Educational and Training Services, Inc. (AMIDEAST), and American Kor-Asian Foundation.

Students who cannot obtain a TOEFL Bulletin and registration form locally should write, well in advance, to: Test of English as a Foreign Language, Box 6154, Princeton, NJ 08541-6154.

Test scores must be sent directly to the University of Kentucky Graduate School from ETS. Photocopies can be submitted for use in a preliminary evaluation until official scores are received from ETS.

Financial Resources Requirement. Entering students must certify that they have at least $16,794 available for each 12-month period of study. It is estimated that this amount will cover the cost of tuition fees, books and supplies, room and meals, health insurance (explained below) and incidentals, for a single person.

The students must have on hand at the beginning of each registration period funds sufficient to pay for tuition, fees, room and board and health insurance. These costs are to be paid at the beginning of each term.
Note: Fees subject to change without notice.

Health History Form. All international students must obtain from the Student Health Service a tuberculin screening test and reading, and complete a health history form, before registration will be allowed. This should be done as soon as possible following arrival on the University campus. (See also Health Services on page 37.)

Application Deadline for International Student Admission

Applications for admission should reach The Graduate School at least six months before the opening of the term the applicant intends to begin graduate work; that is, February 1 for the fall semester which begins in late August, June 15 for the spring semester which begins in

Support Services for the International Student

International Student Services. International Students and Scholars Services division, part of the Office of International Affairs, is the focal point for international student services. It orients students to a new educational system and to American culture, and provides a continuing source of information, counsel, and friendship through their stay. The Office is charged with the responsibility of interpreting immigration regulations which affect international students and scholars. It also sponsors cross-cultural programs on campus and in the community designed to encourage communication and understanding between Americans and internationals. Among the programs offered are the Cosmopolitan Club, Welcome and Orientation Week, the International Hospitality Program, and English as a Second Language. The Office of International Affairs is located in Bradley Hall.

Health Services. The University has an excellent health care clinic for out-patient care that is of special importance to international students (see section on Health Service). UK international students must have hospitalization insurance that is payable in the United States. They must also pay any charges insurance does not cover. Because of the extremely high cost of medical care, it is imperative that a student have insurance for himself or herself, spouse, and children. Health insurance application forms can be obtained in Bradley Hall.

Program in English for International Students. The English Department sponsors the Center for English as a Second Language. The Center offers eight-week terms of study; students may join in June, August, October, January, or March. Students receive 160 hours of intensive English instruction in an eight-week period. No college credit is given for the course of study, but students are given certificates of completion for the Center's program. Sometimes students are admitted to The Graduate School contingent upon successful completion of the program. The Center is authorized under federal law to enroll non-immigrant alien students. The fee is $1,235* for instruction; room, board, and textbooks are not included in the fee. For further information write the Center for English as a Second Language, 1235 Patterson Office Tower, UK, 40506.

*Subject to change without notice.

Sponsored International Graduate Students. International graduate students financed and monitored by sponsoring agencies can be provided with special placement, advising, and management services. Literature describing these services is available from the Office of International Affairs. The sponsoring agency is assessed a fee of $300 per semester per student for these special services.

mid-January, and October 31 for all summer sessions. No application will be considered until all supporting documents have been presented.

SPECIAL ADMISSION CATEGORIES

Post-Baccalaureate Graduate Students

Students who hold a baccalaureate degree from a fully accredited institution of higher learning and who wish to pursue graduate study without a degree or certification objective, and students who do not fulfill the entrance requirements of The Graduate School, may apply for admission as post-baccalaureate graduate students.

Admission to this status may be granted to two types of applicants: 1) Those who demonstrate promise for graduate work but have not qualified for admission to a degree program, or 2) Those who do not intend to complete a degree or to work toward certification. *Post-baccalaureate status is not a form of probationary admission to a degree-granting graduate program.*

An application for admission to The Graduate School as a post-baccalaureate graduate student should be filed in the Admissions Office at least 30 days in advance of the registration date for the term in which the student plans to enroll. An original or a photocopy of a transcript showing an awarded bachelor degree must accompany the application. An overall undergraduate grade point average of 2.5 or better and a 3.0 on all previous graduate work (both on a 4-point scale) are required by The Graduate School for admission.

Post-baccalaureate students may take graduate courses for graduate credit. Permission to enter any graduate class as a post-baccalaureate student will be granted only if the student meets the prerequisites for that course and if space is available.

A post-baccalaureate student who later wishes to apply to enter a degree-granting graduate program must have a 3.0 or better grade point average on all course work, graduate or undergraduate, attempted as a post-baccalaureate. A standard application form or written notice requesting consideration for admission to a specific program and stating the semester or summer session for which enrollment in the program is desired must be presented to The Graduate School. Calendar deadlines for application noted in the front of this Bulletin should be observed.

A maximum of nine semester hours or 25 percent of the semester hours required for the degree concerned (exclusive of residence or thesis credit, research and independent study), whichever is greater, may later be transferred from post-baccalaureate status to a master's or specialist degree program at the University of Kentucky. All such transfers of credit hours into a graduate program must be approved by that program's director of graduate studies and by the Dean of The Graduate School. A grade of A or B must have been earned in the course or courses to be transferred (see Transfer of Credit on page 20 for details).

Non-Degree Certification Students

The University of Kentucky offers admission to students pursuing course work applicable toward non-degree certification. These include, for example, Rank I Certification and Fifth Year Certification through the College of Education. This is a separate type of special admission, which differs from post-baccalaureate status. Minimally, The Graduate School requires applicants for certification to meet the same admission requirements as those for post-baccalaureate status, but the certification unit often imposes additional and more rigorous requirements for admission. It is best to consult with the director of graduate studies in the specific area for which certification is sought prior to applying. Certification students who later wish to transfer credits into a master's or specialist's program at the University of Kentucky may do so. The requirements and limitations are the same as for any transfer of credits into such a program.

Provisional Admission

Students wishing to pursue an advanced degree who are temporarily ineligible for regular graduate admission status may be recommended by the director of graduate studies for provisional admission status in the following cases:

1. Missing transcripts or other requirements for admission such as letters of recommendation;
2. Temporary waiver of the Graduate Record Examination (not to exceed one semester);
3. Deficiencies determined by the program;
4. Temporary ineligibility for regular admission status because program only reviews applications once a year;
5. Graduating University of Kentucky seniors lacking no more than six hours for graduation; the consent of the college dean and the Dean of The Graduate School and approval of the director of graduate studies are necessary. Students may take no more than 12 credit hours and must complete the undergraduate degree during the semester in which they enroll in the provisional status (see Graduating Seniors as Part-Time Graduate Students).

Provisional status is permitted for a maximum of one full-time semester or up to 12 hours after which the student's record will be reviewed. Within 30 days into the following semester, and on recommendation of the director of graduate studies, the student will be changed from provisional to regular program status, or dropped from the graduate program entirely.

Graduating Seniors as Part-Time Graduate Students

Seniors in the University of Kentucky lacking no more than six credit hours for graduation and having an undergraduate average of at least 2.5 on all work attempted may register in The Graduate School in the provisional status with the consent of the undergraduate college dean, the appropriate director of graduate studies, and the Dean of The Graduate School. The total load of such students may not exceed 12 credit hours. Graduate credit will be allowed for each credit hour of graduate work beyond the six or fewer credit hours needed to complete undergraduate requirements. Requirements for the undergraduate degree must be completed during the semester in which the students are allowed to register for part-time graduate work. Students applying for admission to The Graduate School under these conditions must fill out a petition form listing the course or courses to be taken to complete the undergraduate requirements. Petition forms are available in The Graduate School office.

University Scholars Program

(Combined Master's/Bachelor's Degree Program)

The University Scholars Program offers particularly gifted and highly motivated students the opportunity and the challenge of integrating their undergraduate and graduate courses of study in a single continuous program culminating in both a baccalaureate and a master's degree. The total number of hours for the combined program may be as many as 12 fewer than the total required for both the bachelor's and the master's degrees separately. The requirements for the bachelor's degree are unaffected.

Application to the program should be submitted at the end of the student's junior year. Applicants should have completed at least 90 credit hours of work toward the bachelor's degree, or be eligible for senior standing in the semester they are admitted to the program. The master's program should be in the field of the undergraduate major, and the undergraduate grade point average must be at least a 3.5 in the applicant's major field and 3.2 overall.

Applicants to a University Scholar's program must fill out and have signed a University Scholar's application form, which is available in The Graduate School Admissions Office. This form should be returned along with the standard Graduate School application form.

The Dean of The Graduate School or his appointee will make admission decisions. Students must register in The Graduate School for all work taken following admission to the University Scholars' Program. University Scholars may take no more than 16 credit hours per semester, except by recommendation of their director of graduate studies and by approval of the Dean of The Graduate School. Students must have an undergraduate advisor and a graduate advisor. A jointly planned program must be prepared for each student.

The following participate in the University Scholars Program:

Agricultural Economics
Anthropology
Biosystems and Agricultural Engineering
Chemistry
Chemical Engineering
Civil Engineering
Classics

Communication
Electrical Engineering
Family Studies
Forestry
French
Geography
History
Materials Science and Engineering
Mechanical Engineering
Music
Nursing
Physics
Social Work
Sociology
Spanish

Combined Medical and Graduate Studies

Students combining studies toward an M.D. degree and a Ph.D. degree in one of the established programs of The Graduate School must be admitted to both programs. Before applying for admission to The Graduate School, applicants should consult with the Director of Graduate Studies of the graduate area of interest.

Copies of the guidelines for students wishing to pursue the combined M.D./Ph.D. degrees may be obtained in the office of the Associate Dean for Academic Administration, The Graduate School.

University of Kentucky/Lexington Theological Seminary Double Competency Program

The Lexington Theological Seminary and the University of Kentucky have established a double competency program to educate qualified students whose career interests are social work and the ministry. Interested students should contact their major adviser.

University of Kentucky/Asbury Theological Seminary Double Competency Program

Asbury Theological Seminary and the University of Kentucky have established a double competency program for students whose interests are social work and the ministry. Interested students should contact their major adviser.

JD/MPA Dual Degree Program

The University of Kentucky offers a two-year, 45-hour professional Master of Public Administration degree through The Graduate School. The College of Law offers a three-year, 90-hour Juris Doctorate. The MPA program has been professionally reviewed and recognized by the National Association of Schools of Public Affairs and Administration. The College of Law is accredited by the American Bar Association and is a member of the Association of American Law Schools. The JD/MPA dual degree is the only one of its type offered in the Commonwealth. It permits students to gain both degrees in a total time period of one year less than if the degrees were earned independently. For information, contact the Program in Public Administration or the College of Law.

JD/MBA Dual Degree Program

The College of Business and Economics and the College of Law offer the opportunity to obtain the Master of Business Administration (MBA) and Juris Doctor (JD) degrees in a dual degree program. Because both schools recognize that some aspects of business and law are compatible and interrelated, students can usually obtain both degrees in four or four and one-half years instead of the five required if the degrees were pursued separately. As a result, students gain marketable skills and specialized employment opportunities in less time than might otherwise be required. Students interested in the MBA/JD program must apply to both the College of Law and The Graduate School.

PHARM.D./MBA Dual Degree Program

The College of Business and Economics and the College of Pharmacy offer the opportunity to obtain the Master of Business Administration (MBA) and Doctor of Pharmacy (Pharm.D.) degrees in a dual degree program. Students can usually obtain both degrees in four years plus three summers instead of the five and one-half years required if the degrees were pursued separately. The dual degree program is designed to provide students with the necessary educational foundation so that they not only are prepared to begin practice as a pharmacist, but to assume managerial responsibility in a variety of health care settings. A student desiring admission into the dual degree program will be required to apply formally and independently to both programs.

PHARM.D./MPA Dual Degree Program

The University of Kentucky offers a two-year, 45-hour professional Master of Public Administration degree through the Graduate School. The College of Pharmacy offers a four-year, 158-hour Doctor of Pharmacy. The Pharm.D./MPA dual degree is the only one of its type offered in the Commonwealth. The dual degree program permits a student to gain both degrees in a total time period less than if the degrees were earned independently. The dual degree program is highly desirable for persons seeking careers in state and federal regulatory and administrative agencies, the pharmaceutical industry, managed care organizations, and academics. For information contact the Program in Public Administration or the College of Pharmacy.

BS in Engineering/MBA Dual Degree Program

The College of Business and Economics and the College of Engineering offer the opportunity to obtain the Bachelor of Science in Engineering (BS) and Master of Business Administration (MBA) degrees in a five-year

dual degree program. In addition to regular engineering courses, prerequisite undergraduate courses in accounting, economics, and statistics are taken during the first three years of study to prepare students for management, economics, business, and finance MBA courses. The students' senior years mark the beginning of the graduate MBA courses and interaction with non-engineering MBA students. During the summer prior to the fifth year, the students participate in a study-abroad experience designed expressly for the program, thereby enhancing and broadening their cross-cultural experiences.

Visiting Students

Students who are enrolled in a graduate program at another institution and plan to attend the University of Kentucky as Visiting Students need not submit transcripts. Students must, however, request a Visiting Student form from The Graduate School office when filing an application. Visiting Student admission is for one semester only and credit earned in that status is not applicable to a University of Kentucky degree.

Readmission

Former University of Kentucky graduate students in good standing are eligible for readmission within one academic year. Otherwise, readmission is contingent on the approval of the student's program. Students must file an application for readmission by the stated deadlines (see Calendar). An exception to this rule is made on behalf of students who attend only University summer sessions. These students do not have to apply for readmission to a summer session if they were enrolled for the preceding summer session. (No application fee is assessed for students seeking readmission.)

GENERAL REGULATIONS

INFORMATION AND REQUIREMENTS FOR ALL ADVANCED DEGREES

Registration and Classification

All students expecting graduate credit must be enrolled in The Graduate School. Graduate students will conform to the general registration schedule of the University and may not enter later than the last allowable date set by the Registrar.

Before registering, graduate students should obtain approval of their proposed schedule from their adviser(s).

Changes in The Graduate School Requirements

When Graduate School or degree program requirements are changed after a course of study has begun, the students shall have the option of fulfilling either the old or the new requirements.

If students elect to fulfill the old requirements but find that necessary resources (e.g., courses, instruction in particular skills) are no longer available, they may make reasonable substitutes with the approval of the Dean of The Graduate School upon recommendation of the Director of Graduate Studies.

In the event that students interrupt their work on a graduate degree (i.e., not enrolled) for one calendar year or more, the Dean of The Graduate School shall determine, upon recommendation of the Director of Graduate Studies, whether the old requirements or the new requirements shall apply. In the event students have not completed the requirements for the graduate degree five years after the effective date of a change in degree requirements, the new requirements shall apply unless determined otherwise by the Dean of The Graduate School.

Advanced Degrees for Faculty Members

Members of the faculty, with the exception of those in the Community College System, having a rank higher than that of Instructor, may not be considered as candidates for degrees in the discipline in which they are employed and hold academic rank.

Student Responsibility

It is the student's responsibility to be informed concerning all regulations and procedures required by the course of study being pursued. *In no case will a regulation be waived or an exception granted because a student pleads ignorance of the regulation* or asserts that information was not presented by advisers or other authorities. Therefore, the student should become familiar with The Graduate School Bulletin, including 1) the section presenting the requirements for degrees and 2) the program offerings and requirements.

The Director of Graduate Studies in the student's major program should be consulted concerning course requirements, any deficiencies, the planning of a program, and special regulations. Programs may have degree requirements that are not listed in the Bulletin.

It is to be noted that the Dean of The Graduate School interprets the Graduate Bulletin. Only the Graduate Council may waive requirements stated in this Bulletin.

Confidentiality of Student Records

In accordance with the Family Education Rights and Privacy Act of 1974, University of Kentucky students have the right to review, inspect, and challenge the accuracy of information kept in a cumulative file by the institution unless the student waives this right in writing. Records cannot be released in other than emergency situations without the written consent of the student, except in the following situations:

A. to other school officials, including faculty within the educational institution or local educational agency, who have legitimate educational interests;
B. to officials of other schools or school systems in which the student intends to enroll, upon condition that the student be notified of the transfer, receive a copy of the record if desired, and have an opportunity for a hearing to challenge the content of the record;
C. to authorized representatives of 1) the Comptroller General of the United States, 2) the Secretary of Education of the United States, 3) an administrative head of an education agency or 4) state educational authorities;
D. in connection with a student's application for, and receipt of, financial aid;
E. where the information is classified as "directory information." The following categories of information have been designated by the University as directory information: name, address, telephone listing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the

most recent previous educational institution attended by the student. If you do not wish such information released without your consent, you should notify the Registrar's Office prior to the first day of classes.

Questions concerning this law and the University's policy concerning release of academic information may be directed to the Registrar's Office.

Graduate Courses

All courses numbered 500 through 799 may be counted for credit toward a graduate degree provided they are approved as an appropriate part of the student's graduate program by the student's graduate adviser or committee. Courses numbered 400G to 499G carry graduate credit for non-majors only.

Courses numbered at the 800 or 900 level are normally not accepted for credit toward a graduate degree. Exceptions can be made if permission is granted by the Graduate Council to a program to offer specific professional courses as part of its academic program. Prior approval to take a course must be obtained from the Director of Graduate Studies, the Dean of The Graduate School and the dean of the professional college. Without such approval, professional courses may not be counted toward satisfying degree requirements. Courses numbered at the 600 or 700 level should be taught by members of the Graduate Faculty or by such other instructors as are approved by the Dean of The Graduate School.

Add/Drop-Withdrawal

The Graduate School follows the rules of the University Senate as administered by the Registrar's Office.

Academic Load

The total semester or term academic load of a student is the sum of all credits and credit equivalents (e.g., graduate language courses, undergraduate courses, courses audited, etc.) being carried. The normal academic load of a graduate student during any semester is nine credit hours or equivalent. Under no circumstances may it exceed 15 credit hours or equivalent. During the summer term, the maximum academic load for the eight-week term is nine credit hours, and for the four-week intersession is four credit hours. The maximum academic load for any combination of the four- and eight-week terms is 12 credit hours.

Students satisfactorily completing nine course credits, or equivalent, of graduate level work during a semester, are classified as full-time students by the University. Students satisfactorily completing five course credits, or equivalent, during a summer term are classified as full-time. Those completing less than these amounts are classified as part-time. For the student who is a full-time teaching assistant or whose service to the University requires approximately 20 hours per week, the academic load shall not exceed 10 hours. This maximum may be increased to 12 hours for students with lighter service loads upon recommendation of the Director of Graduate Studies and approval of the Dean of The Graduate School.

Full-time students who fall below the minimum full-time equivalent as the result of failing or dropping one or more courses are reclassified as part-time students for that semester or term.

Master's candidates working on their theses may register for up to 12 credits of course number 768 in the appropriate department. Plan A master's degree candidates who are in residence and receiving financial support from the University and/or utilizing University resources while working on the thesis must be enrolled in The Graduate School. Candidates not enrolled in course work to meet degree requirements must be enrolled in their department's course number 748 or 768 each semester.

Grades and Grade Point Averages

The official grades of graduate students are recorded in the Office of the Registrar.

The grading in graduate courses is done according to the following scale:

A-High achievement	4 grade points per credit
B-Satisfactory achievement	3 grade points per credit
C-Minimum passing grade	2 grade points per credit
E-Failure	0 grade points per credit
I-Incomplete	See explanation following
S-Satisfactory	See explanation following

D grades are not awarded to graduate students. Graduate courses (400G-799) may not be taken Pass/Fail.

A grade of I (incomplete) may be assigned to a graduate student if a part of the work of a course remains undone and there is a reasonable possibility that a passing grade will result from completion of the work. **All incompletes (I grades) must be replaced by a regular final letter grade within 12 months of the end of the academic term in which the I grade was awarded or prior to the student's graduation, whichever occurs first.** If an I grade has not been replaced within the allowable period, the University Registrar shall change the I grade to a grade of E on the student's permanent academic record and adjust the student's grade point standing accordingly, unless otherwise approved because of exceptional circumstances by the Dean of the Graduate School upon recommendation of the Director of Graduate Studies in the student's program.

Instructors who assign an I grade must file with the student's Director of Graduate Studies information which includes 1) the name of the student, 2) the course number and hours of credit, 3) the semester and year of enrollment, 4) specific information on the work to be completed before a final grade can be assigned, and 5) the time frame in which the specific requirements are to be met (not to exceed 12 months). Graduate students should consult with their Director of Graduate Studies concerning procedures relative to the awarding of I grades and the conditions under which they may be removed.

A grade of S (satisfactory work in progress) may be recorded for students in graduate seminars, independent work courses, and research courses which extend beyond the normal limits of a semester or summer term. The grade may not be given to a student in a course carrying credit if the student has done unsatisfactory work or failed to do a reasonable amount of work. The project must be substantially continuous in its progress. All S grades must be removed except for those given in Residence Credit 748, 749, 768 and 769, or in graduate courses which carry no credit.

An overall average of B (3.0) on all graduate work in the program must be attained before an advanced degree may be awarded. Graduate-level courses (numbers 400G-799) are computed in the graduate grade-point average, with the exception of 400G courses in the student's program (see Repeat Option).

Once a grade other than an I or S has been reported to the Registrar's Office, it may not be changed unless an error was made at the time the grade was given and recorded, and then only upon the written unanimous approval of the instructor, the Registrar, and the Dean of The Graduate School.

Repeat Option

A student may repeat a graduate course and count only the second grade as part of the graduate grade point average. This action will be initiated by petition of the Director of Graduate Studies to the Dean of The Graduate School, and may be used only once in a particular degree program or in post-baccalaureate status.

Credit Equivalence

Certain research courses carry no credit hours or grades but do contribute to the residence requirements of graduate degrees. For these courses the credit equivalent is stated in the course descriptions.

Scholastic Probation

When students have completed 12 or more semester hours of graduate course work with a cumulative GPA of less than 3.0, they will be placed on scholastic probation. Students will have one full-time semester or the equivalent (nine hours) to remove the scholastic probation by attaining a 3.0 cumulative GPA. If probation is not removed, students will be dismissed from The Graduate School.

Students who have been dismissed from The Graduate School for this reason may apply for readmission to The Graduate School after two semesters or one semester and the eight-week summer term. Readmitted students will have one full-time semester or the equivalent (nine hours) to remove the scholastic probation by attaining a 3.0 cumulative GPA.

Exceptions to this policy can be made only by the Dean of The Graduate School.

Students placed on scholastic probation are not eligible for fellowships or tuition scholarships.

Termination

The Dean of The Graduate School may terminate enrollment in a particular program for the following reasons:

1. Scholastic probation for three enrolled semesters.
2. Having failed twice the final examination for the master's degree or the qualifying examination.
3. In cases where the student's Advisory Committee recommends termination after the qualifying examination has been passed, the Graduate Faculty in that program will meet to vote on the recommendation. When the Graduate Faculty of that program concurs and the student dissents, the student will have an opportunity to meet with the Graduate Faculty of the program, after which a second vote will be taken and a final recommendation will be made to the Dean of The Graduate School.

Each program sets specific requirements and standards of performance, evaluative procedures and criteria, and procedures for terminations. The student should be informed of these criteria at the time of enrollment by the Director of Graduate Studies of the program.

Special Examinations in the Student's Program

A special examination for graduate credit requires the approval of the Dean of The Graduate School. Following approval, students must complete the Special Examination form (available in the Registrar's Office) and have it approved and signed by the Director of Graduate Studies and the Dean of The Graduate School. Students must be enrolled in The Graduate School during the semester they wish to sit for a special examination.

Students Changing Programs

Students who plan to change programs must have the consent of the Director of Graduate Studies in the **new** program. A letter of acceptance from the DGS must be sent to The Graduate School. Also, students must request in writing that this change be made official by The Graduate School.

Off-Campus and Short Courses

Short courses are defined as courses of less than a term in length. A short course may not carry credits greater than the number of weeks during which it is offered. Two short courses of four weeks or less may not be taken simultaneously. Two full-term courses and a short course may not be taken simultaneously.

Instructional standards for off-campus and short courses should be the same as those established for on-campus and regular courses. A comprehensive final examination will normally be required to assess the student's capability for scholarly thinking in the subject

matter area. Practicum or laboratory short courses should require other experiences of comparable rigor.

UK Students as Visitors

University of Kentucky graduate students who attend another graduate school as a Visiting Student must have the permission of their University of Kentucky advisers and The Graduate School **before** the courses are taken in order to transfer credits earned (see Transfer of Credits section).

Visiting Student status may be granted **only** to a student who is in good standing in a degree program.

Time Limit for Degrees

Master's/Specialist Degrees. Activities used to satisfy degree requirements must be completed within eight years preceding the proposed date of graduation. Extensions of time will be considered by the Graduate Council only upon written recommendation by the appropriate Director of Graduate Studies. No activity completed more than 12 calendar years preceding the proposed graduation date will be considered for graduation.

Doctoral Degree. All degree requirements for the doctorate must be completed within five years following the semester or summer session in which the candidate successfully completes the qualifying examination. In the event that all degree requirements are not met during the five-year period, degree candidates who provide evidence of the likelihood of completing the degree during an extension of time may be granted such an extension by the Graduate Council. Requests will be considered only upon written recommendation of the appropriate Director of Graduate Studies after the candidate has again successfully completed the qualifying examination process as currently administered by the program. (Note: Failure to pass the re-examination will result in the termination of degree candidacy; a second re-examination is not permitted.) An extension of no more than five years may be granted.

Graduation

Advanced degrees may be conferred at the close of either semester or the eight-week summer session, but Commencement exercises are held only in May. Students who are eligible to receive degrees at the end of the summer session or the fall semester may participate in the next Commencement exercise.

Appropriate academic costume must be worn.

The thesis and dissertation fees cover the cost of binding of the thesis or dissertation, microfilming, and copyright (see Copyright section). Authorization forms to pay dissertation fees are issued in Room 351, Patterson Office Tower. Diplomas will not be released from the Registrar's Office until the fees have been paid.

To be eligible for a degree, **a student must file an application in The Graduate School within 30 days after the beginning of the semester (15 days in the summer session) in which they expect to complete their work.**

Diplomas

Diplomas for graduate students are ordered after certification of the degrees has been completed. If a letter of certification is needed, The Graduate School will provide one upon request.

Accounts Payable to the University

All outstanding accounts due to the University must be cleared before a degree is awarded. Candidates for degrees whose accounts are cleared close to the final deadline date for graduation clearance should take their receipt of payment to the Registrar's Office

ADVANCED DEGREES

GENERAL REQUIREMENTS FOR ALL MASTER'S DEGREES

(See also General Regulations)

On-Campus Residence

There is **no** Graduate School-wide sustained residence requirement for master's degrees at the University of Kentucky. However, students are advised to consult the special statement of requirements for the programs in which they are interested and consider carefully the statement about the spirit of resident graduate work in the section on residence. Students who contemplate continuing in a doctoral program should take into account at the outset the residence requirements for the doctoral degree.

Foreign Language Requirement

Many programs require a reading knowledge of a modern foreign language for the master's degree. French, German, or Russian are the normally accepted languages. However, another modern language pertinent to the student's program may be substituted on the recommendation of the adviser and with the approval of the Director of Graduate Studies and the Dean of The Graduate School. The language requirement may be satisfied by:

1. completing one of the accelerated graduate level language courses with a B or better grade.
2. completing the Educational Testing Service examination with a minimum score of 450.
3. completing the fourth semester of a foreign language with a grade of B or better as an undergraduate at an accredited college or university.
4. completing, with a grade of B or better, special examinations given for the graduate reading courses. Forms may be obtained from the Registrar's Office, Funkhouser Building. Other types of special examinations are scheduled in The Graduate School. Examinations to "test out" of Russian must be arranged through the Department of Russian and Eastern Studies.
5. transferring a language taken to satisfy the requirements for a master's degree at another university.

Note: With the approval of their program to use their native language, international students who are non-native speakers of English may satisfy the foreign language requirement by presenting a TOEFL score of 550 or above.

Candidates for degrees must be proficient in English.

Transfer of Credits

With the approval of the student's adviser, or major professor, the Director of Graduate Studies, and the Dean of The Graduate School, a maximum of nine semester hours *or twenty-five percent of the semester hours required for the degree concerned (exclusive of residence or thesis credit) whichever is greater,* of regular graduate course credits, completed at an accredited university and earned prior to admission to a given graduate degree program, may be credited toward the minimum requirements of the Master's or Specialist degree in that graduate program provided that the grades earned were A or B. For example, such credits may be earned 1) as a student in another graduate program at the University of Kentucky, or 2) as a graduate student at another accredited graduate school. In the event a student offers credits in more than one of these categories, the total to be credited toward the degree still may not exceed nine hours *or twenty-five percent of the semester hours required for the degree concerned (exclusive of residence or thesis credit), whichever is greater.* In no case will independent work, research, thesis, or dissertation credit completed as part of degree requirements for one program be considered to satisfy requirements of a subsequent master's program.

Courses and Curricula

Graduate students are eligible to take regular courses which meet as organized classes and independent-study or research courses in which each student carries on investigations independent of class meetings. *Independent study or research courses must not duplicate thesis work;* thesis work must be done in addition to the minimum course requirements. *At least two-thirds of the minimum requirements for the master's degree must be in regular courses, and at least half of the minimum course requirements (excluding thesis, practicum, or internship credit) must be in 600- or 700-level courses.* Exceptions to this rule may be made only with the approval of the Graduate Council.

Concurrent Degree Programs

Concurrent enrollment for degree purposes in more than one graduate program is permitted only with the approval of the student's Graduate Adviser(s), Directors of Graduate Studies in the programs, and the Dean of The Graduate School. No more than nine hours of course work may be common to concurrent degree programs.

Subsequent to the receipt of a doctoral degree, a student is not eligible to receive a master's degree based on the work which led to the doctorate.

DEGREES CONFERRED

Doctor of Philosophy

Agricultural Economics
Anatomy and Neurobiology
Anthropology
Animal Sciences
Biochemistry
Biology
Biomedical Engineering
Biosystems and Agricultural Engineering
Business Administration
Chemical Engineering
Chemistry
Civil Engineering
Communication
Computer Science
Crop Science
Economics
Educational and Counseling Psychology
Educational Policy Studies and Evaluation (Higher Education)
Electrical Engineering
English
Entomology
Geography
Geology
Gerontology
History
Mathematics
Mechanical Engineering
Materials Science and Engineering
Microbiology
Mining Engineering
Music
Nursing
Nutritional Sciences
Pharmaceutical Sciences
Pharmacology
Philosophy
Physics and Astronomy
Physiology
Plant Pathology
Plant Physiology
Political Science
Psychology
Public Administration
Social Work
Sociology
Soil Science
Spanish
Statistics
Toxicology
Veterinary Science

Master of Arts

Anthropology
Art
Classical Languages
Communication
Diplomacy
Economics
English
French
Geography
German
History
Library Science
Mathematics
Music
Philosophy
Political Science
Psychology
Sociology
Spanish
Theatre Arts

Master of Science

Agricultural Economics
Animal Sciences
Applied Mathematics
Biology
Chemistry
Computer Science
Crop Science
Dentistry
Economics
Entomology
Geology
Kinesiology and Health Promotion
Mathematics
Nutrition and Food Science
Pharmaceutical Sciences
Physics
Plant and Soil Science
Plant Pathology
Psychology
Statistics
Toxicology
Veterinary Science

Other Degrees

Doctor of Education
Doctor of Musical Arts
Master of Arts in Education
Master of Arts in Interior Design, Merchandising and Textiles
Master of Business Administration
Master of Civil Engineering
Master of Education
Master of Engineering
Master of Fine Arts
Master of Health Administration
Master of Historic Preservation
Master of Mining Engineering
Master of Music
Master of Public Administration
Master of Rehabilitation Counseling
Master of Social Work
Master of Science in Accounting
Master of Science in Agriculture
Master of Science in Biomedical Engineering
Master of Science in Biosystems and Agricultural Engineering
Master of Science in Chemical Engineering
Master of Science in Civil Engineering
Master of Science in Clinical Nutrition
Master of Science in Communication Disorders
Master of Science in Education
Master of Science in Electrical Engineering
Master of Science in Family Studies
Master of Science in Forestry
Master of Science in Health Physics
Master of Science in Interior Design, Merchandising, and Textiles
Master of Science in Library Science
Master of Science in Manufacturing Systems Engineering
Master of Science in Materials Science and Engineering
Master of Science in Mechanical Engineering
Master of Science in Mining Engineering
Master of Science in Nursing
Master of Science in Physical Therapy
Master of Science in Public Health
Master of Science in Radiological Medical Physics
Master of Science in Vocational Education
Specialist in Education

Independent Study Programs
(Correspondence Courses)

No graduate credit is given for courses taken by correspondence.

Final Examination

A Final Examination (oral and/or written) is given to all candidates for master's degrees not later than eight days before the last day of classes of the semester in which the degree is to be awarded. The examination is scheduled by the Dean of The Graduate School and the report is returned to the Dean upon completion of the examination, which in no case may be later than two weeks after the start of the examination. The examining committee consists of at least three qualified faculty recommended by the Director of Graduate Studies and appointed by the Dean of The Graduate School. At least one member must be a full member of the Graduate Faculty and one other must hold at least an associate appointment. The recommendation for a final examination must be filed with The Graduate School at least two weeks prior to the date of the examination. (Students writing theses should see the section on Thesis/Non-Thesis Options.)

If the candidate fails the final examination, the committee may recommend to the Dean of The Graduate School the conditions under which a second examination may be administered. Insofar as it is practicable, the same examining committee gives this examination. In all decisions the majority opinion of the committee prevails. If the committee is evenly divided, the candidate fails. A third examination is not allowed.

Thesis/Non-Thesis Options

The Graduate Faculty authorizes all graduate programs to satisfy the master's requirements by either of two options, thesis (Plan A) or non-thesis, (Plan B). Candidates for the master's degree must have a major area (defined usually as an academic department) and must take at least two-thirds of the course work in this area; the other one-third may be taken in this area or in related graduate areas. In Education, Agriculture, Communications, and Human Environmental Sciences only one-half of the work must be in the major area. When the setting up of major topics seems to require it, the Graduate Council may, on recommendation of the appropriate Director of Graduate Studies, authorize courses taught outside the major to count toward the major.

Also, the Council on Postsecondary Education requires that at least one-half of the minimum course requirements (excluding thesis, practicum, or internship credit) be in the major or core area, with three-fourths of these at the 600- to 700-level. This is in addition to the requirements stated above.

The thesis option (Plan A) requires a thesis to be developed under the direction of a member or associate member of the Graduate Faculty. Collaborative effort by two or more graduate students is not forbidden. However, there must be enough independent effort to enable each student to make a separate contribution and to prepare an individual thesis.

Theses must be in conformity with the instructions prepared by The Graduate School. For specific instructions regarding the format of theses, the student should obtain a copy of the leaflet, *Instructions for the Preparation of a Master's Thesis,* from The Graduate School office or on the World-Wide Web at <www.rgs.uky.edu/gs/thesdissprep.html>.

Before the final examination, the thesis director and the appropriate Director of Graduate Studies must indicate to The Graduate School that the student's thesis satisfies all requirements of The Graduate School and is complete in content and format with the exception of pagination, and that the student is ready to be examined. Any modification in the thesis which the final examination committee specifies must be made before the degree is conferred.

The final copies are submitted to The Graduate School after the Director of Graduate Studies and the Thesis Director have signed that they are complete. The thesis in its final form must be received in The Graduate School within 60 days of the Final Examination.

Theses must be presented and accepted by The Graduate School by the last day of the semester if a student plans to graduate that semester.

Each student must pay a fee for the binding of the thesis. Payment will be made at the Billings and Collection Office.

Theses submitted by candidates become the physical property of the University of Kentucky and authors agree that the University may decide the conditions under which they may be used or published. The University protects the authors' rights by placing certain restrictions upon borrowers' use of theses as long as they are unpublished. The candidate must include, before the title page of the thesis, a copy of the following paragraph regarding regulations:

> Unpublished theses submitted for the master's and doctor's degrees and deposited in the University of Kentucky Library are as a rule open for inspection, but are to be used only with due regard to the rights of the authors. Bibliographical references may be noted, but quotations or summaries of parts may be published only with the permission of the author, and with the usual scholarly acknowledgments.
>
> Extensive copying or publication of the thesis in whole or in part requires also the consent of the Dean of The Graduate School of the University of Kentucky.
>
> A library that borrows this thesis for use by its patrons is expected to secure the signature of each user.

The non-thesis option (Plan B) requires that six or more graduate credit hours of course work be submitted in lieu of a thesis. A student may follow this option with approval of the program concerned.

Students should consult their adviser for any additional requirements that may have been set up for Plan B by their area of study.

GENERAL REQUIREMENTS FOR ALL DOCTORAL DEGREES

Degree of Doctor of Philosophy

The Ph.D. degree is intended to represent the demonstration of independent and comprehensive scholarship in a specific field. Such scholarship must be manifested by both the student's mastery of subject matter and capacity to do research.

The degree of Doctor of Philosophy is conferred upon a candidate who, after completing graduate work devoted to study of a special field of knowledge, 1) passes comprehensive examinations in the chosen field and the dissertation subject, 2) presents a satisfactory dissertation, and 3) shows evidence of scholarly attainment.

Students should note that some doctoral programs have degree requirements that may exceed the minimum requirements of the Graduate Faculty.

The Major Professor and the Advisory Committee

Each student's program is guided by a major professor and an advisory committee throughout the graduate career. Their purpose is to give continuity of direction and counsel and provide intellectual stimulation from the earliest days of residency through the completion of the doctorate.

The Director of Graduate Studies, or designee, serves as adviser to beginning graduate students until the advisory committee is appointed, normally not later than upon completion of 18 credit hours of graduate work. The advisory committee must be appointed at least one year prior to the qualifying examinations. The major professor and advisory committee are appointed by the Graduate Dean after consultation with the appropriate Director of Graduate Studies. The Dissertation Director, when selected, serves as the major professor. The advisory committee also provides advice to the student and specifically sets requirements (within applicable program, Graduate School, and University regulations) which the student must meet in pursuit of the doctorate.

The advisory committee has a core of five members. This core consists of the major professor as chair, two or three other members from the major area, and at least one representative from any minor area(s). At least one representative must be from outside the academic program (department). All members of the core must be members of the Graduate Faculty of the University of Kentucky and three (including the major professor) must possess full Graduate Faculty status. Additional faculty members may serve as members of the advisory committee. The core of the advisory committee must be kept at its full complement throughout the graduate career of the individual student. Thus, in the event of a vacancy on the committee (occasioned by resignation, faculty leave, or inability to serve), an appropriate replacement must be made prior to the making of any committee decision.

All decisions of the advisory committee are by majority vote of its Graduate Faculty members. Advisory committee decisions must be reported promptly to the appropriate Director of Graduate Studies who will be responsible for transmitting them to the Dean of The Graduate School.

In addition to advising and program planning, the advisory committee is also involved in the administration of the qualifying examination, the supervision of the preparation of the dissertation, and the administration of the final examination on the dissertation.

Major and Minor Subjects

Every applicant for the Ph.D. degree must select a major area of study. The major area is one in which the student's efforts are concentrated. Some programs also require one or more minor areas. Minor(s) must be approved by the student's advisory committee.

Residency Requirements

The purpose of a residency requirement is to encourage contact with the academic community in which doctoral students may become fully involved with colleagues, libraries, laboratories, on-going programs of research and inquiry, and experience the intellectual ferment which characterizes a university. Such experience is generally as important as formal class work in the process of intellectual development. While the residency requirements are, by necessity, given in terms of full or part-time enrollment, the intent of the requirements is to ensure that the student becomes fully involved in an essential part of scholarly life.

Requirements for the doctorate may be completed in three years of full-time graduate work or the equivalent in combined full-time and part-time study; however, more time may be required (see the section on Academic Load). In unusual cases, approval of a program of study involving less time may be secured from the Dean of The Graduate School. It should be understood that scholarly accomplishment is the ultimate goal to which requirements are intended to lead the student, not semester hours completed or time spent in the program. On the recommendation of the Director of Graduate Studies, and with the concurrence of the Dean of The Graduate School, successful completion of a master's degree may be considered the equivalent of the first year of the three years of work toward the doctorate.

Subject to approval by the individual doctoral program (see the chart of Degree Requirements), students may fulfill the three-year doctoral residence requirements utilizing one of the three models listed below.

Model I. a) master's degree or 18 graduate hours at the University of Kentucky, or transfer of residence credit from an awarded master's at another accredited school; plus, b) two consecutive semesters enrolled full-time, i.e. nine or more credits per semester (may include combined four-week and eight-week summer sessions); c) enrollment for two consecutive full-time semesters of course 769 after successfully passing the qualifying examination.

Model II. a) master's degree or 18 graduate hours at the University of Kentucky, or transfer of residence credit from an awarded master's at another accredited school; plus, b) enrollment part-time (at least six graduate credits per semester during three consecutive semesters); c) enrollment for two consecutive full-time semesters of course 769 after successfully passing the qualifying examination.

Model III. a) master's degree or 18 graduate hours at the University of Kentucky, or transfer of residence credit from an awarded master's at another accredited school; plus, b) accumulation of 24 graduate credits at the University of Kentucky (exclusive of short courses; no more than nine of these 24 credits may be earned in summer sessions) during three consecutive academic or calendar years; c) enrollment for two consecutive full-time semesters of course 769 after successfully passing the qualifying examinations.

Regardless of the model used to satisfy doctoral residence, all candidates for the doctorate (students who have satisfactorily completed their qualifying examination) must complete two semesters of full-time dissertation study immediately following the qualifying examination. Normally this is accomplished by registering for nine hours of course 769 (which is called Residence Credit) each semester and completed with a grade of S. With the written recommendation of a candidate's advisory committee and with the approval of the appropriate Director of Graduate Studies and the Graduate Dean, specified graduate course work may be taken in lieu of all or part of this residence credit (course 769) requirement. If a summer term is substituted for one of the semesters, three credits must be taken in the four-week session and a minimum of six credits in the eight-week session. The student need not be physically present on campus while enrolled for credit after the qualifying examination. While there is generally no formal class work attached to these credits, and in some cases the student may not be on the campus, full tuition costs are assessed in that students who are preparing their dissertations are utilizing University resources such as libraries, Computing Center, and major professors' and committee members' time and energy.

Note: The semester during which the student takes the qualifying examination may be counted for credit for dissertation study **only** if the date of successful passage is within six weeks (three weeks for the eight-week summer session) of the first day of classes.

Candidates who have fulfilled the above requirements, but who have not yet defended the dissertation, are required to enroll for course 749 or 769 (0 credit hours) each semester until the dissertation is completed and defended. Such registration enables the University to keep accurate records of degree candidates and facilitates rapid and accurate information processing. Some programs have additional residence requirements which must also be met.

It should be understood that the above represents the **minimum requirements** of The Graduate School. Some programs have additional requirements.

Exceptions to this normal pattern may be made with the approval of the Dean of The Graduate School upon the written recommendations of the student's advisory committee and the Director of Graduate Studies, which clearly demonstrates that the principle of residence is preserved.

Foreign Language Requirement

Some doctoral degree programs require a reading knowledge of one or more modern foreign languages for the doctorate. The language(s) normally accepted are French, German, or Russian. However, any modern foreign language more appropriate to the student's field of study may be selected on the recommendation of the advisory committee and with the approval of the Director of Graduate Studies and the Graduate Dean. Arrangements must be made through the Office of the Dean of The Graduate School for examinations in languages not regularly taught at the University of Kentucky.

Any language requirement(s) must be satisfied before the applicant may sit for the qualifying examination (see Foreign Language Requirements on page 20).

The Qualifying Examination

A qualifying examination consisting of both written and oral components is required of all doctoral students. Its purpose is to verify that students have sufficient understanding of, and competence in, their fields to become candidates for the degree. In most programs, an individual qualifying examination is prepared and administered by the advisory committee; in some cases that committee also judges the results of the examination. A majority vote of the core of the advisory committee is required for successful completion of the qualifying examination. Programs which give uniform, written qualifying examinations to all of their candidates shall have rules (filed with the Dean of The Graduate School) governing the role of the advisory committee in the preparation, administration, and evaluation of the qualifying examination. The examination is given usually after four semesters of graduate work or the equivalent.

The qualifying examination must be scheduled through the Director of Graduate Studies and approved two weeks in advance by The Graduate School. Failure to meet this scheduling requirement may result in the student's not having proper University status and can cause omissions in records, loss of credits, or delay of graduation. Students should check with the Director of Graduate Studies to make sure that the qualifying examination has been appropriately scheduled.

The results of the examination must be reported by the Director of Graduate Studies to The Graduate School within 10 days of its conclusion. If the result is failure, the advisory committee determines the conditions to be met before another examination may be given. The minimum time between examinations is four months. A second examination must be taken within one year after taking the first examination. A third examination is not permitted.

The Dissertation

Each student must present a dissertation which represents the culmination of a major research project. The dissertation must be a well-reasoned, original contribution to knowledge in the field of study and should provide evidence of high scholarly achievement. The major professor is the primary source of guidance in the planning and preparation of the dissertation. However, other members of the advisory committee may be involved in the process as well. All core members of the advisory committee must read the dissertation prior to signing the approval form. It is the responsibility of the advisory committee to make suggestions for revisions before the final examination. A majority of the advisory committee core members must indicate that the form and substance of the dissertation are adequate to justify the scheduling of the final examination. The final examination on the dissertation may not be scheduled without the signatures on the approval form of a majority of the advisory committee members.

The style and form of the dissertation must be in conformity with the instructions prepared by The Graduate School. For specific instructions regarding the format of the dissertation, the student should obtain a copy of the *Instructions for the Preparation of Dissertations and Doctor of Musical Arts Projects* from The Graduate School Office or on the World-Wide Web at <www.rgs.uky.edu/gs/thesdissprep.html>.

Each graduating doctoral student will pay dissertation fees. Payment will be made at the University Billings and Collections Office. Authorization forms to pay dissertation fees are issued in room 331, Patterson Office Tower.

Copyright

Dissertations may be copyrighted by the student by 1) signing the Copyright Authorization on the Microfilm Agreement Form which is completed after the dissertation format check in The Graduate School, 2) paying the copyright fee of $35 (this copyright fee is in addition to the $57 dissertation fee), and 3) including a copyright notice in the front of the dissertation. The notice is a single sheet on which is centered the heading:

Copyright by
(name of student)
(year)

The Final Examination

The Final Examination includes a defense of the dissertation and may be as comprehensive in the major and minor areas as the advisory committee chooses to make it. It is conducted by an expanded advisory committee chaired by the Director of Graduate Studies or someone designated by the Director. The Dean of The Graduate School and the President of the University are *ex officio* members of all final examination committees. The examination is a public event and its scheduling is published and announced beforehand. Any member of the University community may attend.

At least four weeks prior to the final examination, following notification by the major professor that the dissertation has been distributed to members of the advisory committee, the Director of Graduate Studies will advise The Graduate School of the intent to examine. At this time the Graduate Dean appoints an Outside Examiner as a core member of the advisory committee. The specific time and date of the examination must be designated by The Graduate School at least two weeks prior to the actual examination. All members of the committee except the outside examiner have had an opportunity to suggest revisions prior to signing the Dissertation Approval Form. Thus, most revisions should have been completed at an earlier time. The final examination must take place no later than eight days prior to the last day of classes of the semester in which the student expects to graduate. Final examinations are public events and must take place while the University is officially in session. They may **not** be scheduled during the periods between semesters or between the end of the eight-week summer session and the beginning of the fall semester.

The Dissertation Approval Form, along with an acceptable copy of the dissertation, must be presented to The Graduate School at the time the Final Examination is established. The draft of the dissertation submitted must be complete in content, including all footnotes, tables, figures, and appendices. A full bibliography or set of references must be included as must a title page and abstract.

In all decisions, the majority opinion of the Graduate Faculty members of the advisory committee prevails. If the advisory committee is evenly divided, the candidate fails.

In the event of failure, the advisory committee recommends to the Dean of The Graduate School conditions under which the candidate may be re-examined, if re-examination is deemed appropriate. When conditions set by the Dean of The Graduate School have been met, the candidate may be re-examined. Should any vacancies on the Committee occur between the two examinations, the Dean of The Graduate School shall appoint replacements. A third examination is not permitted.

After the final examination is passed, the final copy of the dissertation is prepared. Final copies are then submitted to The Graduate School along with the signatures of the Major Professor and the Director of Graduate Studies. The dissertation in its final form must be received in The Graduate School within 60 days of the final examination. If this deadline is not met, the candidate must undergo a second examination.

Doctor of Musical Arts

(See Doctor of Musical Arts Degree on page 92.)

Doctor of Education

(See Doctor of Education on page 73 as well as Graduate Work in the College of Education on page 26.)

DOCTORAL PROGRAMS WITH OTHER UNIVERSITIES

Joint doctoral programs in education are offered between the University of Kentucky and other state universities: Eastern Kentucky University, Morehead State University, Murray State University, and Western Kentucky University. These programs permit qualified candidates to complete approximately one year of graduate work above the master's degree at the cooperating university. A minimum of 18 credit hours of course work, the qualifying examination, and the dissertation must be completed at the University of Kentucky, and a minimum of one academic year must be spent in full-time residence on the Lexington campus. The work of each candidate is directed by a joint faculty committee from both institutions.

Persons interested in these programs should confer with the Dean of The Graduate School at the cooperating university, or the appropriate Director of Graduate Studies in the College of Education at the University of Kentucky. Applications may be filed for review by a joint screening committee. Admission will depend upon academic standing, scores on standardized examinations, and personal references.

There are available cooperative programs in musicology, in physics, and in civil engineering between the University of Kentucky and the University of Louisville; joint programs in biology and geology between the University of Kentucky and Eastern Kentucky University; and a joint program in history between the University of Kentucky and Western Kentucky University. The University of Kentucky and the University of Louisville began a joint Ph.D. program in Social Work in 1997.

Inquiries should be directed to the appropriate Director of Graduate Studies, University of Kentucky.

GRADUATE WORK IN THE COLLEGE OF EDUCATION

The College of Education offers the following degrees: Master of Arts in Education, Master of Science in Education, Master of Science (in the Kinesiology and Health Promotion graduate program), Specialist in Education, Doctor of Education, and Doctor of Philosophy. Graduate work is also provided for persons seeking Rank I or II classification.

Rank II classification may be achieved by the completion of a master's degree or the "Planned Fifth Year Program." The "Fifth Year" is a non-degree program of 32 semester hours for persons who hold bachelor's degrees and teaching certificates. A minimum of 18 hours must be completed at the University of Kentucky. Of the 32 hours, at least 12 must be in professional education, and at least 12 must be in fields outside education.

Specific requirements depend upon the type of certificate desired. Information about specific certification requirements can be obtained from the appropriate Director of Graduate Studies.

Rank I classification requires the completion of: 1) 30 hours of approved graduate-level credit in addition to the requirements for a Rank II classification, or 2) 60 hours of approved graduate-level credit including the master's degree.

Each student's graduate curriculum must be a well-rounded program of courses related to the student's major interest and approved by the adviser. In cases of deficient preparation, the adviser, with the approval of the Director of Graduate Studies in the respective department, determines prerequisite undergraduate courses to be taken. Each department has designated one or more faculty members to direct graduate studies in that department. Specific questions regarding programs may be referred to the appropriate Director of Graduate Studies.

The two plans which lead to the degree of Master of Arts in Education or Master of Science in Education are Plans A and B, described earlier under requirements for the M.A. and M.S. degrees.

Master of Arts in Education

The Master of Arts in Education is the program selected by candidates seeking initial or renewal certification for work in school settings.

A Master of Arts in Education degree will usually lead to Rank II for pay purposes.

The plan which leads to the degree of Master of Arts in Education for persons holding a provisional certificate is outlined below:

1. All candidates for the Master of Arts in Education degree must meet the requirements for a valid teaching certificate, based on a four-year baccalaureate program. These requirements are outlined in the general catalog of the University. If deficiencies are found, they should be overcome before proceeding with graduate work. The work required to overcome these deficiencies is in addition to the minimum graduate requirements for the degree.
2. a. A minimum of 24 semester hours of graduate work, with at least 12 semester hours in courses numbered 600 or higher, must be completed and a thesis presented, or
   b. A minimum of 30 semester hours of graduate work, with at least 15 semester hours in courses numbered 600 or 700, must be completed.
3. At least 12 semester hours of graduate work must be in Education.
4. The total number of credits presented in Education, undergraduate and graduate, must be at least 30 semester hours.
5. At least 12 semester hours must be outside the College of Education for both elementary and secondary teachers except for teachers of vocational agriculture who take six hours outside Education and Reading Specialists who take six to nine hours outside Education.
6. Specific requirements depend upon the type of certificate desired. Information about specific certification requirements can be obtained from the appropriate Director of Graduate Studies.

The College of Education offers an option for secondary teachers from selected majors to meet requirements for initial teacher certification. This option may require additional courses. See the appropriate Director of Graduate Studies for more information regarding this option.

Master of Science in Education

The Master of Science in Education degree is normally awarded to students pursuing programs of study which do not lead to certification. However, if a student already holds a valid teaching certificate, the Master of Science in Education degree may give Rank II for pay purposes and may, under some circumstances, renew the certificate. The Master of Science in Education degree may also endorse a valid teaching certificate for another approved teaching subject or field.

The plan which leads to the degree of Master of Science in Education is outlined below:

1. a. A minimum of 24 semester hours of graduate work, with at least 12 semester hours in courses numbered 600 or higher, must be completed and a thesis presented, or
   b. A minimum of 30 semester hours of graduate work, with at least 15 semester hours in courses numbered 600 or 700, must be completed.
2. A minimum of 12 semester hours of graduate work in the College of Education is required.
3. A minimum of six hours outside the College of Education is required, but individual programs may require additional work outside the College.
4. Specific requirements depend upon the type of certificate desired. Information about specific certification requirements can be obtained from the appropriate Director of Graduate Studies.

The College of Education offers an option for secondary teachers from selected majors to meet requirements for initial teacher certification. This option may require additional courses. See the appropriate Director of Graduate Studies for more information regarding this option.

Master of Education

The Master of Education (M.Ed.) in School Administration is the degree program selected by those seeking preparation for certification as a school principal in Kentucky public schools. The preparation curriculum includes 36 hours of course work and leads to a letter of eligibility for the Instructional Leader School Principalship, All Grades professional certificate. If this is a student's initial master's degree, a 30-hour Rank I program can be included within the curriculum.

The curriculum that leads to eligibility for certification as a principal contains two levels. For those students pursuing the M.Ed. as their initial master's degree, both levels of the preparation program must be completed before one is eligible for participation in the Kentucky Principal Internship Program (KPIP).

Doctor of Education

The requirements for the Ed.D. correspond to those of the Ph.D. with the following differences:

1. In addition to other credentials, admission requirements include:
   a. a master's degree, or
   b. 30 graduate credit hours in preparation of or applicable to an appropriate master's degree.
2. Some program areas require successful teaching, clinical, or administrative experience for admission.
3. The program requires completion of a major body of course work of at least 42 graduate credits beyond the minimum hours required for admission.
4. Course work for the Ed.D. will be planned by the advisory committee to complement and extend previous graduate work. Therefore, the student's total doctoral and predoctoral graduate work will reflect competencies in the following areas:
   a. **Area of Concentration**: A significant concentration of course work designed to develop an in-depth knowledge in a specific area of Education.
   b. **Support Areas**: Course work to support the Area of Concentration shall include the following two components:
      1) Disciplinary support work from outside the Area of Concentration. Some or all of this work will be done outside the College of Education.
      2) Course work relevant to the development of competencies in the foundational studies in Education. Such course work to be taken in departments of the College of Education other than the Area of Concentration.
   c. **Research Methodology**: At least nine credits of recent (within the 'time limit for degrees' policy of The Graduate School) course work selected to develop competencies in conceptualizing research, designing experiments, selecting appropriate methodology, processing and analyzing data, interpreting results, and arriving at conclusions.
5. Although some students' programs may require competency in a foreign language as a research tool, there is no general language requirement.
6. The core membership of the advisory committee for each Ed.D. student consists of members distributed as follows:
   a. The major professor and two other members from the Area of Concentration.
   b. Two members from areas other than the Area of Concentration; at least one of these from outside Education.
   c. Three members must be full members of the Graduate Faculty.
7. In joint programs with the regional universities, three advisory committee members must be from the University of Kentucky and must be full members of the Graduate Faculty.

Joint Doctoral Programs in Education

Joint doctoral programs in education are offered between the University of Kentucky and the following state universities: Eastern Kentucky University, Morehead State University, Murray State University, and Western Kentucky University (see Doctoral Programs with Other Universities on page 26 for additional information).

Students are encouraged to apply for the Joint Doctoral Program early in their master's degree program to facilitate transition into the doctoral program.

Persons interested in a Joint Doctoral Program should confer with the Dean of The Graduate School at the cooperating university, or the appropriate Director of Graduate Studies in Education at the University of Kentucky.

Doctor of Philosophy (Education)

The Doctor of Philosophy degree in the field of Education is offered in Educational and Counseling Psychology and in Educational Policy Studies and Evaluation (Higher Education) (see General Requirements for All Doctoral Degrees on page 23).

Specialist in Education

The Specialist in Education degree is offered in Administration and Supervision, Educational and Counseling Psychology, and Special Education. It is conferred upon a candidate who satisfactorily completes a post-master's planned program in education under the general requirements of The Graduate School and the following special requirements:

Admission

The student, prior to admission to the program must 1) have a master's degree, 2) have a standing of 3.4 or higher on all graduate work, 3) meet the requirements for a teaching certificate or have credentials appropriate to the field of specialization, and 4) have at least 30 credit hours in courses in education (undergraduate and graduate).

The student should file an application with The Graduate School and the Director of Graduate Studies in the appropriate department and must be recommended by the major program and the department.

Program

The student must earn a minimum of 30 credit hours of graduate work beyond the master's degree, of which at least 15 must be in courses numbered 600 or above.

A departmental committee is responsible for helping students plan individual programs. The program should contribute to specialization in a field but should not neglect the broader development of the individual.

The student must complete an independent research project (equal to three but not to exceed six credit hours) and submit a written report, a copy of which is to be filed with the department directing the research.

With the approval of the Director of Graduate Studies and the Dean of The Graduate School, the student may transfer a maximum of nine credit hours earned beyond the master's degree from an institution which is approved to offer work above the master's level.

Final Examination

The final examination required of all candidates is administered by an examining committee consisting of at least three qualified members recommended by the adviser and the Director of Graduate Studies and appointed by the Dean of The Graduate School.

ACADEMIC RESOURCES

Research at the University of Kentucky

The University of Kentucky is the major graduate and research institution of the Commonwealth, and the major land-grant university in the state. As such, it offers substantial programs in both basic and applied research. These research efforts are the life blood of graduate education programs which prepare new researchers who will continue to expand the boundaries of human knowledge and to seek answers to pressing problems of our complex society. Applied research programs in areas such as agricultural sciences, mining and minerals, engineering sciences, medicine, arts and sciences, business and economics, mathematical sciences and physics, and tobacco and health serve the Commonwealth and the nation by addressing critical issues influencing the quality of life and economic well-being of our citizenry.

University faculty and research staff have expertise in many areas especially in the basic biological, physical, medical and social sciences, in engineering, and in the creative arts and the humanities. These individuals conduct research which ranges from the investigation of philosophical and ethical dilemmas raised by advances in science and technology to the practical application of basic knowledge in agriculture, energy, rehabilitation, and information retrieval as well as in the economic development of the Appalachian region.

A significant aspect of research conducted at the University is the concern for its practical application for the betterment of society. Many of the techniques developed and ideas conceived in the laboratory and in advanced study evolve into technological developments of major significance.

Most research programs at the University are supported through federal, state and private sources. Application for such support and the fiscal administration of the monies received are overseen by the Office of Sponsored Projects Administration (OSPA). Programmatic organization and administration of research is provided by the various research institutes and multidisciplinary centers and, in the case of individual faculty projects, by the regular departmental, school, and college structures.

Visiting Scholars and Advanced Study

When appropriate resources are available at the time desired, the appropriate Chancellor or the Vice President for Research and Graduate Studies, upon the recommendation of the Dean of The Graduate School and the department affected, welcomes visiting scholars as guests of the University, and grants the privilege of auditing seminars and research courses and of conducting research in laboratories and libraries. Normally there will be no charge except for laboratory expenses. Negotiations for such arrangements should be made in advance through the Office of the Dean of The Graduate School.

Postdoctoral Fellowships

Postdoctoral fellowships are available in many research programs. Information concerning the terms of the fellowships is available in the department. Postdoctoral fellows are required to register with The Graduate School through their departments.

Research and Teaching Assistantships

Most departments have support for teaching and research assistants. The stipends vary with the departments. Information concerning assistantships may be obtained from the various departments.

Graduate and Professional Student Association

The Graduate and Professional Student Association (GPSA) was formed in the spring of 1969 to provide a permanent channel for communication between the administration and the graduate and professional students.

University of Kentucky Libraries

As the major research library in the Commonwealth, the University of Kentucky Libraries provide comprehensive access to information essential to teaching, research, and service at the University of Kentucky, through human resources and maximum use of technology. The libraries extend information services to the Commonwealth and make unique holdings available to the world. The libraries' collection contains more than 2.6 million volumes and currently receives over 26,000 periodical and serial titles, including government document serials. The social sciences, humanities, and life sciences collections are housed in the William T. Young Library, a new 361,000 square-foot facility that opened in 1998. Specialized collections are housed separately in other campus libraries and information

centers serving the disciplines of agriculture, architecture, art, business and economics, chemistry and physics, communications, education, engineering, geology, law, mathematical sciences, medical sciences, and music.

The University of Kentucky has been a depository for U.S. federal government publications since 1907. The King Library maintains these resources (except those related to agriculture and law), as well as official publications of Great Britain, Canada, the United Nations, the European Union, Kentucky, and other states. The library system has a collection of over 230,000 maps. General interest maps are located in the King Library Map Collection; geological maps are in the Geological Sciences Library.

The library system houses and services over 5.7 million units of microform, including over one million technical reports from U.S. and foreign governments. UK Libraries receive 200 major U.S. and foreign newspapers, and a comprehensive collection of Kentucky newspapers.

Special Collections and Archives (SCA) holds extensive collections of rare books, manuscripts, and audio-visual materials. SCA units include Audio-Visual Archives, University Archives and Record Program, Modern Political Archives, Manuscripts, the Oral History Program, Bert T. Combs Appalachian Collection, Family and Local History, and the King Library Press. Although the SCA's specialization is Kentuckiana, other large collections include: the Appalachian Regional Commission Archives, the Cortot Collection of Musicology, a John Milton Collection, and the W. Hugh Peal Collection of American and English Romantic and Victorian Literature. The latter collection includes extensive holdings of letters, literary manuscripts, and first editions, and is one of the outstanding resources of its type in the United States.

The Agricultural Information Center (AIC), located in the Agricultural Sciences Building, focuses on user services and providing agricultural information to the desk top. The AIV is responsible for the collection development of the agricultural print collection which is housed in the William T. Young Library. Materials in electronic format are maintained by the Center staff and are available either in the AIC or via the Internet. The AIC actively supports faculty and graduate research by providing major abstracts and indexing services as well as major research journals on the wide area network to their desktops. Services provided include delivery of print resources from campus libraries as well as other libraries through interlibrary loan and services such as UK UnCover. Extensive subject specific workshops in electronic access and individual consultation on information needs are provided by the Center staff. The AIC also provides print copies of major research journals pertinent to agriculture and a print reference collection on site. Beginning in the Spring Semester 1999 the AIC will also offer application microcomputing with the addition of a University of Kentucky Student Computing Lab and quiet, contemplative space with the renovation of the reading room.

The library's on-line computer system provides catalog, data base searching, and circulation control. Users can also access bibliographic data bases such as ERIC (Educational Resources Information Center) and Medline (National Library of Medicine). The on-line catalog and all Internet resources are made available in the 20 computer labs that are maintained for student use.

All campus libraries offer a variety of computerized bibliographic and full-text search services. The Information Services Department offers computer-assisted instruction to individuals, introductory orientation to the library for beginning students and in-depth presentations to classes of advanced students. Branch libraries also provide instructional services. Some library units and branches publish guides and brochures on the use of various library tools and services. Information about these and other services are available via the library's Web site at: <www.uky.edu/Libraries/>.

The library system has long been a member of the Center for Research Libraries in Chicago. The Center's collection is one of unique and rarely-held research materials such as archival materials in microform, microform sets, dissertations, newspapers, serials, and materials from Eastern Europe and Asia (east, south and southeast). This material is made available to member libraries through interlibrary cooperation. Faculty, graduate students and staff may borrow these materials through use of the Interlibrary Loan Departments on campus. More information about the Center can be found on the World-Wide Web at: <wwwcrl.uchicago.edu>; and Internet users can access the Center's catalog by telneting to: crlcatalog.uchicago.edu (when the log prompt appears, enter 'guest').

UK Libraries hold membership in the Association of Research Libraries, an organization of the top American and Canadian research libraries. It is also a member of the On-line Computer Library Center (OCLC), a computer-based system of shared cataloging that allows member libraries to make interlibrary loan requests on-line.

Computing Services

The University of Kentucky Computing Center offers University-wide computing services in support of all UK faculty, students, and staff. At present, the facilities include a 64 CPU HP/Convex Exemplar X-Class Scalable Supercomputer (SP 2200), an HP 9000/K460 Technical Server, and an IBM 9672 mainframe. These systems provide large-scale, numerically-intensive computing support for research computing. In addition, there are several communications options available for electronic mail and access to Internet resources. The University provides extensive computing resources for students in the student computing labs. There are currently over 1200 computers available in the labs ranging from Windows 95 and Macintosh systems, to UNIX workstations. Many of the student labs have specialized software for particular disciplines, e.g., CAD software in the College of Architecture, engineering-specific UNIX-based software in the College of Engineering, and instructional technology curriculum

development tools in the College of Education. A wide array of general and special purpose software is available for both the large central system and the student computing facilities. Consultants are on duty in all of the student labs and at the Information Systems Help Desk in McVey Hall. Most facilities and services are available at no charge to University students, faculty and staff.

UK's leadership role in supercomputing extends further than its campus through a partnership between the university and the National Computational Science Alliance. Established in 1997 through a grant from the National Science Foundation (NSF), the Alliance is a unique coalition of computational scientists, and education professionals at more than 50 universities and research institutions across the country working to prototype the computational and information infrastructure of the next century.

UK has a threefold leadership role with the Alliance. First, UK serves as a supernode on the National Technology Grid. As such, the university provides scientists across the nation with supercomputing cycles on the HP Exemplar.

Secondly, UK serves as a technology-transfer point between the Alliance and the 19 states which are part of EPSCoR (Experimental Program to Stimulate Competitive Research). EPSCoR is a federal/state program designed to help rural states develop top research programs.

Finally, UK is a part of the Partnership for Advanced Computational Infrastructure (PACI). This initiative seeks to establish two regional supercomputer centers. UK will be the gateway to the southeast, serving as a liaison with the Southeastern Universities Research Association (SURA) to coordinate its mega-networking plans. Based in Washington, SURA has 41 members in 14 southern states.

Multidisciplinary Graduate Programs

Graduate Center for Biomedical Engineering

The Graduate Center for Biomedical Engineering provides multidisciplinary programs of education, research, and service in the application of engineering principles to the areas of medicine and biology. The Center brings together engineers, life scientists, and physicians to conduct original research in a variety of medical-related problems. Areas of research include cardiopulmonary mechanics and controls, neuromuscular function, musculoskeletal mechanics, rehabilitation engineering, computational neuroscience, motor control, orthopedic biomaterials, orthopedic biomechanics and electromagnetic tissue stimulation. Master of Science and Doctor of Philosophy degrees in Biomedical Engineering are offered. The Center is located in the Wenner-Gren Research Laboratory that provides the framework for multidisciplinary research. Faculty and staff of the Center collaborate with investigators from other units of the University including the Departments of Physiology, Anatomy and Neurobiology, Cardiology, Medicine, Surgery, Physical Medicine and Rehabilitation, Orthopedics, Sports Medicine, and Kinesiology and Health Promotion, as well as the Departments of Agricultural, Chemical, Electrical, and Mechanical Engineering, the College of Pharmacy, and the Center for Robotics and Manufacturing Systems. Center faculty and staff provide opportunities and support for graduate students, medical residents, and selected undergraduates. Graduates of the program enter careers in research institutes, academia, hospitals and industry.

The Patterson School of Diplomacy And International Commerce

The Patterson School of Diplomacy and International Commerce offers an interdisciplinary master's degree which can be tailored to meet the career needs of individual students. The program is especially useful for students desiring careers in any of the non-academic fields in foreign affairs such as international banking, commerce and journalism, or service with governmental agencies or international organizations in foreign affairs. To assure the interdisciplinary character of the degree, students may concentrate their work in a specific geographical area or focus on certain aspects of international affairs.

In addition, the Patterson School serves in an advisory capacity to Ph.D. programs in departments offering internationally-oriented doctoral degrees in various colleges on campus.

Graduate Program in Gerontology

The Ph.D. program in Gerontology provides opportunity for advanced multidisciplinary study of aging and the aged with particular emphasis on issues of health and well-being. This doctoral program is the recipient of a multi-year NIH training grant (1998-2003) The program is a Tier I Target of Opportunity Program coordinated through the Sanders-Brown Center on Aging, a Commonwealth Center of Excellence. The Center is a nationally designated Alzheimer's Disease Research Center, a Center of Excellence in Stroke, and the site of a Geriatric Education Center. The graduate faculty includes representation from Anatomy and Neurobiology, Anthropology, Behavioral Science, Civil Engineering, Dentistry, Family Studies, Geography, Internal Medicine, Management, Neurology, Nursing, Nutrition and Food Science, Philosophy, Physiology, Preventive Medicine and Environmental Health, Psychology, Social Work, and Sociology. Areas of particular expertise and emphasis include rural aging, long-term care, cognitive and sensory change, public policy, ethical issues, and the etiology and treatment of Alzheimer's disease, stroke, and other diseases prevalent among the elderly. Center facilities include 34 biomedical research laboratories, a library, conference rooms, and research and office space. Affiliated facilities for training and research include the University of Kentucky Hospital, Christian Health Center (a University-affiliated nursing home), The Breckinridge (an Alzheimer's assisted living facility), the Center for Rural Health, the Helping Hand Alzheimer's Day Care Program, University of Kentucky

Geriatric Support Services, Cardinal Hill Hospital, Northeast Area Health Education Center, and the Veteran's Affairs Medical Center.

Graduate Program in Nutritional Sciences

The Ph.D. program in Nutritional Sciences provides opportunity for advanced multidisciplinary study in Nutritional Sciences. Educational opportunities exist in agricultural, biological, clinical, community, medical, social, biochemical and molecular nutritional sciences. The graduate faculty consists of more than 30 faculty members representing various academic units of the University including Agronomy, Animal Sciences, Anthropology, Behavioral Science, Biochemistry, Clinical Sciences, Horticulture, Internal Medicine, Neurology, Nutrition and Food Science, Oral Health Science, Psychiatry, Surgery, and Toxicology. Faculty have modern research laboratory facilities for conducting cell culture, human and animal studies using state of the art equipment. These include trace mineral, vitamin, lipid, amino acid, enzyme, hormone, cytokine, stable and radioactive isotope, microcirculatory, and energy assessment analyses. Clinical facilities for training and research include the University of Kentucky Hospital, the Veteran's Administration Hospital, Sanders-Brown Center on Aging, University of Kentucky Medical Center Outpatient Clinics, and the Markey Cancer Center. Opportunities for community-based research exist locally, throughout the state, and in international settings.

James W. Martin School of Public Policy and Administration

The Martin School offers three multidisciplinary degree programs—the Master of Public Administration, the Master of Health Administration and the Ph.D. in Public Administration—and engages in research and public service activities. The disciplines represented by the School's faculty are management, finance, economics, industrial engineering, political science, and health administration. The research and public service components of the Martin School offer the School's faculty, staff, and graduate students the opportunity to engage in interdisciplinary research on public policy issues.

Graduate Center for Toxicology

The Graduate Center for Toxicology (GCT) educates scientists at the M.S., Ph.D. and postdoctoral levels to deal with toxic substances and their effects on humans and the environment. The GCT has a core faculty based in the Health Sciences Research Building and an interdisciplinary faculty of about fifty jointly-appointed faculty members, all of whom are active in teaching and research in toxicology, drawn from the major departments and colleges on campus. The GCT has over 100 graduates among whom are numerous faculty members and government and corporate toxicologists.

Student support comes from Graduate School fellowships, minority fellowships, special fellowships, research assistantships, and NIEHS pre- and postdoctoral fellowships for Research Training in Environmental Toxicology. The GCT is committed to cultural diversity.

Areas of research strength include environmental toxicology, immunotoxicology, molecular mechanisms of chemical carcinogenesis, molecular biology, toxicology, and neurotoxicology. Students in the GCT are organized through the Toxicology Student Forum, which is represented on all GCT committees and functions as the students' voice and representative during their time at the University of Kentucky.

For further information on the Graduate Center for Toxicology, contact the Director at (606) 257-3760 or fax 606-323-1059.

Research Centers, Institutes and Support Units

Appalachian Center

The Appalachian Center coordinates and supports research, instruction, extended service, and archival activities relating to the Appalachian region, and administers interdisciplinary research programs such as the Library's Appalachian Collection. The Center offers graduate assistantships and provides assistance and a focal point for graduate students from a range of disciplines who are interested in the study of Appalachia.

Students interested in graduate study with an emphasis in the Appalachian region may contact the director of the Center.

Sanders-Brown Center on Aging

The Sanders-Brown Center on Aging is a multidisciplinary center for gerontological teaching, research, and service, dedicated to improving the quality of life for older adults. The Center is responsible for coordinating and integrating research, education and service programs in aging throughout the University of Kentucky. It administers interdisciplinary research programs, coordinates the offering of gerontology courses, and assists in the training of graduate students. Over 150 faculty and staff from many areas and disciplines of the University are involved in programs of the Center. (See page 31 for information on the Ph.D. program in Gerontology.)

Students interested in graduate study with an emphasis in gerontology may work toward the Graduate Certificate in Gerontology awarded by the Sanders-Brown Center on Aging. The certificate requires 15 graduate credit hours in an approved, multidisciplinary curriculum in gerontology and completion of graduate degree requirements in a major academic discipline. For further information on the Graduate Certificate in Gerontology contact the Certificate Director, Sanders-Brown Center on Aging.

Center for Business and Economic Research

The Center for Business and Economic Research provides a focal point for research in the Carol Martin Gatton College of Business and Economics. It provides information and staff support for research projects, assists faculty in efforts to secure external funding for research, and coordinates multidisciplinary team approaches to research. The Center also monitors and analyzes the economy of Kentucky and provides quarterly economic forecasts for the state.

Lucille Parker Markey Cancer Center

The Markey Cancer Center is a multidisciplinary center for research, patient care, education and community outreach.

Research activities are broadly represented through four program areas: tumor immunology, molecular genetics, membrane studies and developmental therapeutics. The Center supports core research facilities for flow cytometry, macromolecular structure, electron microscopy, nuclear magnetic resonance spectroscopy, hybridoma production, and transgenic mouse construction. These activities, together with a wide range of individual investigator initiated projects, are supported by a combination of funding sources, including research grants from the National Cancer Institute, the American Cancer Society, and other extramural funding agencies. The Center also has available additional resources in all areas relevant to cancer problems.

Center for Computational Sciences

The Center for Computational Sciences is a center for research and education with primary emphasis on developing and using computer models to analyze chemical, physical, and biological systems. Faculty from Mathematics, Computer Science, Statistics, Engineering, Chemistry, Physics, Biology, and other departments use a multidisciplinary approach to study such systems, utilizing the full range of computational resources—micro, mini, mainframe, and supercomputers. This includes algorithm development and evaluation for vector and parallel, as well as for scalar machines. Courses in applied mathematics, numerical analysis, and computer modeling are available for students interested in this approach to analyzing and understanding these systems.

Maxwell H. Gluck Equine Research Center

The Gluck Equine Research Center is part of the Department of Veterinary Science. Research in the Center is supported, in part, by an endowment established by the University of Kentucky Equine Research Foundation. The Center provides state-of-the-art facilities and equipment for the study of a wide variety of diseases of the horse. Research in the areas of infectious diseases, reproductive physiology, parasitology, pharmacology, immunogenetics, growth and development, pathology, blood typing, and toxicology and experimental therapeutics are conducted within the 69,505 square foot building located in front of Commonwealth Stadium.

The Gluck Center offers postgraduate and postdoctoral training in a variety of disciplines. The Center is well-positioned in one of the most concentrated horse breeding areas in the world. Both basic biomedical and problem-oriented research are included in the Center's program.

Center of Membrane Sciences

The Center of Membrane Sciences affords a unique approach to promote multidisciplinary research and education in both natural biological membranes and artificial synthetic membranes. UK faculty from the Departments of Chemistry, Chemical and Materials Engineering, Biochemistry, Pharmacy, Anatomy and Neurobiology, Physiology and Biophysics, Nutrition and Food Sciences, Animal Sciences, and Psychology are active in the programs of the Center. This collaboration between experts in biological membranes with experts in synthetic membranes constitutes the major strength of the Center and it puts the University and the Commonwealth at the forefront of this vital area of science and technology. No other such Center of Membrane Sciences exists in the United States. The sciences of membranes encompasses broad areas: a) the structure and chemistry of biological membranes and their constituents, transport processes, and information transfer (transmembrane signaling) in living systems; b) the synthesis, structure, and chemistry of synthetic membranes; separation of solutes ranging in size from smaller molecules and ions to large proteins by reverse osmosis and ultrafiltration with biotechnology and pharmaceutical applications; separation of gaseous mixtures by synthetic membranes; c) separation of organic and biomolecules by synthetic membranes containing chemical and biofunctional groups; d) membrane-based catalysis, analysis, and separation combine molecular biology with chemistry and chemical engineering to produce new fundamental and applied studies of biofunctional membranes. Opportunities are available for graduate students in each of the above-listed disciplines as well as in agriculture, allied health, medicine, dentistry, and other areas.

Center for Pharmaceutical Science and Technology

The Center for Pharmaceutical Science and Technology (CPST) offers an institutional framework for multidisciplinary research in the pharmaceutical sciences principally through collaboration with the industry. By providing a focus for efforts already underway at the University, the Center assists established and emerging pharmaceutical, chemical and biotechnology firms engaged in the development, production and marketing of drug products for human and animal health care. The Center's mission is to enrich academic programs, promote technology transfer, conduct specialized educational and training programs relating to pharmaceutical technologies and enhance economic development in the Commonwealth.

Center for Robotics and Manufacturing Systems

The Center for Robotics and Manufacturing Systems is dedicated to the advancement of manufacturing through education, research, and technology transfer. The Center supports active programs in the areas of manufacturing processes, engineered materials and processes, automation systems, and integrated manufacturing systems.

State-of-the-art laboratories are utilized by faculty, staff and students to develop processes for new materials, modeling and simulation, and automation and systems integration. Major areas of research include aspects of metal cutting such as control of machining chatter, methods and theory of chip formation and control, finite element modeling of the machining process, and metrology. The monitoring and control of machine systems also is an important area. Current research also encompasses activities on methodologies for modeling, sensing, and control. Intelligent systems, communication networks particularly adapted to manufacturing systems, and improved distributed computer architectures are being studied. In addition, non-traditional processes such as painting technology, stereolithography, electrodischarge compaction of powdered metal, and injection molding are addressed.

Technology transfer activities help manufacturing companies keep pace with the increasing globalization of the world. Specialized areas of assistance offered by the CRMS engineering and technical staff include computer-aided technologies, electronic assembly, product/process optimization, and rapid prototyping. Technology advancements are disseminated to manufacturers by presentations, seminars, workshops, demonstrations and exhibitions, as well as through one-on-one industrial extension activities.

Interdisciplinary Human Development Institute

The Interdisciplinary Human Development Institute (IHDI) is a research, training, service and technical assistance program working at local, state, regional, national and international levels to improve services to persons with disabilities and their families. These activities are developed in cooperation with a broad range of both University of Kentucky units and public or private organizations and agencies. These cooperative relationships include education, social services, medicine, allied health, rehabilitation and other related disciplines. Its activities include life span involvements with programs ranging from prevention of disabilities to aging and gerontology. It is a member of the American Association of University Affiliated Programs (AAUAP).

Kentucky Geological Survey

The Kentucky Geological Survey (KGS) is a research unit of Research and Graduate Studies at the University of Kentucky. Its mission includes basic and applied research related to Kentucky's geology and mineral resources, water resources, and geologic hazards. Research results are publicly available in published reports and maps, as well as on the Internet at <www.uky.edu/KGS/home.htm>. KGS staff provide technical support to Federal, State, regional, and local government agencies and serve on 90 committees, boards, and professional societies. The Survey is the official repository in Kentucky for oil and gas well records, drill cutting and core samples, and groundwater data.

KGS maintains a state-of-the-art relational database. Geoscience data are available for use by researchers, students, and the public. The Survey's laboratory facilities are used to analyze the chemical and physical characteristics of water, rock, coal, oil, natural gas, and other natural resources. Although laboratory services are provided primarily to KGS researchers, they are also available to other researchers who study the environment and natural resources of Kentucky.

Numerous researchers at KGS serve as adjunct faculty in the Department of Geological Sciences and the Department of Agricultural Engineering, teach courses, and serve on advisory boards of graduate students at UK. Many graduate students are employed in KGS research programs.

Areas of expertise at KGS include coal-mining geology, coal-resource assessment, coal quality and petrography, stratigraphy and sedimentology of the Eastern and Western Kentucky Coal Fields, application of geographic information systems (GIS) to coal-field geology; industrial and metallic minerals; digital geologic mapping, geophysics, and geologic hazards; hydrogeology of agricultural lands, hydrogeology of coal fields, hydrogeology of karst terranes, hydrogeology of urban and industrial areas; and basin hydrology, water supply, and waste management. KGS is a national leader in digital geologic mapping. The Survey is also an authorized ESRI (Environmental Systems Research Institute, Inc.) ArcView GIS instruction center.

Kentucky Transportation Center

The Kentucky Transportation Center serves as the focal point in the state for interdisciplinary research in transportation. In addition to its Transportation Research Program, the Center operates a Technology Transfer Program and provides technical assistance and training to road and street departments throughout the Commonwealth. The Center works closely with various governmental agencies and conducts research supported by a variety of sources including private industry.

Kentucky Water Resources Research Institute

The Kentucky Water Resources Research Institute (KWRRI) stimulates and supports water resources research and education by identifying current and emerging water resources issues for Kentucky and the nation. Faculty at all the universities and colleges in Kentucky are encouraged to participate in the Institute's programs.

Programs of the Institute include the Environmental System Program, a certification program that offers a multi-disciplinary perspective of environmental issues; the Environmental Protection Scholarship Program,

which supports both undergraduate and graduate students with full scholarships in exchange for employment with the state upon graduation; and the Federal Facilities Oversight Unit, which assists the state Division of Waste Management with environmental oversight of federal facilities located in Kentucky. The Water Resources Research Program supports faculty members, research staff and graduate students in a broad spectrum of research topics. The Institute's technology transfer program includes short courses, seminars and conferences, and the distribution of research results.

Statistics Consulting Laboratories

The Department of Statistics operates two consulting laboratories: the Statistics Consulting Laboratory for the main campus and the Biostatistics Consulting Unit for the Medical Center campus. These laboratories provide advice to faculty and graduate students on proper study designs for projects involving quantitative data as well as on appropriate strategies for analyzing the data emanating from such projects. Laboratory services cover the entire range of applied statistical methodology including biostatistics, epidemiology and survey sampling. Statistical programming support for projects is also available on a fee for services rendered basis. The staff occasionally offers short courses on specialized topics.

Survey Research Center

The Survey Research Center designs, coordinates, and conducts survey research activities for the University, non-profit organizations and public agencies and assists faculty and students with survey research projects. The Center's services range from research design, questionnaire development, and sampling through data analysis and report writing.

The Center conducts national, statewide, and local telephone and mail surveys, face-to-face interviews, and focus groups, using the latest technologies and methods such as CATI, CAPI, and CASI. It conducts the biannual Kentucky Survey, which probes the opinions and attitudes of Kentuckians about a variety of social, economic, and political issues, and the Kentucky Health Survey, which addresses a wide range of health issues. Data from these surveys and other Center projects are available for faculty and graduate student research.

Tobacco and Health Research Institute

This Institute conducts research in two distinct fields, namely the investigation of animal physiology related to the use of tobacco products, and the application of biotechnology to develop new crops based on the tobacco plant. In the animal sciences field, THRI grants support projects that investigate the action of tobacco smoke constituents on processes in the lung, the action of nicotine on the central nervous system, and many other mechanisms relating to the interaction of tobacco products with animal physiology. The Institute also provides an unique service to tobacco researchers worldwide through its production of research reference cigarettes, construction of equipment for smoke-exposure studies, and provision of analytical services. Biotechnology research aimed at the development of new crops based on tobacco is supported both through competitive grants and by an in-house program. There is a strong emphasis on collaborations with research groups in academia and industry. The in-house group undertakes research into the types of products best suited to production *via* crop agriculture, the development of advanced systems for production of novel substances in the tobacco plant, and the development of new tobacco plants making novel products such as antibiotics, insecticides, enzymes etc. This research is designed to facilitate the eventual development of entirely new crop opportunities for the Kentucky tobacco grower. The Institute welcomes proposals for research support in both the animal health and the tobacco biotechnology fields. Pilot proposals to initiate innovative research will be considered at any time. Proposals for regular 1- or 2-year THRI research grants must be submitted by February for support to begin July 1. Interested applicants should contact the Director's office (606-257-5798) for more information.

Inter-University Affiliations

Southeastern Universities Research Association

The Southeastern Universities Research Association (SURA) is a consortium of 41 universities in 13 southeastern states and the District of Columbia established in 1980 to serve as an entity through which colleges, universities, and other organizations may cooperate with one another and with government and other organizations in acquiring, developing, and using laboratories, machines, and other research facilities and in furthering knowledge in the physical, biological, and other natural sciences and engineering. The University of Kentucky is a founding member of SURA.

SURA's current research efforts are focused in nuclear physics, information technology, and materials science. SURA manages the Thomas Jefferson National Accelerator Facility (TJNAF) for the Department of Energy for research in nuclear science. The SURA/TJNAF Graduate Fellowship Program offers awards to graduate students at SURA institutions who plan to pursue TJNAF-related research.

Research Program at Oak Ridge Associated Universities

Since 1946, students and faculty of the University of Kentucky have benefited from its membership in Oak Ridge Associated Universities (ORAU), a consortium of colleges and universities and operating contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tennessee. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country; to keep its members informed about opportunities for fellowship, scholarship, and research appointments; and to organize research alliances among its members.

Contact the Office of the Vice President for Research and Graduate Studies, University of Kentucky, (606) 257-1663 for more information about ORAU programs; or contact Ann H. Patton, ORAU Corporate Secretary, at (615) 576-3306.

GENERAL INFORMATION

Residency

According to law, the University of Kentucky and all other state-supported institutions of higher education assess tuition fees on the basis of Kentucky or non-Kentucky residency. The policy for determining residency is established by the Commonwealth of Kentucky Council on Postsecondary Education. Students who are unsure of their residency status should check with the Registrar's Office before applying for admission.

Tuition and Fees for 1998-1999

Tuition Schedule

Per Semester: Fall and Spring

Full-Time Student	Resident	Non-resident
Graduate School	$1,638	$4,578
Part-Time Student		
Graduate School (per hour fee)	$170	$496

Summer Terms:

Full-Time Student (Eight-Week Session only)	Resident	Non-resident
Graduate School	$856	$2,486
Part-Time Student and Four-Week Session (per hour fee)		
Graduate School	$170	$496

Four-Week Session:
Four credit hours is the maximum course load and fees will be assessed separately per hour.
Eight-Week Session:
Full-time fees are attained at five hours for The Graduate School.

Mandatory Registration Fee

Semester (Full-time)	Annual Charges	Eight-Week Summer (Full-time)	Part-time and Four-Week Fee Per Credit Hour
$168.00	$336.00	$36.00	$6.00

FEES ARE SUBJECT TO CHANGE WITHOUT NOTICE.

Fellowships and Assistantships

Financial assistance is available in the form of fellowships and assistantships, as well as research funding. A fellowship is a non-service award made to superior students to assist in the pursuit of an advanced degree. An assistantship is an appointment to specified teaching or research duties. There is a common application form for both fellowships and assistantships.

Fellowships

There are more than 300 non-service fellowships available in all areas of graduate work. The majority of these fellowships carry a tuition scholarship as well as a stipend. Tenure may be from one to three years, depending on fellowship type. While fellowships are formally awarded by The Graduate School, nominations for most fellowships are made by the department in which a student seeks to enroll.

Almost all fellowships are awarded for the academic year. There are virtually no fellowships that begin in the spring semester. Departments make fellowship nominations by February for the next academic year, so students interested in a fellowship should submit applications by that time. Later applicants have a reduced chance of obtaining a fellowship. Notification regarding awarding of fellowships comes from The Graduate School by early May.

Assistantships

Approximately 1500 teaching or research assistantships are available from departments and other units of the University. In addition to an assistantship stipend, full or partial tuition scholarships are available for most assistantship holders.

The majority of assistantships are awarded for the academic year. Students interested in an assistantship should submit applications by February 1 for the next academic year; late applicants have a reduced chance of obtaining an assistantship. Most assistantship decisions are made by April for the coming academic year.

Notification of an assistantship comes from the department. Questions about the availability of positions and the status of assistantship applications should be addressed to the Director of Graduate Studies in the department a student seeks to enter.

Student Support

Funds are available to students enrolled in graduate programs for assistance with expenses relating to dissertation or thesis research as well as for travel to

present research at professional meetings. Students should check with the Graduate School Fellowship Office regarding application materials for student support.

Students should check with the Director of Graduate Studies in the department they seek to enter for information regarding nomination for other research support funds that may be available from The Graduate School.

Health Services

The convenience of an on-campus health care facility, a low-cost prepaid plan for outpatient services, and an excellent student group hospitalization plan—all are designed to make UK's total health plan attractive and economical for graduate and professional students, both full-time and part-time.

All full-time students pay a health fee in fall and spring semesters which entitles them to medical and mental health care at the University Health Service. Students who attend either of the summer sessions may pay the health fee only for the session they attend or they may pay for the whole summer.

Part-time students may prepay the health fee or may use the health service on a fee-for-service basis; the health fee may be paid at the Student Billing Office or at the University Health Service cashier's office.

The University Health Service is located in the Medical Plaza across Rose Street from the Medical Center. The health service clinic hours during the fall and spring semesters are from 8 a.m. to 4:30 p.m. Tuesday, Wednesday, and Friday; 8:00 a.m. to 6:00 p.m. Monday and Thursday; and Saturday morning, 9 to 11 a.m. Summer hours may vary. All visits are made by appointment. Saturday hours are for emergencies and follow-up visits from previous appointments; there are no Saturday hours during summer terms and school breaks. The clinic is staffed by physicians, nurses, psychiatrists, and other health professionals who are specialists in the health problems of young adults.

Spouses of eligible students are welcome to receive their primary care at the health service. They are charged for all services rendered. Children and other family members are not eligible.

Services covered by the health fee include: unlimited visits to physicians and nurses for an illness or injuries, laboratory services and x-rays ordered by the health service clinician as part of evaluation for an illness or injury, some medications, allergy shots and immunizations, and visits to the professionals in the Mental Health Service. For additional information, contact the University Health Service at (606) 323-5823.

Hospitalization Insurance

Services related to hospitalization, surgical procedures and accident care, and any other health care provided outside the University Health Service, are not covered by the health fee. The University of Kentucky strongly endorses the belief that students should have health insurance, either provided by their parents' policy or by an independent insurance company.

Students who receive services provided through campus facilities that are traditionally covered by insurance plans (hospitalization, accidents/injuries, surgical procedures) will be furnished with an itemized statement suitable to forward to the student's insurance carrier. UK international students must have hospitalization insurance that is payable in the United States, and must pay any charges insurance does not cover. It is imperative that students have insurance for themselves, and for their spouse and children if they are married, because of the extremely high cost of medical care. The University, including University Hospital, assumes no responsibility for a student's medical expenses.

UK Student Group Insurance Plan

The University Health Service can assist students in obtaining health insurance coverage. The annual policy provides year-round coverage. University of Kentucky Lexington Campus and Lexington Community College undergraduate students taking six credit hours or more, and graduate students taking three credit hours or more, are eligible for enrollment. Students may also purchase coverage for their spouse and/or children.

The premium may be paid annually, semi-annually or quarterly by check, Visa or MasterCard. Enrollment may be continued from one year to the next by re-enrolling within 14 days from the enrollment date. Although students are encouraged to enroll at the beginning of the school year, enrollment is available throughtout the policy year.

Insurance information packets for the upcoming school year will be available in mid-July at the University Health Services. For further information and enrollment dates, call (606) 323-5823, ext. 230.

The current insurance plan is underwritten by the MEGA Life and Health Insurance Company.

Counseling and Testing Center

The University Counseling and Testing Center has a staff of licensed psychologists whose primary function is to address the emotional/psychological issues of both undergraduate and graduate students. Some typical concerns for graduate students include: feelings of depression, anxiety, stress due to the demands of graduate school, quality of interpersonal relationships, loneliness and isolation, grief, time management, refinement of critical thinking skills, career and life planning, and other issues of a personal nature.

All counseling sessions are *free, voluntary, and confidential.* The services are available by appointment to fee-paying students enrolled for at least six semester hours. Graduate students enrolled for thesis or dissertation hours also are eligible

In addition to counseling with individual students, the Center offers couples (significant others) and group counseling. General counseling groups are ongoing and reconstituted each semester and participants work on a variety of issues There are also special focus groups (such as Bridges, a support group for graduate African-

American women, an eating disorders group, and a discussion group for LD/ADHD).

Appointments and further information may be obtained by calling 257-8701 or by coming to the Center, 301 Frazee Hall

Housing

General Information

The University of Kentucky Housing Office operates over 700 apartments for full-time single graduate students and student families. These apartments are rented on a 12-month lease agreement basis, including academic recesses.

The apartment complexes are in six different areas. They are: Commonwealth Village; Cooperstown; Shawneetown; Linden Walk; Rose Lane and Greg Page Stadium View. These complexes consist of efficiency and one-bedroom apartments except for a limited number of two-bedroom apartments in Shawneetown and Greg Page Stadium View.

Applying for University Apartment Housing

1. Obtain Application for Apartment Housing and return to Apartment Housing Office with $150 deposit.
2. Receive acknowledgment of deposit received.
3. Receive notification of apartment assignment or waiting list assignment from Apartment Housing Office.
4. If assigned to apartment, respond with confirmation or cancellation WITHIN TEN DAYS in order to keep assignment or receive full refund of deposit.
5. Arrive at UK Apartment Housing by specified date of occupancy. Sign 12-month Rental Agreement or Sub Lease and fulfill all terms therein. NOTE: LESSEE MUST BE ENROLLED AS A FULL-TIME UK STUDENT.

Furnishings

The one and two-bedroom units have a living room, kitchen, dining area and a bathroom. The efficiency apartments have a living room-bedroom combination, kitchen, and bath.

All apartments are adequately furnished. Furnishings vary according to the complex. If an unfurnished or partially furnished apartment is desired, arrangements must be approved with the Apartment Housing Office.

Waterbeds are not permitted in any UK apartments. It is recommended that students bring their own lamps; it is best to wait until after moving in to purchase or secure other accessories.

Apartment Assignments

Apartment assignments are made according to the date the completed application is returned to the Apartment Housing Office with a $150 reservation/security deposit. Priority will be given to returning residents. *Filing an application does not guarantee an assignment, nor does it in any way coincide with or affect admission to the University. Once an assignment is confirmed with the applicant, cancellation or failure to occupy the apartment will result in forfeiture of the deposit.*

Approximately 30 days prior to the desired date of occupancy, students will be notified about the assignment.

Payments

Rent payment, which includes all utilities, is due the first day of each month. Payments must be received in the Apartment Housing Office on or before the 10th of each month, or a $15 late fee will be assessed. If a student moves in any time other than the first of the month, the rent will be pro-rated for the days occupied. Rent begins when the apartment keys are picked up.

The student renting the apartment is responsible for completion of a 30-day written notice to vacate when he or she decides to move out at the expiration of the lease.

Deposit

The $150 reservation/security deposit is placed in a non-interest bearing account until the termination of the lease. The deposit, less any charges for cleaning, rent, missing or damaged property, will be refunded within 30 days after the resident moves out.

Cancellations and Refunds

If an application is withdrawn prior to receiving an assignment, or within 10 days after an assignment is made, the deposit will be refunded. If an apartment is not available, the application will be cancelled and the deposit will be refunded.

Upon request, an application and deposit will be held for consideration as apartments become available. A refund of the deposit will be made if the student is refused admission to the University and the Apartment Housing Office is notified in writing within 30 days after notice of rejection from the Admissions Office.

Telephones

Except for residents of Rose Lane and Linden Walk, telephones (i.e., the instruments) are provided by the University. If telephone service is desired, contact Wildcat Calling, 255 Student Center, 257-1005 for hook-up and for information on charges.
Note: Rose Lane and Linden Walk residents must contact GTE to arrange for telephone service.

Parking

Parking is restricted in all apartment complex lots and permits may be purchased from the Public Safety Division, located at the corner of Rose Street and Euclid Avenue. You must show a copy of your lease or sublease at the Public Safety Division Office in order to obtain a permit.

Custodial Service

Students are required to keep apartments in a clean and sanitary condition. University custodial staff maintains only the public areas.

Pets

Pets are not allowed in apartments or in the University housing areas.

Bus Service

Any point on campus may be reached easily by riding the free University shuttle bus which runs every 20 minutes. The bus passes within one block of the apartments.

Carpets

Carpets in all University apartments are cleaned before residents move in. Once a resident occupies an apartment, carpet cleaning and care is the resident's responsibility. Carpet cleaning machines can be rented at local grocery and hardware stores.

Roommate Subleases

If a single graduate student desires to have another single graduate student reside with him or her, a sublease must be signed by the second student through the Apartment Housing Office. Information concerning the sublease is explained in the Rental Agreement.

DEGREE REQUIREMENTS

This chart outlines minimum requirements for all graduate degree programs.

PROGRAM	DEGREE	Thesis Option	Non-thesis Option	Residence Model(s)+	Credit Hours Required
Accounting	Master of Science in Accounting		X		30
Administration and Supervision	Specialist in Education		X		30*
Instruction and Administration	Doctor of Education	X		I, II, III	*
School Administration	Master of Education		X		30
Agricultural Economics	Doctor of Philosophy	X		I	*
	Master of Science	X			24
	Master of Science		X		36
Anatomy and Neurobiology	Doctor of Philosophy	X		I	*
Animal Sciences	Doctor of Philosophy	X		I, II, III	*
	Master of Science	X			24
	Master of Science		X		36
Anthropology	Doctor of Philosophy	X		I	*
General Anthropology	Master of Arts	X			24
Applied Anthropology	Master of Arts		X		33*
Art Education	Master of Arts	X			30
	Master of Arts		X		36
Art History	Master of Arts	X			24
Art Studio	Master of Fine Arts		X		60*
Biochemistry	Doctor of Philosophy	X		I	*
Biology	Doctor of Philosophy	X		I	*
	Master of Science	X			24
	Master of Science		X		30
Biomedical Engineering	Doctor of Philosophy	X		I	*
	Master of Science in Biomedical Engineering	X			26
	Master of Science in Biomedical Engineering		X		26
Biosystems and Agricultural Engineering	Doctor of Philosophy	X		I, II, III	*
	Master of Science in Biosystems and Agricultural Engineering	X			24
	Master of Science in Biosystems and Agricultural Engineering		X		30
Business Administration	Doctor of Philosophy	X		I	*
	Master of Business Administration		X		36
Chemical Engineering	Doctor of Philosophy	X		I, II, III	*
	Master of Science in Chemical Engineering	X			24
	Master of Science in Chemical Engineering		X		30
Chemistry	Doctor of Philosophy	X		I, II, III	*
	Master of Science	X			24
	Master of Science		X		30
Civil Engineering	Doctor of Philosophy	X		I, II, III	*
	Master of Science in Civil Engineering	X			24
	Master of Science in Civil Engineering		X		30
	Master of Civil Engineering		X		30*
Classical Languages and Literatures	Master of Arts	X			24
	Master of Arts		X		30
Clinical Nutrition	Master of Science in Clinical Nutrition		X		30

PROGRAM	DEGREE	Thesis Option	Non-thesis Option	Residence Model(s)	Credit Hours Required
Communication	Doctor of Philosophy	X		I, II, III	*
	Master of Arts	X			30
	Master of Arts		X		30*
Communication Disorders	Master of Science in Communication Disorders		X		30
Computer Science	Doctor of Philosophy	X		I, II, III	*
	Master of Science	X			24
	Master of Science		X		30
Crop Science	Doctor of Philosophy	X		I. II. III	*
	Master of Science	X			24
	Master of Science in Agriculture	X			24
	Master of Science in Agriculture		X		36
Curriculum and Instruction					
Early Childhood Education	Master of Arts in Education	X			30
	Master of Arts in Education		X		36
Elementary Education	Master of Arts in Education		X		30
Instruction and Administration	Doctor of Education	X		I, II, III	*
Instructional Systems Design	Master of Science in Education	X			36
	Master of Science in Education		X		36
Middle School Education	Master of Arts in Education	X			24
	Master of Arts in Education		X		30
	Master of Science in Education	X			24
	Master of Science in Education		X		30
Reading	Master of Arts in Education		X		33
Secondary Education	Master of Arts in Education		X		30*
	Master of Science in Education	X			24*
	Master of Science in Education		X		30*
Dentistry	Master of Science	X			24
Diplomacy and International Commerce	Master of Arts	X			24
	Master of Arts		X		30
Economics	Doctor of Philosophy	X		I	*
	Master of Science		X		30
Educational and Counseling Psychology	Doctor of Philosophy	X		I, II	*
	Doctor of Education	X			*
	Specialist in Education		X		30*
	Master of Arts in Education	X			30*
	Master of Arts in Education		X		36*
	Master of Science in Education	X			30*
	Master of Science in Education		X		36*
Educational Policy Studies and Evaluation	Doctor of Philosophy	X		I, II	*
	Doctor of Education	X			*
	Master of Science in Education		X		30*
Electrical Engineering	Doctor of Philosophy	X		I, II	*
	Master of Science in Electrical Engineering	X			24
	Master of Science in Electrical Engineering		X		33
Engineering	Master of Engineering		X		30
English	Doctor of Philosophy	X		I, II	*
	Master of Arts	X			27
	Master of Arts		X		33

PROGRAM	DEGREE	Thesis Option	Non-thesis Option	Residence Model(s)*	Credit Hours Required
Entomology	Doctor of Philosophy	X		I, II, III	*
	Master of Science	X			24
	Master of Science		X		36
Family Studies	Master of Science in Family Studies	X			*
	Master of Science in Family Studies		X		*
Forestry	Master of Science in Forestry	X			24
	Master of Science in Forestry		X		30
French	Master of Arts		X		30
Geography	Doctor of Philosophy	X		I	*
	Master of Arts	X			24
	Master of Arts		X		30
Geology	Doctor of Philosophy	X		I, II, III	*
	Master of Science	X			24
German	Master of Arts	X			24
	Master of Arts		X		30
Gerontology	Doctor of Philosophy	X		I	*
Historic Preservation	Master of Historic Preservation		X		48
History	Doctor of Philosophy	X		I	*
	Master of Arts	X			24
	Master of Arts		X		36
Interior Design, Merchandising	Master of Arts in Interior Design, Merchandising and Textiles	X			30
and Textiles	Master of Arts in Interior Design, Merchandising and Textiles		X		30
	Master of Science in Interior Design, Merchandising and Textiles	X			30
	Master of Science in Interior Design, Merchandising and Textiles		X		30
Kinesiology and Health Promotion	Doctor of Education	X		I	*
	Master of Science	X			30
	Master of Science		X		30
Library Science	Master of Arts	X			30
	Master of Arts		X		36
	Master of Science in Library Science		X		36
Manufacturing Systems Engineering	Master of Science in Manufacturing Systems Engineering	X			24
	Master of Science in Manufacturing Systems Engineering		X		33
Materials Science and Engineering	Doctor of Philosophy	X		I, II, III	*
	Master of Science in Materials Science and Engineering	X			24
	Master of Science in Materials Science and Engineering		X		30
Mathematics	Doctor of Philosophy	X		I	*
	Master of Science	X			30
	Master of Science		X		30
	Master of Arts	X			30
	Master of Arts		X		30
Applied Mathematics	Master of Science		X		36
Mechanical Engineering	Doctor of Philosophy	X		I, II, III	*
	Master of Science in Mechanical Engineering	X			24
	Master of Science in Mechanical Engineering		X		30*
Microbiology	Doctor of Philosophy	X		I	*
Mining Engineering	Doctor of Philosophy	X		I	*
	Master of Science in Mining Engineering	X			24
	Master of Science in Mining Engineering		X		30

PROGRAM	DEGREE	Thesis Option	Non-thesis Option	Residence Model(s)+	Credit Hours Required
	Master of Mining Engineering		X		30
Music	Doctor of Philosophy	X		I, II	*
	Doctor of Musical Arts	X		I, II	*
	Master of Music	X			30
	Master of Music		X		*
	Master of Arts	X			30
Nursing	Doctor of Philosophy	X		I	*
	Master of Science in Nursing	X			27
	Master of Science in Nursing		X		33
Nutrition and Food Science	Master of Science	X			30
	Master of Science		X		36
Nutritional Sciences	Doctor of Philosophy	X		I, II, III	*
Pharmaceutical Sciences	Doctor of Philosophy	X		I	*
	Master of Science	X			24
	Master of Science		X		30
Pharmacology	Doctor of Philosophy	X		I	*
Philosophy	Doctor of Philosophy	X		I, II	*
	Master of Arts		X		30
Physical Therapy	Master of Science in Physical Therapy	X			24
	Master of Science in Physical Therapy		X		30
Physics and Astronomy	Doctor of Philosophy	X		I	*
	Master of Science	X			24
	Master of Science		X		30
Physiology	Doctor of Philosophy	X		I	*
Plant Pathology	Doctor of Philosophy	X		I, II, III	*
	Master of Science	X			24
Plant Physiology	Doctor of Philosophy	X		I	*
Plant and Soil Science	Master of Science	X			24
	Master of Science		X		30
Political Science	Doctor of Philosophy	X		I, II	*
	Master of Arts	X			24
	Master of Arts		X		30
Psychology	Doctor of Philosophy	X		I	*
	Master of Arts	X			24
	Master of Science	X			24
Public Administration	Doctor of Philosophy	X		I	42
	Master of Health Administration		X		51
	Master of Public Administration		X		45
Public Health	Master of Science in Public Health	X			24
	Master of Science in Public Health		X		30
Radiation Science	Master of Science in Radiological Medical Physics		X		30
	Master of Science in Health Physics		X		30
Rehabilitation Counseling	Master of Rehabilitation Counseling		X		*
Social Work	Doctor of Philosophy	X		I, II, III	44
	Master of Social Work		X		60*
Sociology	Doctor of Philosophy	X		I, II, III	*
	Master of Arts	X			24
	Master of Arts		X		30
	Master of Science in Agriculture	X			24

PROGRAM	DEGREE	Thesis Option	Non-thesis Option	Residence Model(s)+	Credit Hours Required
	Master of Science in Agriculture		X		36
Soil Science	Doctor of Philosophy	X		I, II	*
Spanish and Italian Languages	Doctor of Philosophy	X		I	*
and Literatures	Master of Arts	X			24
	Master of Arts		X		30
Special Education	Doctor of Education	X		I	*
	Specialist in Education		X		30*
	Master of Science in Education	X			36*
	Master of Science in Education		X		39*
Statistics	Doctor of Philosophy	X		I	*
	Master of Science	X			29
	Master of Science		X		35
Theatre Arts	Master of Arts		X		30
Toxicology	Doctor of Philosophy	X		I	*
	Master of Science	X			24
	Master of Science		X		31
Veterinary Science	Doctor of Philosophy	X		I, II, III	*
	Master of Science	X			24
Vocational Education	Doctor of Education	X		I, II, III	42*
	Master of Science in Vocational Education	X			24
	Master of Science in Vocational Education		X		30
	Master of Arts in Education	X			24
	Master of Arts in Education		X		30
	Master of Science in Education	X			24
	Master of Science in Education		X		30

**Individual requirements may vary according to the need of the student. Where asterisks are listed, consult the Director of Graduate Studies in the specific program.*

+See pp. 23-24 for description of Models I, II, and III.

DIRECTORS OF GRADUATE STUDIES

COLLEGE OF AGRICULTURE
PROGRAMS

Agricultural Economics 50
Michael R. Reed
Animal Sciences 51
Robert J. Harmon
Crop Science 66
Michael Barrett
Entomology 76
Bobby Pass
Forestry 77
Michael J. Lacki
Plant Pathology 101
Christopher L. Schardl
Plant Physiology 101
Arthur G. Hunt
Plant and Soil Science 101
M. Scott Smith
Soil Science 100
John H. Grove
Veterinary Science 114
Ernest Bailey

COLLEGE OF ALLIED HEALTH PROFESSIONS
PROGRAMS

Clinical Nutrition 63
Geza Bruckner
Communication Disorders 65
Lori Gonzalez
Physical Therapy 98
Arthur J. Nitz
Radiation Science 106
Ralph Christensen

COLLEGE OF ARCHITECTURE
PROGRAMS

Historic Preservation 82
Julie Riesen-Weber

COLLEGE OF ARTS AND SCIENCES
PROGRAMS

Anthropology 51
Peter D. Little
Biology 55
Judith A. Lesnaw
Chemistry 60
John P. Selegue
Classical Languages and Literature 62
Jane E. Phillips
English 75
Joseph H. Gardner
French 78
Suzanne R. Pucci
Geography 78
John Pickles
Geology 79
Kieran O'Hara
German 79
Philip McKnight
History 82
Eric Christianson
Mathematics 87
J. Brauch Fugate
Philosophy 98
Ted Schatzki
Physics and Astronomy 99
Joseph Straley
Political Science 102
Mark A. Peffley
Psychology 103
Richard H. Smith
Sociology 109
Laurie R. Hatch
Spanish 110
Susan de Carvalho
Statistics 112
Arnold J. Stromberg

COLLEGE OF BUSINESS AND ECONOMICS
PROGRAMS

Accounting 48
James A. Knoblett
Business Administration 57
(MBA, Ph.D.), Michael G. Tearney
Accounting (Ph.D.), Ralph Viator
Decision Science and Information Systems (Ph.D.), Clyde Holsapple
Finance (Ph.D.), Bradford Jordan
Management (Ph.D.), Terry Amburgey
Marketing (Ph.D.), Jule Gassenheimer
Economics 70
Richard A. Jensen

COLLEGE OF COMMUNICATIONS AND INFORMATION STUDIES
PROGRAMS

Communication 64
Roy L. Moore
Library Science 85
Timothy Sineath

COLLEGE OF DENTISTRY
PROGRAMS

Dentistry 68
Thomas T. Lillich

COLLEGE OF EDUCATION
PROGRAMS

Administration and Supervision 49
Susan J.Scollay
Curriculum and Instruction 67
Douglas C. Smith
Educational and Counseling Psychology 71
Charlotte R. Clark
Educational Policy Studies and Evaluation .. 72
Beth L. Goldstein
Kinesiology and Health Promotion 84
Richard Riggs
Rehabilitation Counseling 106
Ralph Crystal
Special Education 111
Belva C. Collins
Vocational Education 114
Charles Byers

COLLEGE OF ENGINEERING
PROGRAMS

Biosystems and Agricultural Engineering 55
Frederick A. Payne
Chemical Engineering 60
To Be Appointed
Civil Engineering 61
Shien T. Wang
Computer Science 66
Grzegorz Wasilkowski
Electrical Engineering 73
Jimmy J. Cathey
Manufacturing Systems Engineering 86
Larry E. Holloway
Master of Engineering 74
G. T. Lineberry
Materials Science and Engineering 87
Eric A. Grulke
Mechanical Engineering 88
Kaveh Tagavi
Mining Engineering 90
Andrzej M. Wala

COLLEGE OF FINE ARTS
PROGRAMS

Art 53
Art Education, George Szekely
Art History, Jane Peters
Art Studio, Garry Bibbs
Music 91
Kate Covington
Theatre Arts 113
Geraldine Maschio

COLLEGE OF HUMAN ENVIRONMENTAL SCIENCES
PROGRAMS

Family Studies 76
Raymond E. Forgue
Interior Design, Merchandising and Textiles 83
Allison Carll-White
Nutrition and Food Science 95
Kwaku Addo

COLLEGE OF MEDICINE
PROGRAMS

Anatomy and Neurobiology 50
Harold H. Traurig
Biochemistry 54
Daniel J. Noonan

Microbiology 89
Robert D. Perry
Pharmacology 97
David M. Kaetzel
Physiology 100
Dexter Speck
Preventive Medicine (Public Health) 105
Sanford W. Horstman

COLLEGE OF NURSING
PROGRAMS

Nursing 94
Lynne A. Hall (Ph.D.)
Juliann G. Sebastian (Master's)

COLLEGE OF PHARMACY
PROGRAMS

Pharmaceutical Sciences 97
Robert Yokel

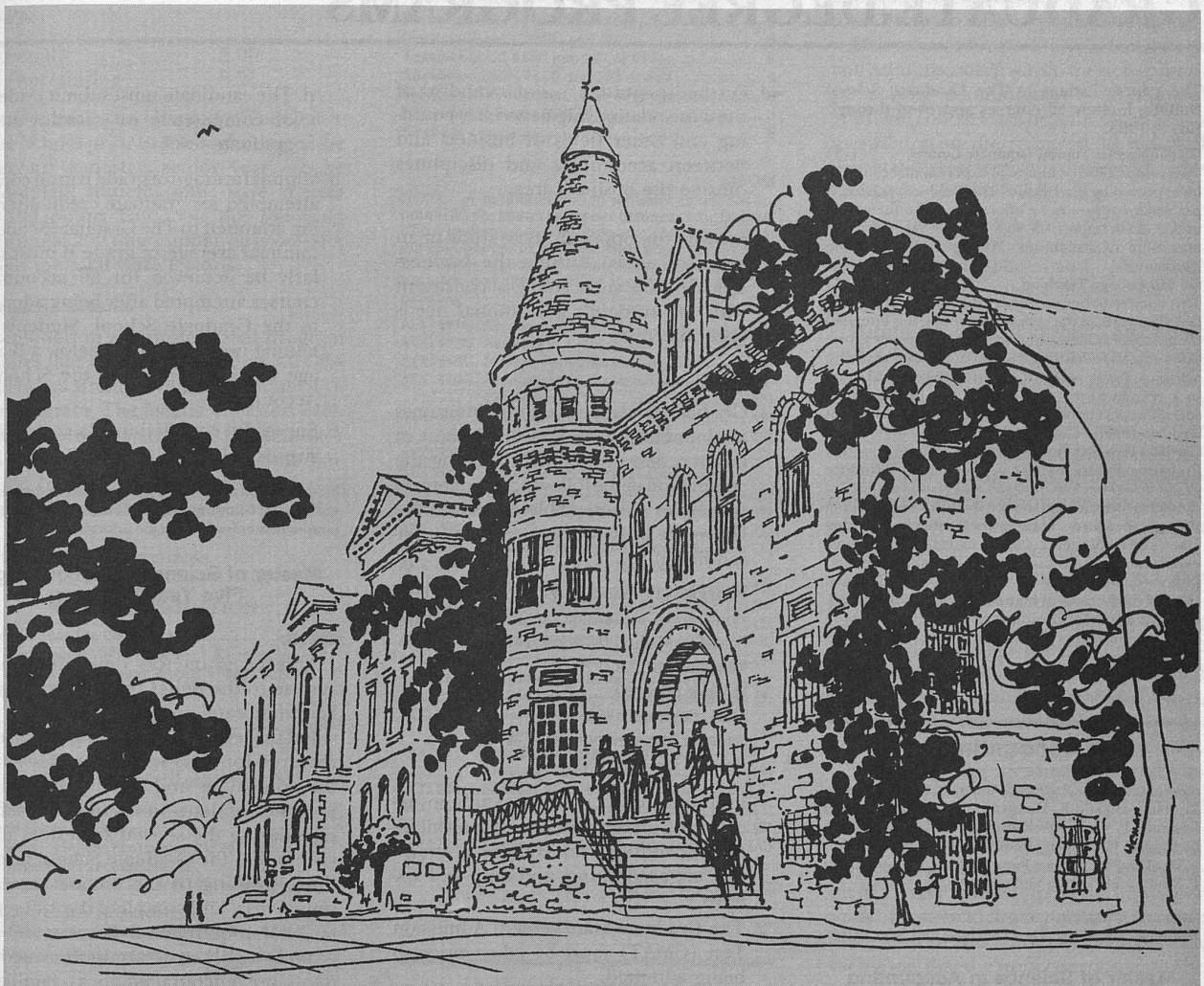
COLLEGE OF SOCIAL WORK
PROGRAMS

Social Work 107
David Royse

THE GRADUATE SCHOOL
PROGRAMS

Biomedical Engineering 55
Eugene Bruce
Diplomacy and International Commerce 69
John Stempel
Gerontology 80
Graham D. Rowles
Health Administration 81
Douglas Scutchfield
Nutritional Sciences 95
Linda Chen
Public Administration 103
Merl M. Hackbart (Ph.D)
Edward T. Jennings (MPA)
Toxicology 113
Mary Vore

ce 69
..... 80
..... 81
..... 95
..... 103
..... 113



The Graduate School Staff Directory

Office of the Dean

Michael T. Nietzel, Dean	(606)257-1759
Melanie Collins	(606)257-5093
Rebecca Fister	(606)257-1759

Academic Administration

Douglass S. Kalika, Sr. Associate Dean	(606)257-4905
Patricia Bond	(606)257-4905
Kaye McDaniel	(606)257-5851
Donavan Cain	(606)257-4905

Admissions-Domestic

Betty Floyd (A-G)	(606)257-7129
Beverly Kemper (H-O)	(606)257-4618
Maureen Barker (P-Z)	(606)257-4619

Admissions-International

Laura Earles (A-Z)	(606)257-4615

Extended Campus Programs

James E. O'Reilly, Associate Dean	(606)257-2411
Jonathan Garrett	(606)257-2411

Fellowship Office

Lisa Collins, Director	(606)257-3261
Lynn Peters	(606)257-3441
Kate Wheeler	(606)257-3261
Bogdanka Kurahovic	(606)257-3261

Fiscal Affairs

Jennifer Krieger	(606)257-4121

Mail Center and Data Processing

Deborah Price	(606)257-4617
Stephanie Francis	(606)257-4617

Records and Degree Certification

Marilyn Lyons	(606)257-4614
Christy Willis	(606)257-8142

Recruiting and Diversity

Deneese L. Jones, Associate Dean	(606)257-4555
Sarah Lee	(606)257-4555

Web Coordinator

Mary K. Kelly	(606)257-5222

GRADUATE DEGREE PROGRAMS

The course listings in The Graduate School Bulletin include all courses approved through July 9, 1998.

GS 600 Special Topical Graduate Course (1-3)
An interdisciplinary, topical or experimental course to be approved by the Dean of The Graduate School. A particular course can be offered no more than twice under the number, GS 600. May be repeated to a maximum of six credits. Prereq: Consent of the instructor.

GS 610 College Teaching (1)
This one-credit-hour seminar addresses teaching and learning issues in the college classroom. It is intended for graduate students who want to prepare for future academic careers and enhance current teaching activities. The seminar will examine pedagogical issues in a general format with opportunity for discipline-specific applications. This course can serve to augment any department- based programs.

GS 650 Preparing Future Faculty (1)
Preparing Future Faculty is designed to introduce graduate students to the roles and responsibilities of the college teacher and to assist them in understanding the variety of institutions in which effective teaching takes place. Students will focus on the academic expectations, institutional identities, and particular policies and procedures which characterize different types of institutions of higher learning. Skills to help students apply for positions and achieve success in their appointments will also be addressed. Lecture, two hours per week.

Accounting

Graduate Faculty: *Professors* William W. Ecton, James A. Knoblett, Donald L. Madden, Michael Tearney, and Relmond P. VanDaniker. *Associate Professors* Myrtle W. Clark, Jean C. Cooper, James R. Holmes, Stuart Keller, C. Douglas Poe, Thomas Pope, Robert J. Ramsay, Ralph E. Viator and Cynthia Vines.

Associate Members: *Assistant Professors* J. Gregory Bushong, Sally Furze, David S. Hulse and Sean Peffer.

Master of Science in Accounting

Plan A:

The Master of Science in Plan A is primarily for students who wish to have a program of advanced study in accounting. This program provides adequate preparation for employment in public accounting, business, government and other organizations, or for initial employment as an instructor at the college level. The program can be structured to prepare a student for further graduate work in related fields. Specifically, the program's objectives are to:

1. Develop the ability to carry out significant research and communicate results thereof.
2. Provide for greater concentration in a selected area of accounting.
3. Expand the student's knowledge of accounting theory, the significance of professional literature, and controversial concepts at an advanced level.
4. Further the student's understanding of the close relationship between accounting and other fields of business and between accounting and disciplines outside the business area.
5. Provide the opportunity to study in an area (or areas) outside the business fields, when such study is consistent with the student's educational needs and objectives.

Requirements

1. Graduate study in accounting presumes a minimum preparation of 30 hours in business and economics, including the completion of the following basic courses (examples of acceptable courses at the University of Kentucky are given in parentheses):

   Principles of Economics (ECO 201, ECO 202)
   Principles of Accounting (ACC 201, ACC 202)
   Statistical Method (STA 291, ECO 391)
   Management (MGT 301)
   Finance (FIN 300)
   Marketing (MKT 300)
   Strategic Management (MGT 499)
   Business Law (MGT 340)

   Prerequisites to graduate study in accounting include courses in intermediate accounting, managerial accounting, tax accounting, auditing, and systems.
2. The Graduate Management Admission Test (GMAT) must be taken prior to being admitted.
3. A minimum of 30 semester hours must be completed in courses carrying graduate credit. At least 20 semester hours must be in courses reserved exclusively for graduate students and at least 15 of these must be in accounting.
4. The course requirements are:
   a. One course in each of the following fields:
      Advanced Managerial Accounting
      Income Taxation
      Accounting Theory
      Attest Function
      One additional accounting course at the 600 level.
   b. At least six semester hours of graduate credit outside the Department of Accounting, three of which must be production related.
   c. A course in Computer Science or Data Processing.
   d. The candidate must submit evidence of competence in statistics at the graduate level.
5. Minimal average of grade B in all courses attempted for graduate credit after being admitted to The Graduate School. A minimal average of grade B must similarly be achieved for all accounting courses attempted after being admitted to the Graduate School. Students obtaining two grades of C below a B average will be dropped by the School of Accountancy.
6. Successful completion of a comprehensive examination.

Note: Students interested in the five-year degree program in Accounting should consult the Director of Graduate Studies for specific information.

Master of Science in Accounting--Five Year Program

Plan B:

This program was developed in response to the belief that the traditional baccalaureate program no longer provided the level of training and proficiency required for entry into the profession. As the admissions and retention standards indicate, students must apply for admission during the second semester, junior year and to the Graduate School prior to the beginning of the second semester, senior year, and complete the 150 semester-hour requirement. Because the program is highly structured, interested students are encouraged to a) familiarize themselves with its requirements as early as their sophomore year so that they may plan their course work accordingly, and b) consult with the School's Director of Graduate Studies as to class schedules each semester.

The program facilitates specialization in the areas of auditing, taxation, not-for-profit, financial, managerial, and accounting-based management information and analytical systems.

Upon completion of the program, both a bachelor's degree and a master's degree will be awarded.

Admission Requirements and Retention Standards

1. Application for admission into the professional program must be made during the first four weeks of the second semester, junior year.
2. Applicants shall have: a) completed the general education component of the curriculum plus ACC 301 and ACC 408 or

ACC 324; and b) earned the following GPA:

Overall	3.00
Accounting	3.25

3. Students must be admitted to The Graduate School prior to the beginning of the second semester, senior year. To be admitted, students must have at least 1,100 points based on the following formula: 200 times upper division GPA plus the total GMAT score.

Retention Standards

Retention in the professional program requires that a student maintain a 3.0 GPA in all hours attempted throughout the five year program. The faculty will assess each student's progress after the first semester and advise the student whether he/she should continue in the professional program or change to the four-year program.

Curriculum Requirements

GENERAL EDUCATION

General Education Component 0-9
Mathematics 109 or a score > 25 on ACT
Foreign Language or 2 years of high school preparation.

Inference and Communications 10-15
English 101 and 102 or 105
Communications 181 or 287
Mathematics 123 and 162 or 113

Disciplinary Requirements 18
Natural Science (6 hours)
Social Science (Economics 201 & Political Science 101 recommended)
Humanities (HIS 108 and 109 recommended)

Cross-disciplinary Requirements (Communications 325 and Sociology 342)

Cross-cultural Requirement 3

37-51

PRE-MAJOR REQUIREMENTS

Accounting 201 AND 202 6
Economics 202 3
Computer Science 101 3
Professional Ethics (Philosophy 330) 3
Statistics 291 3

18

COLLEGE CORE REQUIREMENTS

Marketing 300 3
Management 301 3
Management 499 3
Finance 300 3
Management 340 3
Economics 485G 3
Quantitative Analysis (DIS 300) 3
Economics 391 (Economics and Business Statistics) 3

24

ADDITIONAL PROGRAM REQUIREMENTS

Legal and Social Environment (MGT 341 and 441) .. 6
Computer Science (CS121) 4
Organizational Behavior (MGT 410) or Financial Decisions (FIN 445) 3
Management Information Systems (DIS 620) 3
Managerial Economics (ECO 610) 3
English 203 3
Electives 3

25

ACCOUNTING REQUIREMENTS

Financial (ACC 301, 302 and 601) 9
Managerial (ACC 408G and 608) 6
Taxation (ACC 417G and 577 or 617) 6
Attestation (ACC 403G and 503 or 603 6
Systems (ACC 324 and 524 or 624) 6
Professional Issues (ACC 611) 3
Electives 6

42

146-160

NOTE: A minimum of 150 semester hours are required for the Master of Science in Accounting Degree. Thirty semester hours must be taken in courses carrying graduate credit. Of these thirty hours, twenty must be taken in courses reserved exclusively for graduate students, and fifteen of the twenty must be in Accounting.

ACC 401G	Accounting Theory	(3)
ACC 403G	Auditing	(3)
ACC 410G	Not-For-Profit Accounting	(3)
ACC 416G	Accounting for Business Combinations	(3)
ACC 503	Advanced Auditing	(3)
ACC 507	Advanced Topics in Taxation	(3)
ACC 508	Controllership	(3)
ACC 524	Advanced Accounting Information Systems	(3)
ACC 601	Research in Accounting Theory	(3)
ACC 603	Attest Function	(3)
ACC 608	Advanced Managerial Accounting	(3)
ACC 610	Not-For-Profit and Regulatory Accounting	(3)
ACC 611	Professional Issues in Accounting	(3)
ACC 617	Income Tax Development	(3)
ACC 619	Independent Study in Accounting	(1-3)
ACC 624	Accountametrics	(3)
ACC 627	Corporate Taxation	(3)
ACC 628	Financial/Managerial Accounting	(3)
ACC 637	Taxation of Partnerships and Partners	(3)
ACC 647	Taxation of Estates, Gifts, and Trusts	(3)
ACC 700	Seminar in Accountancy	(1-3)
ACC 701	Seminar in Financial Accounting	(3)
ACC 708	Seminar in Management Accounting	(3)
ACC 795	Independent Study in Accounting	(1-6)

Administration and Supervision

Graduate Faculty: *Professors* J. John Harris III and Eddy J. VanMeter. *Associate Professors* Lars Gordon Björk, Patsy E. Johnson, Jane Clark Lindle, James S. Rinehart, and Susan J. Scollay.

Associate Members: *Associate Professor* Lois Adams-Rodgers. *Assistant Professors* Joyce P. Logan, and Christopher J. Zirkle.

Emeritus Professors: Charles Faber, and James Ogletree.

The Department of Administration and Supervision offers programs leading to the Master of Education (M.Ed.) in School Administration and the Specialist in Education (Ed.S) degree. In cooperation with the Department of Curriculum and Instruction, it offers a program in Instruction and Administration leading to the Doctor of Education (Ed.D.) degree. These advanced degree programs are designed to prepare candidates for leadership positions in public schools and other educational agencies or for the professorship in educational administration. The department participates in a Joint Doctoral Program with regional universities.

Course work for the Ed.D. in Instruction and Administration within the department will consist of a minimum of 45 hours of graduate course work beyond the master's in addition to the required 18 hours of dissertation research. All course work plans include work in the following:

a) Instruction and Administration,
b) support work in education,
c) research tool courses and,
d) support work outside of education.

Within the context of the M.Ed., Ed.S., and Ed.D. degree programs, the department also offers preparation programs for school administrator certification as well as Rank II and Rank I classifications (for salary purposes) for Kentucky school personnel. Contact the Director of Graduate Studies for more information about Kentucky school administration certification as offered by the Department.

The University of Kentucky is an active member of the University Council for Educational Administration, which was formed to promote, through inter-institutional cooperation, improvement in the professional preparation of administrative personnel. A number of services are available to graduate students through this membership.

Internships for graduate students can be arranged with public school systems and other educational agencies.

A limited number of graduate assistantships are available through the department. These involve up to 20 hours per week of service to the department or some other unit of the University, designed in such a way that the work contributes to the educational development of the student. A modest stipend is paid for this service. The University also provides some financial aid in the form of loans and fellowships.

For further information, write to the Director of Graduate Studies in the Department of Administration and Supervision, 111 Dickey Hall, College of Education, University of Kentucky, Lexington, Kentucky 40506, requesting materials for the specific program of interest.

EDA 600	Organization and Administration of American Education	(3)
EDA 601	Introduction to School Leadership and Administration	(3)
EDA 608	Internship in Educational Administration and Supervision	(3)
EDA 610	School Leadership Practicum	(3-6)
EDA 624	Technology and Best Practice for School Improvement	(3)
EDA 627	School Finance and Support Services	(3)
EDA 628	School Law and Ethics	(3)
EDA 629	The Principal	(3)
EDA 631	Leadership for School Program Collaboration	(3)
EDA 632	Administration of Educational Reform	(3)
EDA 634	Leadership for Human Resources Development in Schools	(3)

EDA 639	The Supervisor	(3)
EDA 642	Microcomputer Applications in Administration	(3)
EDA 646	Leadership for School - Community Relations	(3)
EDA 649	The School Superintendency	(3)
EDA 650	Leadership for School Program Improvement	(3)
EDA 651	Foundations of Inquiry	(3)
EDA 669	Leadership for School Problem Solving	(3)
EDA 694	The Administration of Vocational Education	(3)
EDA 701	Leadership in Educational Organizations I	(3)
EDA 702	Leadership in Educational Organizations II	(3)
EDA 749	Dissertation Research	(0)
EDA 769	Residence Credit for the Doctor's Degree	(0-12)
EDA 770	Topical Seminar in Educational Leadership	(1-3)
EDA 771	Seminar in Administration	(1-3)
EDA 785	Independent Work in School Administration	(3)
EDA 792	Research in Educational Administration and Supervision	(3)

Agricultural Economics

Graduate Faculty: *Professors* Joe T. Davis, David L. Debertin, David Freshwater, Harry H. Hall, Larry D. Jones, Angelos Pagoulatos, Michael R. Reed, Lynn W. Robbins, and Jerry Skees. *Associate Professors* Stephen J. Goetz, Mary Marchant, and Loys L. Mather.

Associate Members: *Extension Professors* Craig Infanger, Steven K. Riggins, and Lionel Williamson. *Associate Extension Professors* Steven G. Isaacs and William M. Snell. *Assistant Professors* Ron Fleming, and Steven Vickner.

Joint Appointments: *Professor* Donald H. Graves

Emeritus Professors: Kurt R. Anschel, Robert D. Beck, Barry W. Bobst, Russell H. Brannon, Fred E. Justus, D. Milton Shuffett, and Eldon D. Smith.

The Department of Agricultural Economics provides programs leading to the degrees of Master of Science and the Doctor of Philosophy. Graduate Faculty in the department provide for areas of emphasis in agricultural policy, price analysis, agricultural marketing, farm management, development, resource and production economics. Students must complete a core of courses in agricultural economics, economics and statistics.

The master's program is offered in either Plan A or Plan B. The thesis option (Plan A) requires a minimum of 24 hours of graduate credit and a research thesis. Plan B requires a minimum of 36 hours of graduate level credit. A final oral examination covering course work and the thesis (for students in Plan A) is also required. In addition to the course work requirements, students in the Ph.D. program are required to take a comprehensive examination in microeconomics and macro-economics administered by the Department of Economics. Students also must complete a qualifying examination on the application of agricultural economic analysis within the Department of Agricultural Economics. The ability to conduct original research in agricultural economics, documented through the completion of a dissertation, is also required.

Graduate students have considerable flexibility to structure their program with respect to course work and research topics consistent with individual interests. Each student has a major professor and an advisory committee to assist in course work selection and in the thesis and dissertation research.

Students holding degrees in agricultural economics are employed by academic institutions; local, state, and federal agencies that deal with agriculture; private firms in the agricultural and business sectors; and agencies and governments of foreign countries. These agricultural economists conduct research, develop extension services, teach classes, and serve as managers and administrators in various types of firms and agencies.

A graduate handbook is available which provides information regarding program content, degree options and available financial assistance. Send request to:

Director of Graduate Studies
Department of Agricultural Economics
400 Agricultural Engineering Building
University of Kentucky
Lexington, KY 40506-0276

AEC 441G	Agricultural Financial Management	(3)
AEC 445G	Introduction to Resource and Environmental Economics	(3)
AEC 501	Agricultural Market Organization and Performance	(3)
AEC 502	Advanced Farm Management	(3)
AEC 516	Rural Real Estate Appraisal	(3)
AEC 522	Cooperatives in Agribusiness	(3)
AEC 531	Agricultural Price Analysis	(3)
AEC 532	Agricultural and Food Policy	(3)
AEC 580	Special Problems in Agricultural Economics	(1-3)
AEC 590	Introduction to Quantitative Economics I	(3)
AEC 606	Advanced Agricultural Marketing	(3)
AEC 610	International Trade in Agricultural Products	(3)
AEC 620	Advanced Production Economics I	(3)
AEC 624	Advanced Quantitative Methods in Agricultural Economics	(3)
AEC 626	Agriculture and Economic Development	(3)
AEC 627	Project Analysis for Rural Development	(3)
AEC 640	Advanced Agricultural Policy	(3)
AEC 645	Natural Resource Economics	(3)
AEC 650	Advanced Agricultural Prices	(3)
AEC 653	Local Economic Development	(3)
AEC 660	Research Methods in Agricultural Economics	(3)
AEC 661	Programming Models in Agricultural Economics	(3)
AEC 662	Quantitative Methods in Renewable Resource Management	(3)
AEC 691	Structure of U.S. Agriculture	(3)
AEC 748	Master's Thesis Research	(0)
AEC 749	Dissertation Research	(0)
AEC 768	Residence Credit for the Master's Degree	(1-6)
AEC 769	Residence Credit for theDoctor's Degree	(0-12)
AEC 780	Special Problems in Agricultural Economics	(1-3)
AEC 796	Seminar (Subtitle Required)	(3)

Agronomy

The Department of Agronomy offers graduate work leading to the Master of Science in Crop Science and the Doctor of Philosophy degree in Crop Science or Soil Science. The department also participates in interdepartmental graduate programs leading to the Master of Science in Plant and Soil Science and to the Ph.D. degree in Plant Physiology.

See Crop Science, Soil Science, Plant and Soil Science or Plant Physiology for detailed information about these graduate programs.

Anatomy and Neurobiology

Graduate Faculty: *Professors* Peter Bosomworth, Don M. Gash, James Holsinger, Lothar H. Jennes, Mark Mattson, John Porter, Stephen W. Scheff, and Harold H. Traurig. *Associate Professors* Kathryn M. Albers, Lee Blonder, Rosemarie Booze, Thomas E. Curry, Brian M. Davis, Marilyn J. Duncan, James W. Geddes, Kurt Hauser, James P. Herman, James Hyde, Brian R. MacPherson, Bruce Maley, Kim B. Seroogy, and Joe E. Springer.

Associate Members: *Research Professor* Marilyn L. Getchell. *Associate Professor* Sonia Carlson. *Assistant Professors* Wayne A. Cass, Pamela E. Knapp, and Diane M. Snow. Assistant *Research Professor* David M. Yurek.

Joint Appointment: *Professors* James Holsinger and William R. Markesbery. *Research Professor* Betty Sisken. *Assistant Professor* F. Maragos.

Emeritus Professors: William B. Cotter, William K. Elwood, Stephen D. Smith, and Miroslava Nikitovitch-Winer.

The program of graduate studies in anatomy and neurobiology is intended to provide educational and career opportunities for people with several different objectives. Some students will pursue graduate work in anatomy and neurobiology with the intention of teaching in departments of anatomy and neurobiology; some will have already obtained a professional degree, such as an M.D. or D.M.D., and may be interested in obtaining specific training in some region or system of the body to complement their professional education. Others may study in anatomy and neurobiology as a minor or simply for specific credit.

Preparation for the graduate work in anatomy and neurobiology should include some advanced course work in biological science along with other grounding in the sciences to the minimal extent of course work in quantitative analysis and organic chemistry, a term of calculus, and a year of college physics. Students with deficiencies in any of these areas may be admitted, but will be expected to complete their background early in the course of their graduate studies.

The Department offers the Ph.D. degree with areas of specialization in 1) neuroendocrinology and reproductive biology, 2) development and aging in the nervous system, 3) neurodegeneration and regeneration, and 4) neurochemistry.

Potential applicants for graduate work in anatomy are requested to write directly to the Director of Graduate Studies in the Department of Anatomy and Neurobiology.

ANA 503 Independent Work in Anatomy ..... (3)
ANA 511 Introduction to Human Anatomy ..... (5)
ANA 512 Microscopy and Ultrastructure ..... (4)
ANA 513 Developmental Anatomy ..... (2)
ANA 516 Anatomy of the Nervous System ..... (3)
ANA 529 Concepts of Morphology ..... (2)
ANA 530 Combined Histology and Special Oral Microanatomy ..... (5)
ANA 532 Systemic Human Anatomy ..... (2)
ANA 534 Anatomy of the Human Head and Neck ..... (3)
ANA 536 Human Embryology, an Abbreviated Course ..... (1)
ANA 538 Human Neuroanatomy, an Abbreviated Course ..... (1)
ANA 600 Seminar in Anatomy ..... (1)
ANA 605 Contemporary Neurosciences ..... (3)
ANA 606 Mechanisms of Neurologic Disease (4)
ANA 611 Regional Human Anatomy ..... (8)
ANA 612 Biology of Aging ..... (3)
ANA 613 Behavioral Ecology and Comparative Neurobiology ..... (2)
ANA 614 Techniques in Behavioral Ecology and Comparative Neurobiology ..... (2)
ANA 618 Molecular Neurobiology ..... (4)
ANA 629 Techniques of Anatomical Research (2)
ANA 631 Advanced Human Anatomy ..... (3-5)
ANA 633 Advanced Developmental Anatomy ..... (2-5)
ANA 636 Advanced Neuroanatomy ..... (3-5)
ANA 638 Developmental Neurobiology ..... (3)
ANA 660 Biology of Reproduction ..... (3)
ANA 662 Ultrastructural Anatomy ..... (2-5)
ANA 748 Master's Thesis Research ..... (0)
ANA 749 Dissertation Research ..... (0)
ANA 768 Residence Credit for the Master's Degree ..... (0-6)
ANA 769 Residence Credit for the Doctor's Degree ..... (0-12)
ANA 790 Research in Anatomy ..... (1-12)

Animal Sciences

Graduate Faculty: *Professors* Debra K. Aaron, James Boling, Gary Cromwell, Karl A. Dawson, Donald Ely, David L. Harmon, Robert J. Harmon, Clair L. Hicks, Guy H. Kiracofe, Bruce Langlois, Laurie M. Lawrence, Oran Little, George Mitchell, William Moody, Frederick Thrift, and P.M. Zavos. *Associate Professors* Austin H. Cantor, Lee Edgerton, James A. Jackson, Merlin D. Lindemann, Keith Schillo, William J. Silvia, Herbert J. Strobel, and Youling L. Xiong.

Associate Members: *Extension Professor* Anthony J. Pescatore and Craig Wood. *Associate Professor* Joseph O'Leary. *Associate Extension Professors* Donna M. Amaral-Phillips, Alan McAllister, and W. Benji Mikel. *Assistant Professors* W. Luke Boatright, Brian T. Larson, David Maehr, James Matthews, and Eric Vanzant. *Assistant Extension Professors* Leslie Anderson and Richard D. Coffey. *Adjunct Assistant Professors* James Tidwell and Changzheng Wang.

Joint Appointments: *Associate Professor* Michael J. Lacki. Joint Associate Member: *Associate Extension Professor* Thomas G. Barnes.

Emeritus Professors: Neil Bradley, Virgil Hays, Roger Hemken, and Ray E. Tucker.

The degrees of Master of Science (Plan A and Plan B) and Doctor of Philosophy are available in the animal sciences. Programs in Animal Sciences are divided into the disciplinary areas of animal nutrition, nutritional and anaerobic microbiology, physiology of reproduction and lactation, and genetics and animal breeding. Special interests in beef cattle, dairy cattle, horses, poultry, sheep or swine may be pursued within many of these areas. Programs in food science offer specialization in dairy technology, food chemistry, food microbiology, food safety, meat biochemistry, and meat processing.

Candidates for the Ph.D. degree are required to declare a minor outside the department. On approval of the student's special committee, a minimum of 12 credits in not more than two departments may be substituted for the minor.

ASC 404G Sheep Science ..... (4)
ASC 408G Swine Science ..... (3)
ASC 410G Horse Sciences ..... (3)
ASC 420G Dairy Cattle Science ..... (3)
ASC 462G Artificial Insemination and Fertility of Farm Animals ..... (2)
ASC 564 Milk Secretion ..... (3)
ASC 580 Principles of Animal Nutrition ..... (3)
ASC 601 Mammalian Endocrinology ..... (3)
ASC 630 Advanced Meat Science ..... (4)
ASC 660 Biology of Reproduction ..... (3)
ASC 664 Advanced Animal Breeding ..... (3)
ASC 680 Laboratory Methods in Nutritional Sciences ..... (4)
ASC 681 Energy Metabolism ..... (2)
ASC 682 Microbial Ecology of Digestion ..... (4)
ASC 683 Protein Metabolism ..... (2)
ASC 684 Advanced Ruminant Nutrition ..... (3)
ASC 685 Mineral Metabolism ..... (2)
ASC 686 Advanced Nonruminant Nutrition ..... (3)
ASC 687 Vitamin Metabolism ..... (2)
ASC 688 Equine Nutrition ..... (2)
ASC 748 Master's Thesis Research ..... (0)
ASC 749 Dissertation Research ..... (0)
ASC 768 Residence Credit for the Master's Degree ..... (1-6)
ASC 769 Residence Credit for the Doctor's Degree ..... (0-12)
ASC 771 Animal Science Seminar ..... (1)
ASC 780 Special Problems in Animal Derived Foods ..... (1-4)
ASC 781 Special Problems in Genetics and Animal Breeding ..... (1-4)
ASC 782 Special Problems in Animal Nutrition ..... (1-4)
ASC 783 Special Problems in Reproductive Physiology (Subtitle Required) ..... (1-4)
ASC 790 Research in Animal Derived Foods . (1-6)
ASC 791 Research in Genetics and Animal Breeding ..... (1-6)
ASC 792 Research in Animal Nutrition ..... (1-6)
ASC 793 Research in Reproductive Physiology (Subtitle Required) ..... (1-6)

FSC 434G Food Chemistry ..... (4)
FSC 530 Food Microbiology ..... (5)
FSC 535 Food Analysis ..... (4)
FSC 536 Advanced Food Technology ..... (4)
FSC 538 Food Fermentation and Thermal Processing ..... (4)
FSC 640 Food Lipids ..... (3)
FSC 540 Food Sanitation ..... (3)
FSC 630 Advanced Meat Science ..... (4)
FSC 632 Foodborne Disease Agents ..... (3)
FSC 636 Food Packaging ..... (2)
FSC 638 Food Proteins ..... (3)
FSC 780 Special Problems in Animal Derived Foods ..... (1-4)
FSC 790 Research in Animal Derived Foods . (1-6)

Anthropology

Graduate Faculty: *Professors* Tom D. Dillehay, Peter Little, and John van Willigen. *Associate Professors* Susan Abbott-Jamieson, Lee X. Blonder, Richard W. Jefferies, and H. Jean Wiese.

Associate Members: *Associate Professor* Monica Udvardy. *Assistant Professors* Mary A. Anglin, Deborah L. Crooks, Donald Linebaugh, Christopher A. Pool, and Paul Trawick. *Adjunct Assistant Professors* Brenda J. Clay, Kim McBride, and Mary Powell.

Joint Appointment: *Professor* Karl B. Raitz. *Associate Professors* Beth L. Goldstein and Shaunna L. Scott.

Emeritus Professors: William Adams, Art Gallaher and Donald Hochstrasser.

The Department of Anthropology offers graduate programs leading to the Master of Arts (Plan A and Plan B) and the Doctor of Philosophy degrees. The

degree programs, which share a core curriculum, include education leading to general understanding of anthropological theory and knowledge, research methods, and a specialized area of concentration. Following the completion of the core courses, students are allowed opportunity for specialization. Areas of potential specialization include applied anthropology (with emphasis on agricultural development), medical anthropology, and archaeology.

Generally, graduate students are admitted into the M.A. program with the potential to enter the Ph.D. program upon completion of the M.A. or with a faculty approved by-pass of the M.A. Students entering with master's degrees in anthropology or other fields may enter the Ph.D. program directly, following a review of their previous experiences. In lieu of the core curriculum and thesis, these students may present evidence of alternative course work and the design and completion of a research project similar in scale to a thesis or practicum.

Undergraduate training in anthropology is not required. However, students with limited background in history of anthropological theory, biological anthropology, social organization, and statistics may be required to take graduate courses in these areas early in their program. These courses carry graduate credit and are included in the student's overall course of study.

Requirements in the Ph.D. program consist of 1) core seminars (ANT 601, 602), 2) a research methods sequence (ANT 660, 661, 662 or ANT 650, 651, 662), 3) three advanced seminars (chosen from ANT 731, 732, 733, 734, 735), 4) an area of concentration (applied anthropology students must take ANT 525, 735), 5) regional studies, 6) a minor area consisting of course work outside the Department of Anthropology, 7) successful completion of the doctoral qualifying examination, 8) a dissertation based on original research carried out by the student, and 9) a final oral defense of the dissertation.

Reading knowledge of one foreign language is required for the Ph.D. Because language skill is an important component of research in anthropology, a student's advisory committee may require additional training, experience, and evaluation of a Ph.D. student's language ability as part of the academic program. It is assumed that this will apply to any student who is working in an area where English is not the language.

Requirements for the M.A. program consist of 1) core seminars (ANT 601, 602), 2) a research methods sequence (ANT 660, 661 or ANT 650, 651) and 3) an area of concentration (applied anthropology students must take ANT 525, 735). There is no foreign language requirement for the M.A. unless required by the student's advisory committee. Plan A students must complete a thesis. Plan B students complete a practicum or additional course work. (Plan B option is not available for archaeology.) An oral final examination is required for both Plan A and Plan B.

Students in the applied anthropology program (both M.A. and Ph.D.) are required to have an experience in which they can apply their knowledge to solve practical problems under the supervision of a faculty mentor. This often will involve action and/or research work done in conjunction with an agency, community group, or firm. This experience can be expressed through either a practicum, dissertation project, independent study or previous work experience at the judgment of the Director of Graduate Studies, based on advice of the student's committee.

Anthropology faculty members have research experience in the following areas: South and Southeast Asia, Africa, Europe, Latin America, and North America, particularly in the rural U.S. and Appalachia. Members of the department participate in interdisciplinary research in the University's Center for Rural Health, in the Sanders-Brown Center on Aging, the Gerontology Program, in the College of Agriculture, the College of Medicine, and the College of Education. The Department of Behavioral Science, College of Medicine, includes anthropologists on its faculty, and students with interests in medical anthropology are encouraged to take behavioral science courses.

Department standards for admission to graduate work in anthropology include an undergraduate grade point average of B or better, satisfactory Graduate Record Examination scores, completion of a separate departmental application form, and three letters of recommendation. Write the Director of Graduate Studies, Department of Anthropology, for additional information on departmental requirements and opportunities for financial assistance.

ANT 428G Contemporary Cultures and Societies in Southeast Asia ..... (3)
ANT 430G Comparative Religious Systems ..... (3)
ANT 431G Cultures and Societies of Sub-Saharan Africa ..... (3)
ANT 470G Regional American Ethnography ..... (3)
ANT 505 Ethnohistory of the Native American Southeast ..... (3)
ANT 510 History of Anthropological Theory .... (3)
ANT 515 Phonological Analysis ..... (3)
ANT 516 Grammatical Analysis ..... (3)
ANT 518 Language in Culture ..... (3)
ANT 519 Historical Linguistics ..... (3)
ANT 523 Human Variation in Evolutionary Perspective ..... (3)
ANT 525 Applied Anthropology ..... (3)
ANT 526 Psychological Anthropology ..... (3)
ANT 527 Children and Family in Appalachia ..... (3)
ANT 529 Survey of Medical Anthropology ..... (3)
ANT 532 Legal and Political Anthropology ..... (3)
ANT 533 Social Organization ..... (3)
ANT 534 The Southern Appalachians: A Sociological Interpretation ..... (3)
ANT 538 Economic Anthropology ..... (3)
ANT 541 Archaeological Method and Theory ... (3)
ANT 542 North American Archaeology ..... (3)
ANT 543 Cultural Resource Management ..... (3)
ANT 545 Introduction to Historical Archaeology ..... (3)
ANT 550 Symbols and Cultures ..... (3)
ANT 551 Bioarchaeology ..... (3)
ANT 552 Prehistoric Foodways ..... (3)
ANT 555 Eastern North American Archaeology ..... (3)
ANT 580 Topics in Anthropology ..... (3)
ANT 581 Independent Work in Anthropology ..... (1-4)
ANT 582 Senior Integrative Seminar ..... (3)
ANT 585 Field Laboratory in Archaeological Research ..... (3-6)
ANT 600 Practicum in Teaching Anthropology ..... (1)
ANT 601 Introductory Seminar in Ethnography ..... (3)
ANT 602 Introductory Seminar in Culture Dynamics ..... (3)
ANT 620 Topics and Methods of Evaluation ..... (3)
ANT 621 Advanced Topics and Methods of Evaluation ..... (3)
ANT 637 Sociocultural Dimensions of Economic Development ..... (3)
ANT 638 Food Systems and Agrarian Change ... (3)
ANT 640 Science, Agriculture, and Development ..... (3)
ANT 641 Gender Issues In Development ..... (3)
ANT 650 Theory in Archaeology ..... (3)
ANT 651 Archaeological Data Analysis ..... (3)
ANT 652 Demographic Archaeology ..... (3)
ANT 653 Prehistoric Economics ..... (3)
ANT 654 Archaeology of Political Systems ..... (3)
ANT 660 Ethnographic Research Methods ..... (3)
ANT 661 Ethnographic Data Analysis ..... (3)
ANT 662 Research Design ..... (3)
ANT 664 Cultural Issues in Mental Illness ..... (3)
ANT 684 Farming Systems Research Methods .. (3)
ANT 691 Cultural Resource Management Clerkship ..... (1-3)
ANT 710 Seminar in Physical Anthropology ..... (3)
ANT 720 Seminar in Cultural Anthropology ..... (3)
ANT 725 Seminar in Applied Anthropology ..... (3)
ANT 731 Advanced Seminar in Social and Political Dynamics ..... (3)
ANT 732 Advanced Seminar in Ecological Anthropology ..... (3)
ANT 733 Advanced Seminar in Symbols and Meaning ..... (3)
ANT 734 Advanced Seminar in Economic Anthropology ..... (3)
ANT 735 Advanced Seminar in Practice and Action ..... (3)
ANT 741 Seminar in Regional Archaeology ..... (3)
ANT 748 Master's Thesis Research ..... (0)
ANT 749 Dissertation Research ..... (0)
ANT 750 Graduate Field Study in Anthropology ..... (1-6)
ANT 765 Research Problems in Medical Anthropology ..... (3)
ANT 767 Practicum in Applied Anthropology . (1-6)
ANT 768 Residence Credit for the Master's Degree ..... (1-6)
ANT 769 Residence Credit for the Doctor's Degree ..... (0-12)
ANT 770 Topical Seminar: (Subtitle Required) ..... (3)
ANT 774 Behavioral and Ecological Aspects of Human Nutrition ..... (3)
ANT 776 Seminar in Dependency Behavior ..... (3)
ANT 790 Research Problems in Anthropology ..... (1-6)

Art

Graduate Faculty: *Professors* Georgia Collins, Donald Hoffman, Arturo A. Sandoval, Robert Shay, and George Szekely. *Associate Professors* Garry Bibbs, Dennis Carpenter, Gerald Ferstman, Jack Gron, Marilyn Hamann, Christine Havice, Robert W. Jensen, Jane S. Peters, Robert Scroggins, Robert Tharsing, and Teresa Unseld.

Associate Members: *Assistant Professors* Alice T. Christ, Alisa Luxenberg, Carrie L. Peterson, Allan Richards.

Emeritus Professor: Elizabeth Finkenstaedt and John Tuska.

The Department of Art offers graduate course work in three areas: Art Studio, Art History and Art Education. Both the Art History Area and the Art Education Area confer the Master of Arts degree with an area of specialization in each. Studio degree recipients are awarded the MFA.

Master of Arts

Area of Specialization in Art History: The program of study for the degree of Master of Arts in Art History is intended to provide every student with the course work, language skills, research experience, and professional preparation needed for further graduate study or for work in a museum, arts administration, or educational setting. The curriculum is structured to provide both breadth and depth of inquiry through a variety of art historical approaches, reflecting faculty research and teaching strengths. Experience suggests that applicants from a wide variety of educational backgrounds may earn an MA degree in Art History. If the undergraduate major was not Art History, additional non-seminar courses in a history, further language study, or continued development of research and writing skills may be required/provided.

The Master of Arts degree in Art History has three components:

1) graduate coursework of at least 24 credit hours, including the required professional seminar;

2) foreign language reading competency in German and one other language, French usually being recommended;

3) satisfactory completion and defense of a thesis.

We recommend that courses in art history and museum studies be broadly selected to take full advantage of the multiple approaches, expertise, and insights of all the art history faculty, as well as to prepare graduates with the breadth and depth necessary for the next step in their chosen profession. Therefore candidates for the MA degree must show a minimum of one course each of the three broad historical areas of faculty expertise: ancient and medieval, renaissance through the 18th century, and nineteenth and twentieth centuries. In the required seminar, A-H 738, students will develop a project completed in a previous semester with attention to professional skills and issues. Six of the minimum 24 required credit hours may be taken in related areas such as studio art, history, philosophy, literature and critical studies, or anthropology.

Area of Specialization in Art Education: Students admitted to the graduate program in art education are expected to have completed course work equivalent to an undergraduate major in Art Education (in no case less than 18 hours in Art Education and Education, 12 hours in Art History, and 18 hours in Art Studio). Prospective students who do not meet these requirements should seek the counsel of the Program Faculty Committee to make up deficits prior to acceptance into the program. (In addition, candidates must submit for review by the Program Faculty Committee, a portfolio of recent studio work (slides) and professional writing and other evidence of professional attainment, along with a 300-500 word statement of interest and objectives.)

Work toward the master's degree is pursued under Plan A or Plan B. Successful candidates for the Master of Arts (Plan A) with an area of specialization in art education are to satisfactorily complete: 1) thesis preparation demonstrating substantial research or theoretical inquiry in Art Education; 2) a finished thesis and an oral/written examination; 3) 30 credit hours of graduate course work to be divided as follows: 1) 9 to 12 graduate credit hours in art education; 2) 9 to 12 graduate credit hours in Art History or Art Studio; 3) the remaining nine graduate credit hours may be taken in related course work in the College of Fine Arts, the College of Education or elsewhere in the University as well as in the Department of Art.

Under Plan B, successful candidates are to satisfactorily complete 36 credit hours of graduate course work. At least 24 of the credit hours should be taken in the Department of Art and are to be divided as follows: 12 to 15 graduate credit hours in Art Education and 9 to 12 graduate credit hours in Art History or Art Studio. The remaining 12 graduate credit hours may be taken in related course work in the College of Fine Arts, the College of Education, or elsewhere in the University, as well as in the Department of Art.

In accordance with Graduate Faculty rules, a final comprehensive examination is required in both Plan A and Plan B.

Master of Fine Arts

Applicants who seek admission to the Master of Fine Arts (MFA) degree program should submit a portfolio of recent studio work in the form of at least 20 35mm slides, a slide key, a letter of intent and three letters of recommendation directly to the Department of Art. Application forms for admission and for assistantships and fellowships, GRE scores, and transcripts should be sent directly to the Graduate School. The deadline for all materials is February 1. In no case will this requirement be waived. Undergraduate art work must be substantially equal in quality, scope, and number of hours to the undergraduate major at the University of Kentucky.

The MFA degree will be awarded on the completion of 60 hours of graduate course work. Of these, thirty hours must be at or above the 600 level and forty hours must be in regular courses (not independent study). In addition, the sixty credit hours will include thirty to thirty-six credit hours in Art Studio courses (including Graduate Studio Seminar and Studio Thesis Project), six to twelve credit hours in Art History and/or Art Education (a total of twenty-four credit hours or undergraduate and graduate Art History study is required), and up to eighteen credit hours in related graduate courses which may be taken outside the Department of Art in the College of Fine Arts or elsewhere in the University.

Students must also complete successfully a final one-person MFA exhibition of studio work and a visual documentation of that work together with an explanatory essay which is to be filed with the department prior to the exhibition. A total of six credits of A-S 767 (Studio Thesis Project) is required for the preparation of the exhibition and essay. Work toward the one-person exhibition will begin at a time determined by the department.

The student will designate a major area with the advice of a senior professor at the outset of graduate work and will carry at least twelve hours in that area under the guidance of one professor selected as an adviser. A foreign language is not required, and the MFA degree is offered only according to Plan B.

Candidates for the MFA degree who hold an MA degree in studio work from another school will be required to complete a year's residence and eighteen credit hours of graduate work at the University of Kentucky, including two semesters of Graduate Studio Seminar and all other requirements for the degree. Total hours toward the MFA degree must equal sixty credit hours of graduate work.

ART 748 Master's Thesis Research ..... (0)
ART 768 Residence Credit for the Master's Degree ..... (1-6)
A-E 515 Introduction to Art Therapy ..... (3)
A-E 525 The Elderly and the Arts ..... (3)
A-E 538 Advanced Arts and Crafts in the Elementary School ..... (3)
A-E 545 Topical Studies in Art Education (Subtitle Required) ..... (3)
A-E 577 Art in Secondary Schools ..... (3)
A-E 578 Art in Elementary Schools ..... (3)
A-E 579 Seminar in Art Education ..... (2)
A-E 645 Topical Research in Art Education (Subtitle Required) ..... (3)
A-E 670 School and Community Art ..... (3)
A-E 695 Independent Work: Art Education ... (1-3)
A-E 748 Master's Thesis Research ..... (0)

A-H 501 Museum Studies I: Introduction ..... (3)
A-H 502 Museum Studies II: Internship ..... (3)
A-H 503 Art History through the Art Object (Subtitle Required) ..... (3)
A-H 525 Studies in Genres and Media (Subtitled Required) ..... (3)
A-H 526 Art and the Artist in Society (Subtitled Required) ..... (3)
A-H 527 Art within its Interdisciplinary Framework (Subtitle Required) ..... (3)
A-H 528 Topical Seminar in Art History (Subtitle Required) ..... (3)
A-H 555 Methods in Art History ..... (3)
A-H 592 Aesthetics ..... (3)
A-H 598 Coordinate Study ..... (3)
A-H 603 The Art Object (Subtitle Required) .... (3)
A-H 625 Problems in Genres and Media (Subtitle Required) ..... (3)
A-H 626 The Artist in Society (Subtitle Required) ..... (3)
A-H 627 Interdisciplinary Approaches to Art History (Subtitle Required) ..... (3)
A-H 628 Art History Topical Seminar (Subtitle Required) ..... (3)
A-H 738 Master's Professional Seminar ..... (3)
A-H 748 Master's Thesis Research ..... (0)
A-H 780 Independent Work: Art History ..... (1-3)

A-S 510 Painting III ..... (3)
A-S 511 Painting IV ..... (3)
A-S 520 Printmaking III ..... (3)
A-S 521 Printmaking IV ..... (3)
A-S 530 Advanced Drawing ..... (3)
A-S 540 Graphic Design III ..... (3)
A-S 550 Fiber III ..... (3)
A-S 551 Fiber IV ..... (3)
A-S 560 Sculpture III ..... (3)
A-S 561 Sculpture IV ..... (3)
A-S 570 Ceramics III ..... (3)
A-S 571 Ceramics IV ..... (3)
A-S 580 Photography III ..... (3)
A-S 581 Photography IV ..... (3)
A-S 584 Color Photography II ..... (3)
A-S 586 Nonsilver Photography II ..... (3)
A-S 596 Workshop ..... (1-6)
A-S 610 Painting V ..... (3)
A-S 611 Painting VI ..... (3)
A-S 620 Printmaking V ..... (3)
A-S 621 Printmaking VI ..... (3)
A-S 630 Graduate Drawing ..... (3)
A-S 650 Fiber V ..... (3)
A-S 651 Fiber VI ..... (3)
A-S 660 Sculpture V ..... (3)
A-S 661 Sculpture VI ..... (3)
A-S 670 Ceramics V ..... (3)
A-S 671 Ceramics VI ..... (3)
A-S 680 Photography V ..... (3)
A-S 681 Photography VI ..... (3)
A-S 710 Problems in Painting ..... (3)
A-S 720 Problems in Printmaking ..... (3)
A-S 730 Problems in Drawing ..... (3)
A-S 740 Problems in Fiber ..... (3)
A-S 750 Problems in Sculpture ..... (3)
A-S 767 MFA Studio Thesis Project ..... (1-6)
A-S 770 Problems in Ceramics ..... (3)
A-S 779 Problems in Photography ..... (3)
A-S 780 Problems in Design ..... (3)
A-S 793 Graduate Studio Seminar ..... (1)
A-S 795 Independent Research ..... (1-3)

Behavioral Science

***Graduate Faculty:** *Professors* Michael A. Andrykowski, Eugene B. Gallagher, Thomas F. Garrity, and Timothy A. Smith. *Associate Professors* Lee X. Blonder, Mitzi M. S. Johnson, Thomas H. Kelly, H. Jean Wiese, John F. Wilson, and Richard S. Zimmerman.

***Associate Member:** *Professor* Phyllis J. P. Nash.

Emeritus Professors: John Haley, Phillip Moody, and Robert Straus.

**Faculty members in Behavioral Science hold primary graduate faculty appointments in affiliated programs.*

The Department of Behavioral Science in the College of Medicine offers a certificate of study and a minor in Medical Behavioral Science for doctoral students in sociology, anthropology, psychology, other behavioral science disciplines, and nursing. The certificate and minor have three objectives:

1. Provide students with a multi-disciplinary approach incorporating their basic discipline with other social and behavioral sciences with identification of areas of convergence and interrelation in content, theories and methods
2. Orient students to health and medical settings, including an enculturation to the attitudes, values, professional interrelationships and educational objectives of health personnel and organizations and the nature of behavioral science research in these areas
3. Train students in research to equip them with basic skills and approaches to research design, data acquisition, and data analysis, as well as manuscript and research grant preparation in medical behavioral science through collaboration with ongoing research projects

Students interested in pursuing the certificate of study and/or minor should consult with the Director of Graduate Studies for requirements.

The certificate and minor are partially supported by a training grant from the National Institute of Mental Health, which provides pre- and postdoctoral trainee stipends. A limited number of departmental assistantships are also available to qualified students.

BSC 527 Society and Health ..... (3)
BSC 529 Survey of Medical Anthropology ..... (3)
BSC 546 Social Factors in Mental Health ..... (3)
BSC 620 Orientation to Medical Behavioral Science ..... (1)
BSC 626 Survey of Health Psychology ..... (3)
BSC 664 Cultural Issues in Mental Illness ..... (3)
BSC 745 Research Methods in Medical Behavioral Science ..... (3)
BSC 765 Research Problems in Medical Anthropology ..... (3)
BSC 766 Concepts in Medical Sociology ..... (3)
BSC 770 Psychosocial Issues in Health and Aging ..... (3)
BSC 772 Topical Seminar in Medical Behavioral Science ..... (1-3)
BSC 773 Psychosocial Oncology ..... (3)
BSC 774 Behavioral and Ecological Aspects of Human Nutrition ..... (3)
BSC 775 Human Response to Stress ..... (3)
BSC 776 Seminar in Dependency Behavior ..... (3)
BSC 777 Seminar in Mental Illness Concepts, Research and Policy ..... (3)
BSC 778 Behavioral Factors in Selected Diseases ..... (3)
BSC 779 Behavioral Factors in Death and Dying ..... (3)
BSC 785 Comparative Health Care Systems ..... (3)
BSC 790 Research in Medical Behavioral Science ..... (1-6)

Biochemistry

Graduate Faculty: *Professors* Fitzgerald Bramwell, Albert T. Brown, Delwood C. Collins, Robert C. Dickson, Louis B. Hersh, Robert Lester, Salvatore Turco, Thomas Vanaman, Deneys R. VanderWesthuyzen, and Charles Waechter. *Associate Professors* Malcolm J. Avison, M.S. Kindy, Timothy C. Meeker, M.D. Mendenhall, and Daniel J. Noonan.

Associate Members: *Assistant Professors* Douglas A. Andres, Trevor P. Creamer, Wendy S. Katz, David W. Rodgers, Kevin D. Sarge, H. Peter Spielmann, Sidney W. Whiteheart, and Donghai Wu.

Emeritus Professor: S.K. Chan.

The program of graduate studies in biochemistry is designed primarily for doctoral candidates who plan to pursue a research career in this field.

As preparation for graduate work in biochemistry, students should have completed courses in organic chemistry, physical chemistry, calculus, physics and one course in the biological sciences.

Research interests of faculty members center into three broad categories:

a) structure-function relationship of proteins, complex carbohydrates and lipids, including steroids;

b) regulation of the transcription and translation processes as well as DNA repairs;

c) a recently developed structural biology unit

Inquiries concerning availability of financial support for graduate students should be addressed to the Director of Graduate Studies, Department of Biochemistry, or phone (800) 288-3688.

BCH 401G	Fundamentals of Biochemistry	(3)
BCH 501	General Biochemistry	(3)
BCH 502	General Biochemistry	(3)
BCH 503	Plant Biochemistry	(3)
BCH 517	Experimental Methods in Biochemistry	(4)
BCH 601	Special Topics in Molecular and Cellular Genetics	(1)
BCH 605	Principles of Neurobiology	(4)
BCH 607	General Biochemistry I	(3)
BCH 608	General Biochemistry II	(3)
BCH 610	Biochemistry of Lipids and Membranes	(3)
BCH 611	Biochemistry and Cell Biology of Nucleic Acids	(3)
BCH 612	Structure and Function of Proteins and Enzymes	(3)
BCH 615	Molecular Biology	(3)
BCH 618	Seminar in Biochemistry	(1)
BCH 619	Seminar in Biochemistry	(1)
BCH 640	Research in Biochemistry	(1-9)
BCH 749	Dissertation Research	(0)
BCH 769	Residence Credit for the Doctor's Degree	(0-12)
BCH 779	Membrane Science Colloquium	(1)
BCH 780	Topics in Biochemistry	(1-3)

Thomas Hunt Morgan School of Biological Sciences

The Thomas Hunt Morgan School of Biological Sciences was formed in 1966 from the Departments of Botany, Microbiology, and Zoology. Since 1971, the School has been subdivided according to major fields of contemporary biological research: cell and molecular biology, ecology and evolution, and neurobiology and physiology. Graduate training in these areas within School research laboratories is now focused in the Biology Graduate Program (see below). Some School faculty members are also members of other graduate faculties and train a few students in the Microbiology, Plant Physiology, and Toxicology Programs.

The School of Biological Sciences has excellent facilities to support graduate research in contemporary biology. These include a biology library, greenhouses, an aquatic research facility, a microcomputer room, an herbarium, a zoological museum, environmental control rooms, a microorganism culture facility, a molecular-biology analytical facility, and good access to the university's mainframe computers, microscopy and imaging facility, and field research sites.

Students considering graduate training in the biological sciences should contact the Biology Graduate Program or one of the other related programs mentioned elsewhere in this bulletin.

Biology

Graduate Faculty: *Professors* Jerry M. Baskin, Wesley J. Birge, Philip H. Crowley, Judith A. Lesnaw, J.M. Rawls, Gerald A. Rosenthal, Andrew Sih, and Sheldon M. Steiner. *Associate Professors* Philip Bonner, Jim D. Clark, William S. Cohen, Elizabeth A. Debski, Scott K. Gleeson, Denny O. Harris, Grace M. Jones, John J. Just, Brent D. Palmer, Brian C. Rymond, R. Craig Sargent, Charles A. Staben, and David F. Westneat.

Associate Members: *Adjunct Professor* Carol C. Baskin. *Assistant Professors* Robin L. Cooper, Douglas A. Harrison, Christer J. L. Hogstrand, D. Nicholas McLetchie, Peter M. Mirabito, and Hong Y. Yan.

Joint Appointments: *Professor* J.E. Sisken. *Associate Professor* Robert N. Muller.

Emeritus Professors: M.I.H. Aleem and G.L. Uglem.

The Biology Graduate Program is housed in the Thomas Hunt Morgan School of Biological Sciences. The Program provides training in three areas of contemporary biological research: Ecology, Evolution & Behavior; Molecular & Cellular Biology; and Organismal & Integrative Biology. These areas correspond to the three sections of the School of Biological Sciences around which faculty research programs are clustered:

Ecology, Evolution & Behavior – Evolution of life histories, growth strategies, mating, social and predator-prey behavior; effects of these traits on population and community ecology. Organisms studied include: birds, amphibians, fish, invertebrates, woody and herbaceous vascular plants as well as non-vascular plants such as bryophytes.

Molecular & Cellular Biology – Biological sciences have been revolutionized in recent years by studies and applications at the cellular and molecular levels. The Molecular & Cellular Biology (MCB) section provides graduate training in fields at the forefront of this discipline such as gene expression, cell division, and developmental regulation. Emphasis is placed on the application of molecular genetic and biochemical tools to genetically tractable systems including viruses, fungi, cultured cells, and insects. The graduate course work and laboratory experiences prepare MCB students for scientific careers in high demand areas of basic and applied research.

Organismal & Integrative Biology – Behavioral, anatomical, physiological and molecular techniques are applied to questions of animal development and function. Students entering this section receive training and select a dissertation topic in one or more of the following areas: neurobiology, environmental physiology, neurophysiology, endocrinology and metabolism.

The primary emphasis of our Graduate Program is on doctoral training, however, we also provide training towards the Master's of Science (both Plan A and Plan B). Although we welcome applications from students who have completed (or are nearing completion of) a Master's degree, Master's training is not a prerequisite for admission to our doctoral program.

As preparation for graduate work in Biology, students generally have completed one year of physics, two years of chemistry, one semester of calculus, one year of general biology, and upper-level courses providing a working knowledge of contemporary biology.

Currently, all students admitted to the program are financially supported through teaching assistantships, research assistantships, or fellowships. Course work and research projects in the program are tailored to the background and interests of each student, under the guidance of the student's committee.

Requests for application forms and inquiries about the Biology Graduate Program should be directed to:

Staff Coordinator
Biology Graduate Program
T.H. Morgan School of Biological Sciences
10 1 Morgan Building
University of Kentucky
Lexington, KY 40506-0225
606-257-3255 or 1-800-313-2465
e-mail bgp@pop.uky.edu
http://darwin.ceeb.uky.edu/micro/sbs/sbs.html

BIO 430G	Plant Physiology	(3)
BIO 431G	Lab in Plant Physiology	(2)
BIO 452G	Laboratory in Ecology	(1)

BIO 465G Economic Botany ..... (3)
BIO 476G General Microbial Physiology ..... (4)
BIO 494G Immunobiology ..... (3)
BIO 502 Principles of Systems, Cellular and Molecular Physiology ..... (5)
BIO 508 Evolution ..... (3)
BIO 510 Recombinant DNA Techniques Laboratory ..... (4)
BIO 514 Microbial Genetics ..... (3)
BIO 529 Developmental Biology ..... (3)
BIO 520 Bioinformatics ..... (3)
BIO 535 Comparative Neurobiology and Behavior ..... (3)
BIO 540 Fundamentals of Radiation Biology . (2)
BIO 541 Radioisotope Methodology ..... (2)
BIO 542 Histology ..... (5)
BIO 544 Embryology ..... (5)
BIO 549 Comparative Endocrinology ..... (3)
BIO 550 Comparative Physiology ..... (5)
BIO 551 Plant Autecology ..... (4)
BIO 552 Taxonomy of Vascular Plants ..... (4)
BIO 553 Fish Biology ..... (4)
BIO 554 Mammalogy ..... (3)
BIO 555 Vertebrate Zoology ..... (4)
BIO 557 Herpetology ..... (4)
BIO 559 Ornithology ..... (4)
BIO 560 Environmental Physiology and Toxicology ..... (4)
BIO 561 Medical Entomology ..... (4)
BIO 563 Parasitology ..... (4)
BIO 564 Insect Taxonomy ..... (4)
BIO 565 Limnology ..... (4)
BIO 568 Insect Behavior ..... (3)
BIO 570 Invertebrate Zoology ..... (4)
BIO 571 Algology ..... (4)
BIO 573 Mycology ..... (4)
BIO 575 Plant Anatomy and Morphology ..... (4)
BIO 580 Metabolism of Microorganisms ..... (4)
BIO 582 Virology ..... (3)
BIO 595 Immunobiology Laboratory ..... (2)
BIO 601 Special Topics in Molecular and Cellular Genetics ..... (1)
BIO 605 Empirical Methods in Ecology and Evolution ..... (2)
BIO 606 Conceptual Methods in Ecology and Evolution ..... (2)
BIO 607 Advanced Evolution ..... (2)
BIO 608 Behavioral Ecology and Life Histories ..... (2)
BIO 609 Population and Community Ecology ..... (2)
BIO 611 Biopathology ..... (3)
BIO 612 Biology of Aging ..... (3)
BIO 613 Behavioral Ecology and Comparative Neurobiology ..... (2)
BIO 614 Techniques in Behavioral Ecology and Comparative Neurobiology ..... (2)
BIO 615 Molecular Biology ..... (3)
BIO 618 Molecular Neurobiology ..... (4)
BIO 619 Cytogenetics ..... (4)
BIO 620 Plant Molecular Biology ..... (3)
BIO 621 Topics in Modern Biology (Subtitle Required) ..... (1-3)
BIO 622 Physiology of Plants I ..... (3)
BIO 623 Physiology of Plants II ..... (3)
BIO 625 Insect - Plant Relationships ..... (3)
BIO 632 Advanced Cell Biology I ..... (3)
BIO 633 Advanced Cell Biology II ..... (3)
BIO 635 Insect Physiology and Internal Morphology ..... (4)
BIO 638 Developmentl Neurobiology ..... (3)
BIO 639 Research Projects in Biological Modeling ..... (3)
BIO 650 Animal Physiology Laboratory ..... (2)
BIO 665 Insect Ecology ..... (3)
BIO 685 Advanced Immunobiology ..... (4)
BIO 707 Contemporary Topics in Immunology ..... (2)
BIO 720 Microbial Structure and Function .... (4)
BIO 740 Mammalian Radiation Biology ..... (2)
BIO 748 Master's Thesis Research ..... (0)
BIO 749 Dissertation Research ..... (0)
BIO 768 Residence Credit for Master's Degree ..... (1-6)
BIO 769 Residence Credit for Doctor's Degree ..... (0-12)
BIO 770 Seminar in Biology (Subtitle Required) ..... (1)
BIO 772 Seminar in Microbiology ..... (0-1)
BIO 773 Seminar in Plant Physiology ..... (1)
BIO 774 Seminar in Genetics ..... (1)
BIO 782 Advanced Virology ..... (3)
BIO 790 Mentoring Undergraduate Research in Biology ..... (1)
BIO 795 Research in Biology ..... (1-9)
BIO 798 Research in Microbiology ..... (1-9)

MB 749 Dissertation Research ..... (0)
MB 768 Residence Credit for the Master's Degree ..... (1-6)
MB 769 Residence Credit for the Doctor's Degree ..... (0-12)

Biomedical Engineering

Graduate Faculty: *Professors* Eugene N. Bruce, Charles F. Knapp, Stephen Lai-Fook, and Val M. Runge. *Associate Professors* David Pienkowski and David A. Puleo, Charles D. Smith, and Janet L. Walker.

Joint Appointments: *Professors* Donald T. Frazier, David C. Randall, Keith E. Rouch, and Robert Shapiro. *Associate Professors* Kimberly Ward Anderson, and Betty F. Sisken. *Assistant Professor* David R. Brown.

Associate Members: *Associate Research Professor* Billy J. Barber. *Assistant Professors* James J. Abbas, David R. Brown, Ranu Jung, John H. Lawrence, Abhijit R. Patwardhan, and Richard Salcido. *Research Assistant Professor* Anders Anderson.

Emeritus Professor: James F. Lafferty.

The Center for Biomedical Engineering offers M.S. and Ph.D. degrees in Biomedical Engineering. This graduate program emphasizes the application of engineering principles to the areas of medicine and biology and covers the broad aspects of mechanics, fluids, mass transfer, instrumentation, signal processing, systems analysis, biomaterials and laboratory experimentation. The course work also stresses the application of these techniques to specific areas in rehabilitation engineering, sports medicine, computational neuroscience, space physiology, cardiopulmonary physiology, medical instrumentation, tissue regeneration and image processing. The program at the M.S. level provides the student with a combination of experiences in basic research, design, development, and practical applications. At the Ph.D. level, the focus is primarily on basic research. Students in the program are provided with excellent research opportunities through the facilities of the Center's Wenner-Gren Research Laboratory and its close ties with other colleges of the University such as Medicine and Engineering.

Qualified students enroll in the graduate program through the Center for Biomedical Engineering and establish a course of study with the Center's core faculty and others from engineering and the life sciences. Entering students are expected to have an ABET accredited degree in engineering with some course work in the biological sciences. Applicants with degrees in physical or biological sciences may be accepted but are required to complete some course work in the undergraduate engineering curriculum before being admitted into the graduate program. The time required to complete the undergraduate courses typically is one to four semesters, depending upon the applicant's background. The M.S. program can be completed in four semesters. The Ph.D. program normally requires three to four years to complete. Acceptance to Ph.D. candidacy requires that students pass a qualifying examination administered by their special committee. Candidates for either degree must also successfully defend their thesis or dissertation before the degree is awarded.

The research and teaching activities of the program are concentrated at the Wenner-Gren Research Laboratory but also include facilities and faculty in the Departments of Physiology, Anatomy and Neurobiology, Cardiology, Surgery, Physical Medicine and Rehabilitation, Pharmacy, Pharmacology, Neurology, Physical Therapy, Kinesiology and Health Promotion as well as the Departments of Chemical, Electrical and Mechanical Engineering. The Wenner-Gren Laboratory is a highly multidisciplinary facility employing a full time staff whose members support senior investigators in biomedical engineering research. The laboratory is well equipped with bio-instrumentation, surgical facilities, and electronic and machine shops. It houses specialized facilities for biological material testing, rheology measurements, ultrasonic tissue characterization, instrumentation development, whole-body vibration and acceleration, signal and image processing, and studies in biodynamics.

Further information may be obtained by writing to the Director of Graduate Studies, Center for Biomedical Engineering, Wenner-Gren Research Laboratory, University of Kentucky, Lexington, KY 40506-0070, or by sending e-mail to dgs@cbme.uky.edu.

The Master of Science Degree in Biomedical Engineering requires successful completion of the core curriculum plus an acceptable thesis. In special cases, a non-thesis option is available with the approval of the Director of Graduate Studies.

CORE CURRICULUM

PGY 502	Principles of Physiology	(5)
BME 530	Biomedical Instrumentation	(3)
	Math Elective	(3)
BME 605	Biomedical Signal Processing I	(3)
BME 661	Biomaterials Science and Engineering	(3)
BME 670	Biomechanics I	(3)
BME 672	Biomechanics II	(3)
	Technical Elective	(3)
BME 772	Seminar	(0)

The Ph.D. is a research degree granted on the basis of a broad knowledge of engineering applications in biology and medicine and an in-depth study in a specific area leading to an acceptable dissertation. Courses for advanced study may be selected from the areas of mathematics, life sciences, engineering and chemistry. Please consult the Director of Graduate Studies for a listing of courses which have specific applicability to Biomedical Engineering.

BME 481G	Topics in Biomedical Engineering Subtitle Required)	(3)
BME 501	Foundations of Biomedical Engineering	(3)
BME 530	Biomedical Instrumentation	(3)
BME 605	Biomedical Signal Processing I	(3)
BME 610	Biomedical Control Systems I	(3)
BME 615	Biomedical Signal Processing II	(3)
BME 620	Biomedical Control Systems II	(3)
BME 625	Analysis of Nonlinear Biomedical Systems	(3)
BME 635	Magnetic Resonance Instrumentation and Measurements	(3)
BME 641	Practices of Biomedical Engineering	(3)
BME 661	Biomaterials Science and Engineering	(3)
BME 662	Tissue - Implant Interface	(3)
BME 670	Biomechanics I	(3)
BME 672	Biomechanics II	(3)
BME 685	Biofluid Mechanics	(3)
BME 690	Research in Biomedical Engineering (Subtitle Required)	(1-3)
BME 699	Special Topics in Biomedical Engineering (Subtitle Required)	(1-3)
BME 748	Master's Thesis Research	(0)
BME 749	Dissertation Research	(0)
BME 768	Residence Credit for the Master's Degree	(1-6)
BME 769	Residence Credit for the Doctoral Degree	(0-12)
BME 772	Seminar	(0)
BME 781	Special Problems in Biomedical Engineering (Subtitle Required)	(1-3)

Biosystems and Agricultural Engineering

Graduate Faculty: *Professors* Richard S. Gates, Frederick Payne, Joe Ross, Linus Walton, and Larry G. Wells. *Associate Professors* Donald G. Colliver, Dwayne R. Edwards, and Scott A. Shearer.

Associate Members: *Extension Professors* George Duncan, Robert Fehr, William E. Murphy, Joseph Taraba, and Larry Turner. *Associate Extension Professor* Richard Warner. *Assistant Professors* Sue E. Nokes and Stephen R. Workman.

Emeritus Professors: Edward Smith and John Walker.

The Biosystems and Agricultural Engineering Department offers programs leading to the M.S. in Biosystems and Agricultural Engineering (Plan A and Plan B available) and the Ph.D. degree. The department normally requires a grade point average of 2.8/4.0 for admission to its graduate program.

The biosystems and agricultural engineering graduate program has as its objectives the development of:

1. The ability to plan and conduct research and design involving the application of the engineering science to biological and agricultural systems.
2. The understanding of the mathematical, physical, and biological sciences to permit the reading and understanding of the present and future literature in these and related fields.
3. The skills required to use precision instruments, techniques and computers in research and design.
4. The ability to make sound engineering and management decisions.
5. The ability to teach college level courses in biosystems and agricultural engineering, particularly at the doctoral level.

In the attainment of the above objectives the graduate student will combine courses in biosystems engineering, the physical sciences, other engineering fields, and the biological sciences in developing a program of study. The advanced degrees, however, are primarily research degrees awarded for significant creative research accomplishment, not for the completion of a specified number of courses. Therefore, the program concentrates on a strong thesis or dissertation problem done under the supervision of the graduate faculty of the department. Strong course support is essential if the thesis or dissertation problem is to be properly undertaken and completed.

The design-oriented, non-thesis option is available for the master's degree.

AEN 406G	Physics of Plant and Animal Environment	(3)
AEN 417G	Design — Machine Systems	(3)
AEN 435G	Waste Management for Biosystems	(3)
AEN 438G	Fundamentals of Groundwater Hydrology	(3)
AEN 461G	Biometeorology	(3)
AEN 480G	Heating, Ventilating and Air-conditioning	(3)
AEN 505	Engineering Analysis	(3)
AEN 513	Soil Dynamics in Tillage and Traction	(3)
AEN 515	Fluid Power Systems	(3)
AEN 536	Fluvial Hydraulics	(3)
AEN 537	Irrigation and Drainage Engineering	(3)
AEN 545	Engineering Hydraulics	(3)
AEN 549	Food and Bioprocess Engineering	(3)
AEN 556	Solid and Hazardous Waste Management	(3)
AEN 569	Water Resources System Design	(4)
AEN 599	Topics in Agricultural Engineering	(2-3)
AEN 618	Advanced Plant, Soil, and Machinery	
AEN 625	Topics in Advanced Environment Control and Analysis (Subtitle Required)	(3)
	Relationships	(3)
AEN 638	Groundwater Hydrology	(3)
AEN 642	Open Channel Flow	(3)
AEN 648	Energy and Mass Transfer in Agricultural Processing	(3)
AEN 653	Water Quality in Surface Waters	(3)
AEN 658	Instrumentation for Engineering Research	(3)
AEN 660	Similitude in Engineering	(3)
AEN 665	Water Resources Systems	(3)
AEN 667	Stormwater Modeling	(3)
AEN 748	Master's Thesis Research	(0)
AEN 749	Dissertation Research	(0)
AEN 750	Special Problems in Agricultural Engineering	(1-3)
AEN 768	Residence Credit for the Master's Degree	(1-6)
AEN 769	Residence Credit for the Doctor's Degree	(0-12)
AEN 775	Seminar	(0)
AEN 795	Thesis	(0)
EGR 537	Numerical Analysis	(3)
EGR 599	Topics in Engineering (Subtitle Required)	(1-3)
EGR 611	Boundary Element Methods in Engineering	(3)
EGR 621	Finite Element Analysis in Engineering	(3)
EGR 622	Advanced Finite Element Analysis in Engineering	(3)
EGR 680	Engineering Applications of Stochastic Differential Equations	(3)

Business Administration

Graduate Faculty: *Professors* Chenhua Chung, Gregory G. Dess, James Donnelly, Richard Furst, James Gibson, Andrew J. Grimes, Merlin Hackbart, Charles Haywood, Clyde Holsapple, Keith H. Johnson, Bradford D. Jordan, Albert L. Lederer, Fred W. Morgan, Donald J. Mullineaux, and Steven J. Skinner. *Associate Professors* Terry L. Amburgey, I. Keong Chew, Robert F. Dahlstrom, Mark A. Davis, James W. Freeman, Jule Gassenheimer, Nancy Brown Johnson, Susan D. Jordan, Scott W. Kelley, Anita Lee-Post, Krish Muralidhar, Dennis T. Officer, Ramakrishnan Pakath, Bennett J. Tepper, Kelly L. Tepper, and Tommy E. Whittler.

Associate Members: *Associate Professor* Michael Carpenter. *Assistant Professors* Paul D. Childs, Walter J. Ferrier, Timothy B. Folta, Gordon Holbein, William W. Keep, and Steven H. Ott.

Joint Appointment: *Professor* Philip K. Berger.

Emeritus Professor: James Gibson.

Business Administration Graduate Programs

The College of Business and Economics offers the Master of Business Administration and the Doctor of Philosophy degrees. Faculty offering the MBA and Ph.D. programs are members of the School of Accountancy, the School of Management (Decision Science and Information Systems, Finance, Management, Marketing) and the Department of Economics. A

description of the graduate programs and graduate faculty of the School of Accountancy and Economics Department can be found in those sections of this bulletin.

Master of Business Administration

The MBA program is designed to provide students with the necessary educational foundation so that they are prepared to assume managerial responsibility in a variety of organizational settings. The integrated sequenced program of study consists of two distinct tracks, based on one's background. One track is for students who hold an undergraduate degree in business and are seeking a course of study that will provide them an opportunity to develop more specialized skills in a functional area of business. The other track is for students who do not have an undergraduate degree in business but often have technical training, (e.g., engineering, computer science, etc.) and are seeking a course of study that will provide them an opportunity to seek broad-based management training. Both programs of study are 36 hours after completion of all prerequisites (see description) and have a common core of seven courses. Core courses are designed to provide an understanding of business enterprise; an understanding of quantitative methods and the applications of analysis to business decision making; a knowledge of leadership skills; the ability to solve complicated and realistic business problems; and an understanding of managing a business enterprise in a global environment.

For the business undergraduates, the remaining five courses are electives which will permit students to develop skills in a particular functional area.

For the nonbusiness undergraduates, the remaining five courses will provide students an understanding of functional problems encountered in business enterprise as related to organizational behavior, production, marketing, finance and one elective course.

Requirements

1. The Graduate Management Admission Test (GMAT) must be taken prior to being admitted. Information on dates andlocations where this national examination is given may be obtained from the Counseling and Testing Center, Frazee Hall, University of Kentucky, (606) 257-8701 or the Business and Economics Graduate Center, (606) 257-3592.
2. Required course prerequisites for the MBA Program are two Principles of Accounting courses (one in financial accounting and one in managerial accounting), two Principles of Economics courses (one in micro economics and one in macro economics), a Statistics and Probability course and an Elementary Calculus course. All courses should be equivalent to at least three semester hours. The prerequisites may be satisfied by:

   a) passing the required prerequisite courses (ACC 201 and ACC 202, ECO 201 and ECO 202, STA 291, and MA 123) at the University of Kentucky.

   b) passing similar courses at another accredited university.

   c) passing college-level proficiency (CLEP) examinations.

   d) successfully completing correspondence courses.

3. The MBA program of study is 36 semester credit hours of MBA course work. Required core courses are offered during both the day and evening. Electives are often available in the late afternoon or evening. Very few MBA classes are offered during the summer. Summer programs are available abroad.

MBA Program of Study

		Credits
Business Undergraduate		
ACC 628	Financial/Managerial Accounting	3
ECO 610	Managerial Economics	3
DIS 651	Quantitative Analysis for Decisions	3
BA 610	Global Business Management	3
DIS 620	Management Information Systems in Decision Making	3
MGT 697	Top Management Leadership in the Contemporary Business Environment	3
MGT 699	Business Policy and Strategy II	3
	Electives	15
		Total 36 Credits
Non-business Undergraduate		
ACC 628	Financial/Managerial Accounting	3
ECO 610	Managerial Economics	3
DIS 651	Quantitative Analysis for Decisions	3
MGT 611	Organizational Behaviour	3
DIS 620	Management Information Systems in Decision Making	3
FIN 600	Corporate Financial Policy	3
MKT 600	Marketing Management	3
MGT 697	Top Management Leadership in the Contemporary Business Environment	3
MGT 699	Business Policy and Strategy II	3
DIS 600	Production Management	3
BA 610	Global Business Management	3
	Elective	3
		Total 36

4. Minimal average of grade B in all courses attempted for graduate credit after being admitted to the Graduate School. Students receiving two grades of C below a B average or one grade of E will be subject to dismissal from the MBA program.
5. Successful completion of a comprehensive final examination. It is possible to earn the MBA degree as a full-time or as a part-time student. Generally, full-time students attend day classes and take twelve hours each semester, and part-time students attend evening classes and take six hours each semester.

JD/MBA Option

The Gatton College of Business and Economics and the College of Law offer the opportunity to obtain the Master of Business Administration (MBA) and Juris Doctor (JD) degrees in a dual degree program. Because both schools recognize that some aspects of business and law are compatible and interrelated, students can usually obtain both degrees in four or four and one-half years instead of five required if the degrees were pursued separately. As a result, students gain marketable skills and specialized employment opportunities in less time than might otherwise be required. Students interested in the MBA/JD program must apply to the College of Law, The Graduate School and the MBA program.

MD/MBA, Pharm.D./MBA

Through agreements with the College of Medicine and the College of Pharmacy, the Gatton College admits eligible students to pursue the MBA degree jointly with the MD or Pharm.D. degrees. Students interested in there programs must apply to the College of Medicine or the College of Pharmacy as appropriate and also to the Graduate School and the Gatton College MBA programs.

MBA/B.S. in Engineering

An opportunity to study for an MBA degree while pursuing a Bachelor of Science in Engineering degree is offered to eligible students admitted to the College of Engineering. Students must meet all pre-requisites for the MBA degree before being considered to the program.

Application for Admission

Students who wish to apply for admission to the MBA program in the Gatton College of Business and Economics should a) write to The Graduate School, University of Kentucky, Lexington, KY 40506-0027, and request application forms for admission and financial aid together with the Graduate Bulletin, and b) write The Graduate Center, Gatton College of Business and Economics, University of Kentucky, Lexington, KY 40506-0034 and request program applications and information.

The Doctor of Philosophy Degree

The mission of the doctoral program is to prepare students for successful academic careers. To accomplish this mission, the program prepares graduates to comprehend and evaluate research, to perform research which advances knowledge and to provide effective instruction,

all within a business-related discipline. Specifically, the program is designed to provide:

a) an understanding of the philosophies and basic methodological issues of academic inquiry.

b) an understanding of the theoretical foundations and state-of-the-art research methods in a specific discipline.

c) the ability to design and execute substantive research projects.

Requirements

1. Background Training in Business and Business Related Areas. The Ph.D. is designed to provide specialization beyond the master's level. The educational background of each candidate will be reviewed by the faculty in the student's major area, who identify any deficiencies. In most cases, an MBA (MS in Accounting) from an AACSB accredited institution provides the necessary background.

   Applicants with previous graduate credits are evaluated generally according to the following rules, but each case is individually examined by the faculty of the appropriate business department. A minimal grade point average of 3.2/4.0 is required on all previous graduate credits. Also, students without GMAT scores must take the exam before admission, reporting no less than a minimal score of 500.

2. Core Requirements (18-19 credit hours):*
   a) BA 762 Research Methodology ..... (3)
   b) Theoretical Foundations—Six hours selected by the student from among:
      MGT 700 Administrative Science ..... (3)
      ECO 601 Microeconomic Theory ..... (3)
      ECO 602 Macroeconomic Theory ..... (3)
      MGT 751 Management Science II ..... (3)
      PSY 624 Social Psychology ..... (3)
   c) Research Tools—Nine hours selected by the student from among:
      Six hours statistics sequence ..... (6)
      Research tools elective ..... (3)
   d) BA 700 Teaching Methods in Business (1)*
   *Students who serve as Teaching Assistants are required to enroll in BA 700, Teaching Methods in Business, for one additional credit hour.

3. Major Field Requirements: The major field will consist of at least 21 hours of graduate credit course work including at least 12 credit hours of 700 level courses exclusive of the core. Currently available major fields include:
   Accounting
   Decision Science and Management Information Systems
   Finance
   Management and Organizational Behavior
   Marketing

   All course work must be approved by the Director of Graduate Studies.

4. Written and oral comprehensive examinations are required in the major field.

5. The dissertation will be based on original research on a significant topic. The dissertation will be defended in an oral examination.

6. Minimum average of grade of B for graduate credit and in all courses attempted after being admitted to The Graduate School. Students obtaining two grades of C below a B average will subject to dismissal from the program.

For application forms and information, please write or call:

The Office of the Associate Dean
of Administration and Academic Affairs
Gatton College of Business and Economics
University of Kentucky
Lexington, KY 40506-0034
(606) 257-3024 or (606) 257-3592
E-mail: drball01@pop.uky.edu
http://gatton.gws.uky.edu/

BA 601 Total Quality Management ..... (3)
BA 610 Global Business Management ..... (3)
BA 700 Teaching Methods in Business ..... (1)
BA 749 Dissertation Research ..... (0)
BA 762 Research Methodology ..... (3)
BA 768 Residence Credit for the Master's Degree ..... (1-6)
BA 769 Residence Credit for the Doctor's Degree ..... (0-12)
DIS 506 Productivity and Quality Control ..... (3)
DIS 520 Advanced Business Data Processing and Information ..... (3)
DIS 600 Production Management ..... (3)
DIS 611 Management of Computer Integrated Manufacturing ..... (3)
DIS 612 Advanced Project Management ..... (3)
DIS 615 Production/Inventory Management .... (3)
DIS 620 Management Information Systems in Decision Making ..... (3)
DIS 621 Business Expert Systems ..... (3)
DIS 622 Business Data System Analysis and Design ..... (3)
DIS 623 Business Decision Support System ..... (3)
DIS 624 Management of Information Resources ..... (3)
DIS 650 Data Analysis for Decision ..... (3)
DIS 651 Quantitative Analysis in Business Decision Making ..... (3)
DIS 700 Topics in Operations Management ..... (3)
DIS 720 Management Information Systems Theory ..... (3)
DIS 750 Management Science I ..... (3)
DIS 751 Management Science II ..... (3)
DIS 752 Topics in Optimization ..... (3)
DIS 753 Seminar in Management Science ... (3-6)
DIS 760 Research Methods in Decision Systems ..... (3)
DIS 780 Studies in Decision Science ..... (3)
DIS 790 Special Topics in ManagementDecision Systems (Subtitle Required) ..... (3)

FIN 585 Bank Management ..... (3)
FIN 600 Corporate Financial Policy ..... (3)
FIN 623 International Financial Management ... (3)
FIN 637 Health Finance ..... (3)
FIN 645 Corporate Investment and Financing Policy ..... (3)
FIN 647 Working Capital Policy ..... (3)
FIN 650 Investments ..... (3)
FIN 656 Portfolio Management ..... (3)
FIN 664 Real Estate Finance ..... (3)
FIN 680 Money, Interest and Capital ..... (3)
FIN 691 Advanced Topics in Finance (Subtitle Required) ..... (1-3)
FIN 695 Individual Work in Finance ..... (1-6)
FIN 700 Seminar in Financial Theory ..... (3)
FIN 701 Seminar in Financial Theory II ..... (3)
FIN 745 Seminar in Managerial Finance ..... (3)
FIN 750 Seminar in Investment Theory ..... (3)
FIN 763 Research, Design and Analysis ..... (3)
FIN 780 Seminar in Financial Institutions ..... (3)
FIN 791 Seminar in Finance (Subtitle Required) ..... (1-3)
FIN 795 Independent Work in Finance ..... (1-6)

MGT 408G World Business ..... (3)
MGT 429G Personnel Planning/Strategy/Policy ... (3)
MGT 608 Comparative International Management ..... (3)
MGT 611 Organizational Behavior ..... (3)
MGT 612 Advanced Project Management ..... (3)
MGT 620 Personnel and Industrial Relations ..... (3)
MGT 624 Management of Information Resources ..... (3)
MGT 640 Legal and Regulatory Environment ..... (3)
MGT 660 Seminar in Ethical Issues in Business ..... (3)
MGT 680 Special Topics in Management ..... (3)
MGT 695 Individual Work in Management ..... (1-6)
MGT 697 Top Management Leadership in the Contemporary Business Environment ..... (3)
MGT 699 Business Policy and Strategy II ..... (3)
MGT 700 Administrative Science ..... (3)
MGT 711 Organizations and External Systems ... (3)
MGT 712 Organizations and Individual Behavior ..... (3)
MGT 713 Seminar in Advanced Organization Theory ..... (3)
MGT 714 Seminar in Management Theory and Policy ..... (3)
MGT 763 Research, Design and Analysis ..... (3)
MGT 780 Special Topics in Management (Subtitle Required) ..... (3)
MGT 781 Independent Work in Management ..... (1-6)

MKT 600 Marketing Management ..... (3)
MKT 601 Marketing Research ..... (3)
MKT 621 Product Management ..... (3)
MKT 622 Sales Management ..... (3)
MKT 623 Marketing in Service and Nonprofit Organizations ..... (3)
MKT 624 International Marketing Management ..... (3)
MKT 695 Individual Work in Marketing ..... (1-6)
MKT 700 Seminar in Marketing Management . (3)
MKT 710 Seminar in Consumer Behavior ..... (3)
MKT 720 Seminar in Marketing Theory ..... (3)
MKT 763 Research, Design and Analysis ..... (3)
MKT 771 Seminar in Business Administration ... (3)
MKT 781 Independent Work in Marketing ..... (1-6)

Note: Also see course listings under the Accounting and the Economics programs listed elsewhere in this Bulletin.

description of the graduate programs and graduate faculty of the School of Accountancy and Economics Department can be found in those sections of this bulletin.

Master of Business Administration

The MBA program is designed to provide students with the necessary educational foundation so that they are prepared to assume managerial responsibility in a variety of organizational settings. The integrated sequenced program of study consists of two distinct tracks, based on one's background. One track is for students who hold an undergraduate degree in business and are seeking a course of study that will provide them an opportunity to develop more specialized skills in a functional area of business. The other track is for students who do not have an undergraduate degree in business but often have technical training, (e.g., engineering, computer science, etc.) and are seeking a course of study that will provide them an opportunity to seek broad-based management training. Both programs of study are 36 hours after completion of all prerequisites (see description) and have a common core of seven courses. Core courses are designed to provide an understanding of business enterprise; an understanding of quantitative methods and the applications of analysis to business decision making; a knowledge of leadership skills; the ability to solve complicated and realistic business problems; and an understanding of managing a business enterprise in a global environment.

For the business undergraduates, the remaining five courses are electives which will permit students to develop skills in a particular functional area.

For the nonbusiness undergraduates, the remaining five courses will provide students an understanding of functional problems encountered in business enterprise as related to organizational behavior, production, marketing, finance and one elective course.

Requirements

1. The Graduate Management Admission Test (GMAT) must be taken prior to being admitted. Information on dates andlocations where this national examination is given may be obtained from the Counseling and Testing Center, Frazee Hall, University of Kentucky, (606) 257-8701 or the Business and Economics Graduate Center, (606) 257-3592.
2. Required course prerequisites for the MBA Program are two Principles of Accounting courses (one in financial accounting and one in managerial accounting), two Principles of Economics courses (one in micro economics and one in macro economics), a Statistics and Probability course and an Elementary Calculus course. All courses should be equivalent to at least three semester hours. The prerequisites may be satisfied by:

   a) passing the required prerequisite courses (ACC 201 and ACC 202, ECO 201 and ECO 202, STA 291, and MA 123) at the University of Kentucky.

   b) passing similar courses at another accredited university.

   c) passing college-level proficiency (CLEP) examinations.

   d) successfully completing correspondence courses.

3. The MBA program of study is 36 semester credit hours of MBA course work. Required core courses are offered during both the day and evening. Electives are often available in the late afternoon or evening. Very few MBA classes are offered during the summer. Summer programs are available abroad.

MBA Program of Study

		Credits
Business Undergraduate		
ACC 628	Financial/Managerial Accounting	3
ECO 610	Managerial Economics	3
DIS 651	Quantitative Analysis for Decisions	3
BA 610	Global Business Management	3
DIS 620	Management Information Systems in Decision Making	3
MGT 697	Top Management Leadership in the Contemporary Business Environment	3
MGT 699	Business Policy and Strategy II	3
	Electives	15
		Total 36 Credits
Non-business Undergraduate		
ACC 628	Financial/Managerial Accounting	3
ECO 610	Managerial Economics	3
DIS 651	Quantitative Analysis for Decisions	3
MGT 611	Organizational Behaviour	3
DIS 620	Management Information Systems in Decision Making	3
FIN 600	Corporate Financial Policy	3
MKT 600	Marketing Management	3
MGT 697	Top Management Leadership in the Contemporary Business Environment	3
MGT 699	Business Policy and Strategy II	3
DIS 600	Production Management	3
BA 610	Global Business Management	3
	Elective	3
		Total 36

4. Minimal average of grade B in all courses attempted for graduate credit after being admitted to the Graduate School. Students receiving two grades of C below a B average or one grade of E will be subject to dismissal from the MBA program.
5. Successful completion of a comprehensive final examination. It is possible to earn the MBA degree as a full-time or as a part-time student. Generally, full-time students attend day classes and take twelve hours each semester, and part-time students attend evening classes and take six hours each semester.

JD/MBA Option

The Gatton College of Business and Economics and the College of Law offer the opportunity to obtain the Master of Business Administration (MBA) and Juris Doctor (JD) degrees in a dual degree program. Because both schools recognize that some aspects of business and law are compatible and interrelated, students can usually obtain both degrees in four or four and one-half years instead of five required if the degrees were pursued separately. As a result, students gain marketable skills and specialized employment opportunities in less time than might otherwise be required. Students interested in the MBA/JD program must apply to the College of Law, The Graduate School and the MBA program.

MD/MBA, Pharm.D./MBA

Through agreements with the College of Medicine and the College of Pharmacy, the Gatton College admits eligible students to pursue the MBA degree jointly with the MD or Pharm.D. degrees. Students interested in there programs must apply to the College of Medicine or the College of Pharmacy as appropriate and also to the Graduate School and the Gatton College MBA programs.

MBA/B.S. in Engineering

An opportunity to study for an MBA degree while pursuing a Bachelor of Science in Engineering degree is offered to eligible students admitted to the College of Engineering. Students must meet all pre-requisites for the MBA degree before being considered to the program.

Application for Admission

Students who wish to apply for admission to the MBA program in the Gatton College of Business and Economics should a) write to The Graduate School, University of Kentucky, Lexington, KY 40506-0027, and request application forms for admission and financial aid together with the Graduate Bulletin, and b) write The Graduate Center, Gatton College of Business and Economics, University of Kentucky, Lexington, KY 40506-0034 and request program applications and information.

The Doctor of Philosophy Degree

The mission of the doctoral program is to prepare students for successful academic careers. To accomplish this mission, the program prepares graduates to comprehend and evaluate research, to perform research which advances knowledge and to provide effective instruction,

all within a business-related discipline. Specifically, the program is designed to provide:

a) an understanding of the philosophies and basic methodological issues of academic inquiry.

b) an understanding of the theoretical foundations and state-of-the-art research methods in a specific discipline.

c) the ability to design and execute substantive research projects.

Requirements

1. Background Training in Business and Business Related Areas. The Ph.D. is designed to provide specialization beyond the master's level. The educational background of each candidate will be reviewed by the faculty in the student's major area, who identify any deficiencies. In most cases, an MBA (MS in Accounting) from an AACSB accredited institution provides the necessary background.

   Applicants with previous graduate credits are evaluated generally according to the following rules, but each case is individually examined by the faculty of the appropriate business department. A minimal grade point average of 3.2/4.0 is required on all previous graduate credits. Also, students without GMAT scores must take the exam before admission, reporting no less than a minimal score of 500.

2. Core Requirements (18-19 credit hours):*
   a) BA 762 Research Methodology ..... (3)
   b) Theoretical Foundations—Six hours selected by the student from among:
      MGT 700 Administrative Science ..... (3)
      ECO 601 Microeconomic Theory ..... (3)
      ECO 602 Macroeconomic Theory ..... (3)
      MGT 751 Management Science II ..... (3)
      PSY 624 Social Psychology ..... (3)
   c) Research Tools—Nine hours selected by the student from among:
      Six hours statistics sequence ..... (6)
      Research tools elective ..... (3)
   d) BA 700 Teaching Methods in Business (1)*
   *Students who serve as Teaching Assistants are required to enroll in BA 700, Teaching Methods in Business, for one additional credit hour.

3. Major Field Requirements:
   The major field will consist of at least 21 hours of graduate credit course work including at least 12 credit hours of 700 level courses exclusive of the core. Currently available major fields include:
   Accounting
   Decision Science and Management Information Systems
   Finance
   Management and Organizational Behavior
   Marketing

   All course work must be approved by the Director of Graduate Studies.

4. Written and oral comprehensive examinations are required in the major field.

5. The dissertation will be based on original research on a significant topic. The dissertation will be defended in an oral examination.

6. Minimum average of grade of B for graduate credit and in all courses attempted after being admitted to The Graduate School. Students obtaining two grades of C below a B average will subject to dismissal from the program.

For application forms and information, please write or call:

The Office of the Associate Dean
of Administration and Academic Affairs
Gatton College of Business and Economics
University of Kentucky
Lexington, KY 40506-0034
(606) 257-3024 or (606) 257-3592
E-mail: drball01@pop.uky.edu
http://gatton.gws.uky.edu/

BA 601 Total Quality Management ..... (3)
BA 610 Global Business Management ..... (3)
BA 700 Teaching Methods in Business ..... (1)
BA 749 Dissertation Research ..... (0)
BA 762 Research Methodology ..... (3)
BA 768 Residence Credit for the Master's Degree ..... (1-6)
BA 769 Residence Credit for the Doctor's Degree ..... (0-12)
DIS 506 Productivity and Quality Control ..... (3)
DIS 520 Advanced Business Data Processing and Information ..... (3)
DIS 600 Production Management ..... (3)
DIS 611 Management of Computer Integrated Manufacturing ..... (3)
DIS 612 Advanced Project Management ..... (3)
DIS 615 Production/Inventory Management .... (3)
DIS 620 Management Information Systems in Decision Making ..... (3)
DIS 621 Business Expert Systems ..... (3)
DIS 622 Business Data System Analysis and Design ..... (3)
DIS 623 Business Decision Support System ..... (3)
DIS 624 Management of Information Resources ..... (3)
DIS 650 Data Analysis for Decision ..... (3)
DIS 651 Quantitative Analysis in Business Decision Making ..... (3)
DIS 700 Topics in Operations Management ..... (3)
DIS 720 Management Information Systems Theory ..... (3)
DIS 750 Management Science I ..... (3)
DIS 751 Management Science II ..... (3)
DIS 752 Topics in Optimization ..... (3)
DIS 753 Seminar in Management Science ... (3-6)
DIS 760 Research Methods in Decision Systems ..... (3)
DIS 780 Studies in Decision Science ..... (3)
DIS 790 Special Topics in ManagementDecision Systems (Subtitle Required) ..... (3)

FIN 585 Bank Management ..... (3)
FIN 600 Corporate Financial Policy ..... (3)
FIN 623 International Financial Management ... (3)
FIN 637 Health Finance ..... (3)
FIN 645 Corporate Investment and Financing Policy ..... (3)
FIN 647 Working Capital Policy ..... (3)
FIN 650 Investments ..... (3)
FIN 656 Portfolio Management ..... (3)
FIN 664 Real Estate Finance ..... (3)
FIN 680 Money, Interest and Capital ..... (3)
FIN 691 Advanced Topics in Finance (Subtitle Required) ..... (1-3)
FIN 695 Individual Work in Finance ..... (1-6)
FIN 700 Seminar in Financial Theory ..... (3)
FIN 701 Seminar in Financial Theory II ..... (3)
FIN 745 Seminar in Managerial Finance ..... (3)
FIN 750 Seminar in Investment Theory ..... (3)
FIN 763 Research, Design and Analysis ..... (3)
FIN 780 Seminar in Financial Institutions ..... (3)
FIN 791 Seminar in Finance (Subtitle Required) ..... (1-3)
FIN 795 Independent Work in Finance ..... (1-6)

MGT 408G World Business ..... (3)
MGT 429G Personnel Planning/Strategy/Policy ... (3)
MGT 608 Comparative International Management ..... (3)
MGT 611 Organizational Behavior ..... (3)
MGT 612 Advanced Project Management ..... (3)
MGT 620 Personnel and Industrial Relations ..... (3)
MGT 624 Management of Information Resources ..... (3)
MGT 640 Legal and Regulatory Environment ..... (3)
MGT 660 Seminar in Ethical Issues in Business ..... (3)
MGT 680 Special Topics in Management ..... (3)
MGT 695 Individual Work in Management ..... (1-6)
MGT 697 Top Management Leadership in the Contemporary Business Environment ..... (3)
MGT 699 Business Policy and Strategy II ..... (3)
MGT 700 Administrative Science ..... (3)
MGT 711 Organizations and External Systems ... (3)
MGT 712 Organizations and Individual Behavior ..... (3)
MGT 713 Seminar in Advanced Organization Theory ..... (3)
MGT 714 Seminar in Management Theory and Policy ..... (3)
MGT 763 Research, Design and Analysis ..... (3)
MGT 780 Special Topics in Management (Subtitle Required) ..... (3)
MGT 781 Independent Work in Management ..... (1-6)

MKT 600 Marketing Management ..... (3)
MKT 601 Marketing Research ..... (3)
MKT 621 Product Management ..... (3)
MKT 622 Sales Management ..... (3)
MKT 623 Marketing in Service and Nonprofit Organizations ..... (3)
MKT 624 International Marketing Management ..... (3)
MKT 695 Individual Work in Marketing ..... (1-6)
MKT 700 Seminar in Marketing Management . (3)
MKT 710 Seminar in Consumer Behavior ..... (3)
MKT 720 Seminar in Marketing Theory ..... (3)
MKT 763 Research, Design and Analysis ..... (3)
MKT 771 Seminar in Business Administration ... (3)
MKT 781 Independent Work in Marketing ..... (1-6)

Note: Also see course listings under the Accounting and the Economics programs listed elsewhere in this Bulletin.

Chemical Engineering

Graduate Faculty: *Professors* Dibakar Bhattacharyya, Frank J. Derbyshire, Eric A. Grulke, Charles E. Hamrin Jr., Gerald P. Huffman, Richard Kermode, Asit K. Ray, James T. Schrodt, and Tate T. H. Tsang. *Associate Professors* Kimberly Ward Anderson and Douglass S. Kalika.

Associate Member: *Assistant Professor* Barbara L. Knutson.

The Department of Chemical and Materials Engineering offers programs leading to the M.S. and Ph.D. degrees in Chemical Engineering, with research specialization in the following areas:

Aerosol Chemistry and Physics
Biocellular Engineering
Environmental Engineering
Fuel Science
Membrane Science and Technology
Polymer Processing
Polymer Science and Engineering
Supercritical Fluids Processing
Thermodynamics
Transport Phenomena

Admission to the M.S. or Ph.D. degree programs is on a competitive basis, and financial assistance is available through teaching and research assistantships, as well as a limited number of fellowships. Applicants should have a minimum grade point average of 3.0/4.0 on all undergraduate work, and should hold a Bachelor of Science degree in Chemical Engineering or its equivalent. Meeting the minimum requirements does not guarantee admission, as acceptance is on a competitive and space available basis. Students with undergraduate majors not in chemical engineering (for example chemistry, physics) will be expected to complete a program of undergraduate remedial courses prior to admission into the graduate program.

The M.S. degree in Chemical Engineering requires 24 hours of coursework, plus completion of an acceptable thesis (Plan A). This coursework includes the chemical engineering graduate core, which is comprised of CME 505, CME 620, CME 630, CME 650, and a graduate-level mathematics elective. In certain exceptional cases (as determined by the faculty), a non-thesis M.S. may be undertaken (Plan B). The nonthesis option requires 30 hours of coursework which includes the chemical engineering core, as well as 3 hours of CME 780 (Special Problems in Chemical Engineering). The non-thesis option is only available to those students with prior research or industrial experience. For both Plan A and Plan B, at least half of all graduate coursework must be at the 600 level or above.

The Ph.D. degree is a research degree granted on the basis of broad knowledge of chemical engineering and specialized study in a specific area of interest. The student must conduct original and significant research and must submit and defend a dissertation based on that research. Coursework requirements include the chemical engineering graduate core, and additional courses so as to fulfill the precandidacy residency requirements set forth by the Graduate School; the plan of study is developed by the student in consultation with the research advisor. Advancement to doctoral candidacy is contingent upon successful completion of both the written and oral portions of the Qualifying Examination. The written portion addresses four areas of the chemical engineering discipline: Kinetics and Reactor Design, Mathematics (as applied to chemical engineering problems), Thermodynamics, and Transport. The oral portion consists of a presentation and defense of the student's proposed dissertation research; a prospectus prepared by the student must be submitted to the doctoral advisory committee prior to the examination. There is no language requirement for the M.S. or Ph.D. degrees in Chemical Engineering.

A wide selection of research topics is available under the direction of the Chemical Engineering faculty. For more information on degree requirements, financial aid, and facilities contact the Director of Graduate Studies.

CME 505 Analysis of Chemical Engineering Problems ..... (3)
CME 515 Air Pollution Control ..... (3)
CME 550 Chemical Reactor Design ..... (3)
CME 552 Polymeric Materials ..... (3)
CME 554 Chemical and Physical Processing of Polymer Systems ..... (3)
CME 558 Principles of Polymer Characterization and Analysis ..... (3)
CME 580 Design of Rate and Equilibrium Processes for Water Pollution Control (3)
CME 583 Fuel Science ..... (3)
CME 599 Topics in Chemical Engineering ..... (3)
CME 620 Equilibrium Thermodynamics ..... (3)
CME 621 Nonequilibrium Thermodynamics ..... (3)
CME 625 Properties of Gases and Liquids ..... (3)
CME 630 Transport I ..... (3)
CME 631 Transport II ..... (3)
CME 635 Staged Mass Transfer Operations ..... (3)
CME 637 Biological Transport Phenomena ..... (3)
CME 650 Advanced Chemical Reactor Design ... (3)
CME 671 Basic Electrode Processes in Electrochemical Engineering ..... (3)
CME 680 Biochemical Engineering ..... (3)
CME 748 Master's Thesis Research ..... (0)
CME 749 Dissertation Research ..... (0)
CME 768 Residence Credit for the Master's Degree ..... (1-6)
CME 769 Residence Credit for the Doctor's Degree ..... (0-12)
CME 771 Seminar ..... (0)
CME 779 Membrane Science Colloquium ..... (1)
CME 780 Special Problems in Chemical Engineering ..... (1-3)
CME 790 Research in Chemical Engineering .. (1-9)

EGR 537 Numerical Analysis ..... (3)
EGR 599 Topics in Engineering (Subtitle Required) ..... (1-3)
EGR 611 Boundary Element Methods in Engineering ..... (3)
EGR 621 Finite Element Analysis in Engineering ..... (3)
EGR 622 Advanced Finite Element Analysis in Engineering ..... (3)
EGR 680 Engineering Applications of Stochastic Differential Equations ..... (3)

Chemistry

Graduate Faculty: *Professors* Leonidas G. Bachas, Fitzgerald B. Bramwell, Carolyn P. Brock, D. Allan Butterfield, Dennis J. Clouthier, Robert D. Guthrie, Robert C. Haddon, Boyd Haley, F. James Holler, William R. Markesbery, Donald E. Sands, John P. Selegue, David S. Watt, and Steven W. Yates. *Associate Professors* Mark S. Meier, James E. O'Reilly, J. David Robertson, and Joseph W. Wilson.

Associate Members: *Adjunct Professor* Burtron H. Davis. *Assistant Professors* John E. Anthony, Arthur Cammers-Goodwin, Sylvia Daunert, Roger S. Grev, Robert B. Grossman, Robert Toreki, and Dong-Sheng Yang.

Emeritus Professors: Audrey L. Companion, Paul L. Corio, William D. Ehmann, Robert W. Kiser, Kurt Niedenzu, John M. Patterson, Paul G. Sears, Walter T. Smith, and Stanford L. Smith.

The Department of Chemistry offers the Master of Science and the Doctor of Philosophy degrees. Plan A or B may be used to satisfy the requirements for the M.S. degree. Areas of specialization in chemistry offered are analytical, biological, inorganic, organic, physical, and radio-nuclear. All candidates for the Ph.D. degree are required to serve as a teaching assistant for one semester.

A satisfactory reading knowledge of a modern foreign language is recommended for the M.S. and the Ph.D. degrees, but not required.

As part of the course requirements for both the M.S. and the Ph.D. degrees, all students must normally take four "core" courses. The student selects one course which best meets career objectives in each of the four traditional areas of chemistry (analytical, inorganic, organic, and physical) from a pair of such courses: CHE 524 or 626, CHE 510 or 514, CHE 535 or 538, CHE 547 or 548, respectively.

All new graduate students must take proficiency examinations in analytical, inorganic, organic, and physical chemistry. The results of these examinations are used as a guide in establishing the student's program of courses. Students who do very well on any particular examination may bypass the core course in that area.

Master of Science Degree Plan A (Thesis)

All Graduate School requirements must be met. In addition to four "core" courses, advanced or specialty courses relevant to a student's career objectives are taken to total a minimum of 24 credits. Successful defense of a thesis describing original research of a caliber that could result in publication in refereed scientific journals is required of all M.S. Plan A students.

Master of Science Degree Plan B (Non-Thesis)

Students in the Department of Chemistry may satisfy the requirements for an M.S. degree by using Plan B, a course work M.S. Students wishing to follow this plan shall present for the approval of the Graduate Program Committee a program of courses that satisfies the Committee and meets all Graduate School requirements. This program of courses must meet distribution requirements within the four traditional areas of chemistry, and include 6 or more credits of courses outside of Chemistry that are relevant to the student's career goals.

Doctor of Philosophy Degree

Doctoral degrees are earned in the Department of Chemistry after a student has carried out productive and independent research on a problem that is of significant chemical interest. It is expected that the results of the dissertation work will be published in refereed scientific journals. All Graduate School requirements must be met. Subject to approval of the student's Advisory Committee, course work for the Ph.D. degree shall normally include four "core" courses and eight credits of advanced or specialty courses. At least three credit hours must be in courses outside of the Department of Chemistry.

The Qualifying Examination consists of a written and an oral part. The written component of the Qualifying Examination consists of a series of cumulative examinations designed to test the application of fundamental principles and reasoning to literature or research problems. Scores of 3, 2, 1, or 0 can be obtained on each examination. Eight examinations per year in the areas of Analytical, Inorganic, Organic, and Physical Chemistry and four examinations per year in Biological and Radio-nuclear Chemistry are given. A Ph.D. student normally must attain a minimum of eight points within two years in order to take the oral part of the Qualifying Examination.

For further information on any degree program in Chemistry, please contact the Director of Graduate Studies.

CHE 440G Physical Chemistry ..... (4)
CHE 441G Physical Chemistry Laboratory ..... (2)
CHE 442G Physical Chemistry ..... (3)
CHE 446G Physical Chemistry for Engineers ..... (3)
CHE 450G Practical Inorganic Chemistry ..... (3)
CHE 510 Advanced Inorganic Chemistry ..... (3)
CHE 514 Descriptive Inorganic Chemistry ..... (3)
CHE 520 Radiochemistry ..... (3)
CHE 521 Radiochemistry Laboratory ..... (1-2)
CHE 522 Instrumental Analysis ..... (4)
CHE 524 Chemical Instrumentation ..... (4)
CHE 526 Chemical Separations ..... (2)
CHE 532 Spectrometric Identification of Organic Compounds ..... (2)
CHE 533 Qualitative Organic Analysis Laboratory ..... (2)
CHE 535 Synthetic Organic Chemistry ..... (3)
CHE 538 Principles of Organic Chemistry ..... (3)
CHE 547 Principles of Physical Chemistry I ..... (3)
CHE 548 Principles of Physical Chemistry II .... (3)
CHE 572 Communication in Chemistry ..... (1)
CHE 580 Topics in Chemistry ..... (1-3)
CHE 602 Short Topics in Chemistry ..... (1-3)
CHE 612 Inorganic Chemistry of the Non-Metals ..... (3)
CHE 614 Organotransition Metal Chemistry ..... (3)
CHE 616 Nuclear Chemistry ..... (3)
CHE 620 Electrochemical Methods of Analysis ..... (3)
CHE 625 Optical Methods of Analysis ..... (3)
CHE 626 Advanced Analytical Chemistry ..... (3)
CHE 633 Physical Organic Chemistry ..... (3)
CHE 643 Spectroscopy and Photophysics ..... (3)
CHE 646 Chemical Kinetics ..... (3)
CHE 647 Advanced Quantum Chemistry ..... (3)
CHE 648 Chemical Thermodynamics ..... (3)
CHE 710 Topics in Inorganic Chemistry ..... (2-4)
CHE 736 Topics in Organic Chemistry ..... (2-4)
CHE 746 Topics in Physical Chemistry ..... (2-4)
CHE 748 Master's Thesis Research ..... (0)
CHE 749 Dissertation Research ..... (0)
CHE 768 Residence Credit for the Master's Degree ..... (1-6)
CHE 769 Residence Credit for the Doctor's Degree ..... (0-12)
CHE 772 Seminar Chemistry Instruction ..... (1)
CHE 776 Graduate Seminar ..... (1)
CHE 779 Membrane Science Colloquium ..... (1)
CHE 780 Individual Work in Chemistry ..... (1-5)
CHE 790 Research in Chemistry ..... (1-12)

Civil Engineering

Graduate Faculty: *Professors* George E. Blandford, H. Gesund, Donn E. Hancher, B.O. Hardin, Issam E. Harik, William F. Maloney, L. Ormsby, Jerry G. Rose, S.T. Wang, and Yi-Tin Wang. *Associate Professors* Kamyar Mahboub, Sergio Serrano, Nikiforos Stamatiadis, and James D. Stevens.

Associate Members: *Assistant Professors* Lisa Aultman-Hall, Gail M. Brion, Srinivasa Lingireddy, Kevin G. Sutterer, Scott A. Yost, and Xiangwu Zeng.

Emeritus Professors: J.A. Deacon, J.A. Dearinger, Y.H. Huang, and D.J. Wood.

The Department of Civil Engineering offers the Master of Science in Civil Engineering (Plan A and Plan B available), Master of Civil Engineering (Plan B), and Ph.D. with specialization in the following areas:

Civil Engineering Materials
Construction Engineering and Management
Environmental Engineering
Geotechnical Engineering
Hydraulics Engineering
Structural Engineering
Transportation Engineering
Water resources Engineering

These areas utilize courses from other departments and such inter-departmental programs are encouraged. Engineering Mechanics, Mechanical Engineering, Chemical Engineering, Agricultural Engineering, Mining Engineering, Mathematics, Computer Science, Geology, Biology, and Chemistry are some of the departments whose offerings contribute to the programs in Civil Engineering.

The Master of Civil Engineering is a professionally oriented degree. The primary objective of the M.C.E. program is to provide advanced educational opportunities designed to provide better preparation for students for the professional practice of civil engineering and to enable practicing engineers to continue the pursuit of technical knowledge in a manner well-suited to their individual needs. It incorporates sufficient flexibility to accommodate the needs of a diverse student body while assuring that each graduate will have attained the attributes essential to successful civil engineering practice. The Master of Science in Civil Engineering is a research oriented degree appropriate for a career in research and technology development. The Doctor of Philosophy is the terminal degree to prepare a student for a career in teaching and research and development.

The Master of Civil Engineering (M.C.E.) degree requires 30 credits of course work and the student must demonstrate to the satisfaction of a Master of Civil Engineering Committee reasonable competence and knowledge in specified areas essential to civil engineering practice. For the Master of Science in Civil Engineering (M.S.C.E.) degree, 24 credit hours of course work and a thesis (Plan A) or 30 credit hours of course work (including 3 hours of independent studies) (Plan B) are required to fulfill degree requirements. The non-thesis option (Plan B) is normally available to students with acceptable previous research or design experience.

The Ph.D. degree has no formal course requirement, but students must pass the Qualifying Examination before entering candidacy. There is no language requirement

for the M.C.E., M.S.C.E. and Ph.D. degrees in Civil Engineering.

In addition to satisfying general Graduate School and College of Engineering admissions requirements (a GPA of 2.8/4.0 on all undergraduate work is normally required), applicants for admission to the M.S.C.E., M.C.E., and Ph.D. degree programs in Civil Engineering must have been awarded a Bachelor of Science degree from an engineering program accredited by the Accrediting Board for Engineering and Technology (ABET).

This requirement may be waived for applicants who have been awarded bachelor's degrees other than engineering or from unaccredited engineering programs (including those offered by foreign institutions) if the applicant has received an acceptable score on the Advanced Engineering Test of the Graduate Record Examination (GRE).

Students with undergraduate majors not in engineering must also take a certain number of undergraduate remedial courses.

Neither the M.C.E, the M.S.C.E. degree nor the Ph.D. degree in Civil Engineering will be conferred unless the candidate has successfully completed, during his undergraduate and/or graduate careers, at least one basic course in at least four of the following seven areas: civil engineering materials, fluid mechanics, geotechnical engineering, surveying, structural or solid mechanics, transportation engineering, and water quality engineering.

It is also required that a minimum GRE score of 1000 and 1100 (combination of verbal and quantitative sections) be obtained by Master's and Ph.D. degree applicants respectively. Scores on the analytical portion are also considered. Foreign applicants whose native language is other than English must take the Test of English as a Foreign Language (TOEFL) and score at least 550 on it before they can be admitted. The Department of Civil Engineering has many well equipped laboratories with active research programs in most areas. The research programs provide financial assistance for graduate students. In addition, financial assistance is available through teaching assistantships and a limited number of traineeships, fellowships and scholarships.

Information about the graduate program in Civil Engineering can be obtained by writing the Director of Graduate Studies, Department of Civil Engineering.

CE 461G Hydrology ..... (3)
CE 471G Soil Mechanics ..... (3)
CE 485G Design of Timber Structures, Formwork and Falsework ..... (3)
CE 486G Reinforced Concrete ..... (3)
CE 487G Steel Structures ..... (3)
CE 503 Construction Estimating ..... (3)
CE 505 Construction Project Planning and Management ..... (3)
CE 506 The Engineer, The Law, and the Environment ..... (3)
CE 517 Boundary Location Principles ..... (3)
CE 518 Advanced Surveying ..... (3)
CE 521 Engineering Economy ..... (3)
CE 531 Transportation Systems Operations ... (3)
CE 533 Railroad Facilities Design and Analysis ..... (3)
CE 534 Pavement Analysis and Design ..... (3)
CE 539 Transportation Systems Design ..... (4)
CE 541 Hydraulic Structures ..... (3)
CE 546 Fluvial Hydraulics ..... (3)
CE 549 Engineering Hydraulics ..... (3)
CE 552 Water Quality Control Laboratory I ... (3)
CE 556 Solid and Hazardous Waste Management ..... (3)
CE 559 Water Quality Control Facilities Design ..... (3)
CE 560 Groundwater Modeling
CE 569 Water Resources System Design ..... (4)
CE 579 Geotechnical Engineering ..... (3)
CE 580 Bituminous Materials and Mixtures .... (3)
CE 582 Advanced Structural Mechanics ..... (3)
CE 586 Prestressed Concrete ..... (3)
CE 589 Design of Structural Systems ..... (4)
CE 599 Topics in Civil Engineering (Subtitle Required) ..... (1-4)
CE 601 Construction Equipment ..... (3)
CE 602 Construction Administration ..... (3)
CE 631 Urban Transportation Planning ..... (3)
CE 633 Air Transport Engineering ..... (3)
CE 634 Traffic Characteristics ..... (3)
CE 641 Mechanics of Liquid Flow in Pipes ..... (3)
CE 642 Open Channel Flow ..... (3)
CE 651 Fundamentals of Water Quality Control I ..... (3)
CE 652 Fundamentals of Water Quality Control II ..... (3)
CE 653 Water Quality in Surface Waters ..... (3)
CE 654 Principles of Water and Waste Water Treatment Processes ..... (3)
CE 660 Ground Water Hydrology ..... (3)
CE 662 Stochastic Hydrology ..... (3)
CE 665 Water Resources Systems ..... (3)
CE 667 Stormwater Modeling ..... (3)
CE 671 Advanced Soil Mechanics ..... (3)
CE 676 Groundwater and Seepage ..... (3)
CE 679 Soil-Structure Dynamics and Earthquake Engineering ..... (4)
CE 681 Advanced Civil Engineering Materials ..... (3)
CE 682 Advanced Structural Analysis ..... (3)
CE 683 Experimental Structural Analysis ..... (3)
CE 684 Slab and Folded Plate Structures ..... (3)
CE 686 Advanced Reinforced Concrete Theory ..... (3)
CE 687 Advanced Metal Structures ..... (3)
CE 699 Topics in Civil Engineering (Subtitle Required) ..... (1-4)
CE 709 Computer Applications in Construction ..... (3)
CE 748 Master's Thesis Research ..... (0)
CE 749 Dissertation Research ..... (0)
CE 768 Residence Credit for the Master's Degree ..... (1-6)
CE 769 Residence Credit for the Doctor's Degree ..... (0-12)
CE 772 Experimental Methods in Soil Mechanics ..... (3)
CE 779 Advanced Geotechnical Engineering .. (3)
CE 782 Dynamics of Structures ..... (3)
CE 784 Shell Structures ..... (3)
CE 790 Special Research Problems in Civil Engineering ..... (1-6)
CE 791 Special Design Problems in Civil Engineering ..... (1-6)
EGR 537 Numerical Analysis ..... (3)
EGR 599 Topics in Engineering (Subtitle Required) ..... (1-3)
EGR 611 Boundary Element Methods in Engineering ..... (3)
EGR 621 Finite Element Analysis in Engineering ..... (3)
EGR 622 Advanced Finite Element Analysis in Engineering ..... (3)
EGR 680 Engineering Applications of Stochastic Differential Equations ..... (3)

Classical Languages and Literatures

Graduate Faculty: *Professors* Hubert Martin, Jane Phillips, Robert Rabel, and Louis Swift. *Associate Professors* A. Ross Scaife and Terence Tunberg.

Associate Member: *Assistant Professor* James A. Francis.

The Department offers the M.A. degree under both Plan A and Plan B. While there are no specific course prerequisites for admission, a strong undergraduate concentration in at least one classical language is recommended. The department offers a limited number of teaching assistantships.

Each student will normally elect either Latin literature, Greek literature, or a combination of the two as an area of concentration. A program of courses will be selected from the list below with the advice of the Director of Graduate Studies. Appropriate courses in other areas of graduate study outside of the Department may be added with the approval of the Director of Graduate Studies. Individualized course programs are arranged for students who are preparing for secondary school teaching or who have additional interests in fields other than Classics. A comprehensive examination over the Greek and Roman authors specified in the Department's graduate reading list is required of all degree candidates. All students are expected to demonstrate a reading knowledge of a modern foreign language or a substitute skill approved by the Department. Normally the M.A. program is completed in two years of full-time study.

For additional information and details about graduate study in the Department, contact the Director of Graduate Studies.

CLA 425G The Heroic Ideal: Greek and Roman Epic ..... (3)
CLA 426G Classical Drama: Tragedy and Comedy in Greece and Rome ..... (3)
CLA 450G Special Topics in Classical Literature in Translation (Subtitle required) ..... (3)

CLA 509	Roman Law	(3)
CLA 511	Studies in Roman Philology	(3)
CLA 512	Studies in Roman Philology	(3)
CLA 522	Roman Republican Prose (Subtitle Required)	(3)
CLA 523	Roman Republican Poetry (Subtitle Required)	(3)
CLA 526	Roman Imperial Prose (Subtitle Required)	(3)
CLA 527	Roman Imperial Poetry (Subtitle Required)	(3)
CLA 552	Greek Epic and Lyric Poetry	(3)
CLA 553	Greek Philosophical Literature	(3)
CLA 556	Greek Dramatic Literature	(3)
CLA 557	Greek Historical Literature	(3)
CLA 561	Studies in Greek Philology	(3)
CLA 580	Independent Work in Classics	(3)
CLA 601	Studies in Greek Literature I (Subtitle Required)	(3)
CLA 602	Studies in Greek Literature II (Subtitle Required)	(3)
CLA 603	Studies in Latin Literature of the Republic (Subtitle Required)	(3)
CLA 604	Studies in Latin Literature of the Empire (Subtitle Required)	(3)
CLA 695	Independent Work	(3)
CLA 748	Master's Thesis Research	(0)
CLA 768	Residence Credit for the Master's Degree	(1-6)
CLA 790	Research in the Teaching of Classical Languages	(3)

Clinical Nutrition

Graduate Faculty: *Professors* James W. Anderson, Gilbert Boissonneault, Geza Bruckner, and Elaine L. Jacobson.

Associate Members: *Associate Professor* Maria Boosalis. *Assistant Professor* Doris J. Baker.

Emeritus Professor: Paul Thornton.

The goal of the Division of Clinical Nutrition is to develop nutrition specialists knowledgeable in the metabolic changes that occur in normal and various pathophysiological states. The Division of Clinical Nutrition offers a Plan B degree program resulting in the award of a Master of Science (M.S.) in Clinical Nutrition. Opportunities for specialization are available in the areas of medical nutrition therapy, wellness and health maintenance, and management/administration. In addition, concurrent participation in an American Dietetic Association (ADA) approved dietetic internship and/or Physician Assistant program is possible. Continued graduate study in Clinical Nutrition is possible through the Multidisciplinary Ph.D. Program in Nutritional Sciences.

The core courses provide the student with in-depth knowledge of nutrient metabolism, the physiology of organ systems, and the role of nutrition in the pathophysiology of specific disease states. Elective course selections provide program focus while allowing maximum flexibility to meet individual needs. A minimum of 30 credit hours of course work is required for graduation. Core requirements are listed below; elective courses are selected to complete the degree requirements. The program generally requires 1.5 to 2 years for completion. It is expected that students entering this program shall have completed the necessary courses which are prerequisites for course work offered within the program. A minimum TOEFL score of 580 is required for admission where applicable.

REQUIRED COURSES

CNU 601	Clinical Nutrition	(4)
CNU 602	Current Topics in Clinical Nutrition	(1)
CNU 701	Advanced Clinical Nutrition	(4)
CNU 702	Advanced Clinical Nutrition Internship	(1-5)
CNU 780	Clinical Nutrition Research	(1-5)
CNU 781	Clinical Nutrition Seminar	(1)
	or	
	NS 771 Graduate Seminar in Nutritional Sciences	(0-1)
CNU 782	Independent Study	(1)
	Total Credit Hours:	15-21

SUGGESTED COURSES

BCH 401G	Fundamentals of Biochemistry	(3)
PGY 412G	Principles of Human Physiology	(4)
CNU 603	Nutritional Immunology	(3)
CNU 604	Lipid Metabolism	(3)
CNU 605	Wellness and Sports Nutrition	(3)
CNU 606	Molecular Biology Applications in Nutrition	(2)
CNU 610	Ethics in Clinical Sciences Research	(1)
NS 651	Topics in Nutritional Sciences I	(2)
NS 652	Topics in Nutritional Sciences II	(2)
BSC 775	Human Response to Stress	(3)
HA 601	Overview of the Health Care Delivery System	(3)
KHP 621	Exercise and Coronary Heart Disease	(3)
STA 570	Basic Statistical Analysis	(4)

OPPORTUNITIES FOR SPECIALIZATION

Medical Nutrition Therapy. For students wishing practical experience in nutrition in the treatment of illness and the maintenance of health, specialization in the area of medical nutrition therapy may be desirable. Specialization in this area is useful for those who wish to undertake careers in clinical nutrition in university hospitals and medical centers; for those who intend to teach in the field of clinical nutrition; and for those who plan careers as members of a research team in clinical nutrition and metabolism. Elective courses can be selected to provide expertise in the areas of immunology, biochemistry, physiology, biopathology, nutrient metabolism, and behavioral sciences.

Wellness and Health Maintenance. Another possible area of concentration is in the rapidly growing field of wellness and health maintenance. Specialization in this area may be achieved by selecting elective course areas such as sports nutrition, statistical concepts, management, physiology and exercise physiology, and/or health psychology.

Management/Administration. Supplemental course work in management and administration may be taken to provide a background in planning, coordinating, and managing finances and personnel in the health field. Specialization in this area is useful for those who wish to expand their career potential into management and administrative aspects of the fields of nutrition and dietetics. Elective course selections can provide expertise in the areas of financial, personnel, and organizational management, statistical concepts, and legal and other aspects of the health care system, among others.

Dietetic Internship. In cooperation with the University of Kentucky hospital, special opportunities to participate in an ADA-approved dietetic internship is available on a competitive basis to a limited number of students. American Dietetic Program in Dietetics requirements must be met and M.S. course requirements completed before entry into the internship. Completion of the M.S. program and the internship experience requires a minimum of 2 to 2.5 years.

Physician Assistant (PA) Program. An opportunity exists for completion of the M.S. degree in Clinical Nutrition and the PA program in a minimum of 3 years. Physician Assistants function under the supervision and responsibility of a physician in the provision of routine health care. The graduate of these Programs holds the M.S. degree and eligibility to take the National Certifying Examination for Physician Assistants. Both programs require that prerequisite courses be completed before beginning in these areas of study. A minimum of three years is required for completion of both programs.

CNU 601	Clinical Nutrition	(4)
CNU 602	Current Topics in Clinical Nutrition	(1)
CNU 603	Nutritional Immunology	(3)
CNU 604	Lipid Metabolism	(3)
CNU 605	Wellness and Sports Nutrition	(3)
CNU 606	Molecular Biology Applications in Nutrition	(2)
CNU 610	Ethics in Clinical Sciences Research	(1)
CNU 701	Advanced Clinical Nutrition	(4)

CNU 702	Advanced Clinical Nutrition Internship	(1-5)
CNU 780	Clinical Nutrition Research	(1-5)
CNU 781	Clinical Nutrition Seminar	(1)
CNU 782	Independent Study	(1)

Communication

Graduate Faculty: *Professors* James L. Applegate, Robert Bostrom, Douglas Boyd, Lewis Donohew, David Johnson, Thomas R. Lindlof, Roy L. Moore, Philip C. Palmgreen, and Ramona Rush. *Associate Professors* John Baseheart, James K. Hertog, Joachim Knuf, Richard Labunski, and Norman Van Tubergen and Rick S. Zimmerman.

Associate Members: *Associate Professor* T. Andrew Finn. *Assistant Professors* Shiv K. Bakhshi, Alan DeSantis, Nancy G. Harrington, Derek R. Lane, Susan E. Morgan, and Karla S. Robinson.

Joint Appointments: *Professor* Donald O. Case.

Emeritus Professors: Michael H. Harris and Joseph Ripley.

Communication offers programs leading to the Master of Arts (either Plan A or Plan B) and Doctor of Philosophy degrees. Primary areas of emphasis include communication processes, effects and functions within mass, mediated and interpersonal contexts. Applied areas include health communication, communication and information systems, international and intercultural communication and communication law and policy.

The program offers special opportunities for students to apply communication theory and research in health contexts. Students pursuing work in health communication are encouraged to develop interdisciplinary programs involving the Department of Behavioral Science, College of Medicine, as well as the Colleges of Allied Health, Dentistry, Pharmacy, and Nursing on the University's Medical Campus. Communication also participates in interdisciplinary research programs with the Center for Prevention Research, the Sanders-Brown Center for Aging and a variety of other health-related departments and institutes.

The program is designed to serve the needs of students whose goals may include teaching and academic research, professional research, or communication careers in the media or other organizations. Students with no previous course work in a communication area may be required to take undergraduate work without graduate credit.

Master of Arts

All students will be required to take 12 core credit hours consisting of Proseminar in Communication (CJT 601), Communication Theory (CJT 651), and Communication Research Methods (CJT 665), plus Statistics 570 or its equivalent as determined by the Associate Dean for Graduate Studies. Students must complete 30 credit hours of course work, including six credit hours of CJT 768 (Residence Credit for the Master's Degree), and a thesis (Plan A) or 30 hours of course work with no thesis (Plan B). Plan A students are required to complete an oral and/or written final examination, while Plan B students complete both a written and an oral examination, in the semester in which the degree is to be awarded.

At least 21 credit hours of the minimum requirements for the master's degree must be from offerings within the College of Communications and Information Studies (both Plan A and Plan B). Plan A students may include six hours of CJT 768 in the 21 hours, since the thesis involves work in an area of communication. Also, at least 21 credit hours of the minimum requirements must be in courses at the 600 or 700 levels (both Plan A and Plan B). Plan A students may include six hours of CJT 768 in the 21 hours. No more than three credit hours in Plan A and 6 credit hours in Plan B (of the minimum requirements) may be earned in directed study, directed reading, or internship courses (e.g., CJT 696, CJT 700, CJT 781, CJT 790).

Doctor of Philosophy

The Ph.D. program emphasizes communication as a social science. Graduates are prepared for university positions and careers in government, the media and other organizations as researchers, consultants and policy makers. Students must demonstrate general knowledge of communication, as well as competence in a core area of specialization. Current core areas include health communication, communication and information systems, international and intercultural communication and communication law and policy.

Students must demonstrate a thorough grasp of communication theory and research methods and must take course work in a cognate area outside Communication. Proficiency in a foreign language is no longer required for successful completion of the Ph.D. in Communication. A student's advisory committee may stipulate certain graduate-level courses in another language for the student's program that are consistent with the objectives of the student's program.

The required first-year curriculum is as follows:

Fall Semester
CJT 651
CJT 701
CJT 667
A 500-level or above statistics course

Spring Semester
CJT 631
CJT 665
CJT 645

The Associate Dean for Graduate Studies, in consultation with the Graduate Revies committee, can waive any of the above requirements for a student who has previously taken the same or equivalent course at UK or another university for graduate credit.

Each student works with a major professor and an advisory committee to plan course work and complete the dissertation. The committee also administers the qualifying examination and the final oral examination. The qualifying examination consists of a written and oral examination over general communication, the core area of specialization, research methods/statistics and the cognate area.

Standards for admission to the doctoral program are similar to those of The Graduate School, including satisfactory scores on the verbal, quantitative and analytical portions of the Graduate Record Examination (GRE). For additional information about program requirements and opportunities for financial assistance, write to the Associate Dean for Graduate Studies, College of Communications and Information Studies.

CJT 601	Proseminar in Communication	(3)
CJT 608	Mass Communications and Society	(3)
CJT 615	Proseminar in Communication and Information Systems	(3)
CJT 619	Global Communication and Information Perspectives	(3)
CJT 625	Proseminar in Organizational Communication	(3)
CJT 630	Proseminar in Mass Media Law and Public Policy	(3)
CJT 631	Proseminar in Interpersonal Communication	(3)
CJT 645	Mass Communications Theory Research	(3)
CJT 650	Communication, Language and Culture	(3)

CJT 651 Communications Theory ..... (3)
CJT 665 Communications Research Methods ..... (3)
CJT 671 Proseminar in Health Communication ..... (3)
CJT 682 Communication and Persuasion ..... (3)
CJT 696 Internship in Communications ..... (3)
CJT 700 Directed Reading in Communication ..... (1-3)
CJT 701 Seminar in Communication Perspectives ..... (3)
CJT 715 Seminar in Communication and Information Systems (Subtitle Required) ..... (3)
CJT 719 Special Topics/Issues in International/Intercultural Communications ..... (3)
CJT 721 Seminar in Intrapersonal Communication ..... (3)
CJT 725 Seminar in Organizational Communications (Subtitle Required) ..... (3)
CJT 730 Seminar in Mass Media and Public Policy ..... (3)
CJT 731 Seminar in Interpersonal Communication ..... (3)
CJT 745 Seminar in Mass Communications (Subtitle Required) ..... (3)
CJT 748 Master's Thesis Research ..... (0)
CJT 749 Dissertation Research ..... (0)
CJT 765 Advanced Seminar in Communication Research Methods ..... (3)
CJT 767 Qualitative Methods in Communication Research ..... (3)
CJT 768 Residence Credit for the Master's Degree ..... (1-6)
CJT 769 Residence Credit for the Doctor's Degree ..... (0-12)
CJT 771 Seminar in Health Communication ..... (3)
CJT 780 Special Topics in Communication (Subtitle Required) ..... (3)
CJT 781 Directed Study in Communication ..... (1-6)
CJT 782 Seminar in Strategic Communication (Subtitle Required) ..... (3)
CJT 790 Research Problems in Communication ..... (1-6)

Communication Disorders

Graduate Faculty: *Associate Professors* Lori S. Gonzalez, Judith L. Page, and Sharon R. Stewart.
Associate Members: *Assistant Professor* Jodelle F. Deem.

The Division of Communication Disorders at the University of Kentucky offers a two-year master's degree program in speech-language pathology. The program is a joint effort of the University and the Lexington Veterans' Affairs Medical Center. Students who complete the program will typically meet the academic and clinical training requirements for the American Speech-Language-Hearing Association's (ASHA) Certificate of Clinical Competence in Speech-Language Pathology and for licensure in Kentucky and most states with licensure requirements. Students seeking to fulfill ASHA certification requirements and those desiring certification for school employment should consult with the Director of Graduate Studies.

The length of a student's program depends upon the certification options selected, the student's educational background, and the number of credits completed each semester. Students with an undergraduate major in communication disorders will typically complete the program in two years of full-time study. Students entering without an undergraduate major in communication disorders will need to apply to the undergraduate program to complete approximately one year of prerequisite undergraduate content courses before applying for admission to the graduate program. Additional information regarding these prerequisites is available from the Director of Graduate Studies. For applications to the prerequisite program, contact:

Office of Student Services
Room 118 CAHP Bldg.
University of Kentucky
Lexington, KY 40536-0003

During the first full year of the graduate program, students typically complete course work and clinical practicum at the UK Communications Disorders Clinic. During the second year, students may be assigned to clinical externship rotations in a variety of clinical settings, including the Lexington Veterans' Affairs Medical Center, agencies providing services to children (e.g., public school, preschool, clinic), and agencies in one of Kentucky's Area Health Education Centers (AHECs). Successful completion of a comprehensive examination is required for all degree candidates.

To be considered for admission, a student must have at least a 2.5 undergraduate GPA and submit Graduate Record Examination scores (verbal, quantitative and analytical). Admissions are competitive, so interested students are encouraged to apply by March 1 for Summer admission or by November 1 for Spring admission.

Degree Requirements

The courses expected of all students in the master's degree curriculum include the following:

Core Courses:

CD 521 ..... (3)
CD 647 ..... (3)
CD 655 ..... (3)
CD 670 ..... (3)
CD 672 ..... (3)
CD 673 ..... (3)
CD 674 ..... (3)
CD 701 ..... (3)

Clinical Practicum

CD 657 ..... (6)
(Six credits of approved elective courses may be substituted with approval of the Director of Graduate Studies.)

Successful completion of written comprehensive examinations is required.

Certification Requirements

Students wishing to meet American Speech-Language-Hearing Association certification requirements must also complete the following additional clinical practicum and clinical rotation experiences:

CD 656 ..... (1)
CD 657 ..... (3)
CD 658 ..... (1)
CD 659 ..... (21-36)

For additional information, contact:

Director of Graduate Studies
Division of Communication Disorders
1030 S. Broadway, Suite 5
Lexington, KY 40504-2605

CD 511 Speech-Language Development and Disorders for the Severely Handicapped ..... (3)
CD 512 Speech-Language Development and Disorders for the Mildly Handicapped (3)
CD 514 Language Development Through the Lifespan ..... (3)
CD 515 Language Assessment and Remediation ..... (3)
CD 521 Nonspeech Communication ..... (3)
CD 555 Problems in Communication Disorders (Subtitle Required) ..... (1-4)
CD 585 Speech Science ..... (3)
CD 587 Audiometry ..... (3)
CD 588 Disorders of Articulation ..... (3)
CD 589 Craniofacial Anomalies ..... (3)
CD 591 Aural Rehabilitation ..... (3)
CD 592 Problems and Needs of the Hearing Impaired ..... (3)
CD 610 Ethics in Clinical Sciences Research ... (1)
CD 647 Advanced Language Disorders ..... (3)
CD 655 Advanced Diagnostic Procedures in Speech and Language Pathology ..... (3)
CD 656 Clinical Practicum in Diagnostic Procedures for Speech and Language Pathology ..... (1)
CD 657 Clinical Practicum in Speech and Language Pathology ..... (3)
CD 658 Clinical Practicum in Audiology ..... (1)
CD 659 Clinical Rotation in Speech and Language Pathology ..... (1-12)
CD 670 Disorders of Phonation ..... (3)
CD 672 Aphasia and Related Neurogenic Disorders of Language ..... (3)
CD 673 Neurogenic Disorders of Speech and Language ..... (3)
CD 674 Disorders of Fluency ..... (3)
CD 701 Research Methodology in Communication Disorders ..... (3)
CD 702 Seminar in Speech Pathology (Variable Topic) ..... (1-3)
CD 789 Independent Study in Communication Disorders ..... (1-6)

Computer Science

Graduate Faculty: *Professors* Yuri Breitbart, Raphael A. Finkel, Forbes Lewis, Wiktor Marek, Miroslaw Truszczynski, and Grzegorz W. Wasilkowski. *Associate Professors* Fuhua Cheng, Judy Goldsmith, James N. Griffioen, Jerzy Jaromczyk, Andrew M. Klapper, and Brent W. Seales.

Associate Members: *Associate Professors* Anthony Q. Baxter, Kenneth Calvert, and Duncan Clarke. *Assistant Professors* D. Manivannan and Jun Zhang.

Joint Appointments: *Professor* Kenneth K. Kubota.

Emeritus Professors: A.R. Newbery.

The Department of Computer Science offers programs of study leading to the Master of Science and Doctor of Philosophy degrees. Admission to these programs is highly competitive and based upon academic record, GRE scores, and letters of recommendation. It is strongly suggested that applicants present evidence of mathematical maturity as well as competence in computer science. Full details of the requirements for degree programs are available from the department upon request.

Since very few specific courses are required for the graduate degree programs, all candidates are expected to demonstrate proficiency in the fundamental areas of computer science by passing foundational examinations in computing systems, numerical methods, and computational theory and algorithm analysis. Participation in departmental seminars is also required.

Both thesis (Plan A) and non-thesis (Plan B) options are available in the program leading to the Master of Science degree. A project is required of non-thesis candidates. No language requirement (other than proficiency in English) is mandated.

The doctoral program in Computer Science is a research degree granted primarily on the presentation of a substantial research achievement. To be admitted to candidacy for this degree, candidates must satisfy the requirements of the Graduate School, present evidence of proficiency in a language which is not their native tongue, and pass the qualifying examination. This examination consists of written and oral sections covering breadth in computer science as well as depth in a specific area.

Areas of research actively pursued by faculty and students within the department include: artificial intelligence, numerical methods, operating systems, distributed computing and networking, theory of computation, data base technology, design and analysis of algorithms, cryptography, graphics and vision, parallel processing, and software engineering. Courses in these and other areas are available to permit students to complete studies of sufficient breadth and depth prior to engaging in independent research.

CS 405G	Introduction to Database Systems	(3)
CS 415G	Graph Theory	(3)
CS 416G	Principles of Operations Research I	(3)
CS 441G	Compilers For Algorithmic Languages	(3)
CS 450G	Fundamentals of Programming Languages	(3)
CS 463G	Logic and Artificial Intelligence	(3)
CS 470G	Introduction to Operating Systems	(3)
CS 471G	Networking and Distribted Operating Systems	(3)
CS 480G	Advanced Computer Architecture	(3)
CS 485G	Topics in Computer Science (Subtitle Required)	(2-4)
CS 505	Advanced Concepts in Database Systems	(3)
CS 515	Algorithm Design	(3)
CS 521	Computational Sciences	(3)
CS 522	Matrix Theory and Numerical Linear Algebra I	(3)
CS 532	Finite Precision Arithmetic	(3)
CS 535	Intermediate Computer Graphics	(3)
CS 537	Numerical Analysis	(3)
CS 538	Numerical Analysis II	(3)
CS 541	Advanced Compiler Design I	(3)
CS 550	Introduction to Coding Theory	(3)
CS 555	Logic For Computer Science	(3)
CS 560	Artificial Intelligence	(3)
CS 570	Modern Operating Systems	(3)
CS 575	Theoretical Aspects of Computing	(3)
CS 585	Intermediate Topics in Computer Science (Subtitle Required)	(3)
CS 587	Microcomputer Systems Design	(3)
CS 605	Advanced Information Processing	(3)
CS 610	Master's Project	(3)
CS 612	Independent Work in Computer Science	(1-3)
CS 622	Matrix Theory and Numerical Linear Algebra II	(3)
CS 630	Geometric Modeling	(3)
CS 631	Error Analysis and Certification	(3)
CS 635	Image Processing	(3)
CS 636	Computer Vision	(3)
CS 641	Advanced Compiler Design II	(3)
CS 642	Discrete Event Systems	(3)
CS 645	Computer Networks	(3)
CS 650	Problem Seminar	(3)
CS 655	Design of Programming Languages	(3)
CS 660	Topics in Artificial Intelligence (Subtitle Required)	(3)
CS 674	Heuristic Algorithms	(3)
CS 675	Theory of Computation	(3)
CS 676	Parallel Algorithms	(3)
CS 677	Computational Geometry	(3)
CS 679	Advanced Graph Algorithms	(3)
CS 680	Seminar in Computer Science	(2)
CS 682	Switching Theory	(3)
CS 683	Finite-State Machines	(3)
CS 685	Special Topics in Computer Science (Subtitle Required)	(3)
CS 686	Special Topics in the Theory of Computation (Subtitle Required)	(3)
CS 687	Special Topics in Software (Subtitle Required)	(3)
CS 688	Neural Networks	(3)
CS 689	Special Topics in Numerical Computing (Subtitle Required)	(3)
CS 690	Operating Systems Theory	(3)
CS 748	Master's Thesis Research	(0)
CS 749	Dissertation Research	(0)
CS 768	Residence Credit For the Master's Degree	(1-6)
CS 769	Residence Credit For the Doctor's Degree	(0-12)

Crop Science

Graduate Faculty: *Professors* Michael Barrett, Glenn B. Collins, Michael Collins, Paul L. Cornelius, Charles D. Dougherty, Dennis B. Egli, Larry Grabau, David Hildebrand, Paul Legg, Mark T. Nielsen, Todd Pfeiffer, Charles G. Poneleit, Norman L. Taylor, Dennis M. Tekrony, David A. VanSanford, and William W. Witt. *Associate Professors* Harold R. Burton and Timothy D. Phillips.

Associate Members: *Extension Professors* Morris J. Bitzer, Garry D. Lacefield, James R. Martin, and Andrew J. Powell. *Associate Extension Professors* Jonathan D. Green and Jimmy C. Henning.

Joint Appointments: *Professors* Lowell P. Bush, Joseph Chappell, George M. Cheniae, Robert L. Geneve, Arthur G. Hunt, Dewayne L. Ingram, and George Wagner. *Extension Professor* Robert Anderson. *Associate Professors* Jack W. Buxton, John C. Snyder, David B. Wagner, and Leslie Weston. *Associate Extension Professor* Gary K. Palmer.

The interdepartmental Crop Science graduate program offers graduate work leading to the Master of Science and Doctor of Philosophy degrees with areas in plant breeding and genetics, crop physiology and management, turf science, cellular and molecular genetics, seed science and technology and weed science. Faculty are from the Departments of Agronomy, Forestry and Horticulture in the College of Agriculture. For the M.S. degree, 24 hours of course work plus an acceptable thesis are required (Plan A). Work leading to advanced degrees must conform to the general rules and regulations of The Graduate School. Crop Science faculty also participate in the interdepartmental Plant and Soil Science graduate program which offers programs of study leading to the Master of Science degree.

Individual programs are developed to include a strong course work component and a meaningful research experience. A strong undergraduate background in the agricultural and biological sciences is required for all degree candidates.

A Crop Science minor is offered and must be administered by a member of the Graduate Faculty and requires a minimum of nine credit hours of graduate level plant science courses.

PLS 502	Ecology of Economic Plants	(3)
PLS 510	Forage Management and Utilization	(4)
PLS 515	Turf Management	(3)
PLS 556	Seed Technology	(3)
PLS 560	Soil-Plant Relationships	(3)
PLS 597	Special Topics in Agronomy (Subtitle Required)	(1-3)
PLS 599	Special Problems in Agronomy	(1-4)
PLS 601	Special Topics in Molecular and Cellular Genetics	(1)
PLS 602	Principles of Yield Physiology	(3)
PLS 619	Cytogenetics	(4)
PLS 620	Plant Molecular Biology	(3)
PLS 622	Physiology of Plants I	(3)
PLS 623	Physiology of Plants II	(3)
PLS 630	Experimental Techniques in Plant Physiology	(3)
PLS 650	Soil–Plant Relationships	(3)
PLS 657	Seed Biology	(3)
PLS 658	Advanced Weed Science	(4)
PLS 664	Plant Breeding I	(3)

PLS 676	Quantitative Inheritance in Plant Populations	(3)
PLS 697	Special Topics in Agronomy (Subtitle Required)	(1-3)
PLS 732	Mineral Nutrition of Plants	(3)
PLS 748	Master's Thesis Research	(0)
PLS 749	Dissertation Research	(0)
PLS 768	Residence Credit for the Master's Degree	(1-6)
PLS 769	Residence Credit for the Doctor's Degree	(0-12)
PLS 772	Plant and Soil Science Seminar	(1)
PLS 773	Seminar in Plant Physiology	(1)
PLS 799	Research in Agronomy	(1-4)

Curriculum and Instruction

Graduate Faculty: *Professors* Ronald Atwood, Virginia Atwood, Linda S. Levstik, Shirley C. Raines, and Angene Wilson. *Associate Professors* Gary J. Anglin, William S. Bush, Robert W. Gaskins, Deneese L. Jones, Rosetta F. Sandidge, Mary C. Shake, Douglas C. Smith, J. T. Stevens, and Karen S. Webb.

Associate Members: *Professor* Jack F. McElroy. *Associate Professor* Sharon Brennan. *Assistant Professors* Hariette J. Arrington, William Bintz, Sharon S. Brennan, Marion E. Hines, Douglas L. Jones, Joan M. Mazur, and Sara D. Moore. *Adjunct Professor* Robert S. Tannenbaum.

Emeritus Professors: Harry Barnard, Connie Bridge, Leland Smith.

The Department of Curriculum and Instruction offers a wide range of graduate programs leading to the Master of Arts in Education, Master of Science in Education (Plan A or Plan B available) and Doctor of Education degrees. These programs are designed to prepare specialists for a variety of roles in curriculum and instruction including teaching, supervising, and coordinating subject matter areas at the elementary, middle school, senior high, and junior college levels. The doctoral programs prepare leaders for public schools, universities and other educational agencies. Specialization is available in several graduate areas.

In cooperation with the Department of Administration and Supervision, the department offers a program leading to the Doctor of Education (Ed.D) degree in Instruction and Administration.

Course work for the Ed.D. in Instruction and Administration will consist of a minimum of 42 graduate credits beyond the master's degree planned by the Major Professor and Advisory Committee based on the student's background, needs and goals. All course work plans will include work in the following:

a. instruction and administration,

b. support work in education,

c. research tool courses (minimum of 9 semester hours required), and

d. support work outside of education.

For more information about the program, please consult the Director of Graduate Studies.

MASTER OF ARTS IN EDUCATION
(ELEMENTARY EDUCATION OPTION)

For a Master of Arts in Education, a minimum of 12 semester hours of graduate work shall be selected from at least three areas of professional education. Consult the Director of Graduate Studies for specific recommendations within this broad framework. The program qualifies teachers for a Rank II Certificate if they have completed the appropriate undergraduate curriculum.

MASTER OF ARTS IN EDUCATION
(EARLY CHILDHOOD EDUCATION)

This is a cooperative degree program offered through the Department of Curriculum and Instruction and Family Studies. The Master of Arts in Education is offered through Curriculum and Instruction; the Master of Science in Family Studies through Home Economics. Admission to either program requires submission of a departmental application, in addition to The Graduate School application. The program requires a minimum of 36 graduate hours, or 30 hours and a thesis. Course work will be selected from the following areas. Consult the Director of Graduate Studies for specific course recommendations within this framework. This program qualifies teachers for a standard certificate if they have completed the appropriate undergraduate curriculum.

MASTER OF ARTS IN EDUCATION AND MASTER OF SCIENCE IN EDUCATION
(MIDDLE SCHOOL EDUCATION)

The Master of Arts in Education/Master of Science in Education degree in Middle School Education is a 30-hour program leading to Rank II certification in Middle School for those students completing appropriate undergraduate work. Students complete a minimum of 12 hours in the department, 3 hours in other areas of education, and 12 hours outside the college in an area appropriate to teaching specialization. Students completing this subject area course work in mathematics or science are eligible for the Master of Science in Education degree. Consult the Director of Graduate Studies for more detailed information regarding this program.

MASTER OF ARTS IN EDUCATION
(SECONDARY EDUCATION OPTION)

For a Master of Arts in Education, a minimum of 12 semester hours of graduate work shall be selected from at least three areas of professional education. Consult the Director of Graduate Studies for specific recommendations within the broad framework. The program qualifies teachers for a Rank II Certificate if they have completed the four-year undergraduate curriculum.

MASTER OF SCIENCE IN EDUCATION
(SECONDARY EDUCATION OPTION)

The general requirements for the Master of Science in Education, secondary education area, are the same as those for the Master of Arts in Education. However, the Master of Science in Education may be granted only to those students whose work outside the College of Education includes at least 12 semester hours in mathematics and/or science.

MASTER OF ARTS IN EDUCATION AND MASTER OF SCIENCE IN EDUCATION
(INITIAL CERTIFICATION OPTION—SECONDARY EDUCATION)

This program is designed for students with a completed bachelor's degree. If it is a University of Kentucky degree, it must include a major in business, English, a foreign language, history, mathematics, a science, a social science, or in secondary education. Students having a bachelor's degree in subject area majors listed above from another institution are also eligible. Students not having a degree in one of the above majors may be required to complete additional course work.

Students may meet state certification requirements while completing degree requirements. A minimum of six semester hours of graduate work must be completed outside the College of Education in the teaching specialty area. Dependent upon the student's background, one may need to complete undergraduate deficiencies to meet degree and certification requirements. Consult the Director of Graduate Studies for specific information regarding degree requirements.

MASTER OF SCIENCE IN EDUCATION
(INSTRUCTIONAL SYSTEMS DESIGN OPTION)

The Instructional Systems Design area is a 36-semester hour program designed for individuals who are not seeking public school certification but wish to develop their knowledge and skills in planning and designing instruction. Persons choosing this area are frequently preparing for

instructional systems design responsibilities in business and industry, government and various training organizations.

All students are required to complete an 18-hour common core including nine semester hours in the Department of Curriculum and Instruction. At least six hours must be taken outside the College of Education. Both a thesis option (Plan A, requiring 30 hours of course work and six hours of thesis credit) and a non-thesis option (Plan B, requiring 36 hours of course work) are offered. Specific programs are planned with a faculty advisor subject to the approval of the Director of Graduate Studies.

MASTER OF ARTS IN EDUCATION
(READING)

Requirements for a Master of Arts in Education with Reading as an area of concentration must meet the specifications for a Master of Arts in Education, Plan B. The requirements must also be in conformity with the general requirements for the Master of Arts in Education (Elementary) or the Master of Arts in Education (Secondary).

The curriculum shall include a minimum of 33 semester hours of preparation according to the following distribution:

a. A minimum of 18 semester hours credit in graduate level reading courses to include EDC 619, EDC 620, EDC 642, or EDC 641. An additional 6 hours to be selected with the approval of an adviser.
b. Six to nine semester hours credit in the College of Education, selected to extend the humanistic, behavioral, multi-cultural and research components of the program, based on the student's educational background, with adviser approval.
c. Six to nine semester hours credit selected from appropriate support areas outside the College of Education, with adviser approval.

Completion of the Master of Arts in Education with Reading as an area of concentration will fulfill the academic requirements for certification as a reading specialist. A minimum of three years of successful classroom teaching is an additional requirement for this certification.

EDC 501 Teaching Internship ..... (1-12)
EDC 513 Teaching English as a Second Language ..... (3)
EDC 514 TESL Materials and Methods ..... (3)
EDC 533 Teaching Reading in the Secondary School ..... (3)
EDC 534 Reading and Study Skills in English .... (3)
EDC 543 Video For Distance Education and Multimedia ..... (3)
EDC 544 Use and Integration of Educational Media ..... (3)
EDC 547 Instructional Computing I ..... (3)
EDC 548 Instructional Computing II ..... (3)
EDC 550 Education in a Culturally Diverse Society ..... (3)
EDC 565 Modern Educational Problems (General Curriculum) ..... (3)
EDC 575 Modern Educational Problems (Unclassified) ..... (3)
EDC 576 Modern Educational Problems (Unclassified) ..... (3)
EDC 580 Introduction to Gifted Education ..... (3)
EDC 600 Workshop in Reading ..... (1-3)
EDC 602 Curricula and Programming for the Gifted ..... (3)
EDC 607 Instructional Design I ..... (3)
EDC 608 Instructional Design II
EDC 609 Interactive Multimedia Research and Design ..... (3)
EDC 610 Discipline and Classroom Management ..... (3)
EDC 611 Authoring Applications for Technology-Based Instruction ..... (3)
EDC 612 Instructional Design and Technology Foundations ..... (3)
EDC 615 Advanced Instructional Applications for the Early Adolescent Learner ..... (3)
EDC 616 The Middle School ..... (3)
EDC 618 Advanced Study in the Teaching of Reading ..... (3)
EDC 619 Assessment of Reading Growth and Development ..... (3)
EDC 620 Design and Implementation of Reading Instruction ..... (3)
EDC 621 Linguistic and Cognitive Foundations of Reading in Early Childhood ..... (3)
EDC 631 Mathematics Pedagogy in the Secondary School ..... (0-3)
EDC 632 Social Studies Pedagogy in the Secondary School ..... (0-3)
EDC 633 Business Pedagogy in the Secondary School ..... (0-3)
EDC 634 Science Pedagogy in the Secondary School ..... (0-3)
EDC 635 English Pedagogy in the Secondary School ..... (0-3)
EDC 636 Methods of Teaching Foreign Language, K-12 ..... (0-3)
EDC 641 Research and Theory in Teaching Reading in the Elementary School ..... (3)
EDC 642 Research and Theory in Teaching Language Arts in the Elementary School ..... (3)
EDC 670 Advanced Study in the Teaching of Elementary School Mathematics ..... (3)
EDC 676 Practicum in Gifted Education ..... (3)
EDC 710 Advanced Topics in Instructional Design ..... (3)
EDC 712 The Elementary School ..... (3)
EDC 714 The Secondary School ..... (3)
EDC 724 Organization and Supervision of Student Teaching ..... (3)
EDC 730 Problems of the School Curriculum ... (3)
EDC 732 Principles of Curriculum Construction (3)
EDC 740 Practicum in Teaching Reading and Related Language Arts ..... (3)
EDC 746 Subject Area Instruction in the Secondary School ..... (0-9)
EDC 748 Master's Thesis Research ..... (0)
EDC 749 Dissertation Research ..... (0)
EDC 750 Internship in Instructional Systems Design ..... (3)
EDC 755 Instructional Systems Design Research Colloquium ..... (1)
EDC 768 Residence Credit for the Master's Degree ..... (1-6)
EDC 769 Residence Credit for the Doctor's Degree ..... (0-12)
EDC 777 Seminar in Curriculum and Instruction (Subtitle Required) ..... (1-3)
EDC 781 Independent Study in Curriculum and Instruction ..... (1-3)
EDC 791 Research Problems in Curriculum and Instruction ..... (1-3)

Dentistry

Graduate Faculty: *Professors* Leon A. Assael, Jeffrey B. Dembo, Gerald A. Ferretti, J. David Hardison, M. Tellervo Laine-Alava, Harold R. Laswell, David A. Nash, Jeffrey P. Okeson. *Associate Professors* Cynthia S. Beeman, Larry C. Breeding, John T. Dominici, Samuel J. Jasper, Craig S. Miller, and Richard J. Mitchell.

Associate Members: *Associate Professors* Johnny G. Cailleteau, E. Preston Hicks, and Robert E. Kovarik. *Assistant Professors* G. Thomas Kluemper, and Mark V. Thomas.

Joint Appointments: *Professors* Albert T. Brown, James F. Drummond, Thomas T. Lillich, and Timothy A. Smith. *Associate Professor* Robert B. Calmes, Jr.

Emeritus Professors: Gerald I. Roth and Stanley Saxe.

Students pursuing specialty training in orthodontics, periodontics and orofacial pain are eligible for the Master of Science degree. Successful completion of the degree is prerequisite to award of a specialty certificate.

The goal of the Master of Science degree program is to produce graduates who are clinically adept, well-grounded in research and the biological basis of their specialties, and prepared to function at a high level of accomplishment in specialty practice and academic dentistry.

Only dental graduates of high academic standing will be accepted into this program, which requires three years of didactic, clinical, and research training. All of these elements are integrated throughout the program. All students receive teaching experience in anticipation of full- or part-time academic involvement after graduation.

The program is interdisciplinary. Faculty are drawn from the College of Dentistry clinical and graduate faculty, the Medical Center Departments of Anatomy, Pediatrics, Psychiatry and Behavioral Science, and from departments on the Lexington Campus.

Requirements for the Master of Science degree are: 1) satisfactory completion of program requirements; 2) 24 hours graduate credit, at least half of which must be

from a "core" curriculum; 3) submission of an acceptable thesis based on an individual research project (Plan A); and 4) passage of a comprehensive oral examination and thesis defense. Foreign language credit is not required.

OFP 634	Current Concepts in Temporomandibular Disorders	(3)
OFP 636	Clinical Management of Temporomandibular Disorders	(3)
OFP 700	Orofacial Pain Treatment Planning Seminar	(2)
OFP 734	Current Concepts in Orofacial Pain	(3)
OFP 736	Clinical Management of Orofacial Pain	(3)
ORT 610	Cranio-Facial Form	(3)
ORT 620	Oral-Pharyngeal Function I	(2)
ORT 621	Oral-Pharyngeal Function II	(2)
ORT 660	Orthodontic Diagnosis	(1)
ORT 661	Orthodontic Seminar-Clinic	(3)
ORT 662	Orthodontic Technique	(3)
ORT 664	Biomechanics	(1)
ORT 710	Management of Complex Orofacial Deformities	(1)
ORT 748	Master's Thesis Research	(0)
ORT 768	Residence Credit for the Master's Degree	(1-6)
ORT 770	Orthodontic Seminar	(1)
ORT 790	Research in Orthodontics	(1-5)
CDS 550	Research Methodology and Instrumentation	(2)
CDS 611	Child Growth and Development I	(2)
CDS 612	Child Growth and Development II	(2)
CDS 620	Current Concepts in Geriatric Health Care	(2)
CDS 622	Instructional Skills in Geriatric Health Care	((3)
CDS 624	Issues in Geriatric Health Care Administration	(1)
CDS 631	Principles of Dental Occlusion	(2)
CDS 748	Master's Thesis Research	(0)
CDS 768	Residence Credit for the Master's Degree	(1-6)
CDS 770	Geriatric Dentistry Seminar—Clinic	(2)
CDS 790	Research in Geriatrics	(1-4)
OBI 650	Oral Biology for Postdoctoral Dental Students	(4)
OBI 720	Microbial Structure and Function	(4)
OPT 651	Graduate Oral Pathology	(3)
OSG 651	Anatomical Relationships in Surgery	(1)
PER 610	Introduction to Geriatric/ Gerontologic Health Care	(1)
PER 626	Advanced Concepts in General Dentistry	(1)
PER 661	Modern Concepts in Periodontics	(2)
PER 748	Master's Thesis Research	(0)
PER 768	Residence Credit for the Master's Degree	(1-6)
PER 770	Treatment Planning Seminar	(2)
PER 772	Periodontal Biology and Pathology	(2)
PER 774	Periodontics Surgical Seminar	(1)
PER 776	Periodontal Therapy Seminar	(1)
PER 790	Research in Periodontics	(1-3)

Diplomacy and International Commerce

Graduate Faculty: *Professor* John D. Stempel.

Associate Member: *Associate Professor* Michael Desch. *Assistant Professor* Robert E. Burnett.

Emeritus Professor: Vincent Davis.

The Patterson School of Diplomacy and International Commerce offers an interdisciplinary master's degree and serves in an advisory capacity with respect to the Ph.D. programs in international studies within the several departments historically most closely associated with the Patterson School. These include most of the social science departments in the College of Arts and Sciences (especially History and Political Science), and most of the departments in the College of Business and Economics (especially Economics, Finance, Management, and Marketing), plus a few others elsewhere on campus such as Agricultural (Development) Economics, and Communications.

The M.A. degree program can be tailored with considerable flexibility to meet the career needs of any particular student. Plan A and Plan B are available. This program is especially useful for the student desiring a career in any of the non-academic fields in foreign affairs, such as international banking, international commerce, international journalism (foreign correspondent), or service with governmental agencies (such as the U.S. Department of State) or international organizations (such as the United Nations) in foreign affairs.

At least half of the 30 minimum hours for the M.A. degree must ordinarily be in one of the departments historically most closely associated with the Patterson School. Each student is expected, in the absence of special circumstances, to take a methodology course such as accounting, statistics or computer science at the graduate level. Most students will need three semesters to complete the 30 minimum hours for the M.A. degree; however, some elect to remain for four semesters, going well beyond the 30-hours minimum, in order to obtain more breadth and/or depth in their desired fields of professional preparation. Students are encouraged to serve a career-related internship obtained with the Patterson School's assistance. This internship will typically be scheduled in the summer between the first and second academic years in residence, but there is enough flexibility for it to occur at other times and in some cases to extend beyond the normal ten-weeks limit.

To assure the interdisciplinary character of the degree, the M.A. candidate is expected to take 12 to 15 hours distributed in at least two departments outside the major departmental concentration. Courses acceptable to the program include those dealing with interstate and cultural relations, foreign policy, national and regional development processes, and others related to the student's career goals as approved by the School. Coursework may be concentrated in a specific geographical area such as Latin America, Asia, Europe, etc., or more broadly focused in certain topical or functional aspects of international affairs.

The student must pass a written and an oral examination covering work in three subfields of study, with these subfields to be defined for the student and in consultation with the student by the Patterson School Director of Graduate Studies.

The Patterson School M.A. candidate must meet the basic Graduate School requirement for a reading knowledge of a modern foreign language.

The M.A. degree offered by the Patterson School matches up well with other graduate and professional programs such as a law degree, for those students who might desire extended postgraduate career preparation. However, the Patterson School M.A. degree does not match up well with a doctoral degree. Students who contemplate obtaining a Ph.D. are advised to proceed directly toward that goal.

A number of non-service Patterson School fellowships are available from the income from the bequest of James K. Patterson, the first President of the University.

Application forms for admission and for fellowship assistance should be requested from the Dean of The Graduate School and returned to the Dean of The Graduate School. GRE scores and official transcripts from each college or university attended are required by The Graduate School as part of the application procedure. In addition, each applicant is required to submit a brief statement (two or three pages, at most) explaining the special interest in the Patterson School program in terms of career goals, along with three academic letters of reference and three letters of character or employment reference to be mailed directly to the Director of the Patterson School.

DIP 720	Economic Statecraft	(3)
DIP 730	Cross-cultural Negotiation and Bargaining	(3)

DIP 748	Master's Thesis Research	(0)
DIP 768	Residence Credit for the Master's Degree	(1-6)
DIP 777	Research Problems in International Relations	(3)
DIP 780	International Science and Technology Policy	(3)
DIP 795	Special Problems in Diplomacy and International Commerce	(3)

Economics

Graduate Faculty: *Professors* M.M. Ali, Mark Berger, Dan Black, Glenn C. Blomquist, James Fackler, John Garen, Richard Gift, Curtis Harvey, Charles Hultman, Richard Jensen, Joseph Krislov, and Frank Scott. *Associate Professors* William H. Hoyt, Yoonbai Kim, John Madden, and Mark Toma. *Extension Professor* Randolph McGee.

Associate Members: *Assistant Professors* Stacy Dickert-Conlin and James Stoker.

Joint Appointment: *Professor* Eugenia Toma.

Emeritus Professors: Don Soule.

MASTER OF SCIENCE DEGREE

Objectives

The M.S. in Economics is primarily for students who wish to have flexibility in a program of advanced study in economics. This degree program provides minimal preparation for employment as an undergraduate teacher of economics in community colleges and as a researcher for government, business, and other organizations. The program can be structured to prepare a student for further graduate work in economics and related fields, but it is also suitable for students with strong interdisciplinary interests.

Requirements

Recommended minimal undergraduate preparation: six hours of intermediate theory, six hours of statistics, and six hours of calculus. These can be taken in the program as additional work.

Requirements for the M.S. in economics are:

1. A minimum of 30 hours of graduate credit courses.
   a. The student must satisfactorily complete the following courses:

      ECO 590 Introduction to Quantitative Economics I
      ECO 601 Advanced Microeconomic Theory
      ECO 602 Macroeconomic Theory
      ECO 603 Research Methods and Procedures
      ECO 703 Introduction to Econometrics I

      The student must also satisfactorily complete either:

      ECO 701 Neoclassical Microeconomic Theory
      or
      ECO 702 Advanced Macroeconomic Theory

      and one course in an elective area of the Ph.D. program.

   b. courses taken outside of the Department of Economics must be approved by the Director of Graduate Studies to count toward the 30 hour requirement.
2. success in a final examination.
3. minimal average of grade B in all courses attempted for graduate credit after being admitted to Graduate School. Students obtaining six quality points below a B average will be dropped by the department.

DOCTOR OF PHILOSOPHY DEGREE

Objectives

The Ph.D. program is designed to enable the graduate to contribute to the advancement of economics. The program is also aimed at producing graduates who are qualified to teach, as well as engage in private sector and governmental research and consulting.

To attain these objectives, the program is designed to provide the student with the appropriate knowledge, understanding, skills and abilities, including:

1. an understanding of economic theory.
2. skill in the use of quantitative techniques, specifically mathematics and statistics.
3. specialization in a limited number of areas.
4. a knowledge of the broad social and political background of the economic environment.
5. experience in the development of research projects throughout their entire program.
6. research and writing skills that would lead to the publication of original research.
7. competence in communicating economic knowledge to broad and diverse audiences.
8. recommended minimal under-graduate preparation: six hours of intermediate economic theory,sixhours of statistics, and six hours of calculus.

Requirements

Minimum admission requirements are an undergraduate grade point average of 2.5, a graduate grade point average of 3.0, and a minimum combined score of 1,500 on the verbal, quantitative and analytical sections of the Graduate Record Examination general test. Meeting the minimum requirements does not guarantee admission.

Work for the degree of Doctor of Philosophy in Economics must conform to the general requirements of The Graduate School. The requirements for the degree are:

1. Economic Theory. The student must demonstrate competence in economic theory as demonstrated by passing a departmental written examination in economic theory. This examination will be given twice a year, at the beginning ofthe spring semester and the eight-week summer session. Students failing the examination will be given a second attempt; those failing on the second attempt will be dropped from the program.

   Minimal preparation for the written examination in economic theory can be achieved by taking the following core courses:

   ECO 601 Advanced Microeconomic Theory
   ECO 602 Macroeconomic Theory
   ECO 701 Neoclassical Microeconomic Theory
   ECO 702 Advanced Macroeconomic Theory

   In addition the student must satisfactorily complete ECO 704 and ECO 705.
2. Statistics/Econometrics. The student must demonstrate competence in the area of statistics and econometrics. This competence may be demonstrated by satisfactory performance in the following courses:

   STA 424G Probability and Distribution Theory
   or
   ECO 603 Research Methods and Procedures
   ECO 703 Introduction to Econometrics I
   ECO 706 Introduction to Econometrics II

   or by passing a special examination.
3. Elective Areas. All Ph.D. students must choose two fields of study approved by the student's Advisory Committee. The two fields may be chosen from the following:

   Environmental and Resource Economics
   Industrial Organization
   International Economics
   Labor Economics
   Monetary Economics
   Public Economics

   Minimum course preparation for each field shall consist of at least two courses as determined by the student's Advisory Committee. In addition to the two chosen fields, the student is encouraged to take elective courses in other areas of economics, such as econometrics or economic theory, or in other disciplines such as Agricultural Economics, Finance, Marketing, Management, Mathematics, or Public Administration.

4. Supporting Work. At least nine hours of supporting course work must be selected. These courses must be approved by the student's Advisory Committee. This supporting work will allow the student to pursue more intensive study of one or both of the two chosen fields, or to pursue courses in other fields of economics. The supporting work cannot consist of 400 or 500 level courses, ECO 610 or ECO 611, ECO 652, or any of the core courses in economic theory (ECO 601, ECO 602, ECO 701, ECO 702, ECO 704, ECO 705) or econometrics (ECO 703, ECO 706).

5. Grades. Minimal average of grade B in all courses attempted for graduate credit after being admitted to The Graduate School.

   Students obtaining six quality points below a B average will automatically be dropped by the department.

6. Qualifying Examinations.
   a. Written Examination:
      The written examination must be taken in the student's two elective fields as part of the requirements for candidacy for the Ph.D. degree. This examination is given twice a year, at the beginning ofthe spring semester and at the beginning of the eight-week summer session. The written examination is prepared and graded by specialists in the respective fields. In the event that the student fails one or both parts of the examination, the student's Advisory Committee determines the conditions which must be met before another examination is given. The minimum time between examinations is four months. Two failures to pass the written examination constitute failure of the qualifying examination.
   b. Oral Examination:
      After passing the written qualifying examination, the Director of Graduate Studies will, on the advice of the Advisory Committee, schedule through the Graduate School an oral examination which will be administered by the Advisory Committee. The examination will ordinarily consist of the presentation and defense of a dissertation proposal.

7. The Ph.D. Dissertation. The dissertation will be based on original research on a significant topic. The dissertation will be defended in an oral examination.

ECO 450G Economics of Poverty and Welfare Programs ..... (3)
ECO 465G Comparative Economic Systems ..... (3)
ECO 473G Economic Development ..... (3)
ECO 475G Latin American Economies ..... (3)
ECO 485G Monetary Economics ..... (3)
ECO 487G Intermediate Macroeconomic Theory ..... (3)
ECO 488G Intermediate Microeconomic Theory ..... (3)
ECO 492G Economic Modeling and Data Analysis ..... (3)
ECO 590 Introduction to Quantitative Economics I ..... (3)
ECO 601 Advanced Microeconomic Theory ..... (3)
ECO 602 Macroeconomic Theory ..... (3)
ECO 603 Research Methods and Procedures in Economics ..... (3)
ECO 610 Managerial Economics ..... (3)
ECO 611 Money, Financial Markets, and the Economy ..... (3)
ECO 652 Public Policy Economics ..... (3)
ECO 653 Health Economics ..... (3)
ECO 654 Benefit-Cost Analysis ..... (3)
ECO 670 Economics of International Financial Institutions ..... (3)
ECO 672 World Trade and Commercial Policy ..... (3)
ECO 674 Agriculture and Economic Development ..... (3)
ECO 700 Teaching Methods in Business ..... (1)
ECO 701 Neoclassical Microeconomic Theory .. (3)
ECO 702 Advanced Macroeconomic Theory ..... (3)
ECO 703 Introduction to Econometrics I ..... (3)
ECO 704 General Equilibrium Analysis and Welfare Economics ..... (3)
ECO 705 Macroeconomic Dynamics ..... (3)
ECO 706 Introduction to Econometrics II ..... (3)
ECO 707 Research Seminar in Economics ..... (3)
ECO 710 Economics of Organization ..... (3)
ECO 711 Economics of Firm Strategy ..... (3)
ECO 715 History of Economic Thought ..... (3)
ECO 721 Environmental Economics, Regulation and Policy ..... (3)
ECO 731 Labor Economics I ..... (3)
ECO 732 Labor Economics II ..... (3)
ECO 741 Theory of the Firm and Market Structure ..... (3)
ECO 742 Industrial Organization ..... (3)
ECO 749 Dissertation Research ..... (0)
ECO 751 Public Economics ..... (3)
ECO 752 The Economics of Policy Analysis ..... (3)
ECO 753 Urban and Regional Economics ..... (3)
ECO 766 Monetary Economics: Theory ..... (3)
ECO 767 Monetary Economics: Policy ..... (3)
ECO 768 Residence Credit for the Master's Degree ..... (1-6)
ECO 769 Residence Credit for the Doctor's Degree ..... (0-12)
ECO 771 International Economics Seminar II ... (3)
ECO 772 International Economics: Trade Theory and Policy ..... (3)
ECO 781 Optimization and Economic Theory I ..... (3)
ECO 782 Optimization and Economic Theory II ..... (3)
ECO 790 Time Series Analysis ..... (3)
ECO 792 Econometrics I ..... (3)
ECO 793 Econometrics II ..... (3)
ECO 796 Seminar ..... (1-6)
ECO 797 Research Problems in Economics .... (1-6)

Educational and Counseling Psychology

Graduate Faculty: *Professors* Henry Cole, Fred Danner, Stephen DeMers, H. Thompson Prout, Rory Remer, Timothy A. Smith, William Stilwell, and Judith Worell. *Associate Professors* Charlotte R. Clark and Pamela Remer.

Associate Members: *Professor* Lane J. Veltkamp. *Associate Professor* Phyllis Nash. *Assistant Professors* Eric M. Anderman, Kathleen M. Chard, Harriett H. Ford, Gregg M. Macmann, and Lynda Brown Wright. *Adjunct Professor* James M. Kuder. *Adjunct Assistant Professor* Doris Stilwell. *Research Assistant Professor* Lynley Anderman.

Joint Appointments: *Associate Professors* Ralph M. Crystal and Sonja Feist-Price.

Emeritus Professors: Dwight Auvenshine, James Barclay, and Gordon Liddle.

The Department of Educational and Counseling Psychology offers programs leading to the following degrees: Master of Science in Education (Plans A and B available), the Specialist in Education (Ed.S.), and the Doctor of Philosophy (Ph.D.). We no longer consider admissions to the Master of Arts in Education and the Doctor of Education (Ed.D.) degrees. Students must apply to both The Graduate School **and** to the Department. Doctoral applications must be completed by January 1 for summer/fall beginning. All other degree applications are considered shortly after March 1.

Within the degree programs there are three specializations possible (e.g., counseling psychology, educational psychology and school psychology). Specializations are designed to provide students with both a background in behavioral and humanistic components of human learning and behavior, and competencies to practice the skills designated for these programs. Admission to candidacy in any of these programs includes not only demonstrated skills in the academic area, but a judgment by the faculty of the area program that the candidate demonstrates the personal and social characteristics as well as the professional commitment and ethical standards requisite for providing the services and demonstrating the skills associated with the program and the advanced degree.

For further information on specific program guidelines, contact the Director of Graduate Studies in the Department of Educational and Counseling Psychology.

MASTER OF SCIENCE IN EDUCATION DEGREE

The Master of Science in Education degree is offered by the Department for individuals who will not meet state certification requirements in counseling or school psychology immediately upon

completion. Individuals who are interested in specializing in educational psychology, human development, measurement, or research in education may obtain this degree. The educational psychology program, planned in consultation with an adviser, is flexible and tailored to individual needs. It consists of 36 hours of course work (including a 3-hour paper) or 30 hours of course work plus a 6-hour thesis. The work completed for this degree with an emphasis in either counseling or school psychology is applicable toward certification in either counseling or school psychology, respectively, but does not fulfill state certification requirements. The counseling program prerequisites include psychological testing and abnormal psychology.

SPECIALIST IN EDUCATION DEGREE

The Educational Specialist degree is offered in the areas of educational psychology, counseling psychology and school psychology. Programs in this department follow the general guidelines of the College of Education programs as specified earlier (see Advanced Degrees on p. 20) The program includes the Master of Science in Education degree program plus a full-time one-semester internship and additional course work. This program leads to permission to sit for the State Board of Psychology Certification Examination in Counseling Psychology. The requirements for the State Board of Education certification in School Psychology include the work for the Master of Science in Education Degree plus the additional Educational Specialist degree requirements.

DOCTOR OF PHILOSOPHY DEGREE

The Ph.D. program is offered in the specialty areas of counseling psychology, educational psychology and school psychology under one departmental program. Both the Counseling Psychology Ph.D. and School Psychology Ph.D. programs are fully accredited by the American Psychological Association. A full-time, supervised one-year internship is required for all areas.

Various concentrations are possible within the Ph.D. program. Representative of these are: 1) learning, cognition, and curriculum design; 2) human development and social processes; 3) counseling psychology; 4) measurement, evaluation and research design; and 5) school psychology.

See Advanced Degrees on page 20.

EDP 518 Mental Hygiene ..... (3)
EDP 522 Educational Tests and Measurements (3)
EDP 548 Educational Psychology ..... (3)
EDP 557 Educational Statistics ..... (3)
EDP 570 Introduction to Psychological Services in Schools ..... (3)
EDP 580 Introduction to Gifted Education ..... (3)
EDP 600 Life Span Human Development and Behavior ..... (3)
EDP 601 Human Social Development ..... (3)
EDP 603 Human Cognitive Development ..... (3)
EDP 604 Lifespan Gender Development ..... (3)
EDP 605 Introduction to Counseling: Techniques I ..... (3)
EDP 606 Professional Issues in Counseling Psychology ..... (3)
EDP 610 Theories of Learning in Education ..... (3)
EDP 611 Human Cognitive Learning ..... (3)
EDP 612 Development of Creativity and Critical Thinking ..... (3)
EDP 613 Social Psychology Issues in Education ..... (3)
EDP 614 Motivation and Learning ..... (3)
EDP 615 Proseminar in History and Systems of Psychology ..... (3)
EDP 620 Topics and Methods of Evaluation ..... (3)
EDP 621 Advanced Topics and Methods of Evaluation ..... (3)
EDP 630 Principles of Psychological Assessment ..... (3)
EDP 640 Individual Assessment of Cognitive Functioning ..... (3)
EDP 642 Individual Assessment of Personality Functioning ..... (3)
EDP 649 Group Counseling ..... (3)
EDP 650 Diagnosis/Psychopathology in Counseling Psychology ..... (3)
EDP 652 Theories of Counseling ..... (3)
EDP 656 Methodology of Educational Research ..... (3)
EDP 658 Problems in Educational Psychology ..... (1-3)
EDP 659 Advanced Educational Measurement .. (3)
EDP 660 Research Design and Analysis in Education ..... (3)
EDP 661 Techniques of Counseling II ..... (3)
EDP 664 Pre-Master's Practicum in Counseling Psychology ..... (1-6)
EDP 665 Post-Master's Practicum in Counseling Psychology ..... (1-6)
EDP 666 Psychology of Career Counseling ..... (3)
EDP 669 Diagnostic Classification in School Psychology ..... (3)
EDP 670 Psychoeducational Strategies of Intervention ..... (3)
EDP 671 Seminar in Psychoeducational Consultation in Schools ..... (3)
EDP 675 Practicum in School Psychology ..... (1-6)
EDP 676 Practicum in Gifted Education ..... (3)
EDP 680 Parent and Child Counseling ..... (3)
EDP 683 Topics in Counseling Psychology .... (1-3)
EDP 685 Issues and Techniques in the Counseling of Women ..... (3)
EDP 686 Theory and Methods in Marriage and Family Therapy ..... (3)
EDP 690 Advanced Studies in Psychological Assessment ..... (3-6)
EDP 701 Cognitive-Behavioral Counseling ..... (3)
EDP 702 Career Development: Research, Theories and Practices ..... (2-3)
EDP 703 Seminar in Clinical Supervision ..... (1-3)
EDP 707 Multivariate Analysis in Educational Research ..... (3)
EDP 708 Internship in Educational and Counseling Psychology ..... (0-9)
EDP 748 Master's Thesis Research ..... (0)
EDP 749 Dissertation Research ..... (0)
EDP 765 Independent Study in Counseling Psychology ..... (1-4)
EDP 768 Residence Credit for the Master's Degree ..... (1-6)
EDP 769 Residence Credit for the Doctor's Degree ..... (0-12)
EDP 776 Seminar in School Psychology (Subtitle Required) ..... (3)
EDP 777 Seminar in Counseling Psychology .. (1-3)
EDP 778 Seminar in Educational Psychology (Subtitle Required) ..... (3)
EDP 782 Independent Study in Educational Psychology ..... (1-3)

Educational Policy Studies and Evaluation

Graduate Faculty: *Professors* Alan J. DeYoung, Thomas R. Guskey, Edward W. Kifer, John R. Thelin, and Elizabeth A. Zinser. *Associate Professors* Richard Angelo, Jeffery P. Bieber, Clinton Collins, Virginia Davis-Nordin, and Beth Leah Goldstein.

Associate Members: *Research Associate Professor* Michael B. Donnelly. *Adjunct Associate Professor* Anthony Newberry. *Adjunct Assistant Professors* Terry Birdwhistell and Larry Mayes. *Assistant Professors* Jane Jenson, Emmanuel T. Okorley, and Karen W. Tice.

Joint Appointment: *Professor* Juanita Fleming. *Associate Professor* Susan J. Scollay.

Emeritus Professors: Richard T. LaBrecque and Edgar Sagan.

The Department of Educational Policy Studies and Evaluation provides a unique opportunity for students who wish to develop the knowledge, judgment, and research skill required to address educational issues with flexibility and imagination. Although methodological finesse is prized within the department, degree programs do not emphasize 'methods' per se. The premium is placed on understanding questions of policy within the broader, often overlapping contexts in which they arise. Every effort is made to face the issues in ways which credit rather than ignore those contexts and their subtlety.

There are four broad areas of concentration. Higher Education focuses upon research concerning higher education policies, programs, and services. History and Philosophy of Education treats educational issues, problems, ideas, and institutions, using the tools of historical inquiry and philosophical analysis. The Socio-Cultural Study of Education provides sociological, anthropological, and comparative international perspectives. Evaluation focuses upon the relationships among ethics and education, policy analysis, and the development of evaluation systems for educational policies and programs.

The Department's faculty represents a wide spectrum of intellectual orientations, professional commitments, and experience. No less importantly, an uncommon degree of respect for both the difficulties and the necessities of interdisciplinary conversation prevails. These factors, together with flexibility in program planning at the course work stage (which includes opportunities for independent study, affiliations with faculty from other departments in the College and the University, as well as extramural internships), help to create an environment congenial to students with a variety of backgrounds and future goals. Some of the Department's graduates pursue traditional academic careers as faculty members or administrators. Others serve as policy analysts or evaluation specialists in school systems, state departments of education, or in other arenas outside the university.

Degree Programs

Master of Science in Education (M.S. in Education)

The master's degree is available for those who wish to explore topics in educational policy and evaluation for the first time, or to enhance what understanding they may already possess through direct experience as a teacher or as a member of an administrative staff. For some it serves as a terminal degree; others use it to lay the foundation for doctoral study.

Admission requires a minimum grade point average of 2.5 in all undergraduate course work, a 3.0 GPA for any previous graduate work, as well as satisfactory completion of the Graduate Record Examination (GRE). A total of 31 credit hours including the Proseminar (EPE 601) are required to complete the degree—full-time study for one academic year or its equivalent. No less than 19 hours of the total required must be taken within Educational Policy Studies. Planning in conjunction with an advisory committee, students choose a suitable array of courses from among the department's four areas of concentration, and then round out their programs with some appropriate support work from other departments within the College or the University.

Doctor of Education (Ed.D.)

The Ed.D. program in Educational Policy Studies and Evaluation provides advanced study for those who seek careers in the administration or evaluation of educational programs in schools, colleges, or other institutional settings. The program is also ideally suited for those who wish to develop the scholarly competence needed to serve as faculty members in colleges of education.

Admission to the program requires a master's degree (or thirty graduate credits applicable to an appropriate master's degree) and satisfactory completion of the Graduate Record Examination (GRE). Course work is planned by the student's advisory committee based on their assessment of his or her background and goals. All programs include the Proseminar (EPE 601) and course work chosen from the department's four general areas of concentration as well as support work in related fields within or outside the College of Education. Although some students' programs may require competency in a foreign language, there is no general foreign language requirement.

Doctor of Philosophy (Ph.D.) Studies in Higher Education

For methodological and cultural reasons, proficiency in a foreign language is required of all Ph.D. candidates in Educational Policy Studies and Evaluation. The language may be modern or classical. The choice of foreign language, as well as the means of demonstrating proficiency, must be approved by the student's advisory committee and by the Graduate School. Apart from this requirement, the degree of Doctor of Philosophy represents the same level of attainment as the Doctor of Education. Graduate students are held to a uniformly high standard of intellectual accomplishment at both the course work and dissertation stages, no matter what degree option they may pursue. Unlike the Ed.D. program, however, where students are free to choose the topic of research, the department's Ph.D. requires intensive research on some aspect of higher education. After taking the Proseminar, the student selects an area of concentration in either the history and philosophy of higher education, the sociocultural study of higher education, or research and evaluation in higher education. The requirements for admission are a minimum of 24 hours of graduate work (a master's degree in a discipline outside of Education is preferred) and satisfactory scores on the Graduate Record Examination.

Joint Doctoral Program

The department participates in the joint Ed.D. program with regional universities. These programs permit qualified applicants to complete approximately one year of graduate study beyond the master's degree at the regional institution. The remainder of the academic program must be completed at the University of Kentucky. The work of each student is directed by a joint faculty committee from the two institutions.

EPE 525	Special Topics Seminar in Educational Policy Studies and Evaluation (Subtitle Required)	(3)
EPE 532	Race and Ethnic Relations	(3)
EPE 555	Comparative Education	(3)
EPE 570	Gathering, Analyzing and Using Educational Data	(3)
EPE 601	Proseminar	(1)
EPE 602	Social Policy Issues and Education	(3)
EPE 603	Educational Policy Analysis: An Introduction	(3)
EPE 612	Introduction to Higher Education	(3)
EPE 620	Topics and Methods of Evaluation	(3)
EPE 621	Advanced Topics and Methods of Evaluation	(3)
EPE 622	College and University Faculty	(3)
EPE 628	Ethics and Educational Decision-Making	(3)
EPE 632	Student Services	(3)
EPE 640	Philosophy of Education	(3)
EPE 643	Values, Moral Education and Schooling	(3)
EPE 646	Analysis of Thinking	(3)
EPE 650	History of Western Education	(3)
EPE 651	History of Education in the U.S.	(3)
EPE 652	History of Educational Thought	(3)
EPE 653	History of Higher Education	(3)
EPE 661	Sociology of Education	(3)
EPE 663	Field Studies in Educational Institutions	(3)
EPE 665	Education and Culture	(3)
EPE 667	Education and Gender	(3)
EPE 670	Policy Issues in Higher Education	(3)
EPE 672	College Teaching and Learning	(3)
EPE 674	Theories of Student Development	(3)
EPE 676	Organization and Administration of Higher Education	(3)
EPE 678	Economics of Higher Education	(3)
EPE 679	Multiple measures in Education and Evaluation	(3)
EPE 680	Politics of Higher Education	(3)
EPE 681	History of the University: Governance and its Legal Context	(3)
EPE 682	Higher Education and the Law	(3)
EPE 683	Affirmative Action and Federal Regulation of Higher Education	(3)
EPE 684	Higher Education and Athletics: A Historical Analysis	(3)
EPE 685	The Research University	(3)
EPE 690	The Community College	(3)
EPE 748	Master's Thesis Research	(0)
EPE 749	Dissertation Research	(0)
EPE 763	Advanced Field Studies	(3)
EPE 768	Residence Credit for the Master's Degree	(1-6)
EPE 769	Residence Credit for theDoctor's Degree	(0-12)
EPE 773	Seminar in Educational Policy Studies and Evaluation	(1-3)
EPE 778	Seminar in History of Education in Kentucky	(3)
EPE 785	Independent Studies in Educational Policy Studies and Evaluation	(3)
EPE 790	Internship in Educational Policy Studies and Evaluation	(6)
EPE 798	Seminar in Higher Education	(3)

Electrical Engineering

Graduate Faculty: *Professors* Eugene B. Bradley, Jimmie J. Cathey, Syed A. Nasar, Clayton R. Paul, and Frederick C. Trutt. *Associate Professors* Raymond J. Distler, Kevin D. Donohue, Stephen D. Gedney, Laurence G. Hassebrook, J. Robert Heath, Lawrence E. Holloway, Ratnesh Kumar, Janet Lumpp, Arthur V. Radun, William T. Smith, Charles E. Stroud, Bruce L. Walcott, and Keith W. Whites.

Associate Members: *Assistant Professors* Craig A. Grimes, James E. Lumpp, Jr., Nader Mir, and Denise M. Wilson.

The Department of Electrical Engineering offers advanced studies leading to either a Master of Science in Electrical Engineering or a Doctor of Philosophy in Electrical Engineering. A minimum grade point average of 3.0/4.0 on all undergraduate work is required for admission to the graduate program. A minimum

GRE general test score of 1100 (combination of verbal and quantitative sections) must be obtained. Meeting the minimum requirements does not guarantee admission will be granted. Acceptance is based upon a competitive evaluation and on a space available basis. An undergraduate degree in electrical engineering is preferred. Those applicants without a BSEE degree from an ABET accredited EE program should develop competence and demonstrate ability in the fundamentals of electrical engineering. Such students, before being admitted to full graduate standing within the department, must take (or have taken an equivalent of) a set of prescribed electrical engineering remedial courses. A minimum grade of C (2.0/4.0) must be made in these courses.

For the MSEE degree, both the thesis and non-thesis options are available. The thesis option requires 24 hours of acceptable graduate level work plus the satisfying of the usual requirements for the thesis. The non-thesis option, Plan B, requires 30 hours of acceptable graduate work plus an additional three hours of EE 784, the special problems project. All students in their first semester of regular graduate work must select an academic adviser who will assist the student in formulating a graduate plan of study leading to their particular degree. This plan, which must receive the approval of the Director of Graduate Studies, must contain specific courses and a proposed thesis area or specialized project topic.

In order to assure a minimum breadth and level of understanding at the graduate level, all EE graduate students must take three of five specified courses from the major areas of electrical engineering. These courses are: EE 611 Deterministic Systems, EE 621 Electromagnetic Systems, EE 640 Stochastic Systems, EE 661 Solid State Electronics, EE 685 Digital Computer Structure. Although no formal course requirements exist for the Ph.D. program, students must satisfy the above mentioned core course requirements as well as the selection of an adviser and the formulation of the graduate plan of study. All doctoral students must satisfy the Department of Electrical Engineering foreign language requirement prior to sitting for the qualifying examination.

The Department of Electrical Engineering has active research programs in the following areas: electric machines and drives, power electronics, computer engineering, power systems, robotics, control systems, electromagnetic compatibility, electromagnetic field theory, signal processing, communication systems, circuit theory, solid state electronics, and laser Raman spectroscopy. Departmental laboratories are well-equipped for students' research. In addition, the Center for Robotics and Manufacturing Systems at the University of Kentucky provides additional research opportunities in the area of robotics and manufacturing systems.

EE 402G Electronic Instrumentation and Measurements ..... (3)
EE 403G Advanced Electrical Engineering Laboratory I ..... (2)
EE 415G Electromechanics ..... (3)
EE 416G Energy Conversion Laboratory ..... (2)
EE 421G Signals and Systems I ..... (3)
EE 422G Signals and Systems II ..... (3)
EE 461G Introduction to Electronics ..... (3)
EE 462G Electronic Circuits Laboratory ..... (2)
EE 468G Fields and Waves ..... (4)
EE 511 Introduction to Communication Systems ..... (3)
EE 512 Digital Communication Systems ..... (3)
EE 516 Power Semiconductor Models ..... (3)
EE 517 Advanced Electromechanics ..... (3)
EE 518 Electric Drives ..... (3)
EE 522 Antenna Design ..... (3)
EE 523 Microwave Circuit Design ..... (3)
EE 524 Solid State Physics ..... (3)
EE 525 Numerical Methods and Electromagnetics ..... (3)
EE 527 Electromagnetic Compatibility ..... (3)
EE 530 Robotics ..... (3)
EE 537 Electric Power Systems I ..... (3)
EE 538 Electric Power Systems II ..... (3)
EE 560 Semiconductor Device Design ..... (3)
EE 561 Electric and Magnetic Properties of Materials ..... (3)
EE 562 Analog Electronic Circuits ..... (3)
EE 564 Digital Electronic Circuits ..... (3)
EE 565 Circuit Design with Analog Integrated Circuits ..... (3)
EE 566 Hybrid Microelectronics ..... (3)
EE 567 Introduction to Lasers and Masers ..... (3)
EE 568 Fiber Optics ..... (3)
EE 569 Electronic Packaging Sytems and Manufacturing Processes ..... (3)
EE 571 Feedback Control Design ..... (3)
EE 572 Digital Control of Dynamic Systems ..... (3)
EE 581 Advanced Logical Design ..... (3)
EE 583 Microprocessors ..... (3)
EE 584 Introduction to VLSI Design and Testing ..... (3)
EE 585 Fault Tolerant Computing ..... (3)
EE 587 Microcomputer Systems Design ..... (3)
EE 595 Independent Problems ..... (1-3)
EE 599 Topics in Electrical Engineering (Subtitle Required) ..... (2-3)
EE 601 Electromagnetic Energy Conversion I ..... (3)
EE 602 Electromagnetic Energy Conversion II ..... (3)
EE 603 Power Electronics ..... (3)
EE 605 Systems for Factory Information and Control ..... (3)
EE 606 Seminar and Project in Manufacturing Systems Engineering ..... (3)
EE 608 Advanced Topics in Power Electronics (Subtitle Required) ..... (3)
EE 611 Deterministic Systems ..... (3)
EE 612 Computational Aspects of Robotics ..... (3)
EE 613 Optimal Control Theory ..... (3)
EE 619 Problems Seminar in Operations Research ..... (3)
EE 621 Electromagnetic Fields ..... (3)
EE 622 Advanced Electrodynamics ..... (3)
EE 625 Computational Electromagnetics ..... (3)
EE 627 Multiconductor Transmission Lines ..... (3)
EE 630 Digital Signal Processing ..... (3)
EE 635 Image Processing ..... (3)
EE 639 Advanced Topics in Signal Processing and Communications ..... (3)
EE 640 Stochastic Systems ..... (3)
EE 642 Discrete Event Systems ..... (3)
EE 660 Electronic Device Design ..... (3)
EE 661 Solid-State Electronics ..... (3)
EE 662 MOS Device Design and Modeling ..... (3)
EE 663 Microwave Properties of Materials ..... (3)
EE 664 Saw Device Design, Modeling and Applications ..... (3)
EE 672 Molecular Properties in Electronic Devices ..... (3)
EE 682 Switching Theory ..... (3)
EE 683 Finite-State Machines ..... (3)
EE 684 Introduction to Computer Aided Design of VLSI Circuits ..... (3)
EE 685 Digital Computer Structure ..... (3)
EE 686 Advanced Computer Architecture Design ..... (3)
EE 688 Neural Networks ..... (3)
EE 699 Topics in Electrical Engineering (Subtitle Required) ..... (3)
EE 748 Master's Thesis Research ..... (0)
EE 749 Dissertation Research ..... (0)
EE 768 Residence Credit for the Master's Degree ..... (1-6)
EE 769 Residence Credit for the Doctor's Degree ..... (0-12)
EE 783 Special Problems in Electrical Engineering ..... (1-3)
EE 784 Research Project in Electrical Engineering ..... (3)

EGR 537 Numerical Analysis ..... (3)
EGR 599 Topics in Engineering (Subtitle Required) ..... (1-3)
EGR 611 Boundary Element Methods in Engineering ..... (3)
EGR 621 Finite Element Analysis in Engineering ..... (3)
EGR 622 Advanced Finite Element Analysis in Engineering ..... (3)
EGR 680 Engineering Applications of Stochastic Differential Equations ..... (3)

Master of Engineering

Director of Graduate Studies: G. T. Lineberry

The College of Engineering offers a multidisciplinary Master of Engineering degree. This graduate program is intended to serve the educational needs of engineers from accredited baccalaureate programs employed by Kentucky industries, consulting firms, and government agencies. The degree is offered in its entirety through off-campus modes of delivery, predominantly through Interactive Television (ITV), to receive sites throughout the UK Interactive Television Network. These include sites at the

following UK community colleges: Ashland, Elizabethtown, Owensboro, Paducah and Prestonsburg. Other sites that can be connected are Hazard, Covington and Frankfort. More receive sites are being added each year.

The courses are also available to students in post-baccalaureate status who wish to enhance their knowledge and skills in a specific area, but who are not pursuing an advanced degree.

The five program areas of concentration are: 1) environmental engineering, 2) manufacturing systems design, 3) advanced processing systems, 4) electronics and process control, and 5) mining engineering.

Admission

Graduate study in the College of Engineering normally requires a bachelor's degree in engineering from an ABET-accredited institution (or equivalent). Degree-seeking applicants to the Master of Engineering degree program must meet the following criteria: a first degree in engineering from an ABET-accredited institution (or equivalent) with a minimum GPA of 2.5/4.0, acceptable GRE scores and, for international applicants, a minimum score of 550 on the TOEFL.

Before enrolling in an extended-campus course, the first-time student must gain either admission (or provisional admission) to the Graduate School or must apply for admission to the Graduate School as a post-baccalaureate graduate student. An application to the Graduate School, official transcripts from all colleges attended, and official GRE test scores from the Educational Testing Service must be submitted to the Graduate School.

For students with an undergraduate degree other than in engineering, completion of a set of prerequisite courses will be required prior to admission to the program with full graduate standing. These prerequisite courses vary by area of program concentration and may not be available through distance learning.

Degree Requirements

The Master of Engineering degree requires 30 credit hours. Students who enroll in the program will develop an individualized program which has an 18 credit hour area of concentration. The area of concentration will be multidisciplinary and will correspond to the student's career objectives. The remaining 12 credit hours will be in supporting electives, drawn from Engineering, Business and Economics, Mathematics, or other areas. At least one-half of the courses must be at the 600 level or above. Each student will have a major professor who, with two or more additional faculty, will constitute the student's advisory committee. This Committee will review and approve the student's proposed individualized plan of study and will administer the student's final exam (on campus).

Students may utilize any graduate course offered by UK or by other recognized graduate degree-granting institutions, providing these graduate courses meet the program requirements, are approved by the student's committee, and are taken in graduate status. Transfer of credit for courses taken from other institutions or for courses taken in another degree program or as a post-baccalaureate student is limited to 9 credit hours.

For copies of sample individualized curricula in the program's five areas of concentration or for current information on course offerings and sequencing, contact:

Assistant to the Dean for Extended-Campus Programs
230 Mining and Mineral Resources Building
University of Kentucky

English

Graduate Faculty: *Professors* John Cawelti, John L. Clubbe, Oscar Ronald Dathorne, Joseph Gardner, James Baker Hall, Joan Hartwig, Kevin Kiernan, Jerome Meckier, David L. Miller, Larry Swingle, Gregory A. Waller, and Steven Weisenburger. *Associate Professors* Jonathan Allison, R. Gerald Alvey, Thomas Blues, Virginia L. Blum, Anna Bosch, William Campbell, David Durant, Janet C. Eldred, Lee Elioseff, Walter Foreman, John L. Greenway, Joyce M. MacDonald, Peter L. Mortensen, Dana D. Nelson, Armando Prats, Ellen B. Rosenman, Gregory T. Stump, and Arthur Wrobel.

Associate Members: *Associate Professor* Joan H. Blythe. *Assistant Professors* Thomas Clayton, Jo Ellen Green Kaiser, Cynthia M. Sheard, and Michael Uebel.

Emeritus Professors: Joseph A. Bryant, Guy Davenport, Stephen Manning, Donald Ringe, and John Shawcross.

The Department of English offers programs leading to the M.A. and to the Ph.D. degrees. The master's degree may be obtained either by Plan A or Plan B, as defined in this Bulletin. Special areas of concentration for Plan A are Linguistics, Film, and TESL, but require half their programs to be in literature. M.A. courses are to be chosen from both British and American literature. A reading knowledge of one foreign language is required, as is a final oral examination based on a reading list.

The Ph.D. course requirements include a minimum of 24 hours, four seminars taken at the University of Kentucky, and coverage of the periods of British and American literature. The qualifying examination is both written and oral. The written examinations are based on reading lists drawn up by the student in consultation with the Advisory Committee; one will address a broadly defined historical period, the other, a genre, mode, or topic explored through a range of cultural historical settings. The oral examination focuses on the dissertation prospectus, topic, and context. Ph.D. candidates are required to have a reading knowledge of two languages, usually French and German. There is no specific requirement in a minor area, but such work may be required by a student's Advisory Committee if it appears essential to the major research or concentration interest.

Admission to both programs is generally based on course grades, GRE scores on the Aptitude test, three letters of recommendation, a statement of purpose, and a writing sample. Each student is judged on his or her own merits. Students who receive their master's degree from the University of Kentucky will be evaluated by their thesis committee on both the thesis and the oral examination, so that they need not submit letters of recommendation or a writing sample. Students who do not have the equivalent of a University of Kentucky undergraduate major in English may be asked to include some advanced undergraduate work in English in addition to the courses normally required for the M.A. Students who do not have an M.A. in English may be asked to include additional courses beyond the minimum of 24 hours for the Ph.D.

All applicants must also fulfill the admission requirements of the Graduate School.

A detailed and current statement of requirements for both the M.A. and Ph.D. is available on request from the Director of Graduate Studies in English.

ENG 414G Introduction to Modern English Linguistics ..... (3)
ENG 421G Chaucer ..... (3)
ENG 422G English Renaissance: 1500-1600 ..... (3)
ENG 423G English Renaissance: 1600-1660 ..... (3)
ENG 425G Shakespeare Survey ..... (3)
ENG 426G Shakespeare Studies (Subtitle Required) ..... (3)
ENG 428G Milton ..... (3)
ENG 430G The Restoration and Early 18th Century: 1660-1730 ..... (3)
ENG 431G The Later 18th Century: 1730-1780 .... (3)
ENG 435G The Romantic Movement: 1780-1815 . (3)
ENG 436G The Romantic Movement: 1815-1830 . (3)
ENG 438G Victorian Period: 1830-1860 ..... (3)

GRE general test score of 1100 (combination of verbal and quantitative sections) must be obtained. Meeting the minimum requirements does not guarantee admission will be granted. Acceptance is based upon a competitive evaluation and on a space available basis. An undergraduate degree in electrical engineering is preferred. Those applicants without a BSEE degree from an ABET accredited EE program should develop competence and demonstrate ability in the fundamentals of electrical engineering. Such students, before being admitted to full graduate standing within the department, must take (or have taken an equivalent of) a set of prescribed electrical engineering remedial courses. A minimum grade of C (2.0/4.0) must be made in these courses.

For the MSEE degree, both the thesis and non-thesis options are available. The thesis option requires 24 hours of acceptable graduate level work plus the satisfying of the usual requirements for the thesis. The non-thesis option, Plan B, requires 30 hours of acceptable graduate work plus an additional three hours of EE 784, the special problems project. All students in their first semester of regular graduate work must select an academic adviser who will assist the student in formulating a graduate plan of study leading to their particular degree. This plan, which must receive the approval of the Director of Graduate Studies, must contain specific courses and a proposed thesis area or specialized project topic.

In order to assure a minimum breadth and level of understanding at the graduate level, all EE graduate students must take three of five specified courses from the major areas of electrical engineering. These courses are: EE 611 Deterministic Systems, EE 621 Electromagnetic Systems, EE 640 Stochastic Systems, EE 661 Solid State Electronics, EE 685 Digital Computer Structure. Although no formal course requirements exist for the Ph.D. program, students must satisfy the above mentioned core course requirements as well as the selection of an adviser and the formulation of the graduate plan of study. All doctoral students must satisfy the Department of Electrical Engineering foreign language requirement prior to sitting for the qualifying examination.

The Department of Electrical Engineering has active research programs in the following areas: electric machines and drives, power electronics, computer engineering, power systems, robotics, control systems, electromagnetic compatibility, electromagnetic field theory, signal processing, communication systems, circuit theory, solid state electronics, and laser Raman spectroscopy. Departmental laboratories are well-equipped for students' research. In addition, the Center for Robotics and Manufacturing Systems at the University of Kentucky provides additional research opportunities in the area of robotics and manufacturing systems.

EE 402G Electronic Instrumentation and Measurements ..... (3)
EE 403G Advanced Electrical Engineering Laboratory I ..... (2)
EE 415G Electromechanics ..... (3)
EE 416G Energy Conversion Laboratory ..... (2)
EE 421G Signals and Systems I ..... (3)
EE 422G Signals and Systems II ..... (3)
EE 461G Introduction to Electronics ..... (3)
EE 462G Electronic Circuits Laboratory ..... (2)
EE 468G Fields and Waves ..... (4)
EE 511 Introduction to Communication Systems ..... (3)
EE 512 Digital Communication Systems ..... (3)
EE 516 Power Semiconductor Models ..... (3)
EE 517 Advanced Electromechanics ..... (3)
EE 518 Electric Drives ..... (3)
EE 522 Antenna Design ..... (3)
EE 523 Microwave Circuit Design ..... (3)
EE 524 Solid State Physics ..... (3)
EE 525 Numerical Methods and Electromagnetics ..... (3)
EE 527 Electromagnetic Compatibility ..... (3)
EE 530 Robotics ..... (3)
EE 537 Electric Power Systems I ..... (3)
EE 538 Electric Power Systems II ..... (3)
EE 560 Semiconductor Device Design ..... (3)
EE 561 Electric and Magnetic Properties of Materials ..... (3)
EE 562 Analog Electronic Circuits ..... (3)
EE 564 Digital Electronic Circuits ..... (3)
EE 565 Circuit Design with Analog Integrated Circuits ..... (3)
EE 566 Hybrid Microelectronics ..... (3)
EE 567 Introduction to Lasers and Masers ..... (3)
EE 568 Fiber Optics ..... (3)
EE 569 Electronic Packaging Sytems and Manufacturing Processes ..... (3)
EE 571 Feedback Control Design ..... (3)
EE 572 Digital Control of Dynamic Systems ... (3)
EE 581 Advanced Logical Design ..... (3)
EE 583 Microprocessors ..... (3)
EE 584 Introduction to VLSI Design and Testing ..... (3)
EE 585 Fault Tolerant Computing ..... (3)
EE 587 Microcomputer Systems Design ..... (3)
EE 595 Independent Problems ..... (1-3)
EE 599 Topics in Electrical Engineering (Subtitle Required) ..... (2-3)
EE 601 Electromagnetic Energy Conversion I ..... (3)
EE 602 Electromagnetic Energy Conversion II ..... (3)
EE 603 Power Electronics ..... (3)
EE 605 Systems for Factory Information and Control ..... (3)
EE 606 Seminar and Project in Manufacturing Systems Engineering ..... (3)
EE 608 Advanced Topics in Power Electronics (Subtitle Required) ..... (3)
EE 611 Deterministic Systems ..... (3)
EE 612 Computational Aspects of Robotics .... (3)
EE 613 Optimal Control Theory ..... (3)
EE 619 Problems Seminar in Operations Research ..... (3)
EE 621 Electromagnetic Fields ..... (3)
EE 622 Advanced Electrodynamics ..... (3)
EE 625 Computational Electromagnetics ..... (3)
EE 627 Multiconductor Transmission Lines ... (3)
EE 630 Digital Signal Processing ..... (3)
EE 635 Image Processing ..... (3)
EE 639 Advanced Topics in Signal Processing and Communications ..... (3)
EE 640 Stochastic Systems ..... (3)
EE 642 Discrete Event Systems ..... (3)
EE 660 Electronic Device Design ..... (3)
EE 661 Solid-State Electronics ..... (3)
EE 662 MOS Device Design and Modeling ..... (3)
EE 663 Microwave Properties of Materials .... (3)
EE 664 Saw Device Design, Modeling and Applications ..... (3)
EE 672 Molecular Properties in Electronic Devices ..... (3)
EE 682 Switching Theory ..... (3)
EE 683 Finite-State Machines ..... (3)
EE 684 Introduction to Computer Aided Design of VLSI Circuits ..... (3)
EE 685 Digital Computer Structure ..... (3)
EE 686 Advanced Computer Architecture Design ..... (3)
EE 688 Neural Networks ..... (3)
EE 699 Topics in Electrical Engineering (Subtitle Required) ..... (3)
EE 748 Master's Thesis Research ..... (0)
EE 749 Dissertation Research ..... (0)
EE 768 Residence Credit for the Master's Degree ..... (1-6)
EE 769 Residence Credit for the Doctor's Degree ..... (0-12)
EE 783 Special Problems in Electrical Engineering ..... (1-3)
EE 784 Research Project in Electrical Engineering ..... (3)

EGR 537 Numerical Analysis ..... (3)
EGR 599 Topics in Engineering (Subtitle Required) ..... (1-3)
EGR 611 Boundary Element Methods in Engineering ..... (3)
EGR 621 Finite Element Analysis in Engineering ..... (3)
EGR 622 Advanced Finite Element Analysis in Engineering ..... (3)
EGR 680 Engineering Applications of Stochastic Differential Equations ..... (3)

Master of Engineering

Director of Graduate Studies: G. T. Lineberry

The College of Engineering offers a multidisciplinary Master of Engineering degree. This graduate program is intended to serve the educational needs of engineers from accredited baccalaureate programs employed by Kentucky industries, consulting firms, and government agencies. The degree is offered in its entirety through off-campus modes of delivery, predominantly through Interactive Television (ITV), to receive sites throughout the UK Interactive Television Network. These include sites at the

following UK community colleges: Ashland, Elizabethtown, Owensboro, Paducah and Prestonsburg. Other sites that can be connected are Hazard, Covington and Frankfort. More receive sites are being added each year.

The courses are also available to students in post-baccalaureate status who wish to enhance their knowledge and skills in a specific area, but who are not pursuing an advanced degree.

The five program areas of concentration are: 1) environmental engineering, 2) manufacturing systems design, 3) advanced processing systems, 4) electronics and process control, and 5) mining engineering.

Admission

Graduate study in the College of Engineering normally requires a bachelor's degree in engineering from an ABET-accredited institution (or equivalent). Degree-seeking applicants to the Master of Engineering degree program must meet the following criteria: a first degree in engineering from an ABET-accredited institution (or equivalent) with a minimum GPA of 2.5/4.0, acceptable GRE scores and, for international applicants, a minimum score of 550 on the TOEFL.

Before enrolling in an extended-campus course, the first-time student must gain either admission (or provisional admission) to the Graduate School or must apply for admission to the Graduate School as a post-baccalaureate graduate student. An application to the Graduate School, official transcripts from all colleges attended, and official GRE test scores from the Educational Testing Service must be submitted to the Graduate School.

For students with an undergraduate degree other than in engineering, completion of a set of prerequisite courses will be required prior to admission to the program with full graduate standing. These prerequisite courses vary by area of program concentration and may not be available through distance learning.

Degree Requirements

The Master of Engineering degree requires 30 credit hours. Students who enroll in the program will develop an individualized program which has an 18 credit hour area of concentration. The area of concentration will be multidisciplinary and will correspond to the student's career objectives. The remaining 12 credit hours will be in supporting electives, drawn from Engineering, Business and Economics, Mathematics, or other areas. At least one-half of the courses must be at the 600 level or above. Each student will have a major professor who, with two or more additional faculty, will constitute the student's advisory committee. This Committee will review and approve the student's proposed individualized plan of study and will administer the student's final exam (on campus).

Students may utilize any graduate course offered by UK or by other recognized graduate degree-granting institutions, providing these graduate courses meet the program requirements, are approved by the student's committee, and are taken in graduate status. Transfer of credit for courses taken from other institutions or for courses taken in another degree program or as a post-baccalaureate student is limited to 9 credit hours.

For copies of sample individualized curricula in the program's five areas of concentration or for current information on course offerings and sequencing, contact:

Assistant to the Dean for Extended-Campus Programs
230 Mining and Mineral Resources Building
University of Kentucky

English

Graduate Faculty: *Professors* John Cawelti, John L. Clubbe, Oscar Ronald Dathorne, Joseph Gardner, James Baker Hall, Joan Hartwig, Kevin Kiernan, Jerome Meckier, David L. Miller, Larry Swingle, Gregory A. Waller, and Steven Weisenburger. *Associate Professors* Jonathan Allison, R. Gerald Alvey, Thomas Blues, Virginia L. Blum, Anna Bosch, William Campbell, David Durant, Janet C. Eldred, Lee Elioseff, Walter Foreman, John L. Greenway, Joyce M. MacDonald, Peter L. Mortensen, Dana D. Nelson, Armando Prats, Ellen B. Rosenman, Gregory T. Stump, and Arthur Wrobel.

Associate Members: *Associate Professor* Joan H. Blythe. *Assistant Professors* Thomas Clayton, Jo Ellen Green Kaiser, Cynthia M. Sheard, and Michael Uebel.

Emeritus Professors: Joseph A. Bryant, Guy Davenport, Stephen Manning, Donald Ringe, and John Shawcross.

The Department of English offers programs leading to the M.A. and to the Ph.D. degrees. The master's degree may be obtained either by Plan A or Plan B, as defined in this Bulletin. Special areas of concentration for Plan A are Linguistics, Film, and TESL, but require half their programs to be in literature. M.A. courses are to be chosen from both British and American literature. A reading knowledge of one foreign language is required, as is a final oral examination based on a reading list.

The Ph.D. course requirements include a minimum of 24 hours, four seminars taken at the University of Kentucky, and coverage of the periods of British and American literature. The qualifying examination is both written and oral. The written examinations are based on reading lists drawn up by the student in consultation with the Advisory Committee; one will address a broadly defined historical period, the other, a genre, mode, or topic explored through a range of cultural historical settings. The oral examination focuses on the dissertation prospectus, topic, and context. Ph.D. candidates are required to have a reading knowledge of two languages, usually French and German. There is no specific requirement in a minor area, but such work may be required by a student's Advisory Committee if it appears essential to the major research or concentration interest.

Admission to both programs is generally based on course grades, GRE scores on the Aptitude test, three letters of recommendation, a statement of purpose, and a writing sample. Each student is judged on his or her own merits. Students who receive their master's degree from the University of Kentucky will be evaluated by their thesis committee on both the thesis and the oral examination, so that they need not submit letters of recommendation or a writing sample. Students who do not have the equivalent of a University of Kentucky undergraduate major in English may be asked to include some advanced undergraduate work in English in addition to the courses normally required for the M.A. Students who do not have an M.A. in English may be asked to include additional courses beyond the minimum of 24 hours for the Ph.D.

All applicants must also fulfill the admission requirements of the Graduate School.

A detailed and current statement of requirements for both the M.A. and Ph.D. is available on request from the Director of Graduate Studies in English.

ENG 414G Introduction to Modern English Linguistics ..... (3)
ENG 421G Chaucer ..... (3)
ENG 422G English Renaissance: 1500-1600 ..... (3)
ENG 423G English Renaissance: 1600-1660 ..... (3)
ENG 425G Shakespeare Survey ..... (3)
ENG 426G Shakespeare Studies (Subtitle Required) ..... (3)
ENG 428G Milton ..... (3)
ENG 430G The Restoration and Early 18th Century: 1660-1730 ..... (3)
ENG 431G The Later 18th Century: 1730-1780 .... (3)
ENG 435G The Romantic Movement: 1780-1815 . (3)
ENG 436G The Romantic Movement: 1815-1830 . (3)
ENG 438G Victorian Period: 1830-1860 ..... (3)

ENG 439G Victorian Period: 1860-1900 ..... (3)
ENG 440G The Eighteenth Century English Novel (3)
ENG 441G The Nineteenth Century English Novel (3)
ENG 442G The Twentieth Century English Novel . (3)
ENG 446G Twentieth Century British Literature .. (3)
ENG 448G English Drama: (Subtitle Required) ... (3)
ENG 451G Studies in American Literature Before 1860: (Subtitle Required) ..... (3)
ENG 452G Studies in American Literature: 1860-1920 ..... (3)
ENG 453G Studies in American Literature Since 1900 ..... (3)
ENG 454G American Novel Before 1900 ..... (3)
ENG 455G Modern American Novel ..... (3)
ENG 465G Studies in an Author (Subtitle Required) ..... (3)
ENG 466G Modern Drama ..... (3)
ENG 473G Survey of World Folklore ..... (3)
ENG 478G Appalachian Folklore ..... (3)
ENG 480G Special Studies in Film (Subtitle Required) ..... (3)
ENG 490G Topics of Gender in Literary Studies (Subtitle Required) ..... (3)
ENG 507 Advanced Workshop in Imaginative Writing (Subtitle Required) ..... (3)
ENG 509 Composition for Teachers ..... (3)
ENG 510 American English ..... (3)
ENG 512 Modern English Grammar ..... (3)
ENG 513 Teaching English as a Second Language ..... (3)
ENG 514 TESL Materials and Methods ..... (3)
ENG 515 Phonological Analysis ..... (3)
ENG 516 Grammatical Analysis ..... (3)
ENG 519 Introduction to Old English ..... (3)
ENG 562 Comparative Literature: Seventeenth Through Nineteenth Century ..... (3)
ENG 568 History of Literary Criticism I ..... (3)
ENG 569 History of Literary Criticism II ..... (3)
ENG 570 Selected Topics for Advanced Studies in Literature (Subtitle Required) ..... (3)
ENG 572 Studies in English for Teachers (Subtitle Required) ..... (3)
ENG 581 Aesthetics of Film ..... (3)
ENG 600 Bibliography and Methods of Research ..... (3)
ENG 607 Graduate Writing Workshop (Subtitle Required) ..... (3)
ENG 609 Composition for Teachers ..... (3)
ENG 610 Studies in Rhetoric ..... (3)
ENG 617 Studies in Linguistics (Subtitle Required) ..... (3)
ENG 618 History of the English Language ..... (3)
ENG 619 Beowulf ..... (3)
ENG 620 Studies in Middle English Literature .. (3)
ENG 621 Studies in Chaucer ..... (3)
ENG 622 Studies in English Literature: 1500-1600 ..... (3)
ENG 623 Studies in English Literature: 1600-1660 ..... (3)
ENG 625 Studies in Renaissance Drama Exclusive of Shakespeare ..... (3)
ENG 626 Studies in Shakespeare ..... (3)
ENG 628 Studies in Milton ..... (3)
ENG 630 Studies in English Literature: 1660-1720 ..... (3)
ENG 631 Studies in English Literature: 1720-1780 ..... (3)
ENG 635 Studies in Literature: 1780-1815 ..... (3)
ENG 636 Studies in Literature: 1815-1830 ..... (3)
ENG 638 Studies in English Literature: 1830-1860 ..... (3)
ENG 639 Studies in English Literature: 1860-1900 ..... (3)
ENG 640 Studies in the 19th Century British Novel ..... (3)
ENG 642 Studies in Modern British Literature .. (3)
ENG 643 Studies in Modern British and American Poetry ..... (3)
ENG 651 Studies in American Literature Before 1860 ..... (3)
ENG 652 Studies in American Literature: 1860-1900 ..... (3)
ENG 653 Studies in American Literature since 1900 ..... (3)
ENG 656 Black American Literature ..... (3)
ENG 660 Modern Critical Theory ..... (3)
ENG 681 Studies in Film ..... (3)
ENG 682 Studies in Fiction ..... (3)
ENG 683 Studies in Drama ..... (3)
ENG 684 Studies in Poetry ..... (3)
ENG 690 Studies in Literature and Gender (Subtitle Required) ..... (3)
ENG 700 Tutorial for Ph.D. Candidates ..... (3)
ENG 720 Seminar in Medieval Literature ..... (3)
ENG 722 Seminar in 16th Century Literature .... (3)
ENG 723 Seminar in 17th Century Literature .... (3)
ENG 726 Seminar in Shakespeare ..... (3)
ENG 730 Seminar in 18th Century Literature .... (3)
ENG 735 Seminar in Romantic Literature ..... (3)
ENG 738 Seminar in Victorian Literature ..... (3)
ENG 740 Seminar in 20th Century British Literature ..... (3)
ENG 748 Master's Thesis Research ..... (0)
ENG 749 Dissertation Research ..... (0)
ENG 750 Seminar in Colonial Literature ..... (3)
ENG 751 Seminar in American Literature: 1800-1860 ..... (3)
ENG 752 Seminar in American Literature: 1860-1900 ..... (3)
ENG 753 Seminar in American Literature since 1900 ..... (3)
ENG 768 Residence Credit for the Master's Degree ..... (1-6)
ENG 769 Residence Credit for the Doctor's Degree ..... (0-12)
ENG 771 Seminar in Special Topics ..... (3)
ENG 780 Directed Studies ..... (1-6)
ENG 781 Seminar in Film (Subtitle Required .... (3)

Entomology

Graduate Faculty: *Professors* Douglas L. Dahlman, Kenneth F. Haynes, Fred W. Knapp, Bobby C. Pass, Daniel A. Potter, David H. Wise, and Kenneth V. Yeargan. *Associate Professors* Grayson C. Brown, Allen J. Moore, and Bruce A. Webb.

Associate Members: *Extension Professors* Douglas W. Johnson and Lee H. Townsend. *Research Professor* Randy E. Hunt. *Associate Extension Professor* Michael F. Potter. *Assistant Professors* Lynne K. Rieske-Kinney and Michael J. Sharkey. *Assistant Extension Professor* Ricardo T. Bessin. *Adjunct Assistant Professors* Robert J. Barney, John D. Sedlacek and Paul A. Weston.

Emeritus Professors: Paul H. Freytag, Gerald L. Nordin and Juan G. Rodriguez.

The Department of Entomology offers graduate work leading to the Master of Science and the Doctor of Philosophy degrees. Individual graduate programs are planned by students in consultation with their adviser and the Director of Graduate Studies. Study and research are available in various areas of entomology including applied entomology, behavior, biological control, host plant resistance, insect biology, ecology genetics, molecular biology, pathology, immature insects, medical and veterinary entomology, biochemistry, physiology, taxonomy and acarology. Plans A and B are offered for the master's degree.

ENT 530 Integrated Pest Management ..... (3)
ENT 561 Medical Entomology ..... (4)
ENT 563 Parasitology ..... (4)
ENT 564 Insect Taxonomy ..... (4)
ENT 568 Insect Behavior ..... (3)
ENT 605 Empirical Methods in Ecology and Evolution ..... (2)
ENT 606 Conceptual Methods in Ecology and Evolution ..... (2)
ENT 607 Advanced Evolution ..... (2)
ENT 608 Behavioral Ecology and Life Histories ..... (2)
ENT 609 Population and Community Ecology ... (2)
ENT 613 Behavioral Ecology and Comparative Neurobiology ..... (3)
ENT 614 Techniques in Behavioral Ecology and Comparative Neurobiology ..... (3)
ENT 625 Insect - Plant Relationships ..... (3)
ENT 626 Insect Pathology ..... (3)
ENT 635 Insect Physiology and Internal Morphology ..... (4)
ENT 660 Immature Insects ..... (3)
ENT 665 Insect Ecology ..... (3)
ENT 670 Experimental Methods in Entomology-Field ..... (2)
ENT 671 Experimental Methods in Entomology-Laboratory ..... (2)
ENT 680 Biological Control ..... (3)
ENT 695 Special Topics in Entomology (Subtitle Required) ..... (3)
ENT 748 Master's Thesis Research ..... (0)
ENT 749 Dissertation Research ..... (0)
ENT 768 Residence Credit for the Master's Degree ..... (1-6)
ENT 769 Residence Credit for the Doctor's Degree ..... (0-12)
ENT 770 Entomological Seminar ..... (1)
ENT 780 Special Problems in Entomology and Acarology ..... (2-3)
ENT 790 Research in Entomology and Acarology ..... (1-6)

Family Studies

Graduate Faculty: *Professors* Gregory Brock, Claudia Peck, and Retia S. Walker, and Stephan Wilson. *Associate Professors* Darla Botkin, Cynthia M. Cole, Raymond E. Forgue, B. Jan McCulloch, David Payne, Kimberley F. Townley, and William Turner.

Associate Members: *Associate Professors* Ruth Ann Crum, Mary Lou Routt, and Donna S. Quick. *Assistant Professor* Celia Ray Hayhoe. *Extension Professors* Samuel Quick and Robert Flashman.

Emeritus Professors: Lisa Barclay, John Crosby, and O'Neal Weeks.

The Department of Family Studies offers the Master of Science in Family Studies. There are two programs of study from which the student may choose: Early Childhood Education and Family Studies. Within Family Studies, students may complete a planned program of study in Marriage and Family Therapy including a one-year practicum experience.

Students pursuing Early Childhood Education take four core courses totaling twelve hours: FAM 652, FAM 690, FAM 710, and an advanced development course (FAM 654, 655, or 659). In conjunction with an advisor, they select additional courses to achieve an advanced level of competency in four of six broad areas within the subject matter of Early Childhood Education. The Early Childhood Education program requires 30 credit hours: Plan A requires 24 course credit

hours plus a master's thesis; Plan B requires 30 credit hours plus an integrative scholarly project. The program does not qualify the student for a teaching certificate, but may be taken in conjunction with requirements for a teaching certificate. The deadline date for application for the fall semester is February 15 and the deadline for applying for spring admission is August 1.

Students pursuing the Family Studies program take a group of core courses totaling 12 hours: FAM 603, FAM 652, FAM 654, and FAM 690. The Family Studies program requires 36 credit hours. At least two-thirds of the minimum requirements must be in regular courses, and at least three-quarters of the minimum requirements must be in courses numbered on the 600 or 700 level. Plan A requires 36 hours, six of which are thesis credit hours, 12 core course hours, and 18 hours of major electives. Plan B requires 36 credit hours, 12 of which are core courses and 24 of which are major electives. Students are admitted to the Family Studies program for both the fall and spring semesters. The deadline date for application for the fall semester is February 15 and the deadline for applying for spring admission is August 1.

Students pursuing Marriage and Family Therapy complete a 51 hour program of prescribed courses that is accredited by the American Association for Marriage and Family Therapy Commission on Accreditation. This Plan B/nonthesis program includes course work in the following areas: a) Theoretical Foundations of Marital and Family Therapy; b) Assessment and Treatment in Marital and Family Therapy; c) Human Development and Family Studies; d) Research; e) Ethics and Professional Issues; and f) Supervised Clinical Practice. Students are admitted to the Marriage and Family Therapy program for the fall term only. The deadline for applying for admission is January 15.

For additional information, contact the Director of Graduate Studies, Department of Family Studies, 315 Funkhouser, University of Kentucky, Lexington, KY 40506-0054 or (606) 257-7750.

FAM 502 Families and Children Under Stress ... (3)
FAM 509 The U.S. Family in Historical Perspective ... (3)
FAM 544 Cultural Diversity in American Children and Families ... (3)
FAM 550 Children and Family in Appalachia ... (3)
FAM 551 Woman in Contemporary Society ... (3)
FAM 552 Administration and Supervision in Early Childhood Education Programs ... (3)
FAM 553 Patient-Child Relationships Across the Lifecycle ... (3)
FAM 554 Working with Parents ... (3)
FAM 555 Fostering Cognitive Development in Children ... (3)
FAM 557 Infant Development ... (3)
FAM 563 Families, Legislation and Public Policy ... (3)
FAM 585 Aging and Environment ... (3)
FAM 601 Systemic Family Development ... (3)
FAM 602 Consumer Economics ... (3)
FAM 603 Theory and Research in Family Economics and Management ... (3)
FAM 622 The Family's Role in Early Childhood Education ... (3)
FAM 624 Perspectives on Human Sexuality ... (3)
FAM 652 Readings in Family Theory and Research ... (3)
FAM 654 Life Span Human Development and Behavior ... (3)
FAM 655 Theory and Dynamics of Human Development ... (3)
FAM 656 Adult Development in the Family ... (3)
FAM 657 Family Systems Theory ... (3)
FAM 658 Adolescent Development ... (3)
FAM 659 Advanced Child Development ... (3)
FAM 660 Aging and Family Values ... (3)
FAM 668 Allocation of Family Resources ... (3)
FAM 685 Professional Issues in Marriage and Family Intervention ... (3)
FAM 686 Theory and Methods in Marriage and Family Therapy ... (3)
FAM 687 Treatment Modalities in Marriage and Family Therapy ... (3)
FAM 688 Families in Crisis: Intervention Strategies ... (3)
FAM 689 Perspectives on Divorce and Remarriage ... (3)
FAM 690 Familial and Developmental Research Methods ... (3)
FAM 693 Family Systems Approach to Sexual Problems in Marriage and Family Therapy ... (3)
FAM 699 Field Experiences in Family Studies (1-3)
FAM 710 Current Trends in Early Childhood Education and Care ... (3)
FAM 748 Master's Thesis Research ... (0)
FAM 752 Seminar in Family Theory Construction ... (3)
FAM 759 Special Advanced Topics in Family Studies ... (1-3)
FAM 768 Residence Credit for the Master's Degree ... (1-6)
FAM 773 Seminar in Family Economics and Management ... (3)
FAM 775 Seminar in Human Development and Family Relations ... (1-3)
FAM 776 Proseminar in Marriage and Family Therapy: (Subtitle Required) ... (1-3)
FAM 785 Advanced Problems in Individual and Family Development ... (1-3)
FAM 786 Advanced Problems in Family Economics and Management ... (1-3)
FAM 787 Supervised Experience in the Practice of Marriage and Family Therapy ... (1-6)
HES 596 Special Problems in Human Environmental Sciences ... (1-3)
HES 600 Research Methodology in Human Environmental Sciences ... (3)
HES 786 Advanced Problems in Human Environmental Sciences ... (1-3)

Forestry

Graduate Faculty: *Associate Professors* Paul J. Kalisz, Thomas W. Kimmerer, Michael J. Lacki, Calvin Liu, Robert Muller, Matthew H. Pelkki, James M. Ringe, and David B. Wagner.

Associate Members: *Extension Professors* Donald Graves, Deborah B. Hill, and Allan J. Worms. *Associate Professor* Janice K. Wiedenbeck. *Associate Extension Professor* Thomas G. Barnes. *Assistant Professor* Mary A. Arthur. *Assistant Extension Professor* Jeffrey W. Stringer.

Joint Appointment: *Professor* Louis Shain.

The department offers graduate work leading to the Master of Science in Forestry. Degrees are awarded under Plan A, which requires a minimum of 24 semester hours of graduate course work plus an acceptable thesis, and under Plan B, which requires a minimum of 30 semester hours of graduate course work. The prospective student must have an undergraduate degree in forestry or take a core of forestry courses as part of the master's program.

The study and research program may be directed to any one of the following areas; wood science, forest soils, forest hydrology and water quality, forest ecology, tree physiology, forest genetics, forest wildlife, forest biometrics, forest economics and silviculture.

Students interested in pursuing further graduate studies (Ph.D.) in the forestry area may enter one of several interdepartmental programs such as animal science, plant physiology, crop science, soil science and agricultural economics.

Additional information concerning the graduate program in forestry may be obtained by contacting the Director of Graduate Studies.

FOR 460G Forest Watershed Management ... (3)
FOR 512 Forest Tree Physiology ... (3)
FOR 564 Forest Soils ... (3)
FOR 599 Independent Work in Forestry ... (1-3)
FOR 601 Research Methods in Forestry ... (3)
FOR 602 Narrative Tradition (Subtitle Required) ... (3)
FOR 605 Empirical Methods in Ecology and Evolution ... (2)
FOR 606 Conceptual Methods in Ecology and Evolution ... (2)
FOR 607 Advanced Evolution ... (2)
FOR 608 Behavioral Ecology and Life Histories ... (2)
FOR 609 Population and Community Ecology ... (2)
FOR 611 Forest Genetics ... (3)
FOR 612 Forest Ecosystem Analysis ... (3)
FOR 620 Special Topics in Forestry (Subtitle Required) ... (1-3)
FOR 622 Physiology of Plants I ... (3)
FOR 623 Physiology of Plants II ... (3)
FOR 630 Wildlife Habitat Analysis ... (3)
FOR 662 Quantitative Methods in Renewable Resource Management ... (3)
FOR 663 Special Analysis in Natural Resources (4)
FOR 748 Master's Thesis Research ... (0)
FOR 768 Residence Credit for the Master's Degree ... (1-6)
FOR 770 Forestry Seminar ... (1)
FOR 781 Special Problems in Forestry ... (1-3)
FOR 791 Research in Forestry ... (1-3)

French Language and Literature

Graduate Faculty: *Professors* John D. Erickson, Raymond C. La Charité, Virginia La Charité, and Rupert T. Pickens. *Associate Professor* Suzanne R. Pucci.

Associate Member: *Assistant Professors* Jeffrey N. Peters and Sadia Zoubir-Shaw.

Emeritus Professors: Jean D. Charron, Phillip A. Duncan, and John A. Rea.

The Department of French Language and Literature offers a graduate program leading to the M.A. degree in French language and literature. The department offers the M.A. degree according to Plan B only. Students select a program from a variety of courses listed below in French literature, language, civilization, and literature and the arts. They are then examined over their program. The master's examination for each candidate is prepared and evaluated by a committee of three members of the French graduate faculty which will consider the candidate's course program in preparing the examination. The M.A. examination is administered in November and April.

Candidates must also demonstrate a reading knowledge of another foreign language. The M.A. examination is administered in November, April and July. Applications for the examination should be made to the Director of Graduate Studies no later than four months prior to the date of examination.

For further information concerning the M.A. program in French, consult the Director of Graduate Studies.

All courses listed below are offered on a rotating basis and not less frequently than every eighth semester.

FR 461G Masterpieces of French Drama ..... (3)
FR 470G Studies in French Literature (Subtitle Required) ..... (3)
FR 501 French Literature and the Arts: The Middle Ages ..... (3)
FR 502 French Literature and the Arts: La Belle Epoque ..... (3)
FR 503 French Literature and the Arts: Surrealism ..... (3)
FR 504 Topics in French Literature and Culture (Subtitle Required) ..... (3)
FR 507 Interpretation and Style ..... (3)
FR 510 Linguistic Structure of Modern French ..... (3)
FR 516 Introduction to Early French ..... (3)
FR 550 France Today ..... (3)
FR 553 The Teaching of French ..... (3)
FR 570 Seminar in French Language Pedagogy ..... (1)
FR 601 Poetic Vision (Subtitle Required) ..... (3)
FR 602 Narrative Tradition (Subtitle Required) ..... (3)
FR 603 The Development of the French Language ..... (3)
FR 604 The Tragic Mode (Subtitle Required) (3)
FR 605 Comic Fiction (Subtitle Required) ..... (3)
FR 606 Literature of the Middle Ages (Subtitle Required) ..... (3)
FR 607 Studies in Renaissance Literature (Subtitle Required) ..... (3)
FR 609 Seventeenth-Century Studies (Subtitle Required) ..... (3)
FR 617 Eighteenth-Century Studies (Subtitle Required) ..... (3)
FR 619 Nineteenth-Century Studies (Subtitle Required) ..... (3)
FR 621 Twentieth-Century Studies (Subtitle Required) ..... (3)
FR 630 French Language, Literature and Culture Outside France (Subtitle Required) ..... (3)
FR 650 Cultural History of the French People ..... (3)
FR 768 Residence Credit for the Master's Degree ..... (1-6)
FR 769 Residence Credit for the Doctor's Degree ..... (0-12)
FR 780 Special Studies in French ..... (3)

Geography

Graduate Faculty: *Professors* Stanley Brunn, John Paul Jones, P.P. Karan, Thomas Leinbach, John Pickles, Karl Raitz, Graham Rowles, Gary Shannon, and Richard Ulack. *Associate Professors* Susan M. Roberts, Richard H. Schein, and John F. Watkins.

Associate Members: *Associate Professor* Michael Kennedy. *Assistant Professor* Linda C. Roth.

Joint Appointment: *Assistant Professor* Francis Harvey.

Emeritus Professors: W.A. Bladen and William Withington.

The Department of Geography offers both M.A. (Plan A and Plan B) and Ph.D. programs. Emphasis is placed on theoretical and conceptual training in the student's chosen field of interest. A variety of philosophical and methodological approaches are encouraged. The strength of the program lies in its focus upon close faculty-student interaction, flexibility in designing an appropriate plan of study, and research training in small seminar environments.

The primary objective of the graduate program is to prepare students for research-oriented careers in government, industry, and universities. Emphasis in graduate seminars is on developing the background and skills necessary for original contributions to geographic knowledge.

Faculty have regional expertise in South and South-East Asia, Japan, the Himalayas, southern Africa, the Caribbean, Central and Eastern Europe, the states of the former Soviet Union, Western Europe, and North America (particularly Appalachia). Research clusters of the faculty include:

Cultural Studies: Interpretation and analysis of the built environment; space and representation; the political economy of landscape production; regional imagery; media studies; popular culture; the social construction of community; historic preservation; recreation, tourism and society.
Development Studies: Policies and practices of development; political economy perspectives on development; postcolonial theory; economic restructuring and transition economies; household survival strategies; the relations between migration, transportation, tourism, and economic development; environmental management and sustainable development.
Political Geography: Electoral systems; state theory; post-Cold War democratization; the geography of revolutionary change; critical geopolitics; political economy of environmental movements; political economy of globalization discourses and practices.
Social Geography: Health care, disease, and society; the geography of AIDS; the geography of aging and the life course; poverty and social policy; race and gender; human behavior in space and time; population and migration studies; spatial structure of social networks; transportation of disadvantaged groups.
Social Theory: Theories of human spatiality; Marxist, neo-Marxist, and post-Marxist theory; regulation theory; postmodernism and poststructuralism; feminist theory; space, landscape, and identity; geographic thought and society; technology and social change.
Urban and Economic: The local state urban change; urban social conflict; neighborhood change; economic impacts of transportation systems; urban historical geography; regional economic restructuring; global financial systems; urban morphology; space-time convergence; information and communications; geography of multinational corporations; impacts of foreign direct investment and trade.

In addition, students have access to faculty with expertise in a variety of methodological areas, including: quantitative, especially multivariate statistics and modeling; mathematical demography; automated and production cartography; GIS; remote sensing applied to human geography; air photo interpretation; qualitative research methodologies, including experiential methods and realism; field techniques.

Applicants for the Ph.D. in geography must conform to the general requirements of The Graduate School as set forth in the first part of this Bulletin. Requirements in the Ph.D. program consist of 1) core courses (GEO 700 or other advanced methods course, 702, 707) in the theory

and methodology of geography; 2) seminars, independent study and directed research in one of the research foci noted above or in cognate disciplines; 3) successful examination in one modern foreign language; 4) a written and oral qualifying examination in theory, methodology, and the student's selected topical focus; and 5) a dissertation based on original research. A program designed to meet the professional academic goals of each doctoral candidate is outlined in consultation with the Director of Graduate Studies and the candidate's Advisory Committee.

Applicants for the M.A. degree in geography follow a broadly based program which consists of: 1) required courses (GEO 600, 702, and 710); 2) elective courses in geography and cognate disciplines according to the student's academic goals and career objectives; and 3) the completion of a master's thesis (Plan A). The non-thesis Ph.D.-preparatory program (Plan B) consists of: 1) required courses (GEO 600, 700 or other advanced methods course, 702, 707, 710); 2) elective courses in geography and cognate disciplines according to the student's academic goals and career objectives; 3) a written examination; 4) a publication-quality research paper; and 5) an oral examination. The Plan A option requires 24 credit hours, the Plan B, 30 credit hours.

GEO 405G Cartographic Production and Design . (3)
GEO 409G Introduction to Geographic Information Systems ..... (3)
GEO 420G Urban and Regional Planning ..... (3)
GEO 430G Physical Geography for Teachers ..... (3)
GEO 452G World Geography for Teachers ..... (3)
GEO 475G Medical Geography ..... (3)
GEO 490G American Landscapes ..... (3)
GEO 505 Practicum in Cartography ..... (3)
GEO 506 Introduction to Computer Cartography ..... (3)
GEO 507 Remote Sensing in Geography ..... (3)
GEO 508 Geographic Interpretation of Aerial Photography ..... (3)
GEO 509 Applications of Geographic Information Systems ..... (3)
GEO 542 Political Geography ..... (3)
GEO 544 Human Population Dynamics ..... (3)
GEO 545 Transportation Geography ..... (3)
GEO 547 Geography of Information and Communication ..... (3)
GEO 550 Sustainable Resource Development and Environmental Management ..... (3)
GEO 560 Independent Work in Geography ..... (3)
GEO 565 Topics in Geography ..... (3)
GEO 585 Aging and Environment ..... (3)
GEO 600 Analytic Methods in Geography ..... (3)
GEO 655 Special Study of Systematic Geography ..... (3)
GEO 700 Advanced Analytical Methods in Geography ..... (3)
GEO 702 Concepts in Geography ..... (3)
GEO 707 Seminar in Development of Geographic Thought ..... (3)
GEO 710 Research Methods and Methodology in Geography ..... (3)
GEO 716 Topical Seminar in Cultural Geography (Subtitle Required) ..... (3)
GEO 717 Topical Seminar in Economic and Urban Geography (Subtitle Required) ..... (3)
GEO 718 Topical Seminar in Geography of Environment and Resources (Subtitle Required) ..... (3)
GEO 722 Topical Seminar in Social and Political Geography (Subtitle Required) ..... (3)
GEO 723 Topical Seminar in Geography of the Third World (Subtitle Required) ..... (3)
GEO 740 Internship in Applied Geography ..... (3)
GEO 748 Master's Thesis Research ..... (0)
GEO 749 Dissertation Research ..... (0)
GEO 768 Residence Credit for the Master's Degree ..... (1-6)
GEO 769 Residence Credit for the Doctor's Degree ..... (0-12)
GEO 772 Special Research Problems in Geography ..... (1-6)

Geology

Graduate Faculty: *Professors* F.R. Ettensohn, J.C. Ferm, N. Rast, L.V.A. Sendlein, and W. A. Thomas. *Associate Professors* D. Moecher, K. O'Hara, S.M. Rimmer, and R. Street.

Associate Members: *Assistant Professors* A. E. Fryar, and P. D. Howell. *Adjunct Associate Professors* J. Drahovzal and J. C. Hower. *Adjunct Assistant Professors* J. C. Cobb and J. Dinger.

Joint Appointment: *Professor* R. I. Barnhisel.

Emeritus Professors: J. Thrailkill.

The Department of Geological Sciences offers graduate work leading to the M.S. degree (thesis option) and to the Ph.D. degree in disciplines represented by Departmental faculty. The focus of the program is to prepare students for careers in industry, government and academia. The credentials of each applicant are considered individually and applicants from other scientific disciplines are encouraged to apply. Applicants should have demonstrated competence at the undergraduate level and a grounding in the basic sciences equivalent to that of B.S. graduates of this department. Deficiencies in geosciences, allied sciences and mathematics must be removed by such course work as the departmental committee on graduate studies may specify. Candidates for the M.S. degree must complete 24 credit hours and submit a thesis that demonstrates ability to conduct sound research. Candidates for the Ph.D. must pass a written and oral Qualifying Examination, submit and defend a dissertation based on original and significant research, and satisfy the Graduate School requirements. Students are encouraged to tailor their course curriculum to their academic interests and career goals both within, and in allied fields outside the Department.

The principal areas of study include shallow seismic geophysics, hydrogeology, coal geology, stratigraphy, structural geology, and petrology. Resources for the conduct of graduate research include: the Pirtle geology library, a state-of-the-art microcomputer laboratory, petrographic microscopes, field vehicles and a staffed thin section laboratory. Analytical facilities include electron microprobe, X-ray diffraction, fluid inclusion analysis and organic petrography. Geophysical facilities include the Kentucky Digital Seismic network, a 48-channel digital seismic reflection/refraction unit with enery source, a resistivity unit, and magnetometers.

GLY 401G Invertebrate Paleontology and Evolution ..... (3)
GLY 420G Structural Geology ..... (4)
GLY 450G Stratigraphy and Sedimentation ..... (4)
GLY 513 Remote Sensing and Aerial Photography ..... (3)
GLY 515 General Coal Geology ..... (3)
GLY 530 Low Temperature Geochemistry ..... (3)
GLY 531 Igneous and Metamorphic Geochemistry ..... (3)
GLY 540 Advanced General Geology ..... (3)
GLY 552 Sedimentary Petrology ..... (3)
GLY 555 Stratigraphy ..... (3)
GLY 570 Seminar in Geological Sciences (Subtitle Required) ..... (1)
GLY 575 Geodynamics ..... (3)
GLY 579 Groundwater Geophysics ..... (3)
GLY 585 Hydrogeology ..... (3)
GLY 602 Paleoecology ..... (3)
GLY 620 Tectonics ..... (3)
GLY 624 Mesoscopic Structures ..... (3)
GLY 628 Basin Analysis Seminar ..... (3)
GLY 640 Analytic Methods in Geology ..... (3)
GLY 652 Advanced Stratigraphy ..... (3)
GLY 654 Petrology of Carbonate Rocks ..... (3)
GLY 664 Igneous Petrology ..... (3)
GLY 670 Selected Topics in Geophysics ..... (3)
GLY 671 Earthquake Seismology ..... (3)
GLY 673 Seismic Stratigraphy ..... (3)
GLY 703 Paleoecology/Paleontology Seminar (1-3)
GLY 715 Coal Geology Seminar ..... (2)
GLY 717 Organic Petrology Seminar ..... (3)
GLY 720 Graduate Tectonics Seminar ..... (3)
GLY 741 Clay Mineralogy ..... (3)
GLY 748 Master's Thesis Research ..... (0)
GLY 749 Dissertation Research ..... (0)
GLY 750 Sedimentology/Stratigraphy Seminar (Subtitle Required) ..... (1-3)
GLY 765 Igneous/Metamorphic Petrology ..... (3)
GLY 768 Residence Credit for the Master's Degree ..... (1-6)
GLY 769 Residence Credit for the Doctor's Degree ..... (0-12)
GLY 782 Individual Work in Geology ..... (1-3)
GLY 787 Research in Hydrogeology and Low-Temperature Geochemistry ..... (3)
GLY 790 Research in Geological Sciences ..... (0-6)

Germanic Languages and Literatures

Graduate Faculty: *Professors* Theodore Fiedler, Gerald J. Janecek, Bernd Kratz, and Phillip S. McKnight. *Associate Professors* Jeannine Blackwell, Michael T. Jones, Wolfgang Natter, and Linda Kraus Worley.

The general goal of graduate work in German is to provide students with a critical understanding of German culture, its language and literature and its relationship to western civilization as a whole. Specific courses are designed to acquaint students with the aims and methods of research in the fields of language pedagogy, literary and cultural history, literary theory, and historical linguistics. Students working as teaching assistants under faculty supervision have ample opportunity to develop effective teaching skills in a controlled setting.

The department offers a graduate program leading to the M.A. (Plan A or B) degree in German. Competence in another foreign language, normally French, in addition to German is required for graduate degrees.

Admission requirements include an acceptable undergraduate major in German, a satisfactory score on the Graduate Record Examination (GRE), and three letters of recommendation. Applicants lacking more comprehensive knowledge of German language and literature may be admitted with the understanding that their program must include some advanced undergraduate work in addition to those courses normally required for the M.A.

Individual programs of study are planned with consideration of the student's competencies and interests. The department endeavors to be flexible and to accommodate career goals in teaching, government service, or research.

Areas of specialization of the graduate faculty of the department afford flexible coverage in breadth and depth, with particular strength in medieval studies, the Age of Goethe, Wilhelmine and Weimar culture, contemporary literature and culture, literary theory, intellectual history, gender studies, and foreign language pedagogy. The department serves as the editorial center for the international journal, *Colloquia Germanica.* The University Library has substantial holdings in all areas of German language, linguistics and literature and in supporting fields.

GER 415G Major German Authors (Subtitle Required) ..... (3)
GER 416G Genres of German Literature ..... (3)
GER 420G Special Studies in German Literary and Cultural History (Subtitle Required) ... (3)
GER 507 Advanced German Composition and Conversation ..... (3)
GER 520 Special Topics Seminar ..... (3)
GER 532 History of the German Language ..... (3)
GER 533 Introduction to Middle High German (3)
GER 553 The Teaching of German ..... (3)
GER 612 Studies in Literary Theory ..... (3)
GER 615 Studies in Major Authors ..... (3)
GER 616 Studies in Genre ..... (3)
GER 620 Studies in the Middle Ages ..... (3)
GER 624 Studies in the 17th Century ..... (3)
GER 625 Studies in the 18th Century ..... (3)
GER 629 Studies in the 19th Century ..... (3)
GER 630 Studies in the 20th Century ..... (3)
GER 653 Research and Issues in Teaching German ..... (1)
GER 720 Special Topics in the Middle Ages ..... (3)
GER 729 Special Topics in the 19th Century ..... (3)
GER 730 Special Topics in the 20th Century ..... (3)
GER 748 Master's Thesis Research ..... (0)
GER 768 Residence Credit for the Master's Degree ..... (1-6)
GER 769 Residence Credit for the Doctor's Degree ..... (0-12)
GER 781 Special Studies in German ..... (3)

Gerontology

***Graduate Faculty:** *Professors* David T. Berry, Subbarao Bondada, Linda H. Chen, Surjit S. Dhooper, Thomas F. Garrity, Dallas M. High, William R. Markesbery, Mark Mattson, Daniel R. Richardson, Graham D. Rowles, Stanley Saxe, Stephen W. Scheff, Sharon L. Sheahan, Mary Walker, John Van Willigen, David R. Wekstein, and Phyllis M. Wise. *Associate Professors* J. Wesson Ashford, Lee X. Blonder, Mark A. Davis, James W. Geddes, Laurie R. Hatch, Robert G. Henry, Mitzi S. Johnson, Mark P. Mattson, B. Jan McCulloch, L. Craig Pettigrew, Frederick A. Schmitt, Charles Smith, David A. Snowdon, Nikiforos Stamatiadis, and John F. Watkins. *Assistant Professor* Robert G. Henry.

***Associate Members:** *Adjunct Associate Professor* Linda B. Kuder. *Assistant Professors* Kimberly R. Emmett, Nancy Schoenberg, Nancy Stiles, Christine Tully, and Sarah Wackerbarth. *Research Assistant Professor* Deborah D. Danner.

**Many faculty members in Gerontology hold primary graduate faculty appointments in affiliated programs.*

The Ph.D. program in Gerontology is a multidisciplinary and interdisciplinary research-oriented degree specifically focused on aging and health. The program, based in the Sanders-Brown Center on Aging, is organized in a way that combines expertise, methodologies and facilities from more than 20 departments ranging from the biomedical sciences, through the social and behavioral sciences, to the humanities.

The goal of the Ph.D. program is to provide advanced multidisciplinary and interdisciplinary research training in gerontology with an emphasis on aging and health. Students will develop an understanding of the full spectrum of topics that concern both the process of aging and the health and well-being of the elderly population. In addition, students will develop in-depth knowledge in related disciplines or areas of specialization. The course of study is flexible, stressing a multidisciplinary approach to the selection of course work and research activities. Emphasis is placed on tailoring each student's program to meet the specific needs of the individual's background and career goals.

To fulfill these objectives, the program integrates formal course work in gerontology, specialized training in a related domain, opportunities for research, experiential learning modules and a problem focused research seminar. Graduates of the program will be able to conduct aging-related research, teach gerontology at the university level, direct gerontology educational programs, work in the aging services field, and consult with other professionals on various issues pertaining to aging and health.

Approximately 40 faculty from departments throughout the University are involved in the program's instruction and research activities. Departments represented include: Anatomy and Neurobiology, Anthropology, Behavioral Science, Civil Engineering, Dentistry, Family Studies, Geography, Internal Medicine and Geriatrics, Management, Neurology, Nursing, Nutrition and Food Science, Philosophy, Physiology and Biophysics, Preventive Medicine, Psychology, Social Work, and Sociology. The diversity of the faculty facilitates the comprehensive study of aging and the aged. At the same time it allows for concentration in several areas of particular expertise and program specialization, including: rural aging, long-term care, cognitive and sensory change, public policy, ethical issues, and the etiology and treatment of Alzheimer's disease, strokes, and other diseases prevalent among the elderly.

The Sanders-Brown Center on Aging, a Commonwealth Center of Excellence, offers a broad base of programmatic support for the program as well as serving as the home of a Geriatric Education Center, an Alzheimer's Disease Research Center, and a Stroke Center. Numerous sites for clinical/experiential training are available at various clinics, agencies and organizations, including but not limited to: The Kentucky Division of Aging Services, the University of Kentucky Hospital, Christian Health Center (a University-affiliated nursing home), Helping Hand Alzheimer's Day Care Program, University of Kentucky Geriatric Support Services, University of Kentucky Memory Disorders Clinic, University of Kentucky Center for Rural Health, the Center for Creative Living, Cardinal Hill Hospital, St. Claire Medical Center, Northeast Area Health Education Center and the Veterans Affairs Medical Center.

Further information may be obtained by writing to:

Graham D. Rowles, Ph.D.
Director of Graduate Studies
Ph.D. Program in Gerontology
101 Sanders-Brown Center on Aging
University of Kentucky
Lexington, KY 40536-0230

Ph.D. Requirements

Students are required to complete the core curriculum in gerontology and 18 hours in an area of specialization. Elective courses to be taken will be recommended by each student's Advisory Committee.

Core Curriculum

GRN 600 A Study of the Older Person ..... (3)
GRN 620 Human Aging and Adjustment ..... (6)
GRN 650 Research Methods in Gerontology ... (3)
GRN 780 Applied Research Practicum I ..... (1)
GRN 781 Applied Research Practicum II ..... (1)
GRN 785 Independent Research in Gerontology ..... (3)
GRN 790 Integrative Research Seminar I ..... (3)
GRN 791 Integrative Research Seminar II ..... (3)

Six hours to be selected from:

GRN 612 Biology of Aging ..... (3)
GRN 710 Aging of the Nervous System ..... (3)
BSC 770 Psychosocial Issues in Health and Aging ..... (3)
GRN 610 Aging and Biomedical Ethics ..... (3)
ANT 539 Aging in Cross-Cultural Perspective ..... (3)
GRN 585 Aging and Environment ..... (3)
GRN 715 Health Policy and Aging ..... (3)

It is assumed that students entering with M.S. or M.A. degrees will have taken some of the required courses or their equivalent. The student's Advisory Committee, in conjunction with the Program Steering Committee, will determine the amount of prior course work to be credited toward specific requirements.

Possible elective courses that may be selected by the student or required by the student's Advisory Committee include but are not limited to those listed below:

Gerontology Electives

GRN 513 Geriatric Pharmacy ..... (3)
BSC 779 Behavioral Factors in Death and Dying ..... (3)
NFS 680 Nutrition and Aging ..... (2)
AHE 510 Older Women and their Health ..... (3)
HA 510 Organization of the Long-term Care Sector ..... (3)
SOC 735 Special Topics in Work, Gender and Inequality: Gender and Aging ..... (3)
SW 604 Social Work Practice with the Aging (2)
SW 613 Urban Ecology and Aging ..... (2-3)
SW 642 Psychological Aspects of Human Aging ..... (3)

GRN 513 Geriatric Pharmacy ..... (3)
GRN 585 Aging and Environment ..... (3)
GRN 600 A Study of the Older Person ..... (3)
GRN 610 Aging and Biomedical Ethics ..... (3)
GRN 620 Human Aging and Adjustment ..... (6)
GRN 643 Biomedical Aspects of Aging ..... (3)
GRN 650 Research Methods in Gerontology ... (3)
GRN 710 Aging of the Nervous System ..... (3)
GRN 715 Health Policy and Aging ..... (3)
GRN 749 Dissertation Research ..... (3)
GRN 769 Residence Credit for the Doctor's Degree ..... (0-12)
GRN 780 Applied Research Practicum I ..... (1)
GRN 781 Applied Research Practicum II ..... (1)
GRN 785 Independent Research in Gerontology ..... (3)
GRN 790 Integrative Research Seminar I ..... (3)
GRN 791 Integrative Research Seminar II ..... (3)

Health Administration

Director of Graduate Studies: Douglas Scuthfield

Graduate Faculty: *Professors* Joe Fink, Joel Lee, and Thomas C. Robinson.

Associate Members: *Associate Professors* Steven Fleming and Thomas Samuel. *Adjunct Professors* Leonard Heller and Earl Motzer.

The Master of Health Administration is offered in the Martin School of Public Policy and Administration, a research, academic and service unit of the Graduate School. The MHA is a 51 credit hour program for those seeking careers in the management of a variety of health institutions, organizations and agencies.

The interdisciplinary faculty have appointments in the Martin School, in academic units within the Medical Center, and in the Colleges of Business and Economics, and Arts and Sciences.

Students applying for admission to the program are expected to have an undergraduate grade point average of 2.5 or better on all work attempted; quantitative and verbal scores on the GRE or GMAT of at least 1000 (GRE) or 500 (GMAT); and at least a 3.0 grade point average on previous graduate work. The final selection of students for admission will be subject to the discretion of the admissions committee of the MHA program.

Students are admitted from various academic disciplines. If not previously exposed to business disciplines, students should develop an understanding of the concepts of financial accounting and macroeconomics.

The MHA curriculum has an administrative core, a health service core, and electives totaling 51 credit hours. Degree requirements include the successful completion of all course work with a 3.0 or better GPA and passing oral and written comprehensive examinations.

The MHA program is accredited by the Accrediting Commission on Education for Health Services Administration (ACEHSA).

For more information about the program, write:

MHA Director of Graduate Studies
University of Kentucky
415 Patterson Office Tower
Lexington, KY 40506-0027

Course Requirements

Completion of 51 credit hours of course work is required (see below).

MHA Curriculum

Administrative Core (18 hours)
HA 621 Quantitative Methods of Research ..... (3)
HA 623 Decision Analysis ..... (3)
HA 624 Quality Management and Information Systems in Health Care ..... (3)
HA 642 Public Organization Theory and Behavior ..... (3)
HA 652 Public Policy Economics ..... (3)
FIN 600 Corporate Financial Policy ..... (3)

Health Services Core (27 hours)
HA 601 Overview of the Health Care Delivery System ..... (3)
HA 602 Strategic Planning and Management of Health Care Organizations ..... (3)
HA 603 Legal Aspects of Health Administration ..... (3)
HA 635 Management Accounting for Health Care Organizations ..... (3)
HA 636 Health Economics ..... (3)
HA 637 Health Finance ..... (3)
HA 656 Health Program Evaluation ..... (3)
HA 660 Decision Making in Health Care Organizations ..... (3)
HA 673 Health Policy Development ..... (3)

Electives (6 hours) May be taken as internship (HA 711) plus one course, or two courses.

HA 600 Epidemiology ..... (3)
HA 601 Overview of the Health Care Delivery System ..... (3)
HA 602 Strategic Planning and Management of Health Care Organizations ..... (3)
HA 603 Legal Aspects of Health
HA 609 Health Planning - A System Approach . (3)
HA 610 Health Services Marketing ..... (3)
HA 611 Hospitals as an Integrated System ..... (3)
Administration ..... (3)
HA 612 Long Term Care/Rehabilitation Services ..... (3)
HA 621 Quantitative Methods of Research ..... (3)
HA 622 Mental Health Administration ..... (3)
HA 623 Decision Analysis ..... (3)
HA 624 Quality Management and Information Systems in Health Care ..... (3)
HA 632 Public Funds Management ..... (3)
HA 635 Management Accounting for Health Care Organizations ..... (3)
HA 636 Health Economics ..... (3)
HA 637 Health Finance ..... (3)
HA 642 Public Organization Theory and Behavior ..... (3)
HA 652 Public Policy Economics ..... (3)
HA 656 Health Program Evaluation ..... (3)
HA 660 Decision Making in Health Care Organizations ..... (3)
HA 673 Health Policy Development ..... (3)
HA 711 Practicum In Health Administration .. (3)
HA 715 Health Policy and Aging ..... (3)
HA 775 Special Topics in Health Administration ..... (1-3)
HA 785 Independent Study in Health Administration ..... (1-3)

Historic Preservation

Associate Member: *Assistant Professor* Julie Riesen-Weber.

Preservation is a field involved with the interpretation and conservation of historic sites, as well as with their renovation and adaptive use. An interdisciplinary approach to the investigation of buildings and landscapes, which addresses the complexity of material culture, has been adopted by the faculty of this program.

The College of Architecture offers a Master of Historic Preservation degree, whose curriculum provides opportunities for students to explore a variety of interests. Applications are invited not only from those with degrees in design—architects, interior designers, and landscape architects—but also from those who hold degrees in other disciplines and wish to pursue studies in historic preservation.

Requirements for admission include 1) a baccalaureate degree from an accredited college or university, 2) completion of two semesters of American history and two semesters of surveys in the history of architecture or art, 3) demonstration of ability in drawing, drafting, and photography, 4) three letters of recommendation and a personal essay, 5) a minimum score of 1000 on the verbal and quantitative sections and an acceptable score on the analytical section of the Graduate Record Examination, and 6) an interview with the faculty in the program, if possible.

Requirements for the degree include the completion of core courses, advanced electives, an internship, and a final project—a total of 48 hours of credit. For additional information on admission and requirements, please contact the Director, Graduate Program in Historic Preservation , College of Architecture, University of Kentucky, Lexington, KY 40506-0041.

ARC 602 Dynamics of Historic Preservation: Law, Land Use Planning, and Economics ..... (3)
ARC 610 American Architecture I ..... (3)
ARC 611 American Architecture II ..... (3)
ARC 612 Documentation of Historic Buildings and Sites ..... (3)
ARC 613 Historical Structural Systems and Building Materials ..... (3)
ARC 616 Preservation Design Studio ..... (3)
ARC 699 Summer Internship ..... (1-6)
ARC 720 Case Studies in Preservation ..... (3)
ARC 721 Interpretation of Historic Buildings and Sites ..... (3)
ARC 722 Historic Properties Management and Administration ..... (3)
ARC 723 Kentucky Architecture and Cultural Landscapes ..... (3)
ARC 724 Advanced Historical Structural Systems and Building Materials Conservation ..... (3)
ARC 725 Preservation Practicum ..... (3)
ARC 726 American Material Culture ..... (3)
ARC 728 Historic Landscape and Garden Restoration and Interpretation ..... (3)
ARC 750 Architecture Design Studio ..... (6)
ARC 799 Final Project ..... (6)

GEO 490G American Landscapes ..... (3)
DMT 589 Res/Pres I: Introductory Concepts of Restoration and Preservation ..... (3)

History

Graduate Faculty: *Professors* James Albisetti, Lance Banning, Thomas Cogswell, E. Randolph Daniel, Bruce Eastwood, William W. Freehling, Michael D. Green, George Herring, Robert Ireland, Robert Olson, Theda Perdue, Jeremy Popkin, and Mark W. Summers. *Associate Professors* Francie Chassen-Lopez, Eric Christianson, Patricia Cooper, Ronald Eller, Daniel Gargola, Fon Gordon, David Hamilton, Philip Harling, Kathi Kern, David Olster, Daniel Smith, and Gerald Smith.

Associate Members: *Associate Professor* Daniel Rowland. *Assistant Professors* Karen Petrone, Kristin Stapleton, and Gretchen D. Starr-LeBeau.

Emeritus Professors: Humbert Nelli, Donald Nugent, Gerard Silberstein, and Robert Warth.

The Master's Program

Students should submit evidence of strong undergraduate preparation in history, preferably an undergraduate major with a minimum grade-point average of 3.0 on a 4.0 scale. Applicants for admission must submit Graduate Record Examination scores, three letters of recommendation from professors familiar with their work, and a writing sample. Background in at least one modern foreign language is recommended for admission. Students will not receive the M.A. degree in history unless they demonstrate reading knowledge of a modern foreign language approved by the Department of History and by The Graduate School. Both Plan A and Plan B are offered.

The Ph.D. Program in History

Those who seek the doctorate in history should follow carefully the general directions governing the subjects of residence, courses, and foreign language requisites set forth in the first part of the Bulletin. The applicant does not become a candidate until knowledge of one modern foreign language approved by the Advisory Committee has been demonstrated, and until the Qualifying Examination has been passed and has been approved by the Graduate School. Students specializing in areas other than the history of the United States must demonstrate competence in a second foreign language before the Qualifying Examination. Students specializing in the history of the United States may, upon the decision of the Advisory Committee, be required to demonstrate competence in a second foreign language or in another skill, such as statistics, computer science, or oral history. Those specializing in the history of Early Modern or Modern Britain must demonstrate reading knowledge of a second foreign language only if the student's Advisory Committee considers the requirement necessary and appropriate for the doctoral dissertation. In all cases it is the right of the Advisory Committee, not the student, to determine the appropriateness of a foreign language and to decide whether a student specializing in United States history should be required to demonstrate competence in a second foreign language or other skill.

The student's work for the doctorate in history is directed by an Advisory Committee composed of representatives of the areas and fields under four preparation requirements. The committee's chair directs the dissertation and students should consult this person at their earliest convenience.

Requisites for the Ph.D. candidacy in history will be met as follows:

Students must be examined in four fields. Two of these will be considered major fields and two will be considered minor fields. One of the two major fields must be a chronologically defined field (i.e. Early Modern Britain, 1485-1750; U.S. since 1865; Modern Europe, 1914-present). The major examinations require a substantial background in the monographic and journal literature of the field. The minor field examinations generally require a survey knowledge of the field and familiarity with major historiographical and thematic issues in the field. Students should consult with the examiners in order to define the fields and determine how to prepare for the exams. At least one of the minor fields must be a field outside the main concentration of study. Students studying American history must take a non-U.S. field. Students studying continental Europe after 1648 may satisfy the outside minor with a field in British history, a non-European field, or a pre-1648 field in Medieval or Ancient history. Students studying British history may satisfy it with a field in continental Europe, a non-European field, or a pre-1450 field in Medieval or Ancient history. For students concentrating in Ancient or Medieval history, the outside field must either be a post-1450 European field or a non-European field. With the permission of the major adviser, a student may substitute a field of study from outside the History Department.

The fields available for study are listed below. With the approval of the committee, a student may substitute a specially constructed field not on the list.

Non-American Fields

Greece
Rome
Byzantium
Early Middle Ages
Later Middle Ages
Early Modern Europe (1450 - 1648)
Early Modern Europe (1648 - 1815)
Modern Europe (1815 - 1914)
Modern Europe (1914 - present)
Early Modern Britain (1485-1750)
Britain (1750 - present)
Russia and Eastern Europe to 1800
Russia and Eastern Europe (1800 –present)
Latin America
Middle East*
Asia*
European Science and Technology
**Available only as a minor field*

American Fields

U.S. to 1865
U.S. since 1865
American Diplomatic
American South
American Social
Native American
American Women
Afro-American
American Science and Technology
American Medicine
American Legal

HIS 500 Pre-Classical and Classical Greece ..... (3)
HIS 501 Fourth Century Greece and the Hellenistic World ..... (3)
HIS 502 A History of the Roman Republic ..... (3)
HIS 503 A History of the Roman Empire ..... (3)
HIS 504 Greek and Roman Medicine ..... (3)
HIS 505 Ethnohistory of the Native American Southeast ..... (3)
HIS 509 Roman Law ..... (3)
HIS 510 Medieval Civilization I ..... (3)
HIS 511 Medieval Civilization II ..... (3)
HIS 512 Medieval Institutions to the Mid-Tenth Century ..... (3)
HIS 513 Medieval Institutions Since the Mid-Tenth Century ..... (3)
HIS 519 The Era of the Renaissance ..... (3)
HIS 520 The Era of the Reformation ..... (3)
HIS 521 European Social History 1400-1800 .... (3)
HIS 524 European Diplomacy 1870-1918 ..... (3)
HIS 525 European Diplomacy Since 1918 ..... (3)
HIS 526 Europe Since World War II ..... (3)
HIS 533 Modern European Imperialism ..... (3)
HIS 534 Russia in the Twentieth Century I ..... (3)
HIS 535 Russia in the Twentieth Century II ..... (3)
HIS 536 Intellectual and Cultural History of Russia to 1800 ..... (3)
HIS 537 Intellectual and Cultural History of Russia 1800-present ..... (3)
HIS 538 Marxism: The History of Socialism and Communism ..... (3)
HIS 540 History of Modern France to 1815 ..... (3)
HIS 541 History of Modern France Since 1815 (3)
HIS 542 German History 1815-1914 ..... (3)
HIS 543 German History Since 1914 ..... (3)
HIS 546 The Byzantine Empire ..... (3)
HIS 547 History of the Ottoman Empire: 1200-1923 ..... (3)
HIS 548 History of the Middle East: 1808-1952 (3)
HIS 549 History of the Middle East: 1952 to Present ..... (3)
HIS 553 18th Century Britain ..... (3)
HIS 554 British History 1815-1901 ..... (3)
HIS 555 British History Since 1901 ..... (3)
HIS 560 Latin America in the World ..... (3)
HIS 562 Modern Mexico ..... (3)
HIS 563 The History of Women in Latin America ..... (3)
HIS 568 Native American History: The East .... (3)
HIS 569 Native American History: The West ... (3)
HIS 572 American Legal History ..... (3)
HIS 573 American Constitutional History ..... (3)
HIS 574 The Diplomacy and Foreign Policy of the United States to 1919 ..... (3)
HIS 575 The Diplomacy and Foreign Policy of the United States since 1919 ..... (3)
HIS 576 Frontier America, 1400-1869 ..... (3)
HIS 577 Frontier American, 1869-Present ..... (3)
HIS 578 History of the Old South ..... (3)
HIS 579 History of the New South ..... (3)
HIS 580 History of Appalachia ..... (3)
HIS 581 U.S. Urban History since 1865 ..... (3)
HIS 582 Immigration and American History, 1815 to the Present ..... (3)
HIS 584 Health and Disease in the United States ..... (3)
HIS 585 The Age of Jim Crow, 1880-1930 ..... (3)
HIS 586 The Images of Blacks in American Society ..... (3)
HIS 590 Japanese History to 1800 ..... (3)
HIS 591 Japanese History since 1800 ..... (3)
HIS 593 East Asian History since World War II (3)
HIS 595 Studies in History ..... (3)
HIS 596 The U.S. Family in Historical Perspective ..... (3)
HIS 597 Westerners in East Asia, 1839 to the Present ..... (3)
HIS 598 China in Revolution, 1895-1976 ..... (3)
HIS 606 Historical Criticism ..... (3)
HIS 613 Readings in Early Medieval History ... (3)
HIS 614 Readings in High and Late Medieval History ..... (3)
HIS 615 Readings in History of Science and Medicine through the Renaissance ..... (3)
HIS 622 Readings in European History 1500-1815 ..... (3)
HIS 623 Readings in European Cultural History since 1815 ..... (3)
HIS 624 Readings in European Political and Diplomatic History since 1815 ..... (3)
HIS 625 Readings in British and British Empire History ..... (3)
HIS 626 Readings in British and British Empire History ..... (3)
HIS 630 Readings in American History: The Colonial Era ..... (3)
HIS 631 Readings in American History: The American Revolution and The New Republic ..... (3)
HIS 632 Readings in American History: The Age of Jackson, Civil War, and Reconstruction ..... (3)
HIS 633 Readings in American History: The Gilded Age and the Progressive Era .. (3)
HIS 634 Readings in American History: America Since 1920 ..... (3)
HIS 638 Readings in Latin American History ... (3)
HIS 640 Readings in East Asian History ..... (3)
HIS 650 Readings in Special Topics in History . (3)
HIS 651 Readings in U.S. Foreign Relations Since 1900 ..... (3)
HIS 652 Readings in American History of Science and Technology ..... (3)
HIS 653 Readings in U.S. Women's History ..... (3)
HIS 654 Readings in Modern African-American History ..... (3)
HIS 655 Readings in Antebellum Southern ..... History ..... (3)
HIS 656 Readings in New South History ..... (3)
HIS 695 Independent Work ..... (1-3)
HIS 700 Special Problems in History ..... (3)
HIS 706 Seminar in Medieval History ..... (3)
HIS 710 Seminar in American History, 1607-1815 ..... (3)
HIS 712 Seminar in American History, 1865 to the Present ..... (3)
HIS 722 Seminar in Modern European History, 1870 to the Present ..... (3)
HIS 730 Seminar in Modern British History .... (3)
HIS 748 Master's Thesis Research ..... (0)
HIS 749 Dissertation Research ..... (0)
HIS 768 Residence Credit for the Master's Degree ..... (1-6)
HIS 769 Residence Credit for the Doctor's Degree ..... (0-12)

Horticulture

Graduate Faculty: *Professors* Robert Geneve, Dewayne L. Ingram, and Thomas R. Kemp. *Associate Professors* Douglas D. Archbold, Jack Buxton, Robert Houtz, John C. Snyder, and Leslie Weston.

Associate Members: *Extension Professors* Robert G. Anderson Robert E. McNiel, and John Strang. *Extension Assistant Professors* Brent Rowell and John Strang. *Adjunct Assistant Professors* George F. Antonius and Gary R. Cline.

Emeritus Professors: Dean Knavel and L. Stoltz.

The Department of Horticulture and Landscape Architecture participates in the interdisciplinary graduate program leading to the Master of Science in Plant and Soil Science, with an emphasis in Horticultural Science (see the program description for Plant and Soil Science for details). This study and research program will relate to innovative cultural practices for vegetables, fruit, nursery or floricultural crops and/or horticultural plant biology.

Students interested in working in horticulture toward a Doctor of Philosophy degree may enter the Plant Physiology program or the Crop Science program (see the program descriptions for Plant Physiology and Crop Science for details).

Interior Design, Merchandising and Textiles

Graduate Faculty: *Professors* Elizabeth Pratt Easter and Allison Carll White. *Associate Professors* Laura D. Jolly, Kimberly A. Miller, and Margaret B. Portillo.

Associate Members: *Associate Professors* Ann Whiteside-Dickson and Terry D. Rothgeb. *Assistant Professor* Maria Okorley and Leslie D. Stoel.

The graduate program in the Department of Interior Design, Merchandising and Textiles is philosophically committed to the well-being of individuals in their immediate environment. Each area of focus is designed to meet individual interests and career objectives.

Interior Design

A concentration in interior design leads to a post-professional Master of Arts or Master of Science in Interior Design, Merchandising and Textiles. A combination of course work, independent study, and research experience is available to provide students with a program of study designed for career goals. Graduate emphasis is individualized to meet each student's career interests.

The student works with an advising committee in the selection of a thesis or non-thesis option and the appropriate courses at 500, 600 and 700 levels. It is essential that the applicant have an undergraduate degree in interior design or a related subject matter. Supplementary course work may be required of applicants without first professional undergraduate interior design degrees.

Merchandising, Apparel and Textiles

A concentration in merchandising, apparel and textiles leads to a Master of Science or Master of Arts in Merchandising, Apparel and Textiles. A combination of course work, independent study and research experience is available to provide students with a program of study designed for career goals. Graduate emphasis is individualized to meet each student's career interests.

The student works with an advisory committee in the selection of a thesis or non-thesis option and the appropriate courses at 500, 600 and 700 levels. It is expected that the applicant have an undergraduate degree in the major area of interest or a closely related field.

Degree Requirements

The Master of Science in Interior Design, Merchandising, and Textiles and the Master of Arts in Interior Design, Merchandising, and Textiles will be available under Plan A and Plan B. The thesis option (Plan A) requires 24 hours of course work, six hours of master's residence credit, and a thesis; Plan B requires completion of 30 credit hours, which is to include six hours of DMT 700. A common core of twelve hours, comprised of DMT 650, DMT/HES 600, DMT 772, and either STA 570 or DMT 655, is required of all students. (The M.S. degree requires STA 570, while the M.A. requires DMT 655.) Students are to complete twelve credits of additional course work in the area of concentration. Successful completion of a final examination is required.

Admission

Potential graduate students must:

1. apply and be accepted to the Graduate School and to the Department of Interior Design, Merchandising, and Textiles.
2. have been granted a baccalaureate degree by an accredited institution with a minimum 3.0 GPA on a 4.0 scale (2.5-3.0 GPAs will be considered in relation to other credentials).
3. have taken the Graduate Record Examination (GRE). For a non-English speaking student, a TOEFL score of 550 or above is required.
4. be reviewed by the department.

To be reviewed by the department, send a letter to the Director of Graduate Studies stating the general nature of your desired program and career goals; rationale for selecting this program; and your background in this area of study.

Additionally, three letters of recommendation regarding academic ability must be sent to the Director of Graduate Studies. A portfolio, which is reviewed and evaluated by a faculty committee, is required of all design applicants.

DMT 515 Specification and Evaluation of Textiles and Apparel ..... (3)
DMT 520 Textiles for Interiors ..... (3)
DMT 522 History of Textiles ..... (3)
DMT 525 Economics of the Apparel and Textile Industry ..... (3)
DMT 532 Advanced Apparel Product Studio (Subtitle Required) ..... (3)
DMT 533 History of Costume ..... (3)
DMT 545 Clothing for Specific Needs ..... (3)
DMT 547 Social and Psychological Aspects of Apparel ..... (3)
DMT 557 Interior Design Studio 3 ..... (5)
DMT 558 Interior Design Studio 4 ..... (5)
DMT 559 Special Topics in Interior Design, Merchandising, and Textiles (Subtitle Required) ..... (1-3)
DMT 589 Res/Pres I: Introductory Concepts of Restoration and Preservation ..... (3)
DMT 595 Special Problems in Merchandising . (1-3)
DMT 600 Research Methodology in Human Environmental Sciences ..... (3)
DMT 622 Advanced History of Textiles ..... (3)
DMT 633 Advanced History of Costume ..... (3)
DMT 641 Regional Variations in Colonial American Design ..... (3)
DMT 642 Historic American Interiors ..... (3)
DMT 646 Current Research Issues in Environmental Design ..... (3)
DMT 650 Survey of Current Theories and Literature ..... (3)
DMT 655 Issues in Creativity and Design ..... (3)
DMT 659 Interior Design Studio 5 ..... (3)
DMT 660 Interior Design Studio 6 ..... (3)
DMT 665 Environmental Issues Related to Interior Design ..... (3)
DMT 669 Advanced Color Theory and Application ..... (3)
DMT 700 Research Problems in Interior Design, Merchandising, and Textiles ..... (3)
DMT 748 Master's Thesis Research ..... (0)
DMT 759 Special Topics in Interior Design, Merchandising, and Textiles (Subtitle Required) ..... (1-3)
DMT 768 Residence Credit for the Masters Degree ..... (1-6)
DMT 772 Seminar in Interior Design, Merchandising and Textiles ..... (1-3)
DMT 785 Independent Study in Interior Design, Merchandising and Textiles ..... (1-3)
HES 596 Special Problems in Human Environmental Sciences ..... (1-3)
HES 600 Research Methodology in Human Environmental Sciences ..... (3)
HES 786 Advanced Problems in Human Environmental Sciences ..... (1-3)

Kinesiology and Health Promotion

Graduate Faculty: *Professors* Melody P. Noland and Robert Shapiro. *Associate Professors* Richard S. Riggs, Dennis Vinton, Andrew Weiner, and James W. Yates.

Associate Member: *Associate Professors* Rayma Beal, David Caborn, John Hall, Stanley Labanowich and Steve Parker. *Assistant Professors* Jody Clasey, Jean McCrory, Vonnie Colvin and Lynda Ransdell.

Joint Appointments: *Associate Professor* Arthur J. Nitz. *Assistant Professor* John Lawrence.

Emeritus Professors: Joseph Gruber and Pentti Teraslinna.

The Department of Kinesiology and Health Promotion offers graduate work leading to the Master of Science and Doctor of Education degrees with areas of concentration in kinesiology and health promotion. Within these areas students may subspecialize in health promotion; physical education teaching/coaching; sport management; exercise physiology; or biomechanics.

Doctor of Education Degree

The Ed.D. program in Kinesiology and Health Promotion provides advanced study for those who seek careers in educational, industrial or other appropriate settings. Admission to the program requires a master's degree and satisfactory completion of the Graduate Record Examination. Course work is planned by the student's advisory committee based on their assessment of the student's background and goals. All programs include course work within and outside the department. Additional information about the Ed.D. can be obtained from the Director of Graduate Studies.

Master of Science Degree

The master's program is designed to provide a high-quality graduate program for the following two types of students: 1) active, motivated individuals who desire advanced study to enhance their professional adequacy, and 2) discipline-oriented students completing a master's as an intermediate step toward doctoral work. The objective of the program is to prepare the student to: 1) effectively locate, analyze, and use significant elements of the professional literature and research materials, 2) permit an in-depth study of

a specialized content area within the field, and 3) acquire a knowledge of sound research procedures.

The program needed to accomplish this objective involves a combination of departmental course offerings, supporting electives, and a required core of statistics and research methods. Inasmuch as the fields of health promotion and kinesiology draw their principles from a variety of disciplines, it is appropriate that certain electives be chosen from the supportive areas of the biological and physical sciences and the behavioral and social sciences. Master's candidates with the approval of the department may select either a thesis (Plan A) or a non-thesis option (Plan B).

Applicants must meet the requirements set forth in the first part of this Bulletin. Students are expected to have satisfactorily completed the Graduate Record Examination. In addition, applicants are expected to have a minimum of 21 undergraduate hours in their respective fields. Specific prerequisites for graduate study at the master's level are determined by a committee of the departmental graduate faculty based upon area of emphasis.

General Requirements

Regardless of whether the student concentrates in the kinesiology or health promotion areas, all candidates are required to complete one of the following:

PLAN A
(Thesis Option)

EDP 557	Educational Statistics	3
	or	
	STA 570 Basic Statistical Analysis	4
KHP 644	Research Techniques Applied to Health, Physical Education and Recreation	3
Supporting Electives		6
KHP	Area of Concentration	12
KHP 768	Residence Credit for the Master's Degree	6
	Total	30-31

PLAN B
(Non-Thesis Option)

EDP 557	Educational Statistics	3
	or	
	STA 570 Basic Statistical Analysis	4
KHP 644	Research Techniques Applied to Health, Physical Education and Recreation	3
Supporting Electives		6
KHP	Area of Concentration	18
	Total	30-31

For additional information, write to the Director of Graduate Studies, Department of Kinesiology and Health Promotion.

KHP 420G Physiology of Exercise ..... (3)
KHP 509 Workshop in Health and Safety ..... (1-3)
KHP 515 Anatomical and Mechanical Kinesiology ..... (3)
KHP 535 School Health Dilemmas of Special Populations ..... (3)
KHP 546 Physical Education Workshop ..... (1-3)
KHP 547 Psychology of Sport and Physical Activity ..... (3)
KHP 560 Motor Development in Infants and Young Children ..... (3)
KHP 570 Design and Management of Facilities for Sport ..... (3)
KHP 573 Management of Sport ..... (3)
KHP 576 Intramural and Sports Club Administration ..... (3)
KHP 577 Practicum in Recreation ..... (3-9)
KHP 579 Adapted Physical Education ..... (3)
KHP 580 Introduction to Team Development ..... (3)
KHP 585 Foundations of Sport Management ... (3)
KHP 592 Choreography ..... (2)
KHP 600 Exercise Stress Testing and Prescription ..... (3)
KHP 609 Seminar in Health and Safety Education ..... (3)
KHP 615 Biomechanics of Fundamental Movements ..... (3)
KHP 620 Advanced Exercise Physiology ..... (3)
KHP 621 Exercise and Coronary Heart Disease . (3)
KHP 644 Research Techniques Applied to Health, Physical Education and Recreation ..... (3)
KHP 676 Current Issues and Problems in Sport Management ..... (3)
KHP 680 Sport Marketing ..... (3)
KHP 681 Financial Aspects of Sport ..... (3)
KHP 685 Supervision of Sport and Fitness Personnel ..... (3)
KHP 686 Sport Manager's Lab ..... (3)
KHP 687 Practicum in Sport Management ..... (3-9)
KHP 694 Independent Study in Health Education ..... (1-3)
KHP 695 Independent Study in Physical Education ..... (1-3)
KHP 696 Independent Study in Recreation .... (1-3)
KHP 720 Sports Medicine ..... (3)
KHP 748 Master's Thesis Research ..... (0)
KHP 749 Dissertation Research ..... (0)
KHP 768 Residence Credit for the Master's Degree ..... (1-6)
KHP 769 Residence Credit for the Doctor's Degree ..... (0-12)
KHP 770 Seminar in Physical Education ..... (3)
KHP 780 Seminar in Recreation ..... (3)
KHP 781 ProSeminar in HPR (Subtitle Required) ..... (1-3)
KHP 782 Independent Research ..... (3)

Library Science

Graduate Faculty: *Professors* Donald O. Case, Lois Chan, JoAnn V. Rogers, Timothy Sineath, and Thomas Waldhart. *Associate Professor* Ling H. Jeng.

Emeritus Professors: Lawrence A. Allen, Robert E. Cazden and Michael Harris.

Master's Program

The School of Library and Information Science offers a program that conforms to the University of Kentucky Graduate School in offering three forms of the master's degree. Most students elect the MSLS degree which requires 12 hours of core courses, 24 hours of electives, and the final examination. Required core courses are LIS 600 Information in Society; LIS 601 Information Sources and Services; LIS 602 Information Storage and Retrieval; and LIS 603 Management in Library and Information Science.

Three elective hours must be taken in LI 636, LIS 637, LIS 638, or LIS 668; as many as nine elective hours may be in a cognate area of study (subject area courses outside library and information science). Fifteen hours of electives must be at the 600 level, and a maximum of 9 hours may be transferred into the program, including any courses taken in post-baccalaureate status.

The M.A. degree Plan A requires all of the above plus satisfactory demonstration of a language competency, a minimum of six hours in a cognate area, and a thesis which substitutes for six elective hours. The M.A. plan B is the same as plan A in every respect except six hours of advanced bibliography or technical services course work may be substituted for the thesis.

Degree requirements of the program allow students considerable freedom to design the best possible programs for their individual needs. The curriculum is sufficiently varied to permit opportunities to build both breadth and depth into the course of study. The student is assisted in this endeavor by a faculty adviser who provides guidance and counsel. Adviser assignment is based, whenever possible, on student preference.

The program requires 36 hours for the master's degree with 12 of those hours in the core. The other 24 hours are electives chosen by the student and approved by his adviser. Completion of the 36 hours of course work with an average grade of B or above, together with the satisfactory completion of the final examination, is the general requirement. No student may complete the program with more than two C (or lower) grades.

Standards for admission include a bachelor's degree from an accredited institution, an undergraduate grade point average of 2.75 or higher (on a scale with A = 4.0), and a score of 450 or higher on the verbal test *and* 400 or higher on the quantitative *or* analytical tests of the Graduate Record Examination (GRE). A score of 550 or higher on the TOEFL exam is required for all non-native speakers of English. All admissions decisions are made on a competitive basis. For additional information regarding admissions and program requirements, please contact the Director of Graduate Studies, SLIS.

LIS 510 Children's Literature and Related Materials ..... (3)
LIS 513 Literature and Related Materials for Early Adolescence ..... (3)
LIS 514 Information Resources and Services for Young Adults ..... (3)
LIS 550 Introduction to Cataloging and Classification ..... (3)
LIS 600 Information in Society ..... (3)
LIS 601 Information Sources and Services ..... (3)

LIS 602	Information Storage and Retrieval	(3)
LIS 603	Management in Library and Information Science	(3)
LIS 604	Library and Book History	(3)
LIS 607	Information Needs and Use	(3)
LIS 608	Methods of Research in Library and Information Science	(3)
LIS 609	Current Problems in Library and Information Science	(3)
LIS 610	Creative Library Programs for Children	(3)
LIS 611	Critical Analysis of Children's Literature	(3)
LIS 618	Adult Information Needs and Services	(3)
LIS 622	Social Science Information	(3)
LIS 623	Information in the Humanities	(3)
LIS 624	Information in Science and Technology	(3)
LIS 626	Government Publication	(3)
LIS 630	On-Line Information Systems and Services	(3)
LIS 636	Microcomputers in Libraries and Information Centers	(3)
LIS 637	Information Technology	(3)
LIS 638	Internet Technologies and Information Services	(3)
LIS 640	Health Sciences Libraries	(3)
LIS 641	Law Librarianship	(3)
LIS 643	Archives and Manuscripts Management	(3)
LIS 644	Administration of School Library Media Centers	(3)
LIS 645	Public Libraries	(3)
LIS 646	Academic Libraries	(3)
LIS 647	Current Trends in School Media Centers	(3)
LIS 650	Technical Processing Systems	(3)
LIS 651	Library and Information Networks	(3)
LIS 655	Organization of Knowledge I	(3)
LIS 656	Organization of Knowledge II	(3)
LIS 659	Collection Development	(3)
LIS 660	Administrative Behavior in Library Management	(3)
LIS 668	Information Systems Design	(3)
LIS 675	Professional Field Experience	(3)
LIS 676	School Media Practicum	(1-12)
LIS 690	Special Topics in Library and Information Science	(1-3)
LIS 695	Independent Study in Library and Information Science	(3)
LIS 748	Master's Thesis Research	(0)
LIS 768	Residence Credit for the Master's Degree	(1-6)

Manufacturing Systems Engineering

Director of Graduate Studies: Lawrence E. Holloway

The College of Engineering offers a master's degree program in Manufacturing Systems Engineering. Because of its highly multi-disciplinary nature, the Master of Science in Manufacturing Systems Engineering is housed in the College of Engineering rather than in one of the existing departments. The resources and facilities of the Center for Robotics and Manufacturing Systems are a key component in this degree program.

Graduate degree programs in the field of manufacturing systems engineering are important for enhancing manufacturing productivity and quality in the U.S. The Master of Science in Manufacturing Systems Engineering is designed to equip the student for opportunities in modern manufacturing processes and systems. Some of the possible areas of concentration for research and study are: Manufacturing Processes and Equipment, Design for Manufacturing, Plastic and Polymer Processing, Electronics Design and Manufacturing, Computer-aided Design and Manufacturing, Manufacturing Systems Planning and Control, Automated Assembly, and Lean Manufacturing.

The Center for Manufacturing Systems, a part of the College of Engineering, conducts graduate-level academic research of the highest quality and transmits that knowledge to industry and government. This 68,000 square foot building, completed in the fall of 1989, contains: laboratories and offices, machining lab, metrology lab, rapid prototyping lab, electronics assembly lab, welding lab, automation equipment lab, workstations, CAD/CAE systems, instructional TV classrooms, and TV satellite uplink and downlink equipment.

Admission

Applicants normally have a bachelor's degree in engineering from an ABET accredited institution (or equivalent). For students with an undergraduate degree other than engineering, completion of a set of identified courses (or their equivalent) in an Engineering discipline will be required prior to admission to the program with full graduate standing.

A minimum grade point average of 2.8 on undergraduate work is expected, along with minimum GRE scores of 700 quantitative and 500 Analytical. If a student does not meet these criteria, an evaluation of the student's overall education and experience may allow admission, subject to evaluation by the Director of Graduate Studies.

Curriculum and Degree Requirements

The Plan A (thesis option) master's degree requires 24 credit hours of course work, a thesis, and the satisfactory completion of a final examination. One-half or more of the course work must be at the 600 level or above. All students are required to complete four specified core courses: Modeling of Manufacturing Processes and Machines; Systems for Factory Information and Control; Seminar and Project in Manufacturing Systems Engineering; and Organizational Behavior. The electives for each student will be developed in conjunction with an advisor to insure that the program provides breadth and depth of content for the student, and meets his or her specific needs and interests. Appropriate electives are drawn from areas of Engineering, Computer Science, Business and Economics, or Mathematics. Two electives are designated as Manufacturing Specialization electives.

The Plan B (non-thesis option) is reserved for students who have significant engineering research or development experience in a manufacturing environment, for which completion of a thesis would be less beneficial than the additional course work involved in Plan B. The program requires 33 credit hours of course work and the satisfactory completion of a final examination. Students must complete the four core courses specified above, as well as MFS 784 Research Project in Manufacturing Systems Engineering, nine credit hours of Manufacturing Specialization electives, and nine credit hours of other appropriate electives. Approval of the student's advisor and of the Director of Graduate Studies is necessary for a student to pursue Plan B.

MFS 505	Modeling of Manufacturing Processes and Machines	(3)
MFS 507	Design for Manufacturing	(3)
MFS 512	Manufacturing Systems	(3)
MFS 563	Simulation of Industrial Production Systems	(3)
MFS 581	Quality Control	(3)
MFS 599	Topics in Manufacturing Systems Engineering (Subtitle Required)	(3)
MFS 605	Systems for Factory Information and Control	(3)
MFS 606	Seminar and Project in Manufacturing Systems Engineering	(3)
MFS 607	Analysis of Metal Cutting Processes	(3)
MFS 608	Nontraditional Manufacturing Processes	(3)
MFS 611	Organizational Behavior	(3)
MFS 699	Topics in Manufacturing Systems Engineering (Subtitle Required)	(1-3)
MFS 748	Master's Thesis Research	(0)
MFS 768	Research Credit for the Master's Degree	(1-6)
MFS 780	Special Problems in Manufacturing Systems Engineering	(3)
MFS 784	Research Project in Manufacturing Systems Engineering	(3)
EGR 537	Numerical Analysis	(3)
EGR 599	Topics in Engineering (Subtitle Required)	(1-3)
EGR 611	Boundary Element Methods in Engineering	(3)
EGR 621	Finite Element Analysis in Engineering	(3)
EGR 622	Advanced Finite Element Analysis in Engineering	(3)
EGR 680	Engineering Applications of Stochastic Differential Equations	(3)

Materials Science and Engineering

Graduate Faculty: *Professors* Peter P. Gillis, James G. Morris, Kenji Okazaki, Lynn S. Penn, and Philip J. Reucroft. *Associate Professor* H. Alan Fine.

Associate Member: *Assistant Professors* Elizabeth Dickey and Susan B. Sinnott.

Joint Appointment: *Professor* Gerald P. Huffman. *Assistant Professor* Craig A. Grimes.

Emeritus Professor: Robert J. DeAngelis.

The department offers programs of study leading to the Master of Science in Materials Science and Engineering, and to the Doctor of Philosophy. Persons with backgrounds in any physical science or engineering discipline are encouraged to apply, and each applicant's qualifications reviewed individually. Students applying need to have performed competently at the undergraduate level and need a good grounding in the physical sciences or engineering. Deficiencies in mathematics or in specific areas of science or engineering must be corrected by such remedial course work as prescribed by the departmental committee on graduate education.

The master's degree is offered under Plan A (thesis option) and Plan B (non-thesis option). Candidates for the degree under Plan A must complete 24 credit hours of course work and submit and defend a thesis that demonstrates ability to conduct sound research. Candidates for the Plan B degree must complete 30 credit hours of the broad area of materials science and engineering. Master's candidates must take at least half of the minimum course requirements at the 600 level or above, and must take two-thirds of their course work within the department.

The Ph.D. program offers broad training in materials science and engineering while providing options to suit the student's particular interest. With the approval of the Advisory Committee, doctoral students complete a program of course work selected to correct deficiencies and to enhance the area of interest. Students must demonstrate, by course work, proficiency in a minor area selected from the fields of mathematics, physical sciences, or engineering. Doctoral students must pass a qualifying examination consisting of both written and oral components. This examination is usually based on a selected area of the scientific literature and is to verify that the student has an understanding of the field of interest sufficient to become a candidate for the degree. Also, as part of the qualifying examination, doctoral students must submit and defend a proposal of dissertation research. After qualifying as a doctoral candidate, the student must conduct original and significant research and must submit and defend a dissertation based on that research. The submission and defense of the dissertation cannot occur before three years of doctoral study have been completed. Additional registration requirements pertaining to doctoral students before and after successful completion of qualifying examinations are described under the general requirements for all doctoral degrees earlier in this Bulletin.

Resources for the conduct of advanced studies include polymer synthesis and composites fabrication laboratories, metallurgical processing laboratories, test and analysis facilities for microscopic and macroscopic characterization of polymers, ceramics, and metals. Extra-departmental facilities include library and mainframe computing.

MSE 401G Metal and Alloys ..... (4)
MSE 402G Electronic Materials and Processing ... (3)
MSE 403G Ceramic Engineering ..... (4)
MSE 404G Polymeric Materials ..... (3)
MSE 454G Polymer Engineering ..... (3)
MSE 506 Mechanics of Composite Materials .... (3)
MSE 531 Powder Metallurgy ..... (3)
MSE 535 Mechanical Properties of Materials .... (3)
MSE 538 Deformation Processing ..... (4)
MSE 542 Extractive Metallurgy ..... (4)
MSE 550 Corrosion ..... (3)
MSE 554 Chemical and Physical Processing of Polymer Systems ..... (3)
MSE 556 Introduction to Composite Materials .. (4)
MSE 558 Principles of Polymer Characterization and Analysis ..... (3)
MSE 561 Electric and Magnetic Properties of Materials ..... (3)
MSE 566 Hybrid Microelectronics ..... (3)
MSE 568 Fiber Optics ..... (3)
MSE 569 Electronic Packaging Systems and Manufacturing Processes ..... (3)
MSE 580 Material Selection and Failure Analysis (3)
MSE 581 Quality Control ..... (3)
MSE 585 Materials Characterization Techniques ..... (4)
MSE 599 Topics in Materials Science and Engineering (Subtitle Required) ..... (1-4)
MSE 607 Analysis of Metal Cutting Processes ... (3)
MSE 632 Advanced Materials Science ..... (3)
MSE 635 Advanced Mechanical Metallurgy ..... (3)
MSE 636 Dislocation Theory ..... (3)
MSE 650 Advanced Materials Thermodynamics (3)
MSE 659 Advanced Phase Diagrams ..... (3)
MSE 661 Advanced Physical Metallurgy I ..... (3)
MSE 662 Advanced Physical Metallurgy II ..... (3)
MSE 665 Crystallography and X-Ray Analysis .... (4)
MSE 666 Diffraction Methods in Materials Science ..... (4)
MSE 699 Advanced Topics in Materials Science and Engineering (Subtitle Required) .. (3)
MSE 748 Master's Thesis Research ..... (0)
MSE 749 Dissertation Research ..... (0)
MSE 768 Residence Credit for the Master's Degree ..... (1-6)
MSE 769 Residence Credit for the Doctor's Degree ..... (0-12)
MSE 771 Seminar ..... (0)
MSE 781 Special Problems, Literature and Laboratory ..... (1-3)
MSE 782 Special Problems, Literature and Laboratory ..... (3)
MSE 790 Research in Materials Science ..... (3-9)

EGR 537 Numerical Analysis ..... (3)
EGR 599 Topics in Engineering (Subtitle Required) ..... (1-3)
EGR 611 Boundary Element Methods in Engineering ..... (3)
EGR 621 Finite Element Analysis in Engineering ..... (3)
EGR 622 Advanced Finite Element Analysis in Engineering ..... (3)
EGR 680 Engineering Applications of Stochastic Differential Equations ..... (3)

Mathematics

Graduate Faculty: *Professors* David Adams, James C. Beidleman, James Brennan, J.D. Buckholtz, Richard Carey, Thomas Chapman, Donald Coleman, Craig C. Douglas, Paul Eakin, Carl Eberhart, Edgar Enochs, Michael Freeman, J.B. Fugate, Ronald Gariepy, Lawrence Harris, Thomas Hayden, Peter D. Hislop, Henry Howard, David Johnson, Kenneth Kubota, Carl W. Lee, David B. Leep, John Lewis, John Mack, Chi-Sing Man, Peter Perry, Avinash M. Sathaye, Ted Suffridge, Clasine van Winter, and James H. Wells. *Associate Professors* Zhaojun Bai, Russell M. Brown, Raymond Cox, Kurt Helmes, Jonathan Lee, Robert Molzon, Karen Pinney Mortensen, and Serge Ochanine.

Associate Members: *Assistant Professors* Vassily Gorbounov, Ren-Cang Li, Zhongwei Shen, and Kristina Vuskovic.

Emeritus Professors: Raymond Rishel, Wimberly Royster, S.M. Shah and James Simpson.

The Department of Mathematics grants the M.A., M.S., and Ph.D. degrees. There are no specific course prerequisites for admission; however, two semesters of advanced calculus, and at least one semester each of algebra and topology are suggested. Both the M.A. and M.S. degree are 30 credit-hour programs, offered under either Plan A or Plan B.

The Master of Arts degree, featuring a core program that emphasizes mathematical structures, is designed for prospective community college teachers and for students contemplating studies at the Ph.D. level.

The Master of Science degree, through an emphasis on the applications of mathematics and the acquisition of computational skills, focuses on careers in business, industry, and government.

The doctorate is a research degree granted on the basis of broad mathematical knowledge and exhibited creative ability. Course work leading to the doctorate is available in the areas of algebra, analysis (classical and modern), applied mathematics, optimization, numerical analysis, differential equations, and topology. A comprehensive examination is required of each student.

In order to be admitted to candidacy for the degree, a student must pass a proficiency examination in one foreign language chosen from French, German or Russian, complete studies in a minor field (either inside or outside the department) and successfully complete the comprehensive examinations. Subsequent work becomes highly specialized through seminars, independent study, and finally, work on a dissertation which penetrates in depth some field of particular interest. Areas in which members of the faculty have active research projects include algebraic, general and infinite-dimensional topology, group theory, ring theory, algebraic geometry, number theory, one and several complex variables, rational approximation, operator theory, differential equations, numerical analysis and optimization and control theory.

The ability to communicate mathematics is an increasingly important professional qualification. The department requires all students to complete a teaching or research assignment during each semester of their enrollment in a graduate mathematics program. Students will be assigned to teach courses at the early undergraduate level. Entering students will normally be assigned three semester hours, and continuing ones will normally teach six semester hours. With the approval of the Director of Graduate Studies, a student may substitute an equivalent research effort for the teaching activity.

MA 415G Graph Theory ..... (3)
MA 416G Principles of Operations Research I .. (3)
MA 417G Principles of Operations Research II .. (3)
MA 432G Methods of Applied Mathematics I .... (3)
MA 433G Introduction to Complex Variables .... (3)
MA 471G Advanced Calculus I ..... (3)
MA 472G Advanced Calculus II ..... (3)
MA 481G Differential Equations I ..... (3)
MA 483G Differential Equations II ..... (3)
MA 485G Fourier Series and Boundary Value Problems ..... (3)
MA 501 Seminar in Selected Topics ..... (3)
MA 502 Seminar in Selected Topics ..... (3)
MA 503 Combinatorics ..... (3)
MA 506 Methods of Theoretical Physics I ..... (3)
MA 507 Methods of Theoretical Physics II ..... (3)
MA 515 Mathematical Programming and Extensions ..... (3)
MA 522 Matrix Theory and Numerical Linear Algebra I ..... (3)
MA 527 Applied Mathematics in the Natural Sciences I ..... (3)
MA 532 Ordinary Differential Equations ..... (3)
MA 533 Partial Differential Equations ..... (3)
MA 537 Numerical Analysis ..... (3)
MA 538 Numerical Analysis II ..... (3)
MA 551 Topology I ..... (3)
MA 561 Modern Algebra I ..... (3)
MA 565 Linear Algebra ..... (3)
MA 570 Multivariate Calculus ..... (3)
MA 571 Analysis I ..... (3)
MA 602 Topology ..... (3)
MA 611 Independent Work in Mathematics . (3-9)
MA 613 Problems Seminar in Operations Research ..... (3)
MA 616 Numerical Techniques for Nonlinear Optimization ..... (3)
MA 617 Markovian Decision Problems ..... (3)
MA 618 Combinatorics and Networks ..... (3)
MA 622 Matrix Theory and Numerical Linear Algebra II ..... (3)
MA 625 Numerical Methods for Differential Equations ..... (3)
MA 628 Applied Mathematics in the Natural Sciences II ..... (3)
MA 630 Mathematical Foundations of Stochastic Processes and Control Theory I ..... (3)
MA 632 Advanced Differential Equations ..... (3)
MA 633 Theory of Partial Differential Equations ..... (3)
MA 639 Research Projects in Biological Modeling ..... (3)
MA 641 Differential Geometry ..... (3)
MA 642 Differential Geometry ..... (3)
MA 651 Topology II ..... (3)
MA 654 Algebraic Topology I ..... (3)
MA 655 Algebraic Topology II ..... (3)
MA 661 Modern Algebra II ..... (3)
MA 667 Group Theory ..... (3)
MA 670 Analysis II ..... (3)
MA 671 Functions of a Complex Variable I ..... (3)
MA 672 Functions of a Complex Variable II ... (3)
MA 673 Several Complex Variables ..... (3)
MA 679 Mathematical Theory of Linear Control Systems ..... (3)
MA 681 Functional Analysis I ..... (3)
MA 682 Functional Analysis II ..... (3)
MA 715 Selected Topics in Optimization ..... (3)
MA 721 Selected Topics in Numerical Analysis (3)
MA 732 Selected Topics in Differential and Integral Equations ..... (3)
MA 748 Master's Thesis Research ..... (0)
MA 749 Dissertation Research ..... (0)
MA 751 Selected Topics in Topology ..... (3)
MA 752 Selected Topics in Topology ..... (3)
MA 761 Homological Algebra ..... (3)
MA 764 Selected Topics in Algebra ..... (3)
MA 765 Selected Topics in Algebra ..... (3)
MA 768 Residence Credit for the Master's Degree ..... (1-6)
MA 769 Residence Credit for the Doctor's Degree ..... (0-12)
MA 772 Selected Topics in the Theory of Complex Variables ..... (3)
MA 773 Selected Topics in Analysis ..... (3)
MA 777 Mathematical Seminar ..... (3)
MA 778 Mathematical Seminar ..... (3)

Mechanical Engineering

Graduate Faculty: *Professors* Louis M. Brock, Clifford J. Cremers, O. J. Hahn, I. S. Jawahir, Thomas W. Lester, Alan T. Male, M. Pinar Mengüç, Keith E. Rouch, J. Peter Sadler, Kozo Saito, Andrew F. Seybert, Kaveh A. Tagavi, Theodore Tauchert, and Horn-Sen Tzou. *Associate Professors* Mark T. Hanson, George P. Huang, Wei Yang Lu, James M. McDonough, Suzanne W. Smith, and T. W. Wu.

Associate Member: *Assistant Professors* J. D. Jacob, Michael Lovell, John A. Main, and Johné M. Parker.

Emeritus Professors: Millard F. Beatty, Oscar W. Dillon, James E. Funk, Donald C. Leigh, David J. Shippy, and Shiva N. Singh.

The Department of Mechanical Engineering provides programs for study and research leading to the Master of Science in Mechanical Engineering and the Doctor of Philosophy.

Research and Graduate Studies curricula within the Department of Mechanical Engineering are concentrated in the following four major areas: 1) Manufacturing; including Manufacturing Processes, Manufacturing Systems, and Robotics; 2) Mechanics; including Acoustics, Composite Materials, Dynamics, Fracture Mechanics, Mechanics of Materials, Solid Mechanics, Tribology, and Vibration; 3) Systems and Design; including Aerospace Structures, Control, Intelligent Structural Systems, and Machine Design; and 4) Thermal-Fluid Sciences; including Combustion and Fire Research, Computational Fluid Dynamics, Fluid Mechanics, Heat and Mass Transfer, Radiative Transfer, Thermal Systems, Thermodynamics, and Two-Phase and Phase-Change Heat Transfer.

Admission to the mechanical engineering graduate programs normally requires a bachelor's degree in engineering (not necessarily in mechanical engineering), a GPA of at least 3.0/4.0 on all graduate and undergraduate work, and Graduate Record Examination scores of at least 1100 (Verbal + Quantitative) and 550 (Analytical). An undergraduate degree in chemistry or physics combined with a strong interest in engineering topics may be acceptable when certain required undergraduate courses are also taken. *Satisfying the above requirements does not guarantee admission to the mechanical engineering graduate program.*

The master's degree requires 24 credit hours of course work and a thesis (Plan A). A non-thesis option (Plan B) consisting of 30 credit hours is available to students with admission and enrollment limited to those with acceptable previous research or design experience. Enollment in the non-thesis option requires approval of the Director of Graduate Studies and must be requested within the student's first nine credit hours of graduate course work.

The Ph.D. degree is a research degree granted on the basis of broad knowledge of mechanical engineering and in-depth study in a specific area leading to a dissertation reflecting original work by the doctoral candidate. To obtain a Ph.D. degree in mechanical engineering, in addition to meeting the general Graduate School requirements, a student must:

1. Earn 48 graduate credit hours taken at the University of Kentucky while in graduate standing. Alternatively, those holding a non-UK M.S. may satisfy this requirement by earning 24 graduate credit hours at UK.

2. Satisfy the mathematics requirement. The mathematics requirement for the Ph.D. degree in mechanical engineering may be satisfied by completing three math-related courses with a grade of B or better in each. A list of acceptable courses is maintained by the Director of Graduate Studies.

3. Pass the Ph.D. Preliminary Examination. The Preliminary Examination is a written examination and shall satisfy the written portion of the Qualifying Examination required by the Graduate School. This examination tests the student's knowledge in the field of mechanical engineering. This is a uniform examination that is required in three subject areas. For the Ph.D. preliminary examination, a doctoral student may select any of the available technical areas as a major field (two of the three subject areas should be from the student's chosen major field). A list of current technical areas, subject areas, and various courses under each subject area is maintained by the Director of Graduate Studies.

4. Pass the Qualifying Examination. This examination evaluates the soundness of the student's proposed doctoral dissertation research. A prospectus prepared by the student and submitted to the student's advisory committee is required. Only those who have passed the preliminary examination and have satisfied the doctoral mathematics requirement may sit for this examination.

5. Present and satisfactorily defend the dissertation.

For a more detailed description of these requirements, contact the Director of Graduate Studies.

The Department, in collaboration with the College of Engineering's Center for Robotics and Manufacturing (CRMS), has several research laboratories: Acoustics Lab, Advanced Structures Lab, CAD/CAM/CAE Lab, Combustion and Fire Research Lab, Computational Fluid Dynamics Systems (CFD) Lab, Engineering Metrology Lab, Fluid Mechanics Lab, Machine Vision Lab, Machining Dynamics Systems Lab, Machining Research Lab, Manufacturing Simulation and Tribiology Research Lab, Nonlinear Dynamics Research Lab, Metal Forming Research Lab, Non-traditional Manufacturing Processes Lab, Phase Change and Microgravity Heat Transfer Lab, Radiative Transfer and Optics Lab, Rapid Prototyping Lab, Robotics Lab, Thermal Sensing Lab, and Welding Research Lab.

ME 480G Heating, Ventilating and Air-Conditioning ..... (3)
ME 501 Mechanical Design with Finite Element Methods ..... (3)
ME 505 Modeling of Manufacturing Processes and Machines ..... (3)
ME 507 Design for Manufacturing ..... (3)
ME 510 Dynamics and Design of Robot Manipulations ..... (3)
ME 512 Manufacturing Systems ..... (3)
ME 514 Nuclear Reactor Analysis and Fuel Management ..... (3)
ME 530 Gas Dynamics ..... (3)
ME 531 Fluid Dynamics I ..... (3)
ME 542 Kinematic Synthesis of Mechanisms ... (3)
ME 560 Engineering Optics ..... (3)
ME 563 Basic Combustion Phenomena ..... (3)
ME 566 Direct Energy Conversion Processes .. (3)
ME 583 Biotechnology ..... (3)
ME 599 Topics in Mechanical Engineering (Subtitle Required) ..... (3)
ME 601 Advanced CAE Applications ..... (3)
ME 602 Dynamics of Distributed Mechanical Systems ..... (3)
ME 604 Dynamics of Rotating Machinery ..... (3)
ME 606 Seminar and Project in Manufacturing Systems Engineering ..... (3)
ME 607 Analysis of Metal Cutting Processes .... (3)
ME 608 Nontraditional Manufacturing Processes ..... (3)
ME 610 Engineering Acoustics ..... (3)
ME 611 Boundary Element Methods in Engineering ..... (3)
ME 620 Advanced Engineering Thermodynamics I ..... (3)
ME 625 Advanced Heat Conduction ..... (3)
ME 626 Advanced Heat Convection ..... (3)
ME 627 Radiation Heat Transfer ..... (3)
ME 628 Boiling and Condensation ..... (3)
ME 631 Fluid Dynamics II ..... (3)
ME 634 Turbulent Flows ..... (3)
ME 640 Advanced Analysis and Simulation of Dynamic Systems ..... (3)
ME 645 Advanced Control System Analysis ..... (3)
ME 647 System Optimization I ..... (3)
ME 690 Advanced Algorithms for Computational Fluid Dynamics ..... (4)
ME 699 Topics in Mechanical Engineering (Subtitle Required) ..... (3)
ME 748 Master's Thesis Research ..... (0)
ME 749 Dissertation Research ..... (0)
ME 768 Residence Credit for the Master's Degree ..... (1-6)
ME 769 Residence Credit for the Doctor's Degree ..... (0-12)
ME 780 Special Problems in Mechanical Engineering ..... (3)
ME 781 Special Problems in Bioengineering ... (3)
ME 790 Research in Mechanical Engineering (1-9)

EGR 537 Numerical Analysis ..... (3)
EGR 599 Topics in Engineering (Subtitle Required) ..... (1-3)
EGR 611 Boundary Element Methods in Engineering ..... (3)
EGR 621 Finite Element Analysis in Engineering ..... (3)
EGR 622 Advanced Finite Element Analysis in Engineering ..... (3)
EGR 680 Engineering Applications of Stochastic Differential Equations ..... (3)

Microbiology

Graduate Faculty: *Professors* Charles T. Ambrose, Subbarao Bondada, Malaya Chatterjee, Donald A. Cohen, Jeffrey N. Davidson, Frederick C. DeBeer, James Freeman, Vincent Gallicchio, Norman L. Goodman, Alan M. Kaplan, Heinz Kohler, Judith Lesnaw, Thomas L. Lillich, Robert Perry, Thomas L. Roszman, Jesse E. Sisken, Susan Straley, and Jerold G. Woodward. *Associate Professors* Robert B. Calmes Jr., Jimmy Clark, L. Edward DeMoll, James W. Freeman, Denny Harris, Robert J. Jacob, Charlotte S. Kaetzel, Joseph McGillis, Avindra Nath, Martha Peterson, Carol L. Pickett, Vivek M. Rangnekar, Charles Snow, Brett Spear, Marion R. Steiner, and Stephen B. Zimmer.

Associate Members: *Associate Professor* Bin-Tao Pan. *Adjunct Associate Professor* Timothy Overman. *Assistant Professors* Yousef Abu Kwait, J. Scott Bryson, Lucinda H. Elliott, Craig T. Jordan, and Jiayou Zhang.

Joint Appointment: *Professor* Albert Brown. *Associate Professor* Craig S. Miller.

The Microbiology Ph.D. program is housed in the Department of Microbiology and Immunology in the College of Medicine and provides an interdisciplinary approach to problems concerning the basic molecular and cellular processes of eukaryotic and prokaryotic organisms. As preparation for graduate work in microbiology and immunology, students should have completed courses in chemistry through organic chemistry, in mathematics through calculus, in biology and/or microbiology and should have had one year of work in physics. Physical chemistry is recommended and opportunities are available for outstanding students to make up deficiencies in their undergraduate training.

Research interests within the program are clustered in pathogenic microbiology, cancer cell and molecular biology and immunology. Specific research areas include microbial physiology, bacterial pathogenicity, cellular and molecular immunology, tumor immunology, lymphocyte differentiation, neuro-immunomodulation, membrane biology, molecular virology, molecular genetics and gene regulation, and involve extensive utilization of molecular biology, genetic engineering, transgenic technology, hybridoma technology and fluorescence activated cell sorting.

The program of study is tailored to the individual background and career goals of the student and stresses an interdepartmental approach both in the selection of courses and in the pursuit of research. Students typically select courses

in the Departments of Biochemistry, Pharmacology, Pathology, and Biology as well as Microbiology and Immunology and are expected to participate in graduate seminars, journal clubs, research seminars, to interact with visiting scholars and to present the results of their research at local and national meetings.

Financial support is available for highly qualified students. Inquiries regarding graduate level training in Microbiology and Immunology should be directed to the Director of Graduate Studies, Department of Microbiology and Immunology, University of Kentucky College of Medicine, Lexington, KY 40536-0084.

MI 494G	Immunobiology	(3)
MI 515	General Cell Biology	(3)
MI 590	Cellular and Molecular Physiology	(4)
MI 595	Immunobiology Laboratory	(2)
MI 598	Clinical Microbiology	(3)
MI 601	Special Topics in Molecular and Cellular Genetics	(1)
MI 604	Experimental Genetics	(2)
MI 611	Biopathology	(3)
MI 615	Molecular Biology	(3)
MI 618	Molecular Neurobiology	(4)
MI 685	Advanced Immunobiology	(4)
MI 707	Contemporary Topics in Immunology	(2)
MI 710	Special Topics in Microbiology	(2-3)
MI 720	Microbial Structure and Function	(4)
MI 748	Master's Thesis Research	(0)
MI 749	Dissertation Research	(0)
MI 768	Residence Credit for the Master's Degree	(1-6)
MI 769	Residence Credit for the Doctor's Degree	(0-12)
MI 772	Seminar in Microbiology	(0-1)
MI 798	Research in Microbiology	(1-9)

Mining Engineering

Graduate Faculty: *Professors* Joseph Leonard, R.S. Mateer and K.F. Unrug. *Associate Professors* G.T. Lineberry, Richard J. Sweigard, Andrzej M. Wala and Jon C. Yingling.

Associate Members: *Associate Professor* Joseph Sottile. *Adjunct Associate Professor* B. K. Parekh. *Adjunct Assistant Professor* John G. Groppo, Jr.

The programs leading to the degrees of Master of Science in Mining Engineering, Master of Mining Engineering, and Doctor of Philosophy are offered through the Department of Mining Engineering. The objectives of these programs are to provide an advanced level of applied science for use in the mining industry and to offer specified topics for research specialization.

The Master of Mining Engineering is a professionally-oriented degree intended for the student who wishes to add topics to a basic baccalaureate degree for use in a working career. It is also appropriate for the returning adult student who needs more subject matter for career betterment. The Master of Science in Mining Engineering is a research-oriented degree appropriate for a career in problem solving, research, or technology development. The Doctor of Philosophy is the terminal degree in the subject and is normally required for a career in teaching and research.

The Master of Mining Engineering requires 30 credits of course work capped by a professional paper that reports on a current topic of scientific or technical interest, quite possibly connected to the student's career interests. For the Master of Science in Mining Engineering, 24 credit hours of course work plus an acceptable thesis (Plan A) or 30 credits of course work and a report on one or more research topics (Plan B) are required to fulfill program requirements. Plan B Master of Science degrees will be reserved normally for students who have already demonstrated their ability to conduct and report on independent research.

Enrollment in either master's degree program is open to qualified applicants with an undergraduate degree in mining engineering or other engineering and science fields. A grade point average of 2.8/4.0 is normally required on all undergraduate work. Persons with undergraduate degrees in fields other than mining engineering are required to make up deficiencies in undergraduate mining engineering courses.

Applicants for admission must have a combined score on the verbal and quantitative portions of the Graduate Record Examination (GRE) in excess of 1,000. Scores on the analytical portion are also considered. Foreign applicants whose native language is other than English must take the Test of English as a Foreign Language (TOEFL) and score at least 550 before they can be admitted.

In addition to satisfying general Graduate School and College of Engineering admissions requirements (a GPA of 2.8/4.0 on all undergraduate work is normally required), applicants for admission to the M.Min.E., M.S. in Min.E., and Ph.D. degree programs in mining engineering must have been awarded the Bachelor of Science degree prior to admission to the graduate degree status. Normally, it is expected that applicants will have graduated from an engineering program accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET). For applicants from non-U.S. universities, from related but non-engineering disciplines, and from institutions that do not have accredited engineering programs, an assessment will be made of the comparability of educational background to that prescribed and appropriate remedial course work established as a provision for admission.

The Ph.D. degree has no formal course requirement. Generally, students take a number of courses to prepare for the qualifying examinations and usually need to spend two years to complete a suitable dissertation. Most students find it necessary to take course work beyond the master's degree as necessary preparation for the qualifying examination. There is a language requirement for the Ph.D.

Current research areas include the following: rock mechanics and ground control, operations research, mine ventilation, underground construction, surface mining and reclamation, mine environmental engineering, mine power systems, coal preparation, and mineral economics. In addition to the graduate courses in mining engineering, graduate courses in civil engineering and other disciplines may be used to satisfy degree requirements providing they are appropriate to the student's program of study.

Additional information about the graduate program in mining engineering can be obtained by writing the Director of Graduate Studies, Department of Mining Engineering.

MNG 511	Mine Power System Design	(3)
MNG 551	Rock Mechanics	(4)
MNG 561	Mine Construction Engineering I	(3)
MNG 563	Simulation of Industrial Production Systems	(3)
MNG 572	Advanced Coal Preparation	(3)
MNG 575	Coal Preparation Design	(3)
MNG 581	Mine Valuation and Geostatistics	(3)
MNG 591	Mine Design Project I	(1)
MNG 592	Mine Design Project II	(2)
MNG 599	Topic in Mining Engineering	(2-3)
MNG 611	Mine Power System Protection	(3)
MNG 631	Advanced Mine Systems Engineering	(3)
MNG 632	Mine Plant Machinery II	(3)
MNG 634	Advanced Mine Engineering	(3)
MNG 637	Rock Slope Stability and Design	(3)
MNG 641	Advanced Mine Ventilation	(3)
MNG 661	Mine Construction Engineering II	(3)
MNG 681	Geostatistics II	(3)
MNG 690	Advanced Mineral Beneficiation Engineering	(3)
MNG 699	Topics in Mining Engineering (Subtitle Required)	(3)
MNG 748	Master's Thesis Research	(0)
MNG 749	Dissertation Research	(0)
MNG 768	Residence Credit for the Master's Degree	(1-6)
MNG 769	Resident Credit for the Doctor's Degree	(0-12)
MNG 771	Seminar in Mining Engineering	(1)
MNG 780	Special Problems in Mining Engineering	(1-6)
MNG 790	Special Research Problems in Mining Engineering	(1-9)
EGR 537	Numerical Analysis	(3)
EGR 599	Topics in Engineering (Subtitle Required)	(1-3)
EGR 611	Boundary Element Methods in Engineering	(3)
EGR 621	Finite Element Analysis in Engineering	(3)

EGR 622 **Advanced Finite Element Analysis in Engineering** ..... (3)

EGR 680 **Engineering Applications of Stochastic Differential Equations** ..... (3)

Music

Graduate Faculty: *Professors* John Ashworth, Joseph Baber, James B. Campbell, Richard C. Domek, Harold R. Gray, Jr., Alan Hersh, Mina F. Miller, and Schuyler Robinson. *Associate Professors* Lance Brunner, Kate Covington, Jonathan Glixon, Charles Lord, Noemi Lugo, Everett McCorvey, Ronald P. Monsen, Patricia Montgomery, Miles Osland, Ronald Pen, David W. Sogin, and Cecilia H. Wang.

Associate Members: *Associate Professors* Gordon B. Cole, David G. Elliott, Jefferson Johnson, Benjamin Karp, Stephen King, David A. MacKenzie, and Daniel Mason. *Assistant Professors* Terry R. Everson and Diana R. Hallman.

Emeritus Professors: Karl-Werner Guempel, Hubert Henderson, Phyllis Jenness, Phillip Miller, Bruce N. Morrison, and Lucien Stark.

The School of Music offers the Master of Arts (M.A.) in musicology or theory; Master of Music (M.M.) in performance, composition, or music education; Doctor of Musical Arts (D.M.A.) in performance or composition; and the Doctor of Philosophy (Ph.D.) in musicology, music education or theory. The applicant for the master's degree is expected to have earned an appropriate undergraduate degree and the applicant for the doctoral degree is expected to have earned an appropriate master's degree at the University of Kentucky or an equivalent degree from a comparable institution.

Entrance Requirements

Placement examinations in theory, music history and literature, and the proposed field of specialization are required of all applicants before admission to graduate programs in music. Graduates of, or students currently enrolled at, the University of Kentucky are not exempt from this requirement. Those seeking a degree in performance must audition as well. Entrance examinations and auditions are held four times each year for those wishing to enroll: the second Saturday in November, the third Saturday in February, the first Saturday in March and the second Saturday in July. For those wishing to begin studies in the summer session, examinations and auditions must be taken no later than the first Saturday in March. *The Director of Graduate Studies must be notified at least four weeks in advance of the date chosen for examinations (and audition if applicable) by the applicant.* In special circumstances and with the consent of the Director of Graduate Studies entrance examinations may be taken *in absentia* or at times other than those stated. Audition tapes may also be sent, but D.M.A. candidates must audition in person.

Note: Persons not applying for financial assistance may choose any of the above dates. Persons applying for Non-Service Fellowships **must** take the examinations (and the audition if applicable) no later than the third Saturday in February. Those applying for teaching assistantships may choose to take the examinations in November, February, or March for application for the subsequent fall semester. Those wishing to begin studies during a summer session must take the examinations no later than the first Saturday of March.

GENERAL REQUIREMENTS FOR MASTER'S DEGREE

Foreign Language Requirements. The Master of Arts degree requires a reading knowledge of one foreign language, preferably French or German. Voice majors are expected to have taken at least one year each of undergraduate level German, French, and Italian (or the equivalent by petition to the Director of Graduate Studies in the School of Music) as a prerequisite for degree study. If deficient, a student must enroll in language courses each semester of study until the deficiency is removed.

Thesis Requirements. The Master of Arts degree requires a thesis (Plan A: see general requirements). For the Master of Music degree in Performance, a public recital acceptable to the faculty is required in lieu of a thesis. For the Master of Music degree in Composition, a composition of major proportions, acceptable to the composition-theory faculty and publicly performed, must be submitted in lieu of a thesis. A thesis is optional (Plan A or Plan B) in the Master of Music in Music Education.

A final comprehensive examination is required for each program.

MASTER OF ARTS

Prerequisites: A suitable background in music literature and music theory, and a reading knowledge of one foreign language, normally French or German.

MASTER OF ARTS (Musicology Emphasis)

Music History and Literature	**9-12**
Theory (including MUS 670, 671, or 672)	**6-9**
Research Methods (MUS 618)	**3**
Directed Electives	**0-6**
Thesis	**6**
	Total 30

MASTER OF ARTS (Theory Emphasis)

Theory	**9-12**
Music History and Literature	**6-9**
Research Methods (MUS 618)	**3**
Directed Electives	**0-6**
Thesis	**6**
	Total 30

MASTER OF MUSIC (Composition)

Prerequisites: Submission of three original compositions.

Advanced Composition (MUS 673)	**4**
Orchestration (MUS 570 and 571)	**4**
Music History and Literature	**6**
Theory (including a minimum of one course from: MUS 670, 671, or 672)	**9**
Directed Electives	**1**
Thesis Composition	**6**
	Total 30

The thesis composition must be publicly performed. The student is responsible for the preparation of legible score and parts.

MASTER OF MUSIC (Performance)

Prerequisites: Acceptance by the appropriate faculty of applied music.

Music Performance (including recital)	**9**
Music History and Literature	**6**
Theory (including MUS 670, 671 or 672)	**6**
Directed Electives	**9**
Recital	**0**
	Total 30

This degree program is offered in the following areas: piano, voice (see below), organ, violin, viola, cello, flute, oboe, clarinet, saxophone, bassoon, trumpet, horn, trombone, euphonium, tuba, percussion and conducting (choral or instrumental).

Wind, string and conducting majors must participate in at least one University-sponsored performing organization for two semesters.

MASTER OF MUSIC (Voice Performance)

Voice Performance (including recital)	**9**
Music History and Literature (must include MUS 623)	**6**
Theory (including MUS 578, 670, 671, or 672)	**6**
Physiology and Functioning of the Singing Voice (MUS 665)	**3**
Materials, Techniques, and Literature of Voice Teaching (MUS 667)	**3**
Advanced German Vocal Repertory (MUS 620)	**3**
	Total 30

A minimum of three full semesters, excluding summer sessions, is necessary for an M.M. in Performance.

MASTER OF MUSIC (Music Education - Plan A)

Core Requirements	**12**
MUS 600 Research I	**3**
MUS 601 Foundations of Music Education	**3**
Music History and Literature	**3**
Music Theory (including MUS 578, MUS 670, MUS 671, or MUS 672)	**3**
Thesis	**6**
Music Education Electives	**6**

The student can select any Music Education courses 500 level or above.

Music Electives	**6**

The student can select any Music course 500 level or above in Performance, Music History, or Music Theory/Composition.

Total 30

Students planning to earn a doctorate in Music Education should elect Plan A.

MASTER OF MUSIC (Music Education - Plan B)

Core Requirements	**12**
MUS 600 Research I	**3**
MUS 601 Foundations of Music Education	**3**
Music History and Literature	**3**
Music Theory (including MUS 578, MUS 670, MUS 671, or MUS 672)	**3**
Specialized Area of Study	**12**

(The student will select 12 hours from one of the five areas described below, Instrumental Teaching, Choral

Teaching, General Music, Orff Methods, and Choral or Instrumental Conducting. The student and advisor will determine the general area of emphasis and plan a set of courses which best fulfills the needs of the student).

Music or Education Electives 6

(The student can select any music or education courses 500 level or above.)

Total 30

Specialized areas of study for Plan B.

INSTRUMENTAL TEACHING EMPHASIS - Band or Orchestra (Student and Advisor choose twelve hours from courses below which would best fulfill the student's needs.)

MUP	**Applied Performance (maximum of 4 hours) 1-4**
MUP	**Secondary Applied 1-2**
MUS 680	**Band History and Literature 3**
MUS 622	**Symphonic Literature 3**
MUS 660	**Adv. Methods: Elementary General Music 3**
MUP 558	**Conducting or**
MUP 658	**Conducting 1-4**
MUS 684	**Advanced String Methods and Materials 3**
MUS 570	**Orchestration 2**
MUS 706	**Music Learning and Behavior 3**

CHORAL TEACHING EMPHASIS (Student and Advisor choose twelve hours from courses below which would best fulfill the student's needs.)

MUP	**Applied Performance (Maximum of 4 hours) 1-4**
MUS 660	**Adv. Methods: Elementary General Music 3**
MUS 650	**Music Education Workshop 1-3**
MUS 660	**Adv. Methods: Choral Techniques 3**
MUP 558	**Conducting or**
MUP 658	**Conducting 1-4**
MUS 706	**Music Learning and Behavior 3**

GENERAL MUSIC TEACHING EMPHASIS - Elementary Music, Jr. High, Middle School General Music (Student and Advisor choose twelve hours from courses below which would best fulfill the student needs.)

MUP	**Applied Performance (maximum of 4 hours) 1-4**
MUS 660	**Adv. Methods: Elementary General Music 3**
MUS 560	**Orff Schulwerk Workshop 1-3**
MUS 561	**Orff Schulwerk Certification 2-6**
MUS 650	**Music Education Workshop 1-3**
MUS 766	**Seminar in Music Education 3**
MUS 664	**Music and Special Learners 3**
MUS 706	**Music Learning and Behavior 3**

CONDUCTING EMPHASIS - Instrumental or Choral (Student and advisor choose twelve hours from courses below which would best fulfill the student's needs.)

MUP	**Applied Performance (maximum of 4 hours) 1-4**
MUP	**Secondary Applied Performance 1-2**
MUS 680	**Band History and Literature 3**
MUS 622	**Symphonic Literature 3**
MUS 681	**Advanced Rehearsal Techniques - Band 3**
MUP 558	**Conducting or**
MUP 658	**Conducting (4 hours required) 1-4**
MUS 660	**Adv. Methods: Choral Techniques 3**
MUS 570	**Orchestration or**
MUS 571	**Orchestration 2**
MUS 684	**Adv. String Methods & Materials 3**
MUS 706	**Music Learning and Behavior 3**

DOCTOR OF MUSICAL ARTS DEGREE

The Doctor of Musical Arts program offers opportunity for fullest development as a performer, composer, or teacher of music performance or composition. Technical excellence is a prerequisite for admission into the program; doctoral study emphasizes work in adjunct areas of music, related fields, and research as they enhance and support the major area.

One foreign language, normally French or German, is required for all D.M.A. students. As a prerequisite for doctoral study, voice majors must have satisfied the foreign language requirement specified above for the Master of Music (Voice Performance) degree. If deficient, a student must enroll in language courses each semester of study until the deficiency is removed.

One lecture-recital and three formal recitals are required for performance majors. The program content of the recitals will be established in cooperation with the student's Advisory Committee. With its approval, a program of chamber music, a concerto performance with orchestra, or a major role in an opera or oratorio may fulfill the requirement for one of the recitals. In lieu of a dissertation, a doctoral project will be required as an indication of the student's ability for scholarly study and research.

The Project for the D.M.A. in Performance will consist of two parts. Part 1 is a monograph that represents the culmination of a significant research project on a topic related to that of the lecture-recital. The monograph must be a well-reasoned, original contribution to the field of study, and should provide evidence of scholarly achievement. A D.M.A. monograph differs from a Ph.D. dissertation principally in that it may be of more restricted scope, and that it may take a more interpretive, synthetic, or practical approach than is usual for a dissertation. Part 2 consists of thoroughly researched and documented written discussions of the remaining repertoire used in fulfilling the performance requirements. The monograph and discussions of repertoire are to be approved by the Advisory Committee in the same manner as a Ph.D. dissertation. If the Major Professor of a student in a performance program is not a Full Member of the Graduate Faculty, another member of the Advisory Committee, who is a Full Member of the Graduate Faculty shall serve as co-chair. If the major professor of a student in a performance program is not a member of the Graduate Faculty, a Full Member of the Graduate Faculty shall serve as chair and major academic professor; the performance teacher shall serve as the sixth member of the committee.

The Project for the D.M.A. in Composition will consist of two parts. Part 1 is a large-scale original composition. The candidate is responsible for arranging a public performance of the work. Part 2 is an in-depth analysis and discussion of the composition. The composition and in-depth written analysis and discussion are to be approved by the Advisory Committee in the same manner as a Ph.D. dissertation.

The minimum course requirements beyond the master's degree are as follows:

MUS 618 Research Methods*	**3**
Music History and Literature	**9**
Advanced Music Theory**	**6**
Performance Major	**12**
Minor (optional)***	**9**
Total	**30-39**

DOCTOR OF MUSICAL ARTS (Voice Performance)

Research Methods (MUS 618)*	**3**
Music History and Literature (must include MUS 623*)	**6**
Advanced Music Theory**	**6**
Voice Performance	**12**
Performance Related Study: must include MUS 665*, 667*, and 620* and 6 credits of Directed Research in Vocal Literature (MUS 780)	**6-15**
Minor (Optional)***	**9**
Total	**33-51**

DOCTOR OF MUSICAL ARTS (Choral Conducting)

Research Methods (MUS 618)*	**3**
Music History and Literature (must include MUS 625)	**9**
Advanced Music Theory**	**6**
Advanced Choral Methods (MUS 660)	**3**
Performance Major****	**12**
Minor (Optional)***	**9**
Total	**33-42**

*If not completed at the master's level.

**MUS 578 cannot be used to fulfill this requirement.

***The minor may be taken within or outside the School of Music, and is subject to the approval of the Advisory Committee and the chairman of the department concerned.

****Must include a minimum of 4 credits of MUP 758

DOCTOR OF PHILOSOPHY DEGREE IN MUSIC

The School of Music offers courses and research opportunities leading to the Ph.D. in music. Applicants must meet the entrance requirements of The Graduate School as well as those of the School of Music, and must show evidence of competence in musical performance. Applicants must submit a master's thesis or a research paper of sufficient scope and quality to demonstrate competence in research and clarity of expression. The basic core requirements beyond the master's degree are as follows:

Research Methods: MUS 618 (if not taken at the master's level) 3
Music History and Literature beyond the master's 9
Advanced Music Theory beyond the master's* 6
Three seminars (minimum) beyond the master's 9

Total 27

(24 hours if competency in Research Methods is accepted by the Musicology faculty.)

There is no specific requirement in a minor area, but such work may be required by a student's Advisory Committee if it is essential to the major research or field of concentration.

Satisfaction of language requirements will conform to The Graduate School policy; however, specific languages required will vary with individual options.

*MUS 578 cannot be used to fulfill this requirement.

The Ph.D. in music may be pursued in one of three areas: music education, music theory, or musicology. The program outline for each area beyond the core requirements is given below; the student's Advisory Committee advises on and plans the actual program of study.

MUSIC EDUCATION

Music in Higher Education (MUS 762)
Psychology of Music (MUS 770)
At least one graduate level course in statistics
A knowledge of acoustics (PHY 140 or equivalent), a knowledge of specialized research in music education (MUS 600 or equivalent). These requirements must be met by the end of the first year of doctoral study.
Additional courses in music education or adjunct subjects as recommended by the Advisory Committee.
A reading knowledge of French, German, or a language appropriate to the research interest.

MUSIC THEORY

Pedagogy of Theory (MUS 674)
Advanced Analytical Techniques (MUS 676)
History of Music Theory (MUS 678)
Additional courses in music theory or adjunct subjects as recommended by the Advisory Committee
A reading knowledge of French, German, or a language appropriate to the research interest

MUSICOLOGY

Medieval Notation (MUS 700)
Renaissance Notation (MUS 701)
Additional courses in musicology or adjunct subjects as recommended by the Advisory Committee
A reading knowledge of at least two foreign languages, normally German and either French or Italian

In all cases, the foreign language requirement(s) must be met by the end of the first full year of study in the Ph.D. program. The student's Advisory Committee must be formed and appointed by the Dean of the Graduate School prior to advance registration for the student's third semester. The dissertation topic and prospectus must be approved by the Advisory Committee; the dissertation itself must be the result of original research which adds to or modifies what has previously been known on the subject. Qualifying examinations must be taken no later than one semester after the completion of course work. A student is admitted to candidacy for the Ph.D. degree only after meeting the language requirement(s) and passing the qualifying examinations.

JOINT PH.D. IN MUSICOLOGY

University of Kentucky
and
University of Louisville

A joint Ph.D. in Musicology is available from the University of Kentucky and the University of Louisville. The faculties and facilities of both universities are available to students on either campus. If the student is enrolled full-time at either university, courses from the other are available without charge.

Students interested in this program should contact the Associate Dean of the Graduate School, University of Louisville, or the Director of Graduate Studies at the University of Kentucky, School of Music, for further information. The general regulations for doctoral students at the University of Kentucky will apply.

Admission. Every applicant must be admitted to the graduate schools of BOTH universities. Official transcripts and GRE scores for students admitted to the University of Louisville will be sent to the Director of Graduate Studies, School of Music, University of Kentucky by the Graduate School, University of Louisville. Applicants may be admitted provisionally on the recommendation of the Director of Graduate Studies in Music at the University of Kentucky pending receipt of GRE scores and/or completion of placement examination at the University of Louisville.

Language Requirements. The University of Louisville will notify the Director of Graduate Studies, University of Kentucky, that a student has completed the language requirements.

Residence Requirements. At least three regular courses must be taken at the University of Kentucky. Residence requirements may be satisfied at the University of Louisville, University of Kentucky, or a combination of both. A student must be in residence as a full-time student or the equivalent for a minimum of four semesters beyond the master's degree. At least two of these semesters must be consecutive and precede the qualifying examination.

The University of Louisville will notify the Director of Graduate Studies, University of Kentucky, (if residency is being fulfilled at the University of Louisville) of the intent to schedule the qualifying examination and confirm that the student meets pre-qualifying requirements. Each candidate for the doctorate fulfilling residency at the University of Kentucky must complete two semesters of full-time dissertation study immediately after the qualifying examination by registering for a total of 18 credit hours in MUS 769. The candidate must maintain candidacy by registering for MUS 769 or Music History 769 (zero credit) each semester thereafter until the dissertation is successfully defended.

Advisory Committee. The Advisory Committee will be composed of six graduate faculty members, three from each institution.

Further information may be obtained from the University of Louisville Graduate School Bulletin.

CERTIFICATE IN MUSIC THEORY PEDAGOGY

The School of Music offers course work leading to the Certificate in Music Theory Pedagogy. The Certificate requires a total of 15 hours consisting of the following courses:

MUS 674	Theory Pedagogy	(3)
MUS 675	Internship	(3)
MUS 676	Advanced Analytic Techniques	(3)

and
two elective theory courses selected from the following:

MUS 572	Counterpoint	(3)
MUS 573	Counterpoint	(3)
MUS 670	Musical Style I	(3)
MUS 671	Musical Style II	(3)
MUS 672	Musical Style III	(3)
MUS 677	Contemporary Music Idioms	(3)
MUS 678	History of Theory	(3)
MUS 772	Seminar in Theory	(3)
MUS 799	Independent Work in Music Theory	(1-3)

The Certificate will be awarded upon completion of the requirements. Students working on the Certificate are expected to earn a grade of B or higher in each certificate requirement.

MUSIC COURSES

All music performance courses (MUP) may be repeated three times for credit. Music ensemble courses (MUC) may be repeated indefinitely.

All music performance courses carry from one to four credits during the fall and spring semesters. (Applied music offerings during the summer are limited.)

MUC 570	Advanced Chamber Music Ensemble	(1)
MUC 596	Opera Workshop	(1-3)
MUC 675	Jazz Ensemble	(1)
MUC 689	Wind Ensemble	(1)
MUC 691	Orchestra	(1)
MUC 692	University Choristers	(1)

MUP 501	Piano	(1-4)
MUP 502	Voice	(1-4)
MUP 503	Organ	(1-4)
MUP 504	Violin	(1-4)
MUP 505	Viola	(1-4)
MUP 506	Cello	(1-4)
MUP 507	String Bass	(1-4)
MUP 508	Flute	(1-4)
MUP 509	Oboe	(1-4)
MUP 510	Clarinet	(1-4)

MUP 511 Bassoon ..... (1-4)
MUP 512 Trumpet ..... (1-4)
MUP 513 French Horn ..... (1-4)
MUP 514 Trombone ..... (1-4)
MUP 515 Euphonium ..... (1-4)
MUP 516 Tuba ..... (1-4)
MUP 517 Saxophone ..... (1-4)
MUP 518 Percussion ..... (1-4)
MUP 519 Harp ..... (1-4)
MUP 520 Harpsichord ..... (1-4)
MUP 521 English Horn ..... (1-4)
MUP 522 Historical Instruments ..... (1-4)
MUP 523 Classical Guitar ..... (1-4)
MUP 530 Vocal Coaching for Singers ..... (1-3)
MUP 558 Conducting ..... (1-4)
MUP 601 Piano ..... (1-4)
MUP 602 Voice ..... (1-4)
MUP 603 Organ ..... (1-4)
MUP 604 Violin ..... (1-4)
MUP 605 Viola ..... (1-4)
MUP 606 Cello ..... (1-4)
MUP 607 String Bass ..... (1-4)
MUP 608 Flute ..... (1-4)
MUP 609 Oboe ..... (1-4)
MUP 610 Clarinet ..... (1-4)
MUP 611 Bassoon ..... (1-4)
MUP 612 Trumpet ..... (1-4)
MUP 613 French Horn ..... (1-4)
MUP 614 Trombone ..... (1-4)
MUP 615 Euphonium ..... (1-4)
MUP 616 Tuba ..... (1-4)
MUP 617 Saxophone ..... (1-4)
MUP 618 Percussion ..... (1-4)
MUP 619 Harp ..... (1-4)
MUP 620 Harpsichord ..... (1-4)
MUP 622 Historical Instruments ..... (1-4)
MUP 623 Classical Guitar ..... (1-4)
MUP 630 Vocal Coaching for Singers ..... (1-3)
MUP 658 Conducting ..... (1-4)
MUP 701 Piano ..... (1-4)
MUP 702 Voice ..... (1-4)
MUP 703 Organ ..... (1-4)
MUP 704 Violin ..... (1-4)
MUP 705 Viola ..... (1-4)
MUP 706 Cello ..... (1-4)
MUP 708 Flute ..... (1-4)
MUP 709 Oboe ..... (1-4)
MUP 710 Clarinet ..... (1-4)
MUP 711 Bassoon ..... (1-4)
MUP 712 Trumpet ..... (1-4)
MUP 713 French Horn ..... (1-4)
MUP 714 Trombone ..... (1-4)
MUP 716 Tuba ..... (1-4)
MUP 717 Saxophone ..... (1-4)
MUP 718 Percussion ..... (1-4)
MUP 730 Vocal Coaching for Singers ..... (1-3)
MUP 758 Conducting ..... (1-4)

MUS 400G Music History Review ..... (3)
MUS 470G Review of Harmony ..... (1)
MUS 471G Review of Aural Skills ..... (1)
MUS 500 Music of the Middle Ages ..... (3)
MUS 501 Music of the Renaissance ..... (3)
MUS 502 Music of the Baroque Era ..... (3)
MUS 503 Music of the Classic Period ..... (3)
MUS 504 Music of the Nineteenth Century ..... (3)
MUS 505 Music of the Twentieth Century ..... (3)
MUS 506 History of American Music ..... (3)
MUS 520 Vocal Solo Literature ..... (3)
MUS 521 Organ Literature ..... (3)
MUS 522 Piano Literature to 1830 ..... (3)
MUS 523 Piano Literature Since 1830 ..... (3)
MUS 530 Collegium Musicum ..... (1-3)
MUS 540 Applications of Music Technology ..... (3)
MUS 550 Topics in Music Education (Subtitle Required) ..... (1-3)
MUS 560 Orff Schulwerk ..... (1-3)
MUS 561 Orff Certification: Level I, II, or III ... (2)
MUS 566 Piano Pedagogy ..... (3)
MUS 570 Orchestration ..... (2)
MUS 571 Orchestration ..... (2)
MUS 572 Counterpoint ..... (3)
MUS 573 Counterpoint ..... (3)
MUS 574 Composition ..... (2)
MUS 575 Composition ..... (2)
MUS 578 Analysis and Style Survey ..... (3)
MUS 600 Research I ..... (3)
MUS 601 Foundations in Music Education ..... (3)
MUS 618 Research Methods ..... (3)
MUS 620 Advanced Vocal Repertory (Subtitle Required) ..... (3)
MUS 622 Symphonic Literature ..... (3)
MUS 623 Opera Literature ..... (3)
MUS 624 Chamber Music Literature ..... (3)
MUS 625 Choral Literature ..... (3)
MUS 650 Music Education Workshop ..... (1-4)
MUS 660 Advanced Music Education Methods and Materials (Subtitle Required) ..... (3)
MUS 664 Music and Special Learners ..... (3)
MUS 665 Physiology and Functioning of the Singing Voice ..... (3)
MUS 667 Materials, Techniques and Literature of Voice Teaching ..... (3)
MUS 670 Musical Style I ..... (3)
MUS 671 Musical Style II ..... (3)
MUS 672 Musical Style III ..... (3)
MUS 673 Advanced Composition ..... (2)
MUS 674 Pedagogy of Theory ..... (3)
MUS 675 Internship in Theory Pedagogy ..... (1)
MUS 676 Advanced Analytic Techniques ..... (3)
MUS 677 Contemporary Music Idioms ..... (3)
MUS 678 History of Theory ..... (3)
MUS 680 Band History and Literature ..... (3)
MUS 684 Advanced String Methods and Materials ..... (3)
MUS 690 Topics in Musicology (Subtitle Required) ..... (3)
MUS 700 Medieval Notation ..... (3)
MUS 701 Renaissance Notation ..... (3)
MUS 702 Seminar in Musicology ..... (3)
MUS 704 Music Technologies ..... (3)
MUS 705 Research II ..... (3)
MUS 706 Music Learning and Behavior ..... (3)
MUS 707 Tests and Measurements in Music ..... (3)
MUS 719 Independent Work in Musicology ... (1-3)
MUS 748 Master's Thesis Research ..... (0)
MUS 749 Dissertation Research ..... (0)
MUS 762 Music in Higher Education ..... (3)
MUS 766 Seminar in Music Education ..... (3)
MUS 767 Independent Work in Music Education ..... (1-3)
MUS 768 Residence Credit for the Master's Degree ..... (1-6)
MUS 769 Residence Credit for the Doctor's Degree ..... (0-12)
MUS 770 Psychology of Music ..... (3)
MUS 772 Seminar in Theory ..... (3)
MUS 780 Directed Research in Vocal Literature ..... (1-3)
MUS 799 Independent Work in Music Theory ..... (1-3)

Nursing

Graduate Faculty: *Professors* Dorothy Brockopp, Juanita Fleming, Margaret Grier, Lynne Hall, Marcia Stanhope, Mary K. Walker, and Carolyn Williams. *Associate Professors* Norma J. Christman, Pamela Kidd, Ann Peden, Barbara A. Sachs, Juliann G. Sebastian, and Sharon Sheahan.

Associate Members: *Professor* Gwendolen Lee. *Associate Professors* Teresa A. Free, Margaret Hickman, Marilyn G. King, and Louise Warden. *Assistant Professors* Sharon J. Barton, Ellen J. Hahn, Vicki Hines-Martin, Patricia B. Howard, and Pamela A. Shuler. *Research Assistant Professor* Mary C. DeLetter.

Joint Appointment: *Associate Professor* John F. Wilson.

Emeritus Professors: Gretchen LaGodna and Dorothy Luther.

The College of Nursing offers graduate programs leading to the Master of Science in Nursing and to the Doctor of Philosophy.

Master of Science

The Master of Science in Nursing program prepares nurses for an advanced practice specialty. The program is designed to build on the first professional degree; nursing theory, research, and practice are emphasized. Areas of concentration are: a) Adult Nursing focuses upon the care of adults across the life span in critical illness, adult, oncology, rehabilitation, ER-trauma, gerontological nursing, acute-care nurse practitioner, and nurse care manager; b) Community Health Nursing/Administration focuses on preparing nurses to assume positions in community-based agencies delivering health and nursing services to specific populations as primary care nurse practitioners, as nurse managers, community health clinical nurse specialists, and nurse care managers; c) Parent-Child Nursing focuses upon children, adolescents, and families, perinatal nursing, and neonatal; d) Psychiatric/Mental Health Nursing focuses upon the specialized care of individuals and families with psychiatric and addictive problems in hospital and community settings.

Applicants to the master's degree program must meet the minimum requirements of The Graduate School, as well as the following requirements of the nursing program: satisfactory scores on the Graduate Record Examination (GRE), a minimal grade point average of 2.5 on a 4.0 grading scale, a National League for Nursing accredited baccalaureate degree, three references, and an interview. Nurse licensure in Kentucky and one year of experience as a nurse are required before enrolling in a clinical practicum. Final admission recommendations are made on a competitive basis.

The Master of Science in Nursing degree requires a minimum of 27 credit hours of course work plus six hours of residence credit (Plan A) or 33 credit hours of course work (Plan B). Some specialties may require more. All students are required to take concepts and theories in nursing, nursing research, roles and issues, and graduate level courses in statistics and science. In addition, each student must complete a research project or thesis, and pass a final examination. Students may pursue part-time study through flexible scheduling and selected evening courses. The College offers master's degree courses at the UK Rural Health Center in Hazard and at Morehead State University.

Nurses with diplomas or associate degrees have the choice of combining their programs of study for the BSN and MSN degrees. The BSN/MSN option provides qualified registered nurses with an accelerated approach to career advancement from the associate or hospital diploma in nursing to the master's degree. Applicants to the BSN/MSN track must meet the criteria listed for the BSN program and for the MSN program (GPA of 2.5 on a 4.0 scale). Evidence of one year of nursing experience, successful scores on the NLN Mobility Profile exams, three letters of reference, and a personal interview are required. Admission to the BSN/MSN track does not constitute admission to the MSN degree program. The MSN degree will not be awarded without concurrent or prior completion of the BSN requirements.

Doctor of Philosophy

The Doctor of Philosophy in Nursing program prepares nurse scholars to contribute to the development of nursing science through clinical research and the application of knowledge to nursing practice. Graduates assume roles in research, education, and administration.

Applicants to the doctoral program must meet the minimum requirements of The Graduate School, as well as the following requirements of the nursing program. An applicant must possess a master's degree in nursing from a National League of Nursing accredited school and a 3.3 or higher grade point average on a 4.0 scale for all master's level work. Satisfactory scores on the GRE are expected. Applicants must have a minimum of two years post-baccalaureate experience. Personal interviews and three references are required. Final admission recommendations are made on a competitive basis.

A student enrolled in the master's degree program, who has completed 17 credit hours of MSN course work, can apply for admission to the doctoral program. To apply for doctoral study, a MSN student must submit a letter to the Assistant Dean for Research and Doctoral Studies expressing a desire to enroll in the doctoral program, submit a revised goal statement reflecting interest in doctoral education and research, attach a sample of scholarly work, request the academic advisor to send the Assistant Dean an admission recommendation, and complete an interview with the Assistant Dean and one additional faculty member.

The Doctor of Philosophy degree in nursing requires a minimum of 45 credit hours of course work beyond the master's degree, plus 18 hours of residence credit for dissertation research. A written and oral examination is required to qualify as a degree candidate. The student must engage in two semesters of full-time study (nine credit hours) prior to the qualifying examination. There is a final examination for defense of the dissertation research.

NUR 510 Older Women and Their Health ..... (3)
NUR 512 Complementary/Alternative Approaches to Health Care ..... (3)
NUR 520 Special Topics in Nursing (Subtitle Required) ..... (2-4)
NUR 600 Advanced Nursing Practice: Roles and Issues ..... (3)
NUR 610 Concepts and Theories in Nursing ..... (2)
NUR 612 Nursing Research Methods ..... (3)
NUR 613 Research Applications in Nursing ..... (3)
NUR 614 Practicum in Clinical Nursing I ..... (4)
NUR 615 Practicum in Clinical Nursing II ..... (5)
NUR 620 Problems in Clinical Nursing ..... (2-6)
NUR 624 Pediatric Health Screening and Health Promotion ..... (2)
NUR 628 Population Focused Practicum in the Community ..... (2)
NUR 629 Epidemiologic Principles Applied to Health Care and Nursing Practice ..... (3)
NUR 650 Advanced Physical Health Assessment ..... (2-6)
NUR 651 Diagnostic Laboratory Procedures ..... (2)
NUR 652 Pharmacologic Applications in Primary Care ..... (3)
NUR 654 Common Health Problems of Young, Middle and Old Adults I ..... (3)
NUR 655 Common Health Problems of Young, Middle and Old Adults II ..... (3)
NUR 656 Health Problems of the Pediatric Client ..... (2)
NUR 657 Health Issues of the Child and Adolescent Client ..... (2)
NUR 658 Risky Behaviors and Health ..... (3)
NUR 662 Clinical Nursing Practice in Expanded Roles I ..... (1-4)
NUR 663 Management of Clinical Nursing Practices I ..... (4)
NUR 668 Psychotherapeutics for Advanced Nursing Practice ..... (3)
NUR 672 Clinical Nursing Practice in Expanded Roles II ..... (3-4)
NUR 673 Management of Clinical Nursing Practice II ..... (4)
NUR 676 Women's Helath: A Public Health Perspective ..... (3)
NUR 682 Clinical Nursing Practice in Expanded Roles III ..... (3-8)
NUR 683 Management of Clinical Nursing Practices III ..... (3-8)
NUR 700 Behavioral Responses to Health Problems ..... (2)
NUR 701 Biological Responses to Health Problems ..... (2)
NUR 702 Biological Phenomena in Acute Illness (3)
NUR 703 Biological and Behavioral Phenomena in Chronic Illness ..... (2)
NUR 710 Advanced Parent/Child Nursing I ..... (2)
NUR 711 Advanced Parent/Child Nursing II .... (2)
NUR 715 Perinatal Nursing: Low Risk Families . (2)
NUR 716 Perinatal Nursing: High Risk Mother . (2)
NUR 717 Perinatal Nursing: High Risk Neonate ..... (2)
NUR 720 Advanced Psychiatric/Mental Health Nursing I ..... (2)
NUR 721 Advanced Psychiatric/Mental Health Nursing II ..... (2)
NUR 730 Nursing Management in the Organization I ..... (3)
NUR 731 Nursing Management in the Organization II ..... (3)
NUR 735 Family and Community Health Promotion ..... (3)
NUR 737 Nursing Care Management—Resource Management ..... (3)
NUR 738 Models and Processes of Nursing Care Management ..... (3)
NUR 739 Nursing Care Management—Clinical Outcomes and Quality Improvement (2-3)
NUR 740 Nurse-Midwifery Management: Neonate ..... (2)
NUR 741 Nurse-Midwifery Management: Well Woman ..... (2)
NUR 742 Nurse-Midwifery Management: Antepartal Woman ..... (2)
NUR 743 Nurse-Midwifery Management: Intrapartal and Postpartal Woman ..... (2)
NUR 744 Nurse-Midwifery Management: Woman With Problems ..... (2)
NUR 745 Nurse-Midwifery Management: Practice Organizations ..... (2)
NUR 748 Master's Thesis Research ..... (0)
NUR 749 Dissertation Research ..... (0)
NUR 768 Residence Credit for the Master's Degree ..... (1-6)
NUR 769 Residence Credit for the Doctor's Degree ..... (0-12)
NUR 776 Special Topics Seminar (Subtitle Required) ..... (2-4)
NUR 778 Proseminar in Contemporary Health and Nursing Policy Issues ..... (3)
NUR 779 Dissertation Seminar ..... (1-3)
NUR 781 Independent Study in Nursing ..... (1-3)
NUR 790 Knowledge Development in Nursing .. (3)
NUR 791 Qualitative Methods in Nursing Research ..... (3)
NUR 792 Quantitative Methods in Nursing Research ..... (3)
NUR 793 Measurement of Nursing Phenomena (4)
NUR 794 Analysis, Interpretation, and Presentation of Quantitative Data ..... (3)

Nutrition and Food Science

Graduate Faculty: *Professors* Linda Chen, Ching K. Chow, Howard Glauert, Bernhard Hennig, and L. P. Mercer. *Associate Professors* Kwaku Addo, M. Margaret Barth and Hazel Forsythe.

Associate Members: *Associate Professor* Claire Schmelzer. *Associate Extension Professor* Darlene Forester. *Assistant Professors* Lisa M. Gaetke and Wonae Cho.

The graduate curriculum, available within the Department of Nutrition and Food Science, leads to the Master of Science degree (M.S.). The graduate program offers three emphases: Biochemical Nutrition, Community Nutrition, and Food Science. Additionally, within the department there exist two approved/accredited dietetics programs leading to R.D. status.

With highly qualified faculty, the department forms a nucleus to provide the University of Kentucky with an educational, research and informational center in nutritional sciences. Faculty research areas include cancer, arteriosclerosis, cell culture, molecular biology, eating disorders, post-harvest plant physiology, aging, etc. The breadth of education and training available in the laboratories of the faculty provides a background for graduate students to assume positions in academic and health care institutions, industry, business, and government. Furthermore, the Master of Science graduate program prepares the student for the

multidisciplinary Ph.D. program in Nutritional Sciences.

Admission

To be admitted to the graduate program in Nutrition and Food Science, a student must:

1. Have been granted a baccalaureate degree in Nutrition, Food Science, or related area by an accredited institution. A minimum grade point average of 3.0 on a 4.0 scale or a total of 1,000 or more for the verbal and quantitative portions of the Graduate Record Examination (GRE) is usually required.
2. Be admitted to the Graduate School of the University of Kentucky.
3. Have a TOEFL score of 550 or better if an international student.

Program Requirements

Each emphasis of the Master's degree program is tailored to meet the needs of the individual student. The specific plan of study will be designed in conjunction with the student's graduate committee. The program requires 24 credits plus a minimum of sixcredits of research (NFS 768) and a thesis (Plan A) or 36 hours with no thesis (Plan B).

All students will be required to complete course work in one of the following emphases: Biochemical Nutrition, Community Nutrition, or Food Science.

Other Requirements

All students are expected to complete all prerequisites to graduate courses. Successful Master's degree candidates are expected to have competence in all phases of basic nutrition and food science. For students whose undergraduate major was not in nutrition, this may necessitate taking additional courses in areas of deficiencies.

All students must pass an oral final examination.

NFS 408G Seminar in Food and Nutrition ..... (1)
NFS 503 Community Nutrition ..... (3)
NFS 510 Advanced Nutrition ..... (3)
NFS 511 Therapeutic Nutrition ..... (3)
NFS 513 Advanced Therapeutic Nutrition ..... (2)
NFS 516 Maternal and Child Nutrition ..... (3)
NFS 546 Institution Organization and Management ..... (3)
NFS 548 Institution Administration ..... (3)
NFS 580 Dietetics Pre-Professional Practice ..... (3)
NFS 590 Field Work in Nutrition ..... (1)
NFS 591 Special Problems in Foods and Nutrition ..... (1-3)
NFS 594 Special Problems in Institution Management ..... (1-3)
NFS 603 Advanced Community Nutrition ..... (3)
NFS 610 Human Nutrition: Assessment ..... (3)
NFS 680 Nutrition and Aging ..... (2)
NFS 685 Mineral Metabolism ..... (2)
NFS 748 Master's Thesis Research ..... (0)
NFS 768 Residence Credit for the Masters Degree ..... (1-6)
NFS 770 Seminar in Nutrition and Food Science ..... (1)
NFS 772 Current Topics in Human Nutrition and Food Science ..... (2)
NFS 781 Special Problems in Foods and Nutrition ..... (1-3)
NFS 784 Special Problems in Institution Management ..... (1-3)
HES 596 Special Problems in Human Environmental Sciences ..... (1-3)
HES 600 Research Methodology in Human Environmental Sciences ..... (3)
HES 786 Advanced Problems in Human Environmental Sciences ..... (1-3)

Nutritional Sciences

Graduate Faculty: *Professors* Rajendar K. Chawla, Ion Deaciuc, James F. Drummond, Daniell Hill, Laurie L. Humphries, James Muller, and Deneys R. van der Westhuyzen. *Associate Professors* Alan Daugherty and Thomas H. Schwarcz.

Associate Members: *Associate Professor* Eun Lee. *Assistant Professors* Shirish Barve, Willem deVillers, Lawrence Gates, Michal Toborek and Gary Varilek.

Joint Appointments: *Professors* James W. Anderson, Gilbert A. Boissonneault, James A. Boling, Geza Bruckner, Linda H. Chen, Ching K. Chow, Vincent S. Gallicchio, Howard Glauert, Ramesh Gupta, David L. Harmon, Bernhard Hennig, David Hildebrand, Elaine Jacobson, Edward J. Kasarskis, Jr., Thomas Kemp, Mark Mattson, Craig McClain, L. Preston Mercer, and George E. Mitchell, Jr.and Larry W. Robertson. *Associate Professors* Kwaku Addo, Douglas Archbold, Margaret Barth, Maria G. Boosalis, Austin H. Cantor, Hazel W. Forsythe, Thomas H. Kelly, Mark S. Kindy, Merlin D. Lindemann, Daret St. Clair, and Youling L. Xiong. *Assistant Professors* Paul M. Kingery and Steve Post.

Joint Associate Members: *Associate Professors* Lisa Cassis, Georgette Howard, and Brett Spear. *Assistant Professors* Deborah L. Crooks, James Matthews, Eric Vanzant and Changzhen Wang.

Emeritus Professor: Roger W. Hemken, Paul Thornton, and Ray E. Tucker.

The multidisciplinary Graduate Program in Nutritional Sciences provides opportunity for advanced study leading to a Ph.D. degree. The aim of the program is to develop nutritional scientists who are able to function in a variety of sophisticated academic, industrial and professional settings. Educational opportunities exist in agricultural, biological, clinical, medical, social and basic nutritional sciences. The program is organized on an interdepartmental and intercollege basis. More than 38 faculty members from various academic units of the university including Agronomy, Animal Sciences, Anthropology, Behavioral Science, Biochemistry, Clinical Sciences, Endocrinology, Horticulture and Landscape Architecture, Internal Medicine, Neurology, Nutrition and Food Science, Oral Health Science, Psychiatry, Surgery and Toxicology are involved in the teaching and research activities of the program. The program is diversified and systematic, yet highly flexible. Individualized professional training and extensive research opportunities are available to students.

Program faculty have modern research laboratory facilities for conducting human, animal, and cell culture studies using state-of-the-art molecular biology, trace mineral, vitamin, lipid, amino acid, enzyme, hormone, stable and radioactive isotope, microcirculatory, and energy assessment analysis. Clinical facilities for training and research include the University of Kentucky Hospital, Veterans Administration Hospital, Sanders-Brown Center on Aging, University of Kentucky Medical Center Outpatient Clinics, and the Markey Cancer Center. Clinical research units are present at both the University of Kentucky Medical Center and the Veterans Administration Medical Center, and on-going nutritional studies are performed at both units. All facilities are within walking distance of each other. Nutritional support teams are established at both the University and Veterans Administration Hospitals. Opportunities for community-based research exist locally, throughout the state, and in international settings. Further information may be obtained by writing to the Director of Graduate Studies, Multidisciplinary Ph.D. Program in Nutritional Sciences, 118 Kinkead Hall, University of Kentucky, Lexington, KY 40506-0057.

Ph.D. Degree Requirements

Students are required to complete the core curriculum. Elective courses to be taken will be recommended by the advisory committee.

Nutrition Prequisite

NFS 510 Advanced Nutrition 3
or
CNU 601 Clinical Nutrition 4
or
ASC 580 Principles of Animal Nutrition 3
or equivalent

Nutrition Core Courses

ASC 683 Protein Metabolism 2
ASC/NFS 685 Mineral Metabolism 2
ASC 687 Vitamin Metabolism 2
CNU 604 Lipid Metabolism 3
or
ASC 681 Energy Metabolism 2
NS 771 Graduate Seminar in Nutritional Sciences 2
NS 651 Topics in Nutritional Sciences I 2
or
NS 652 Topics in Nutritional Sciences II 2

Other Core Courses

STA 570	Basic Statistical Analysis	4
BCH 501	General Biochemistry	3
BCH 502	General Biochemistry	3
PGY 502	Principles of Systems, Cellular and Molecular Physiology	5
	Total	30-32

It is assumed that students entering with M.S. Degrees will have taken some of the required courses or their equivalent. The advisory committee will determine the amount of prior course work to be credited toward specific requirements.

Possible elective courses that may be selected by the student or required by the student's Advisory Committee include but are not limited to those listed below:

NS 651	Topics in Nutritional Sciences I	(2)
NS 652	Topics in Nutritional Sciences II	(2)
NS 680	Laboratory Methods in Nutritional Sciences	(4)
NS 749	Dissertation Research	(0)
NS 790	Research in Nutritional Sciences	(0-6)
ASC 684	Advanced Ruminant Nutrition	(3)
ASC 686	Advanced Nonruminant Nutrition	(3)
BCH 610	Biochemistry of Lipids and Membranes	(3)
BCH 503	Plant Biochemistry	(3)
BCH 613	Biochemistry of Carbohydrates	(3)
BCH/BIO/MI 615	Molecular Biology	(3)
BIO/PGY 549	Comparative Endocrinology	(3)
BIO 542	Histology	(3)
BIO 580	Metabolism of Microorganisms	(4)
BIO 716	Metabolism of Microorganisms	(4)
BSC/ANT 774	Behavioral and Ecological Aspects of Human Nutrition	(3)
BSC 775	Human Response to Stress	(3)
BSC 778	Behavioral Factors in Selected Diseases	(3)
CNU 602	Current Topics in Clinical Nutrition	(3)
CNU 603	Nutritional Immunology	(3)
CNU 605	Wellness and Sports Nutrition	(3)
CNU 606	Molecular Biological Applications in Nutrition	(2)
CNU 701	Advanced Clinical Nutrition	(2)
CNU 702	Advanced Clinical Nutrition	(2)
EDP 661	Counseling Techniques	(3)
GRN/SW 643	Biomedical Aspects of Aging	(3)
KHP 420G	Physiology of Exercise	(3)
KHP 620	Advanced Exercise Physiology	(3)
KHP 621	Exercise and Coronary Heart Disease	(3)
KHP 720	Sport Medicine	(3)
NFS 603	Advanced Community Nutrition	(3)
NFS 680	Nutrition and Aging	(2)
PGY 512	Cellular Physiology	(4)
PGY 522	Principles of Biophysics	(4)
PGY 607	Hormonal Control Mechanisms	(3)
PGY 630/GRN 612/ BIO 612	Biology of Aging	(3)
PHA 521	General Pharmaco- and Toxicodynamics	(2)
SOC 528	Dimensions of Aging	(3)
TOX 622	Concepts of Toxicology	(3)
TOX 680	Advanced Toxicology	(3)

NS 651	**Topics in Nutritional Sciences I**	**(2)**
NS 652	**Topics in Nutritional Sciences II**	**(2)**
NS 680	**Laboratory Methods in Nutritional Sciences**	**(4)**
NS 749	**Dissertation Research**	**(0)**
NS 769	**Residence Credit for the Doctor's Degree**	**(0-12)**
NS 771	**Graduate Seminar in Nutritional Sciences**	**(1)**
NS 790	**Research in Nutritional Sciences**	**(0-6)**

Pharmaceutical Sciences

Graduate Faculty: *Professors* Robert A. Blouin, Jordan L. Cohen, Peter Crooks, Patrick DeLuca, George Digenis, Lewis Dittert, Thomas S. Foster, Boyd Haley, Anwar Hussain, Myron K. Jacobson, Michael Jay, Pankaja Kadaba, William Lubawy, Patrick J. McNamara, Jack W. Olson, Robert Rapp, Michael C. Shannon, Hsin-Hsuing Tai, and Robert A. Yokel. *Associate Professors* Paul M. Bummer, Thomas Burke, Lisa Cassis, Mary Chandler, Ching-Shih Chen, Dennis Clifton, Linda Dwoskin, Eric D. Endean, C. Gary Gairola, Jimmi C. Hatton, Georgette Howard, Milton Kornet, Robert Kuhn, Robert Lodder, Mary M. Piascik, Todd Porter, Edward Soltis, Jan St. Pyrek, Peter Wedlund, and John R. Yannelli. *Research Associate Professor* Charles F. Mactutus. *Assistant Professor* James R. Pauly.

Associate Members: *Associate Professors* Sunil Chatterjee, and Martin E. Evans. *Research Associate Professor* Allen D. Hacker. *Assistant Professors* Karen Blumenschein, Andrew M. Cross, Jr., George R. Dickens,, Abdulghani Houdi, William J. John, P. Andrew Pearson Ginell Post, and Steve Post. *Research Assistant Professor* Daniel P. Wermeling.

Joint Appointment: *Professors* Boyd Haley and David Watt.

Emeritus Professors: Harry Kostenbauder, Charles Lesshafft, Mark M. Luckens, Harry Smith, and Joseph Swintosky.

The College of Pharmacy offers M.S. and Ph.D. programs in pharmaceutical sciences, with concentration in pharmaceutics, pharmacology and medicinal chemistry. Specific areas of interest include pharmaceutical analysis, physical pharmacy, drug delivery, pharmaceutical technology, pharmacokinetics, pulmonary and cardiovascular pharmacology, neuropharmacology, clinical pharmacology, clinical pharmaceutical sciences, drug metabolism, drug design and synthesis, natural products chemistry and nuclear pharmacy.

The M.S. degree is offered under a modification of Plan A which permits students to take approximately one-half of their courses in work areas outside the major area. Plan B may be employed only in exceptional cases.

Pharmaceutical Sciences' graduate students are typically enrolled in graduate courses in departments of chemistry, statistics, biochemistry, pharmacology, and others, depending upon the focus of the student's program. Superimposed upon this base, it is expected that the student will take graduate level courses within the major area of interest from the courses listed in Pharmacy.

For regular admission to graduate study in pharmaceutical sciences a student should have a sound background in pharmacy, chemistry, biology or chemical engineering, with a mastery of mathematics through calculus. Applicants lacking basic requirements in these areas will be required to make up such deficiencies by taking undergraduate courses for non-graduate credit.

PHR 510	**Modern Methods in Pharmaceutical Analysis**	**(5)**
PHR 520	**Special Topics in Pharmacy Law**	**(2)**
PHR 525	**Introduction to Sociopharmacology**	**(2)**
PHR 530	**Radiopharmaceutics**	**(3)**
PHR 541	**Pharmaceutical Technology Clerkship**	**(4)**
PHR 545	**Sterile Parenterals and Devices**	**(2-3)**
PHR 595	**Independent Problems in Pharmacy Administration**	**(1-3)**
PHR 612	**Quantitative Pharmacodynamics: Pharmacokinetics**	**(3)**
PHR 620	**Natural Products Chemistry**	**(3)**
PHR 622	**Advanced Biopharmaceutics**	**(2)**
PHR 630	**Pharmaceutical Rate Processes**	**(3)**
PHR 631	**Equilibrium Phenomena in Pharmaceutical Systems**	**(3)**
PHR 640	**Methods in Pharmological Research I**	**(2)**
PHR 641	**Methods in Pharmological Research II**	**(2)**
PHR 645	**Neurotoxicology**	**(2)**
PHR 647	**Introduction to Molecular Pharmacotherapeutics**	**(3)**
PHR 649	**Molecular Pharmacology**	**(3)**
PHR 664	**Theory and Practice of Drug Metabolism**	**(3)**
PHR 668	**Psychotherapeutics for Advanced Nursing Practice**	**(3)**
PHR 748	**Master's Thesis Research**	**(0)**
PHR 749	**Dissertation Research**	**(0)**
PHR 760	**Topics in Pharmaceutical Sciences**	**(1-4)**
PHR 762	**Bioorganic Mechanisms**	**(3)**
PHR 768	**Residence Credit for the Master's Degree**	**(1-6)**
PHR 769	**Residence Credit for the Doctor's Degree**	**(0-12)**
PHR 774	**Graduate Seminar in Pharmacology and Experimental Therapeutics**	**(1)**
PHR 776	**Seminar in Pharmaceutical Sciences I**	**(1)**
PHR 778	**Seminar in Pharmaceutical Sciences II**	**(1)**
PHR 779	**Membrane Science Colloquium**	**(1)**
PHR 780	**Special Problems in Pharmaceutical Sciences**	**(1-6)**
PHR 790	**Research in Pharmaceutical Sciences**	**(1-12)**

Pharmacology

Graduate Faculty: *Professors* James W. Flesher, Edgar T. Iwamoto, Philip W. Landfield, John Slevin, and Mary Vore. *Associate Professors* David M. Kaetzel, Edward J. Pavlik, Norman Pedigo, and Michael Piascik.

Associate Members: *Professor* John Littleton. *Assistant Professors* Kuey-Chu Chen, Robert W. Hadley, Nicholas J. Koszewski, Nada Porter, LuZhe Sun, and Hollie I. Swanson.

Emeritus Professors: Donald F. Diedrich.

The Department of Pharmacology offers the Ph.D. degree in Pharmacology.

Pharmacology is the study of drugs and their interaction with molecular and physiologic systems. Pharmacology encompasses therapy in medicine as well as investigations of basic cellular mechanisms. Pharmacologists in modern society find careers as teachers, as scientists engaged in research of problems related to developing new drugs and evaluating drugs for their efficacy and toxicity. In addition, the molecular and physiologic mechanisms of drugs and endogenous substances are also studied.

Graduates from accredited colleges with bachelor degrees in the biological sciences, in chemistry, physics or pharmacy or who also hold professional degrees in medicine, dentistry, veterinary medicine or pharmacy are eligible for candidacy for graduate degrees in pharmacology. It is advisable that the candidates have good basic training in mathematics, physics, chemistry and biological sciences. A major part of the Ph.D. program involves independent research under the direction of a member of the graduate faculty. Training can be obtained in neuropharmacology, psychopharmacology, drug metabolism, carcinogenesis, receptor mechanisms, toxicology, neuroendocrinology, cardiovascular pharmacology and problems related to drug abuse.

Inquiries concerning the details of the program as well as possible financial support for graduate students should be addressed to the Chairman of the Department of Pharmacology.

PHA 522	Systems Pharmacology	(3)
PHA 602	Neuropharmacology	(4)
PHA 603	Pharmacology of Organs and Systems	(3)
PHA 605	Principles of Neurobiology	(4)
PHA 606	Mechanisms of Neurologic Disease	(4)
PHA 612	Quantitative Pharmacodynamics, Pharmacokinetics	(3)
PHA 621	Advanced Pharmacodynamics	(3)
PHA 630	Special Topics in Pharmacology	(1-3)
PHA 634	Pharmacology of Cardiovascular Drug Therapy	(3)
PHA 649	Molecular Pharmacology	(3)
PHA 658	Advanced Neuropharmacology	(3)
PHA 663	Drug Metabolism and Disposition	(2)
PHA 670	Chemical Carcinogenesis	(3)
PHA 748	Master's Thesis Research	(0)
PHA 749	Dissertation Research	(0)
PHA 750	Research in Pharmacology	(1-5)
PHA 768	Residence Credit for the Master's Degree	(1-6)
PHA 769	Residence Credit for the Doctor's Degree	(0-12)
PHA 770	Seminar in Pharmacology	(1)
PHA 779	Membrane Science Colloquium	(1)

Philosophy

Graduate Faculty: *Professors* Susan Bordo, Daniel Breazeale, Ronald Bruzina, Joan Callahan, James E. Force, Daniel Frank, James Manns, Alan Perreiah, and Patricia Smith. *Associate Professors* Harmon Holcomb, Henry Schankula, Anita M. Superson, and Theodore R. Schatzki. *Adjunct Professor* Edward Madden.

Associate Members: *Assistant Professors* David Bradshaw, Brandon Look, and Paul Taylor. *Adjunct Assistant Professor* Roger Jones.

Emeritus Professors: Dallas High.

The Department of Philosophy offers programs of study leading to the Doctor of Philosophy and the Master of Arts degrees.

Ordinarily, applicants for graduate study in philosophy at the University of Kentucky will enter the Ph.D. program. The purpose of the Ph.D. program is to develop the student's ability to do serious, advanced research in philosophy. The program is designed to accommodate the needs of individual students at an advanced level to pursue a traditional degree in philosophy, engage in interdisciplinary research to prepare for professions outside of philosophy itself, or prepare for the profession of teaching philosophy. The Ph.D. program requires the completion of 66 hours of course work, or 36 hours of course work beyond course work done for an M.A. in philosophy at the University of Kentucky or elsewhere. Normally, 18 of the 36 required post-M.A. hours will be taken for writing the dissertation, leaving 18 of the required hours for non-dissertation course work. Students will need to demonstrate reading competence in at least one foreign language, as well as competence in logic. All Ph.D. students will need to pass comprehensive examinations in metaphysics and epistemology, and value theory. A Qualifying Examination in each student's area of specialization precedes the writing of the dissertation. Students entering the Ph.D. program without an M.A. in philosophy from the University of Kentucky are expected to complete their degree work within five years. Every effort will be made to see that all students entering the Ph.D. program without an M.A. in philosophy from the University of Kentucky are offered five years of financial support (teaching assistantships and/or fellowships), with ongoing funding for those years contingent on the availability of funds and the student's continuing to make satisfactory progress through the program. Ph.D. students who have completed all requirements for the M.A. in philosophy at the University of Kentucky will be eligible to receive the M.A. in philosophy *en passant.*

GROUP A

PHI 500	Topics in Philosophy (Subtitle Required)	(3)
PHI 503	Topics in Ancient Philosophy	(3)
PHI 504	Islamic and Jewish Philosophy and the Classical Tradition	(3)
PHI 506	Topics in Medieval Philosophy	(3)
PHI 509	Topics in History of Modern Philosophy	(3)
PHI 513	Nineteenth Century Philosophy	(3)
PHI 514	American Philosophy	(3)
PHI 515	Contemporary Philosophy: The Analytic Turn	(3)
PHI 516	Contemporary Philosophy: Phenomenological Directions	(3)
PHI 517	Existentialism	(3)
PHI 519	Critical Social Thought	(3)
PHI 520	Symbolic Logic II	(3)

GROUP B

PHI 530	Ethical Theory	(3)
PHI 535	Social and Political Philosophy	(3)
PHI 537	Philosophy of Law	(3)
PHI 540	Feminist Philosophy	(3)
PHI 545	Philosophy of Religion	(3)
PHI 592	Aesthetics	(3)

GROUP C

PHI 550	Philosophical Problems in Knowledge and Reality	(3)
PHI 560	Philosophy of Scientific Method	(3)
PHI 561	Philosophical Problems in the Natural Sciences (Subtitle Required)	(3)
PHI 562	Philosophical Problems in the Social and Behavioral Sciences	(3)
PHI 565	Philosophy of Language	(3)
PHI 570	Philosophy of History	(3)
PHI 575	Philosophy of Mind	(3)

GRADUATE SEMINARS

PHI 630	Seminar in Moral Philosophy	(3)
PHI 650	Seminar in Metaphysics and Epistemology (Subtitle Required)	(3)
PHI 680	Special Topics in Philosophy	(3)
PHI 700	Seminar in Ancient Philosophy	(3)
PHI 705	Seminar in Medieval Philosophy	(3)
PHI 710	Seminar in Modern Philosophy	(3)
PHI 715	Seminar in Recent Philosophy	(3)
PHI 749	Dissertation Research	(0)
PHI 750	Seminar in Interdisciplinary Issues	(3)
PHI 755	Tutorial in Interdisciplinary Issues	(1-6)
PHI 768	Residence Credit for the Master's Degree	(1-6)
PHI 769	Residence Credit for the Doctor's Degree	(0-12)
PHI 790	Research in Philosophy	(3)

Physical Therapy

Graduate Faculty: *Professor* Terry R. Malone. *Associate Professor* Arthur J. Nitz.

Associate Members: *Assistant Professors* Ramona R. Hicks and Stuart K. Ware.

Emeritus Professor: Dean P. Currier.

The division of Physical Therapy offers the Master of Science in Physical Therapy degree with both thesis (Plan A) and non-thesis (Plan B) options. Plan A is designed as an advanced degree sequence involving an area of speciality concentration (musculosketal, neuromuscular, cardiopulmonary) and the completion of an individual research project resulting in a thesis. Plan B is designed for the graduate physical therapist to further his or her knowledge in Physical Therapy practice and clinical research and requires the completion of a joint research project rather than the individual project and thesis. A dual degree sequence of study prepares the student to enter the physical therapy profession as an appropriately credentialed individual awarded a Bachelor of Health Science and a Master of Science in Physical Therapy (non-thesis option including a joint research project).

Prerequisites for Graduate Study in Physical Therapy

In addition to meeting all the general criteria for admission to the Graduate School at the University of Kentucky, students entering the Physical Therapy Master's Program must:

Thesis (Plan A) and Non-thesis (Plan B)

1) have completed an entry level program in physical therapy (certificate, bachelor's, or master's);
2) be licensed or eligible for licensure as a physical therapist in Kentucky or provide evidence of current licensure as a physical therapist in another of the United States;
3) furnish three personal/professional references;
4) obtain a minimum combined score of 1000 on the verbal and quantitative areas of the GRE.

Bachelor of Health Science and M.S. in Physical Therapy Dual Degree

The following descriptors deal with the graduate phase of this program of study.

1) have completed a minimum of 90 semester hours including specific University/Professional prerequisites and the initial two semester of the Professional Physical Therapy curriculum.
2) complete the overall application process including references, GRE and appropriate Graduate School requirements.

The final selection of students for Plan A, Plan B, and the dual degree sequence will be on a competitive admissions basis. Specific information and details are available from the Division of Physical Therapy. Students pursuing the dual degree must follow the application procedures as outlined through the division of Physical Therapy for both the undergraduate and graduate sequence.

Degree Requirements

Plan A (Thesis)

The Plan A degree candidate must complete 24 semester credit hours of graduate work with a grade point average of 3.0 (B) or higher standing and must write and defend a thesis. At least 15 hours will be completed at the 600 or 700 course level. The student, in consultation with an advisor, will design a program of study which both incorporates the core requirements and is suitable for his or her particular needs in the proposed area of concentration.

Plan B (Non-thesis)

The Plan B degree candidate must complete 30 semester credit hours of graduate work with a grade point average of 3.0 (B) or higher standing and must complete a joint clinical research project to be presented in both a written and oral format. At least 15 hours will be completed at the 600 or 700 course level. In addition to core requirements, the student, in consultation with an advisor, will design a program of study suitable for his or her particular needs and proposed area of clinical concentration.

BHS/MSPT Dual Degree Program

The dual degree program of study results in the awarding of a Bachelor of Health Science and a Master of Science in Physical Therapy. (This program of study will pursue interim accreditation by the Commission on Accreditation for Physical Therapy Education.) Specifics on course requirements for the BHS component of this program are available from the Division of Physical Therapy. The graduate phase of the program builds upon the strong Basic Science Professional prerequisites as well as the first year of the program which includes 16 hours of advanced Basic Science coursework. Participants must apply and be admitted to the Graduate School for the fall semester following the first year of the professional curriculum. Students must satisfy all Plan B requirements, including a written comprehensive examination and the completion and presentation of a joint research project, in both oral and written format, during the final portion of their graduate sequence of study.

PT 603 Pharmacology for Physical Therapy Students ..... (1)
PT 605 Wellness and Sports Nutrition ..... (3)
PT 610 Ethics in Clinical Sciences Research ... (1)
PT 625 Advanced Assessment and Management of the Patient with Musculoskeletal Disorders ..... (3)
PT 628 Gerontology for Physical Therapy Students ..... (1)
PT 645 Measurements in Physical Therapy .... (3)
PT 650 Dysfunction of Peripheral Joints ..... (3)
PT 651 Dysfunction of Vertebral Joints ..... (3)
PT 652 Pathomechanics ..... (3)
PT 654 Mechanisms of Motor Control ..... (3)
PT 655 Neuromotor Development ..... (3)
PT 660 Advanced Clinical Practicum in Physical Therapy ..... (1-6)
PT 668 Research Problems ..... (2-3)
PT 676 Electrophysiological Testing and Therapeutics ..... (2)
PT 686 Specialty Electives ..... (2-4)
PT 695 Independent Study in Physical Therapy ..... (1-3)
PT 748 Master's Thesis Research ..... (0)
PT 768 Residence Credit for the Master's Degree ..... (1-6)
PT 770 Seminar in Physical Therapy ..... (3)

Physics and Astronomy

Graduate Faculty: *Professors* Joseph Brill, John Connolly, Peter C. Eklund, Moshe Elitzur, Gary J. Ferland, Howard Grotch, Michael Kovash, Bing-an Li, Keh-Fei Liu, Keith B. MacAdam, Alan MacKellar, Joseph P. Straley, Thomas H. Troland, and Jesse Weil. *Associate Professors* Suketu Bhavsar, Michael Cavagnero, John Christopher, Lance DeLong, Terrence Draper, Herbert A. Fertig, Tim Gorringe, David A. Harmin, Nicholas Martin, Kwok-Wai Ng, and Isaac Shlosman. *Adjunct Professors* Peter R. Almond and Robert A. Stokes.

Associate Members: *Assistant Professors* Daniel S. Dale, Susan V. Gardner, Clifford V. Johnson, Alfred D. Shapere, and Valdis J. Zeps, Jr. *Research Assistant Professor* Wolfgang Korsch.

Joint Appointments: *Professors* Eugene B. Bradley, Gerald Huffman, and Clasine vanWinter.

Emeritus Professors: Guy Lehman and Marcus McEllistrem.

The Department of Physics and Astronomy offers courses and research opportunities leading to the M.S. and Ph.D. degrees in the special areas of astronomy and astrophysics, atomic and molecular physics, low and medium energy nuclear physics, condensed matter physics, and theoretical particle physics. More detailed descriptions of each of these options will be sent on request. Both experimental and theoretical work are being pursued in all the above mentioned areas except particle physics, where only theoretical research is carried out. Excellent laboratory facilities and library materials are available. A major experimental facility is the six-million volt Van de Graaff accelerator.

All graduate students are expected to demonstrate competence in the core areas of mechanics, electromagnetic theory, quantum mechanics and statistical physics, and breadth in topical areas such as atomic, nuclear, condensed matter, astrophysics, and particle physics. This can be done by passing the appropriate courses and scoring sufficient points on the departmental Cumulative Examination, the tests of which are given five times a year and consist of questions on the above mentioned core areas at both intermediate and advanced levels. Scores of 3, 2, 1, and 0 may be obtained on each question.

An M.S. student must accumulate at least ten points on the Cumulative Exam within a continuous two-year period before taking the M.S. oral exam. Plan A or Plan B may be used to satisfy the requirements for the M.S. degree. The M.S. program can include an emphasis on applied physics, and students are encouraged to take courses in related programs such as engineering and biology when such courses satisfy academic objectives. The M.S. candidate must pass a departmental oral exam covering the core course work and the thesis, if one was done under Plan A.

The Ph.D. degree is a research degree granted on the basis of broad knowledge of physics and in-depth study in a specific area leading to a dissertation reflecting original work by the doctoral candidate which is eligible for publication in a refereed journal. The Qualifying Examination for the Ph.D. consists of a written part and an oral part. The periodic Cumulative Exams shall constitute the written portion of the Qualifying Examination. A Ph.D. candidate must accumulate a minimum of 20 points on the exams within a continuous two-year period, with at least ten points being earned at the advanced level, in order to pass the written part of the exam and be eligible to take the oral part of the exam.

Candidates for doctoral degrees may perform their dissertation research work at the Lexington Campus of the University of Kentucky or arrangements may be made to do this work at other institutions or laboratories such as the Oak Ridge National Laboratory, the National Astronomical Radio Observatory or other places by special arrangement.

PHYSICS

PHY 401G Special Topics in Physics and Astronomy for Elementary and High School Teachers ..... (2-4)
PHY 402G Electronic Instrumentation and Measurements ..... (3)
PHY 404G Mechanics ..... (3)
PHY 416G Electricity and Magnetism ..... (3)
PHY 417G Electricity and Magnetism ..... (3)
PHY 472G Interaction of Radiation with Matter .. (3)
PHY 504 Advanced Mechanics ..... (3)
PHY 506 Methods of Theoretical Physics I ..... (3)
PHY 507 Methods of Theoretical Physics II ..... (3)
PHY 508 Optics ..... (3)
PHY 520 Introduction to Quantum Mechanics .. (3)
PHY 522 Heat and Thermodynamics ..... (3)
PHY 524 Solid State Physics ..... (3)
PHY 525 Solid State Physics ..... (3)
PHY 530 Experimental Physics: Optics and Spectroscopy ..... (2)
PHY 535 Experimental Physics: Atomic and Nuclear ..... (3)
PHY 545 Radiation Hazards and Protection ..... (3)
PHY 546 General Medical Radiological Physics . (3)
PHY 554 Fundamental Atomic Physics ..... (3)
PHY 555 Fundamental Nuclear Physics ..... (3)
PHY 556 Fundamental Particle Physics ..... (3)
PHY 567 Introduction to Lasers and Masers ..... (3)
PHY 570 Seminar on Teaching Physics ..... (1)
PHY 571 Seminar on Teaching Physics Laboratories ..... (1)
PHY 591 Astrophysics I - Stars ..... (3)
PHY 592 Astrophysics II - TheGalaxy ..... (3)
PHY 600 Selected Topics in Advanced Physics (2-3)
PHY 611 Electromagnetic Theory I ..... (3)
PHY 613 Electromagnetic Theory II ..... (3)
PHY 614 Quantum Mechanics I ..... (3)
PHY 615 Quantum Mechanics II ..... (3)
PHY 624 Theory of the Solid State ..... (3)
PHY 625 Theory of the Solid State ..... (3)
PHY 629 Nuclear Physics ..... (3)
PHY 630 Topics in Nuclear and Intermediate Energy Physics (Subtitle Required) .... (3)
PHY 632 Statistical Mechanics ..... (3)
PHY 639 Physical Processes in Astrophysics ..... (3)
PHY 640 Galaxies and Cosmology ..... (3)
PHY 651 Atomic Physics ..... (3)
PHY 716 Advanced Quantum Mechanics ..... (3)
PHY 748 Master's Thesis Research ..... (0)
PHY 749 Dissertation Research ..... (0)
PHY 756 Particle Physics ..... (3)
PHY 768 Residence Credit for the Master's Degree ..... (1-6)
PHY 769 Residence Credit for the Doctor's Degree ..... (0-12)
PHY 770 Colloquium ..... (1)
PHY 781 Independent Work in Physics ..... (3)
PHY 790 Research in Physics ..... (3)
PHY 791 Research in Physics ..... (5)

ASTRONOMY

AST 591 Astrophysics I - Stars ..... (3)
AST 592 Astrophysics II - The Galaxy ..... (3)
AST 639 Physical Processes in Astrophysics ..... (3)
AST 640 Galaxies and Cosmology ..... (3)

Physiology

Graduate Faculty: *Professors* Nausherwan Burki, Donald Frazier, Thomas Getchell, Henry Hirsch, Brian Jackson, Lu-Yuan Lee, Sandra Legan, Cobern Ott, Bertram Peretz, David Randall, Daniel Richardson, David Wekstein, Phyllis M. Wise, and James Zolman. *Associate Professors* Douglas G. McMahon and Dexter Speck.

Associate Members: *Associate Professor* Warwick A. Arden. *Assistant Professors* Kenneth B. Ain, David R. Brown, Steven Estus, Paolo Fanti, Ok-Kyong Park-Sarge, Timothy S. McClintock, Jonathan Satin, and Eric J. Smart.

Joint Appointment: *Professor* Jesse Sisken.

Emeritus Professors: Louis Boyarsky, Joseph Engelberg, and Fred Zechman.

The graduate program, which offers the Ph.D. degree, is designed to educate and train students to be competent research scientists and teachers of physiology. The specific objectives are to provide students with: 1) an environment which promotes independent development and habits of lifelong scholarship, 2) a broad base of knowledge of the principles of molecular, cellular, and organ-system physiology, 3) the capacity to carry out independent research in an area of physiology and, 4) experience and training in the teaching of physiology.

To fulfill these objectives the program combines formal course work, independent reading, interaction with scholars at the tutorial level, and independent research including a dissertation.

Admission to the graduate program is competitive and is based upon academic background, professional recommendations, performance on the Graduate Record Examination (GRE), experience, and when possible, personal interviews. In general, one year of biology and physics, two years of chemistry, and mathematics through calculus are required. A course in statistics is strongly recommended.

In conjunction with the Colleges of Medicine and Dentistry, the department will consider for admission those qualified students who wish to pursue a combined professional and graduate program. In addition, special programs may be developed in biomedical engineering.

Inquiries should be addressed to the Director of Graduate Studies.

PGY 412G Principles of Human Physiology Lectures ..... (4)
PGY 502 Principles of Physiology Lecture ..... (5)
PGY 504 Independent Work in Physiology .... (2-4)
PGY 522 Quantitative Physiology ..... (4)
PGY 535 Comparative Neurobiology and Behavior ..... (3)
PGY 549 Comparative Endocrinology ..... (3)
PGY 560 Pathophysiology: Integrative Study in Physiology and Medicine ..... (1)
PGY 590 Cellular and Molecular Physiology ... (4)
PGY 601 Mammalian Endocrinology ..... (3)
PGY 602 Readings in Systems, Cellular and Molecular Physiology ..... (3)
PGY 604 Advanced Cardiovascular Physiology (3)
PGY 605 Principles of Neurobiology ..... (4)
PGY 606 Advanced Neurophysiology ..... (3)
PGY 607 Hormonal Control Mechanisms (Subtitle Required) ..... (3)
PGY 608 Advanced Renal Physiology ..... (3)
PGY 609 Advanced Respiratory Physiology ..... (3)
PGY 610 Experimental Physiology ..... (4)
PGY 613 Behavioral Ecology and Comparative Neurobiology ..... (2)
PGY 614 Techniques in Behavioral Ecology and Comparative Neurobiology ..... (2)
PGY 615 Seminar in Teaching Medical Science (Med Science Teaching I) ..... (1)
PGY 616 Seminar in Teaching Medical Science (Med Science Teaching II) ..... (2)
PGY 618 Molecular Neurobiology ..... (4)
PGY 627 Proseminar in Physiological Psychology ..... (3)
PGY 630 Advanced Topics in Physiology and Biophysics ..... (1-3)

PGY 638 Developmental Neurobiology ..... (3)
PGY 650 Animal Physiology Laboratory ..... (2)
PGY 660 Biology of Reproduction ..... (3)
PGY 748 Master's Thesis Research ..... (0)
PGY 749 Dissertation Reseach ..... (0)
PGY 767 Topical Seminar in Physiological Psychology ..... (3)
PGY 768 Residence Credit for the Master's Degree ..... (1-6)
PGY 769 Residence Credit for the Doctor's Degree ..... (0-12)
PGY 771 Proseminar in Cell Physiology and Biophysics ..... (2)
PGY 774 Graduate Seminar in Physiology ..... (1)
PGY 791 Research in Physiology ..... (1-15)

Plant Pathology

Graduate Faculty: *Professors* Said A. Ghabrial, James W. Hendrix, Thomas P. Pirone, Christopher L. Schardl, Louis Shain, John G. Shaw, Malcolm R. Siegel, and David A. Smith.

Associate Members: *Extension Professors* John R. Hartman, Donald E. Hershman, and William C. Nesmith. *Associate Extension Professor* Paul Vincelli. *Assistant Professors* Mark L. Farman and Lisa J. Vaillancourt. *Research Assistant Professors* Margaret P. Sanger and Heather H. Wilkinson.

Emeritus Professors: Joseph Kuc and Shuh J. Sheen.

The department offers work leading to the M.S. and Ph.D. degrees. For the Ph.D. degree, individual programs of study must conform with the requirements established by The Graduate School; a minor is not required.

PPA 400G Principles of Plant Pathology ..... (3)
PPA 503 Plant Biochemistry ..... (3)
PPA 601 Special Topics in Molecular and Cellular Genetics ..... (1)
PPA 640 Identification of Plant Diseases ..... (3)
PPA 652 Plant Pathogenic Fungi ..... (3)
PPA 656 Plant Virology ..... (3)
PPA 660 Molecular and Physiological Dynamics of Plant-Microbe Interactions ..... (4)
PPA 661 Genetics of Plant-Microbe Interactions ..... (3)
PPA 695 Epidemiology and Management of Plant Diseases ..... (3)
PPA 748 Master's Thesis Research ..... (0)
PPA 749 Dissertation Research ..... (0)
PPA 768 Residence Credit for the Master's Degree ..... (1-6)
PPA 769 Residence Credit for the Doctor's Degree ..... (0-12)
PPA 770 Plant Pathology Seminar ..... (1)
PPA 784 Special Problems in Plant Pathology (1-3)
PPA 794 Research in Plant Pathology ..... (1-4)

Plant Physiology

Graduate Faculty: *Professors* L.P. Bush, Joseph Chappell, Arthur G. Hunt, and George Wagner.

Associate Member: *Assistant Professor* Deane Falcone.

Joint Appointments: *Professors* Robert Geneve, David Hildebrand, Thomas R. Kemp, and Christopher L. Schardl. *Associate Professors* Douglas D. Archbold, Michael Barrett, William S. Cohen, Robert Houtz, Thomas Kimmerer, David D. Wagner, and Leslie Weston.

The University-wide, interdepartmental graduate program offers a plan of study leading to the Doctor of Philosophy degree. The aim of this program is to aid students in developing a high degree of excellence in plant physiology/biochemistry/molecular biology.

Faculty members of the program are from the Thomas Hunt Morgan School of Biological Science in the College of Arts and Sciences and the Departments of Agronomy, Forestry, Horticulture, and Plant Pathology in the College of Agriculture. Areas of research pursued by the faculty members include stress physiology and biochemistry, metabolism and roles of secondary products in disease resistance, biochemical and molecular basis of disease resistance, and biochemistry of photosynthesis and photorespiration, physiology of crop yield, senescence, regulation of gene expression, physiology of stress and population genetics in forest species, mineral nutrition and ion transport, alleopathy, plant morphogenesis in tissue culture, and genetic transformation of plants.

Course offerings in plant physiology are co-listed under the Thomas Hunt Morgan School of Biological Science and the Departments of Agronomy, Horticulture, and Plant Pathology. Plant Physiology utilizes courses in the Departments of Biochemistry, Chemistry, Mathematics, and Statistics as supporting courses to suit the needs and interests of the individual student.

Programs leading to advanced degrees must conform to the general rules and regulations of the Graduate School. In addition to satisfying Graduate School residency requirements, candidates for the Ph.D. must complete BCH 501, BCH 502, BCH 503, CHE 440G, PLS 622, PLS 623, PLS 773, and an acceptable dissertation. A plant physiology minor requires PLS 622, PLS 623, and nine additional credit hours of prescribed course work. For additional information, contact: the Director of Graduate Studies, N212A Agricultural Science Center - North.

PLS/BIO/FOR 622 Physiology of Plants I ..... (3)
PLS/BIO/FOR 623 Physiology of Plants II ..... (3)
PPA 660 Molecular and Physiological Dynamics of Plant-Microbe Interactions ..... (4)
PLS 769 Residence Credit for the Doctor's Degree ..... (0-12)
PLS/BIO 773 Seminar in Plant Physiology ..... (1)

Plant and Soil Science

Graduate Faculty: *Professors* R.Barnhisel, M. Barrett, L. Bush, J. Chappell, G. Collins, M. Collins, P. Cornelius, C. Doughterty, D. Egli, V. Evangelou, W. Frye, R. Geneve, L. Grabau, D. Hildebrand, A. Hunt, D. Ingram, A. Karathanasis, T. Kemp, P. Legg, R. Phillips, T. Pfeiffer, C. Poneleit, J. Simms, M. Smith, N. Taylor, D. TeKrony, D. VanSanford, G. Wagner, and W. Witt. *Associate Professors* D. Archbold, H. Burton, J. Buxton, J. Grove, R. Houtz, M. Nielson, Timothy Phillips, J. Snyder, and L. Weston.

Associate Members: *Extension Professors* R. Anderson, M. Bitzer, G. Lacefield, J. Martin, R. McNiel, L. Murdock, A. Powell, J. Strang, W. Thom and K. Wells. *Associate Extension Professors* D. Ditsch, J. Henning, J. Green, and G. Palmer. *Assistant Professors* Susheng Gan, D. N. McLetchie, E. Perfect, and J. Thompson.. *Assistant Extension Professors* R. Pearce and B. Rowell. *Adjunct Assistant Professors* George Antonious and Gary Cline. *Adjunct Faculty* D. Layne.

Joint Appointments: *Professors* M. Cohen, J. Hendrix, and C. Schardl. *Associate Professors* M. Coyne, P. Kalisz, T. Kimmerer and Timothy Phillips.

The Plant and Soil Science graduate program offers graduate work leading to the Master of Science degree. This interdisciplinary program is jointly administered by faculty from the Departments of Agronomy and Horticulture. Most of the graduate faculty in Plant and Soil Science also participate in doctoral programs in Crop Science, Plant Physiology or Soil Science, which are separately listed.

The program is designed to allow students to specialize in one of the diverse aspects of plant/soil systems; specialization areas include: Crop Science, Horticultural Science, Plant Physiology and Soil Science. The curriculum will accommodate the needs of students directed either towards further doctoral work and research careers, or towards post-M.S. employment in horticultural, crops or soils related professions.

Degree Requirements

Plan A requires the completion of 24 hours of graduate course work and submission of an approved thesis. Plan B substitutes an additional six hours of graduate credit for the thesis requirement. The core curriculum consists of disciplinary as well as basic science/research methods courses. Plan A requires twelve hours of designated core course work, (Plan B, fifteen hours) of which at least three-quarters must be at the 600-level or above, distributed in the following manner:

Disciplinary Courses

(Plan A: 6-9 credits; Plan B: 9-12 credits)

PLS 622	Physiology of Plants I	(3)
PLS 623	Physiology of Plants II	(3)
PLS 502	Ecology of Economic Plants	(3)
PLS 601	Special Topics in Molecular and Cellular Genetics	(1)
PLS 602	Principles of Yield Physiology	(3)
PLS 650	Soil-Plant Relationships	(3)
PLS 573	Soil Morphology and Classification	(3)
PLS 664	Plant Breeding I	(3)
PLS 772	Plant and Soil Science Seminar	(1)

Basic Science/Research Methods

(Plan A or B: 4-6 credits)

STA 570	Basic Statistical Analysis	(4)
STA 671/672	Regression/Correlation/Design	(4)
PPA/BCH 503	Plant Biochemistry	(3)

Area of Specialization

At least twelve credit hours of graduate courses (fifteen hours for Plan B) are required which support the designated area of specialization: Crop Science, Horticultural Science, Plant Physiology, or Soil Science. Consult the Director of Graduate Studies for a listing of appropriate courses.

PLS 520	Vegetable Crop Production	(3)
PLS 525	Greenhouse Floral Crop Management	(3)
PLS 582	Special Problems in Horticulture	(1-4)
PLS 605	Physiology Mechanisms	(3)
PLS 770	Horticulture Seminar	(1)
PLS 790	Research in Horticulture	(1-4)

Political Science

Graduate Faculty: *Professors* Bradley Canon, Vincent Davis, Karen Mingst, Mark Peffley, Herbert Reid, Phillip Roeder, and Ernest Yanarella. *Associate Professors* Charles L. Davis, Donald Gross, Stuart Kaufman, and Ellen Riggle.

Associate Members: *Professor* John M. Rogers. *Associate Professor* Penny Miller. *Assistant Professors* Horace A. Bartilow, Matthew J. Gabel, Gregory L. Hager, Cynthia L. Irvin, Jennifer A. Segal, and Steven Voss.

Joint Appointments: John Stempel and Jeffery Talbert.

Emeritus Professors: Vincent Davis, George Gadbois, Malcolm Jewell, and Sidney Ulmer.

Candidates for admission to the graduate program in political science must provide the information required by the Graduate School and must also submit at least three letters of recommendation from persons familiar with the applicant's academic performance. Students who do not have political science undergraduate majors are welcome in this program.

The Political Science Department offers both the M.A. and Ph.D. degrees. The M.A. degree may be earned under either of two plans: Plan A requires at least 24 hours of course work and a thesis; Plan B requires at least 30 semesters hours of course work and examination in three fields of political science, or in two fields of political science and one outside field. Under either plan, the student must take at least two-thirds of the required semester hours in political science, and at least half of the political science work must be in courses open only to graduate students. A candidate for the Plan B master's degree must pass a foreign language requirement or an analytical skills requirement.

The Ph.D. program is divided into a general phase and a specialized phase. Entering students spend their first year in the general phase, which includes proseminars in methodology and in at least four major fields of political science. (Students who have previously taken graduate work may be exempt from some of these proseminars.) At the end of the first year of graduate work, the student is evaluated by a departmental committee which determines whether the general phase has been satisfactorily completed.

During the specialized phase of the graduate program, the student's work is based on a program prepared with the Advisory Committee. The students take advanced work in at least two substantive fields in political science. The qualifying examination in political science consists of a written and oral examination in each of the two substantive fields specified in the student's program. The examination is given by the Advisory Committee. Following this examination the students write a prospectus for the dissertation and are examined orally on this by the Advisory Committee. The students then write a dissertation and defend it in a final oral examination.

Candidates for the Ph.D. in political science must demonstrate proficiency in a research skill. The required research skill will consist of additional quantitative skills or proficiency in a foreign language that is directly pertinent to the student's research interests.

Additional details concerning departmental requirements may be secured from the Department of Political Science.

PS 411G	Comparative Government-Parliamentary Democracies I	(3)
PS 412G	Comparative Government-Parliamentary Democracies II	(3)
PS 417G	Survey of Sub-Saharan Politics	(3)
PS 420G	Governments and Politics of South Asia	(3)
PS 421G	Government and Politics of Southeast Asia	(3)
PS 427G	East European Politics	(3)
PS 428G	Latin American Government and Politics	(3)
PS 429G	Government and Politics in Russia and the Post-Soviet States	(3)
PS 430G	The Conduct of American Foreign Relations	(3)
PS 431G	National Security Policy	(3)
PS 433G	Politics of International Economic Relations	(3)
PS 436G	International Organization	(3)
PS 437G	Dynamics of International Law	(3)
PS 439G	Contemporary International Problems	(3)
PS 441G	Early Political Theory	(3)
PS 442G	Modern Political Theory	(3)
PS 453G	Urban Government and Politics	(3)
PS 455G	Intergovernmental Relations in the American Federal System	(3)
PS 456G	Appalachian Politics	(3)
PS 461G	Civil Liberties	(3)
PS 463G	The American Judicial Process	(3)
PS 465G	Constitutional Law	(3)
PS 467G	The U.S. Supreme Court	(3)
PS 470G	American Political Parties	(3)
PS 472G	Political Campaigns and Elections	(3)
PS 473G	Public Opinion	(3)
PS 474G	Political Psychology	(3)
PS 475G	Politics and Mass Media	(3)
PS 476G	Legislative Process	(3)
PS 480G	Government and the Economy	(3)
PS 482G	Food, Energy, and Ecology	(3)
PS 487G	Introduction to Public Administration	(3)
PS 489G	The Analysis of Public Policy	(3)
PS 532	Comparative Foreign Policies	(3)
PS 535	Political Risk Analysis	(3)
PS 538	Conflict and Cooperation in Latin American Relations	(3)
PS 539	The Foreign Policy of the Soviet Union	(3)
PS 545	American Political Thought	(3)
PS 557	Kentucky Government and Politics	(3)
PS 566	Constitutional Interpretation	(3)
PS 571	Interest Groups	(3)
PS 580	The Budgetary Process	(3)
PS 584	The American Presidency and the Federal Executive	(3)
PS 620	Comparative Politics: Theory and Method	(3)
PS 630	Proseminar in Non-Institutional Political Behavior	(3)
PS 671	Strategies of Inquiry in Political Science	(3)
PS 672	Introduction to Techniques of Political Research	(3)
PS 674	Proseminar in Theories of International Politics	(3)
PS 679	American Political Institutions	(3)
PS 680	Proseminar in Political Institutions and Process	(3)
PS 681	American Political Behavior	(3)
PS 684	Proseminar in Policy Studies	(3)
PS 685	Proseminar in Public Administration and Policy	(3)
PS 690	Contemporary Political Thought: Theoretical Foundations of Political Concepts and Issues in the Twentieth Century	(3)
PS 711	Topical Seminar in Political Science (Subtitle Required)	(3)
PS 731	International Security	(3)
PS 732	Comparative Foreign Policy (Subtitle Required)	(3)
PS 733	International Political Economy	(3)
PS 737	Transnational Organizations and Processes	(3)
PS 748	Master's Thesis Research	(0)
PS 749	Dissertation Research	(0)
PS 750	Political Parties and Elections in America	(3)
PS 756	Regional Politics (Subtitle Required)	(3)
PS 759	Comparative Political Behavior	(3)
PS 760	Seminar in Judicial Process	(3)
PS 762	Seminar in Judicial Policy Making	(3)
PS 765	Research Problems in Judicial Politics	(3)
PS 768	Residence Credit for the Master's Degree	(1-6)
PS 769	Residence Credit for the Doctor's Degree	(0-12)

PS 770 Democratic Theory and Public Policy (3)
PS 772 Advanced Problems in Research Methods ..... (3)
PS 775 Seminar in Public Policy ..... (3)
PS 776 Topical Seminar in Policy Studies (Subtitle Required) ..... (3)
PS 778 Research Problems in Transnational Politics ..... (3)
PS 780 Legislative Behavior ..... (3)
PS 795 Special Problems in Political Science (1-3)
PS 796 Directed Research in Political Science ..... (1-3)

Psychology

Graduate Faculty: *Professors* Michael A. Andrykowski, Michael Bardo, David T. Berry, Philip Kraemer, Elizabeth Lorch, Richard S. Milich, Thomas W. Miller, Michael Nietzel, Thomas A. Widiger, and Thomas Zentall. *Associate Professors* Ruth A. Baer, Susan Barron, Charles R. Carlson, Melody Carswell, Jonathan M. Golding, Rick H. Hoyle, Mitzi Johnson, Thomas H. Kelly, Monica Harris Kern, Robert Lorch, Donald McCoy, James McCubbin, John D. Ranseen, Frederick A. Schmitt, Gregory T. Smith, Richard H. Smith, and John F. Wilson.

Associate Members: *Associate Professors* William Clerici, John Neill, and James Norton. *Assistant Professors* Chana K. Akins, Ramesh S. Bhatt, Donald R. Lynam, Jr., Margo J. Monteith, and Pathik Wadhwa.

Emeritus Professors: John Haley.

The department offers one Ph.D. degree in psychology in two programs: clinical psychology and experimental psychology, the latter subdivided into cognitive neural studies, developmental studies, and social psychology. The major goal of the doctoral programs in psychology is to prepare the student for a career in research in both academic and non-academic settings and in teaching.

The area of specialization in clinical psychology provides academic courses, practica, and internships which permit students to combine their teaching and research activities with a clinical career in the mental health field. Special areas of expertise among clinical faculty include psychological assessment, child clinical psychology, health psychology, neuropsychology, personality, psychopathology and diagnosis, psychotherapy, research methodologies, and substance abuse. Clinical training is facilitated by early placement of students at a variety of settings including various medical settings, a federal corrections facility, community mental health centers, state and private psychiatric hospitals, and the department's own psychological clinic. The clinical program is fully accredited by the American Psychological Association.

The cognitive, neural and developmental studies area provides a combination of integrated course work and individualized training designed to prepare students for a career in research and teaching. Emphasis is places on theoretical analysis and empirical studies of change. Scholarship in basic theory is the primary focus of training, but students interested in applying their training to nonacademic settings will not be discouraged. Current research within the area includes memory, reading, human factors, animal cognition and intelligence, psychopharmacology, developmental psychobiology, and development of perception, attention, memory, and comprehension.

The area in social psychology is designed to provide intensive experience in research with members of the social psychology faculty, with the aim of developing in the student a strong theoretical and research competence with complex social phenomena. Traditions of both experimental laboratory research and naturalistic study are utilized; emphases include theoretical and applied significance of research. Within broad limits set by the program, any given student's course of study is designed to fit that student's particular needs and interests. Research experience in related behavioral sciences (for example, communication, marketing, anthropology) are encouraged.

During the first year of the doctoral program, students in all areas gain experience in the major content areas of psychology and in psychological statistics. Thereafter, the student and the adviser construct a program of study consistent with the academic interests and professional goals of the student.

The M.A. and M.S. degrees are awarded under Plan A only, as one component of doctoral training.

The minimum departmental standards for admission to graduate work in psychology include an undergraduate department over-all average of B or better, a satisfactory score on the verbal and quantitative portions of the Graduate Record Examination (GRE) and three letters of recommendation. All admissions are on a competitive basis. For additional information concerning the program in psychology and such matters as financial support, contact the Director of Graduate Studies, Department of Psychology or see <www.uky.edu/ArtsSciences/Psychology> on the Web.

PSY 503 Psychology of Industrial Personnel Procedure ..... (3)
PSY 529 Psycholinguistics ..... (3)
PSY 532 Personality ..... (3)
PSY 533 Abnormal Psychology ..... (3)
PSY 534 Child Psychopathology ..... (3)
PSY 535 Psychological Testing ..... (3)
PSY 552 Animal Behavior ..... (3)
PSY 558 Biology of Motivation ..... (3)
PSY 561 Advanced Topics in Foundations of Clinical Psychology (Subtitle Required) (3)
PSY 562 Advanced Topics in Cognitive Psychology (Subtitle Required) ..... (3)
PSY 563 Advanced Topics in Developmental Psychology (Subtitle Required) ..... (3)
PSY 564 Advanced Topics in Learning (Subtitle Required) ..... (3)
PSY 565 Advanced Topics in Neuroscience (Subtitle Required) ..... (3)
PSY 566 Advanced Topics in Social Psychology (Subtitle Required) ..... (3)
PSY 603 Psychopathology ..... (3)
PSY 610 Psychometrics ..... (3)
PSY 611 Psychological Research ..... (3)
PSY 613 Behavioral Ecology and Comparative Neurobiology ..... (2)
PSY 614 Techniques in Behavioral Ecology and Comparative Neurobiology ..... (2)
PSY 616 Research Design in Clinical Psychology ..... (3)
PSY 620 Proseminar in History and Systems of Psychology ..... (3)
PSY 621 Proseminar in Learning ..... (3)
PSY 622 Proseminar in Personality ..... (3)
PSY 623 Proseminar in Sensation and Perception ..... (3)
PSY 624 Proseminar in Social Psychology ..... (3)
PSY 625 Proseminar in Developmental Psychology ..... (3)
PSY 626 Survey of Health Psychology ..... (3)
PSY 627 Proseminar in Physiological Psychology ..... (3)
PSY 628 Proseminar in Cognitive Processes .... (3)
PSY 629 Introduction to Clinical Psychology .... (2)
PSY 630 Clinical Methodology I ..... (2)
PSY 631 Practicum in Clinical Methodology I ... (2)
PSY 632 Clinical Methodology II ..... (2)
PSY 633 Practicum in Clinical Methodology II . (2)
PSY 636 Systems of Psychotherapy ..... (3)
PSY 637 Practicum in Psychological Assessment and Intervention ..... (1-3)
PSY 638 Developmental Neurobiology ..... (3)
PSY 664 Cultural Issues in Mental Illness ..... (3)
PSY 708 Internship in Clinical Psychology ..... (0)
PSY 710 Topical Seminar in Clinical Psychology ..... (3)
PSY 748 Master's Thesis Research ..... (0)
PSY 749 Dissertation Research ..... (0)
PSY 767 Topical Seminar in Physiological Psychology ..... (3)
PSY 768 Residence Credit for the Master's Degree ..... (1-6)
PSY 769 Residence Credit for the Doctor's Degree ..... (0-12)
PSY 772 Topical Seminar in Learning ..... (3)
PSY 776 Seminar in Dependency Behavior ..... (3)
PSY 778 Topical Seminar in Developmental Psychology ..... (3)
PSY 779 Topical Seminar in Social Psychology (3)
PSY 780 Problems in Psychology ..... (1-3)
PSY 781 Research Participation ..... (1)
PSY 790 Research in Psychology ..... (1-12)

Public Administration

Graduate Faculty: *Professors* Philip K. Berger, Robert Rodgers, and Eugenia Toma. *Associate Professor* Edward T. Jennings, Jr.

Associate Members: *Assistant Professors* Sheila Murray, Jeffery C. Talbert, and Sarah Wackerbarth.

Joint Appointments: *Professors* Glenn C. Blomquist, Richard W. Furst, and Merlin Hackbart. *Associate Professors* Donald A. Gross and William H. Hoyt. Associate Member: *Assistant Professor* Gregory L. Hager.

The Martin School of Public Policy and Administration, a research, academic and service unit of the Graduate School, offers the Ph.D., the MPA, and the MHA degrees. The Ph.D. in Public Administration is designed to prepare students to function at a high level of analytic sophistication in academic and administrative positions. The Master of Public Administration is a 45 credit hour program designed for those seeking careers in the public, quasi-public, and private sectors.

The interdisciplinary faculty have primary or joint appointments in the Martin School and in one of the academic departments of the College of Business and Economics, the College of Arts and Sciences, or the Medical Center.

The curriculum of the Ph.D. program provides knowledge of the principles of organizational behavior, an understanding of the public policy process and policy issues, and an ability to analyze policy and administrative problems through research and analytical methods.

Students are required to take 42 hours of graduate course work beyond the master's degree or its equivalent. The program of study includes a 21-hour Core covering:

Public management
Public policy
Research methods

and a 21-hour Area of Concentration selected from one of the following:

Governmental Processes and Institutions
Organization Theory and Behavior
Public Financial Management

Areas are designed by students in conjunction with their faculty advisers.

The dissertation involves research on a public management or public policy issue. An internship is necessary for students without significant public experience.

Financial support is available to qualified students through fellowships, assistantship, and research grants.

Inquiries should be made through the Director of Graduate Studies, 415 Patterson Tower.

Core Courses

Public Policy and Management (12 hours)

PA 731 Fiscal and Budgetary Policy ... (3)
PA 742 Theory of Public Organizations ... (3)
PA 751 Public Policy Formulation ... (3)
PA 752 The Economics of Policy Analysis ... (3)

Research Methods (9 Hours)

Nine hours of research methods are chosen by the student with the approval of the advisory committee.

The MPA Program conforms to the general rules and regulations of The Graduate School. Students applying for admission to the program are expected to have an undergraduate grade point average equivalent to 2.5 or better; quantitative and verbal scores on the GRE or GMAT at approximately the 50th percentile; and a GPA of at least a 3.0 on all graduate work previously attempted.

Students are admitted from a diversity of academic disciplines. Although there are no course prerequisites, students should be familiar with concepts of economics and accounting.

Degree requirements are successful completion of 45 hours of course work with a 3.0 GPA or better and passing oral and written comprehensive examinations.

Generally, courses are offered in the late afternoon and evening to accommodate working students.

The Martin School MPA program is accredited by the National Association of Schools of Public Affairs and Administration (NASPAA).

For additional information, write:
MPA Director of Graduate Studies
415 Patterson Tower
University of Kentucky
Lexington, KY 40506-0027

The MPA Program is designed to provide:

1. an Administrative Core of 27 semester hours which covers the areas of economics, finance, accounting control, management, research methods, public policy formulation and the political and legal environments of public administration;
2. an Area of Concentration of 9 semester hours in one of five areas of specialization (environmental management, public financial management, health policy, policy analysis, and state, local and urban management), or in a specially designed concentration;
3. elective course work of six semester hours selected to complement the area of concentration or enhance skills and knowledge acquired in the core curriculum;
4. an administrative internship for 3 semester hours of credit. Students with significant professional experience may substitute a policy paper or an additional graduate course.

Course Requirements

Completion of a minimum of 45 semester hours of graduate work is required.

A. Administrative Core (27 semester hours)

PA 621 Quantitative Methods of Research . (3)
PA 622 Public Program Evaluation ... (3)
PA 623 Decision Analysis ... (3)
PA 631 Public Financial Management ... (3)
PA 632 Public Funds Management ... (3)
PA 641 Political Environment of Public Organizations ... (3)
PA 642 Public Organization Theory and Behavior ... (3)
PA 651 The Policy Process ... (3)
PA 652 Public Policy Economics ... (3)

B. Area of Concentration (9 semester hours)

State, Local and Urban Management

This area of concentration is designed to prepare generalists in local, state, and urban government administration.
Select 9 hours from:

PS 453G Urban Government and Politics .... (3)
PS 455G Intergovernmental Relations in the American Federal System (3)
PS 476G Legislative Process ... (3)
PS 557 Kentucky Government and Politics (3)
PS 571 Interest Groups ... (3)

Health Policy

The health policy concentration prepares students for careers as managers and analysts of health policy in federal, state, and local agencies, not-for-profit organizations, and the private sector.
Select 9 hours from:

PA 636 Health Economics ... (3)
PA 673 Health Policy Development ... (3)
PA 785 Independent Study in Health Administration ... (3)
or
PA 680 Benefit-Cost Analysis ... (3)

Environmental Management

Martin School graduates with a concentration in environmental management will be ready to contribute to the design and implementation of environmental policy.
Complete the following 9 hours:

PA 727 Environmental Economics, Regulation and Policy ... (3)
ES 610 Engineering and Physical Science in Environmental Systems ... (3)
ES 620 Natural, Biological, Medical Sciences in Environmental Systems ... (3)

Public Financial Management

Students completing this specialization will be prepared for entry-level professional position in public and not-for-profit organizations.
Select 9 hours from:

ACC 410G Not for Profit Accounting ... (3)
FIN 585 Bank Management ... (3)
FIN 680 Money, Interest and Capital ... (3)
ECO 485G Monetary Economics ... (3)
ECO 611 Business Conditions Analysis ... (3)

Policy Analysis

This concentration provides students the ability to analyze and interpret qualitative and quantitative data, conduct and present results of quantitative and qualitative analyses, and communicate complex ideas in a concise, straightforward manner.
Select 9 hours from:

PA 680 Benefit-Cost Analysis ... (3)
a course in quantitative or qualitative methods ... (3)
a course in substantive policy area, PA 775, PA 796, or PA 722 ... (3)

C. Elective Courses (6 semester hours)

Courses are selected from lists of appropriate courses prepared by the faculty for each area of specialization or with the approval of the Director of Graduate Studies.

D. Internship (3 semester hours)

PA 711 Internship in Public Administration ..... (3)

PA 621 Quantitative Methods of Research ..... (3)
PA 622 Public Program Evaluation ..... (3)
PA 623 Decision Analysis ..... (3)
PA 628 Personnel Management in the Public Sector ..... (3)
PA 631 Public Financial Management ..... (3)
PA 632 Public Funds Management ..... (3)
PA 636 Health Economics ..... (3)
PA 637 Health Finance ..... (3)
PA 641 Political Environment of Public Organizations ..... (3)
PA 642 Public Organization Theory and Behavior ..... (3)
PA 651 The Policy Process ..... (3)
PA 653 Local Economic Development ..... (3)
PA 652 Public Policy Economics ..... (3)
PA 656 Health Program Evaluation ..... (3)
PA 671 Overview of the Health Care Delivery System ..... (3)
PA 673 Health Policy Development ..... (3)
PA 680 Benefit-Cost Analysis ..... (3)
PA 711 Internship in Public Administration .... (3)
PA 724 Public Financial Management ..... (3)
PA 727 Environmental Economics, Regulation and Policy ..... (3)
PA 731 Fiscal and Budgetary Policy ..... (3)
PA 742 Theory of Public Organizations ..... (3)
PA 749 Dissertation Research ..... (0)
PA 751 Public Policy Formulation and Implementation ..... (3)
PA 752 The Economics of Policy Analysis ..... (3)
PA 769 Residence Credit for the Doctor's Degree ..... (0-12)
PA 775 Special Topics in Health Administration ..... (1-3)
PA 785 Independent Study in Health Administration ..... (1-3)
PA 795 Special Topics in Public Administration ..... (1-3)
PA 796 Independent Study in Public Administration ..... (1-3)

Public Health

Graduate Faculty: *Professors* Richard Blomquist, Terence Collins, Richard Furst, Ramesh Gupta, Eugene C. Rich, and F. Douglas Scutchfield. *Associate Professors* S.W. Horstman, Douglas J. Lanska, Robert McKnight, Barbara Phillips, and David A. Snowdon.

Associate Members: *Associate Professor* Donald R. Holleman, Jr. *Assistant Professors* Francis P. Kohrs, Susan H. Pollack, T. Scott Prince, and Deborah B. Reed. *Research Assistant Professors* Steven R. Browning Deborah D. Danner, Claudia Hopenhayn-Rich, and Kathryn J. Luchok.

The Department of Preventive Medicine and Environmental Health offers a program of study leading to the Master of Science in Public Health. Public health is a broad discipline and the component parts are reflected in the requirements to obtain this degree. The MSPH program also offers a special concentration in the more narrowly focused discipline of Industrial Hygiene.

Entrance into the MSPH program requires a sufficient biological and mathematical background to participate in the required courses. There is no language requirement. The required courses include health care administration, epidemiology, biostatistics, industrial hygiene and occupational/environmental health. A thesis is required for most areas of specialization. A non-thesis option, with completion of additional course work, is available in certain cases. A number of areas of concentration are available in addition to general public health and industrial hygiene. These areas include, but are not limited to, occupational/environmental health, toxicology, clinical preventive medicine, epidemiology/biostatistics, and health policy analysis.

Entrance into the Industrial Hygiene track of the program requires a B.S. degree in a science major with chemistry content, including organic chemistry. Other undergraduate degrees will be considered if the science content is sufficient. The industrial hygiene program is well established and receives extramural funding. New laboratory facilities have recently been completed. The possibility of extended field work in industrial hygiene also exists, and field site placements have been developed.

There is an active program of research ongoing in the department, with much of the departmental activities having a clinical orientation. Agricultural injuries and illnesses, childhood injuries and child labor, and bloodborne pathogens are special areas of interest.

Admission into the graduate program is competitive and based upon academic background, performance on the Graduate Record Examination (GRE), professional experience, and interest in the field.

PM 521 Epidemiology ..... (4)
PM 601 Occupational and Environmental Health ..... (4)
PM 602 Occupational and Environmental Health ..... (4)
PM 621 Topics in Advanced Epidemiology ..... (2)
PM 651 Work Place Ventilation ..... (3)
PM 661 Industrial Hygiene Sampling ..... (3)
PM 662 Public Health Practice and Administration ..... (3)
PM 663 Practicum in Advanced Industrial Hygiene ..... (1-3)
PM 670 Clinical Epidemiology ..... (3)
PM 675 Research Design in Public Health ..... (4)
PM 676 Women's Health: A Public Health Perspective ..... (3)
PM 748 Master's Thesis Research ..... (0)
PM 768 Residency Credit for the Master's Degree ..... (1-6)
PM 770 Seminar in Preventive Medicine and Public Health ..... (1-3)
PM 780 Special Problems in Preventive Medicine and Public Health ..... (1-3)
PM 790 Research in Preventive Medicine and Public Health ..... (1-3)

Radiation Medicine

Graduate Faculty: *Associate Professor* Guy Simmons.

Joint Appointment: *Associate Professor* Ralph C. Christensen.

Emeritus Professor: Joseph Sayeg.

Graduate studies in Radiation Medicine are closely allied with those in the Radiation Sciences Division of the Department of Clinical Sciences, College of Allied Health Professions. Course work involves study of the physical properties and characteristics of radiation, the effects of ionizing radiation upon matter and living organisms, and safety and protection considerations of radiation. Several courses jointly listed with the Department of Physics and Astronomy teach the student about radiation interactions, radiation safety, and general medical physics. One course jointly listed with Biological Sciences concerns the biological effects of ionizing radiation. Research and clinical training in a health-medical setting provides an opportunity for the student to observe the applications of radiation in medicine.

Graduate degree programs are detailed under Radiation Sciences, College of Allied Health programs elsewhere in this Bulletin. Inquiries should be addressed to the Director of Graduate Studies.

RM 472G Interaction of Radiation with Matter .. (3)
RM 545 Radiation Hazards and Protection ..... (3)
RM 546 General Medical Radiological Physics . (3)
RM 601 Advanced Radiation Dosimetry ..... (2)
RM 647 Physics of Diagnostic Imaging I ..... (3)
RM 648 Physics of Diagnostic Imaging II ..... (3)
RM 649 Physics of Radiation Therapy ..... (3)
RM 652 Advanced Laboratory in Nuclear Medical Physics ..... (1-3)
RM 660 Graduate Practicum in Radiation Medicine ..... (1-6)
RM 695 Research in Health-Related Radiation Sciences ..... (1-4)
RM 740 Mammalian Radiation Biology ..... (2)

Radiation Science

Graduate Faculty: *Professor* Mohammed Mohiuddin. *Associate Professor* Ralph Christensen.

Associate Members: *Assistant Professors* Geoffrey S. Ibbott, Ali S. Meigooni and Nikos Papanikolaou.

Joint Appointment: *Associate Professor* Guy Simmons.

The Division of Radiation Sciences, Department of Clinical Sciences, offers a program in Radiation Science leading to the degree of Master of Science in Health Physics or Master of Science in Radiological Medical Physics.

Graduates of accredited colleges with an appropriate baccalaureate degree (preferably a physics major or strong minor) may become candidates for one of these degrees. Prerequisites include physics through atomic and nuclear physics (with laboratory), one year of undergraduate biology, one year of general chemistry, mathematics through (ordinary) differential equations, and individual courses in computer science, statistics, human physiology, and human anatomy. Students lacking certain course prerequisites may be admitted while completing them, if so approved by the Director of Graduate Studies.

Both degree options are interdisciplinary. As such, Plan B is utilized for the graduate work, incorporating specific courses in several departments. There is no language requirement. A core of courses is common to both options. Additional special course work is prescribed for each option as degree requirements.

CORE PROGRAM

RM/BIO 740 Mammalian Radiation Biology ..... (2)
PHY/RM 472G Interaction of Radiation with Matter .. (3)
RAS/RM/PHY 545 Radiation Hazards and Protection ..... (3)
RAS/RM/PHY 546 General Medical Radiological Physics (3)
RAS/RM 601 Advanced Radiation Dosimetry ..... (2)
RAS 710 Seminar in Bioradiation Science ..... (1)
RAS/RM 695 Research in the Health-Related Radiation Sciences ..... (2)

Subtotal 16

Master of Science in Radiological Medical Physics Additional Program

RAS/RM 647 Physics of Diagnostic Imaging I ..... (3)
RAS/RM 648 Physics of Diagnostic Imaging II ..... (3)
RAS/RM 649 Physics of Radiation Therapy ..... (3)
RAS 651 Advanced Laboratory in Diagnostic Imaging Physics ..... (2)
PHY/EE 402G Electronic Instrumentation and Measurements ..... (3)

Total 30 (minimum)

Master of Science in Health Physics Additional Program

RAS 575 Applied Health Physics Laboratory . (2)
CHE 520 Radiochemistry ..... (3)
Specialization Electives ..... (9)

Total 30 (minimum)

Available Specialization Electives (partial listing)

CHE 521 Radiochemistry Laboratory ..... (1-2)
PHY 402G Electronic Instrumentation and Measurements ..... (3)
PHY 416G/417G Electricity and Magnetism ..... (6)
PHY 520 Quantum Mechanics ..... (3)
PHY 554/555 Fundamental Atomic and Nuclear Physics ..... (6)
PM 601/602 Environmental and Occupational Health ..... (8)
RAS 715 Advanced Problems in Health-Related Radiation Sciences ..... (1-4)
RAS/RM 647, 648 Physics of Diagnostic Imaging I and II (6)

RAS 540 Fundamentals ofr Radiation Biology .. (2)
RAS 541 Radioisotope Methodology ..... (2)
RAS 545 Radiation Hazards and Protection ..... (3)
RAS 546 General Medical Radiological Physics ..... (3)
RAS 575 Applied Health Physics Laboratory .... (2)
RAS 601 Advanced Radiation Dosimetry ..... (2)
RAS 610 Ethics in Clinical Sciences Research ... (1)
RAS 647 Physics of Diagnostic Imaging I ..... (3)
RAS 648 Physics of Diagnostic Imaging II ..... (3)
RAS 649 Physics of Radiation Therapy ..... (3)
RAS 651 Advanced Laboratory in Diagnostic Imaging Physics ..... (1-3)
RAS 652 Advanced Laboratory in Nuclear Medical Physics ..... (1-3)
RAS 695 Research in Health-Related Radiation Sciences ..... (1-4)
RAS 710 Radiation Science Seminar (Subtitle Required) ..... (1)
RAS 715 Advanced Problems in Health-Related Radiation Sciences ..... (1-4)

Rehabilitation Counseling

Director: Ralph M. Crystal

Graduate Faculty: *Associate Professor* Ralph M. Crystal.

Associate Members: *Associate Professor* Sonja Feist-Price.

Joint Member: *Assistant Professor* Debra A. Harley.

The Graduate Program in Rehabilitation Counseling is an interdisciplinary program in the Department of Special Education and Rehabilitation Counseling at the University of Kentucky. The curriculum, in accordance with the guidelines of accreditation and certification organizations in rehabilitation counseling, provides for flexible programming in response to individual student needs and interests. The program is accredited by the Council on Rehabilitation Education and fulfills national certification requirements in rehabilitation counseling. Program graduates are eligible to sit for the Rehabilitation Counseling Certification Examination.

The program trains students to understand the physical, psychological, social, cultural and economic factors of persons with disabilities in terms of vocational adjustment, and independent living and functioning. Rehabilitation counseling is a challenging and expanding profession. The rehabilitation counselor provides and coordinates services to persons with emotional, physical, and developmental disabilities which interfere with productive functioning and independent living. The counselor must demonstrate competencies in establishing and conducting counseling relationships, assessment procedures, vocational placement, program planning and coordination; have an awareness of professional and community resources that can be utilized in the rehabilitation process; have knowledge of persons from culturally diverse backgrounds, and, understand how rehabilitation engineering and technology can be utilized to help clients achieve their goals. Emphasis is placed on severe disability and its consequences, independent living, job development and placement, technology, business and industry, and consumer issues and rights. Graduates of the program are employed in a wide range of public and private rehabilitation settings.

Course and field work total a minimum of 45 credit hours if the student has a bachelor's degree in rehabilitation. The typical program for other students is 57 hours, up to a maximum of 60 hours. At least 75% of the credit hours must be taken at the University of Kentucky. Courses are offered in the late afternoon and early evening to accommodate full- and part-time students. Students who attend the program on a full-time basis can complete the program in 16 months.

Students are admitted from a wide range of backgrounds and academic disciplines. It is anticipated however, that most students entering the program will have a background in psychology, education, sociology, rehabilitation, or other social-behavioral sciences. Students who have other educational backgrounds are also considered.

Students who express an interest in employment in public rehabilitation are eligible for a federal personnel preparation scholarship. This scholarship pays tuition and provides a monthly stipend. Scholarship recipients are required to

become employed in a public rehabilitation agency or a program which procures services from a public rehabilitation agency.

The curriculum is composed of three levels of courses: basic core, advanced core, and support areas.

Basic Core

The Basic Core courses or their equivalent are required for students without a background in the field of rehabilitation or who have not otherwise had these courses.

RC 510	Orientation to Rehabilitation Resources
RC 515	Medical and Psychosocial Aspects of Disabilities I
RC 516	Medical and Psychosocial Aspects of Disabilities II
RC 520	Principles of Rehabilitation Counseling
RC 530	Cultural Diversity in Rehabilitation
RC 540	Chemical Dependency in Rehabilitation Counseling
RC 640	Rehabilitation in Business and Industry
RC 650	Rehabilitation Counseling Theory and Techniques I
RC 660	Rehabilitation Counseling Theory and Techniques II

Advanced Core

Advanced Core courses or their equivalent are required for all students enrolled in the degree program:

RC 610	Case Management in Rehabilitation Counseling
RC 620	Vocational Evaluation/Work Adjustment of the Severely Disabled
RC 630	Placement Services and Techniques in Rehabilitation Counseling
RC 710	Practicum
RC 720	Internship
RC 740	Administration, Supervision, and Program Evaluation in Rehabilitation Counseling
RC 750	Rehabilitation Research
RC 760	Contemporary Practices in Rehabilitation

Students who have taken any of the above courses or their equivalent may consult with faculty to request waiver of the required course and to substitute an approved elective.

Other Rehabilitation Courses

RC 550	Special Topics in Rehabilitation Counseling
RC 782	Directed Independent Study

Support Areas

A support area will be chosen by the student in conjunction with a faculty adviser. Students are encouraged to use their electives to develop 'support areas.' A support area is defined as a group of two to three courses, focusing on one theme, to enhance specific skills or knowledge related to rehabilitation.

Courses comprising a support area may be offered by one or more departments. Support areas available through interdisciplinary planning include: learning disabilities, mental retardation, developmental disabilities, gerontology, mental health, administration and management, family studies, research and evaluation, group counseling, policy and planning, criminal justice, hearing impairment, visual impairment, recreation, drugs and alcoholism, business and industry, technology, and advocacy. Cooperating disciplines include Educational and Counseling Psychology, Social Work, Special Education, Sociology, Public Administration, Family Studies, Psychology, Therapeutic Recreation, and Allied Health.

Admission to Field Work

Admission to field work will be considered after the student has completed two semesters (full time) of graduate study or when the student has completed 24 hours of graduate study. The decision to advance to field work includes successful completion of the admission to field work examination, demonstrated skill in academic areas, and a judgment by the faculty that the student possesses the personal and social characteristics necessary for providing professional rehabilitation counseling services.

Field Work

The first field work component is a three credit practicum, which consists of 200 clock hours of supervised experience in a rehabilitation or rehabilitation-related setting, a weekly seminar, and individual supervision. Students who receive training support from the Rehabilitation Services Administration must have involvement with business and industry as part of the practicum. Such students are required to be employed with a public rehabilitation program upon graduation. The practicum is generally taken during the eight-week summer session. A student must be admitted to field work prior to enrolling in the practicum.

In accordance with national accreditation and certification requirements, students then complete 600 clock hours of supervised internship in a rehabilitation or rehabilitation-related setting. Every intern student also participates in a weekly seminar and individual supervision. Internship is three credits per 200 clock hours, and may be taken in the summer, fall, or spring semesters following practicum. The internship is taken in one semester; or, due to extenuating circumstances, it may be divided into two semesters. It is recommended, however, that the internship be completed in one semester.

Students must successfully complete their internship, and demonstrate competence in working with individuals with disabilities in the context of a professional rehabilitation counseling relationship in order to graduate.

A final written examination is given at the completion of all course work. Graduation is contingent upon the successful completion of this examination.

RC 510	**Orientation to Rehabilitation Resources**	**(3)**
RC 515	**Medical and Psychosocial Aspects of Disabilities I**	**(3)**
RC 516	**Medical and Psychosocial Aspects of Disabilities II**	**(3)**
RC 520	**Principles of Rehabilitation Counseling**	**(3)**
RC 530	**Cultural Diversity in Rehabilitation**	**(3)**
RC 540	**Chemical Dependency in Rehabilitation Counseling**	**(3)**
RC 546	**Transdisciplinary Services for Students With Multiple Disabilities**	**(3)**
RC 547	**Collaboration and Inclusion in School and Community Settings**	**(3)**
RC 558	**Special Topics in Rehabilitation**	**(1-3)**
RC 610	**Case Management in Rehabilitation Counseling**	**(3)**
RC 620	**Vocational Evaluation and Work Adjustment for the Severely Disabled**	**(3)**
RC 630	**Placement Services and Techniques in Rehabilitation Counseling**	**(3)**
RC 640	**Rehabilitation in Business and Industry**	**(3)**
RC 650	**Rehabilitation Counseling Theory and Practice I**	**(3)**
RC 660	**Rehabilitation Counseling Theory and Practice II**	**(3)**
RC 710	**Practicum in Rehabilitation Counseling**	**(3)**
RC 720	**Internship in Rehabilitation Counseling**	**(3-9)**
RC 740	**Administration, Supervision and Program Evaluation in Rehabilitation Counseling**	**(1-3)**
RC 750	**Rehabilitation Research**	**(1-3)**
RC 760	**Contemporary Practices in Rehabilitation**	**(1-3)**
RC 782	**Directed Independent Study**	**(1-3)**

Social Work

Graduate Faculty: *Professors* Lauretta F. Byars, Surjit S. Dhooper, S. Zafar Hasan, Kay Hoffman, John Landon, David D. Royse, Kennard W. Wellons, and Vernon Wiehe. *Associate Professors* James J. Clark, Janet P. Ford, and Elizabeth L. Rompf.

Associate Members: *Associate Professors* John R. Ballantine and Nathan Sullivan. *Assistant Professors* Katherine Amato-von Hemert, Dinah G. Anderson, Felix O. Chima, Kathleen T. Deal, Pat Litzelfelner, Holly A. Riffe, Mary C. Secret, Mary Virginia Sprang, and Richard D. Sutphen.

Emeritus Professors: Richard K. Brautigam, Ronda Connaway, Martha Gentry, Chester A. Holmquist, Elizabeth A. Kirlin, and Constance P. Wilson.

Master of Social Work

The College of Social Work offers a graduate curriculum of two academic years of full-time study, leading to the Master of Social Work degree in accordance with Plan B. The MSW degree program is designed to prepare students for advanced practice of

social work. Students must meet the general requirements of The Graduate School, as listed elsewhere in this bulletin, as well as other specific requirements of the College of Social Work for the Master of Social Work degree as indicated below.

1. Earn 60 hours of credit with a grade-point average of B or above. Fifty-four of these credits must be in the required social work courses. An average of 3.0 must be earned in at lease three of the five professional foundation areas of the curriculum, namely Social Work Practice, Human Behavior and Social Environment, Social Welfare Policy and Services, Educational Practicum, and Research. Six hours of elective courses may be taken in Social Work or related disciplines.

2. Advanced standing of 30 credit hours may be granted in the Master of Social Work program to graduates of undergraduate social work programs accredited by the Council on Social Work Education who have earned: 1) grades of A or B in at least four of the five professional foundation areas of the curriculum, namely, Social Work Practice, Human Behavior and Social Environment, Social Welfare Policies and Services, Research, and Field Practicum, and 2) an overall undergraduate GPA of 3.00 with a 3.00 GPA in social work courses. Advanced standing students will be admitted to the second year of the MSW program, required to complete 30 credit hours at the University of Kentucky.

3. The MSW degree requires 60 credit hours, at least 30 of which must be taken at the University of Kentucky. Advanced standing of up to one year or 30 credit hours may be granted for work completed at a school accredited by the Council on Social Work Education.

4. Advance to degree candidacy by the end of the end of the first year of graduate study by completing the College of Social Work advancement-to-candidacy review. This will be a requirement for admission to advanced standing in the MSW program.

5. Successfully complete the final comprehensive examination. This examination consists of an intensive review with students of the total education program to determine their potential capacity for professional practice.

6. Students admitted to the Master of Social Work program will meet the requirements in force at the time of their admission, except when the requirements are changed to comply with the standards of accreditation of the Commission on Accreditation, Council on Social Work Education. The M.S.W. degree program is accredited by the Council on Social Work Education.

The minimum requirements for admission are: baccalaureate degree from an accredited institution of higher learning with a grade point average of 3.0, a grade point average of 3.0 on all graduate work attempted, and submission of official scores on the verbal, quantitative and analytic portions of the Graduate Record Examination (GRE). Applicants with less than a 3.0 UGPA will be placed in a "Waiting List" pool, where the minimum GPA requirement for admission will be the Graduate School's 2.5. Only a limited number of applicants will be admitted from this pool. Applications for admission to the M.S.W. program should be filed on prescribed forms both with the College of Social Work and The Graduate School.

Doctor of Philosophy

The College offers a program leading to a Ph.D. degree through the Joint UK-UofL Ph.D. in Social Work Program which draws upon the academic resources of both the University of Kentucky and University of Louisville and is offered at both locations. This program is academically unique nationally and is innovative in the incorporation of technology for fostering joint administrative and instructional activities. A joint admissions committee approves the selection of students for the program and student advising, qualifying examination, and dissertation committees are made up of professors from both universities.

The program consists of a minimum of 44 credits of post-master's course work plus two full-time semesters of dissertation residence. Students are required to complete a core curriculum of 26 credit hours, work on an individualized plan of study of 15 credit hours that includes scholarly study of an area of social work practice (9 credit hours), and pertinent research and/or teaching practica (6 credit hours). After meeting these requirements, students take the qualifying examination. After successfully completing qualifying examination, they must take a research seminar (3 credit hours) and complete two semesters of dissertation residence. The following is the summary of these requirements.

Core Curriculum (26 credit hours)

Theory Development in Social Work Profession (3)
Advanced Analysis of Social Welfare Problems .. (3)
Human Behavior & Change Theories ..... (3)
Ethics, Social Work & Society ..... (3)
Social Work Research I ..... (3)
Social Work Research II ..... (3)
Statistics for Social Work I ..... (3)
Statistics for Social Work II ..... (3)
Professional Seminar I ..... (1)
Professional Seminar II ..... (1)

Individualized Plan of Study (15 credit hours)

Course work in an area of scholarly study ..... (9)
Areas include: Aging, Alcohol & Substance Abuse, Family and Children, Disabilities, Generic Social Work Practice, Health, Mental Health, Rural/ Appalachian Issues, and Urban Issues.

Research/Teaching Practicum in the selected area of study ..... (6)

Qualifying Examination

Research in Social Work Seminar (3 credit hours)

Dissertation (18 credit hours)

The major aim of the program is to produce scholars with skills to expand the base of tested knowledge that can guide the profession of social work in addressing major social problems as well as to meet the challenges facing the doctoral level researcher, teacher, and practitioner. The program emphasizes theory development and research. Applicants must present career objectives consistent with the social work profession and demonstrate strong potential to complete a vigorous academic research program. They must submit the following:

- a master's degree in social work (MSSW or MSW) from a program accredited by or judged to be equivalent by CSWE;
- at least two years' post-master's, full-time, paid experience in social work;
- an undergraduate grade point average (GPA) of 3.00 on a 4.0 scale and a graduate GPA of 3.5;
- official transcripts from each university/college attended;
- Graduate Record Examination Aptitude Test Scores (GRE); a combined score of 1000 on the verbal and quantitative sections is expected;
- three letters of reference (two academic and one from employer);
- an autobiography that describes career and research interests and the rationale for pursuing a doctoral program.

SW 505 Child Welfare Services ..... (2-3)
SW 510 Mental Health Knowledge for the Social Professions ..... (2-3)
SW 513 Integrated Services for the Handicapped ..... (3)
SW 514 Alcoholism and Problem Drinking ... (2-3)
SW 515 Medical and Psychosocial Aspects of Disabilities I ..... (3)
SW 516 Medical and Psychosocial Aspects of Disabilities II ..... (3)

SW 523 Social Perspectives on Racism and Ethnic Prejudices in America ..... (2-3)
SW 541 Administration and Supervision in the Social Professions ..... (3)
SW 560 Social Work Practice in Juvenile Justice ..... (3)
SW 571 Social Work and the Law ..... (3)
SW 580 Topical Seminar in Social Work ..... (2-4)
SW 600 Social Work Practice I ..... (4)
SW 601 Social Work Practice II ..... (2)
SW 603 Social Work Practice with Children and Youth ..... (2)
SW 604 Social Work Practice with the Aging (2-3)
SW 605 Social Work Practice in Health Services ..... (2)
SW 607 Social Work Practice with Families ..... (2)
SW 609 Clinical Social Work Practice ..... (2)
SW 610 Social Services in Black Communities . (3)
SW 611 Social Work Practice in Mental Health ..... (2-3)
SW 612 Seminar on Social Work Practice with Women ..... (2-3)
SW 613 Urban Ecology and Aging ..... (2-3)
SW 614 Social Work Practice with People with AIDS ..... (2-3)
SW 615 Social Work in Work Settings ..... (2-3)
SW 616 Social Work Practice in School Settings ..... (2-3)
SW 617 Family Violence: Social Work Interventions ..... (2-3)
SW 618 Social Work Practice with Gay and Lesbian People ..... (2-3)
SW 620 Human Growth and the Social Environment I ..... (4)
SW 623 Social Work Practice with Groups . . (2-3)
SW 624 Perspectives on Human Sexuality ..... (3)
SW 626 Forensic Mental Health: Evaluation and Treatment ..... (2-3)
SW 627 Social Work Intervention in Family Problems ..... (2-3)
SW 630 Social Welfare Policy and Services ..... (4)
SW 632 Social Work and the History of Social Reform ..... (2)
SW 634 Comparative Social Welfare Policies and Programs ..... (2-3)
SW 636 Management Skills ..... (3)
SW 637 Task Groups in an Organizational Context ..... (2)
SW 640 Graduate Educational Practicum I ..... (5)
SW 641 Graduate Educational Practicum II .... (5)
SW 642 Psychological Aspects of Human Aging (3)
SW 643 Biomedical Aspects of Aging ..... (3)
SW 650 Research Methods in Social Work ..... (3)
SW 652 Public Policy and Aging ..... (2-3)
SW 662 Income Security and Aging ..... (2-3)
SW 680 Special Problems in Social Work Practice ..... (2-6)
SW 700 Advanced Generalist Social Work Practice I ..... (3)
SW 701 Advanced Generalist Social Work Practice II ..... (2)
SW 720 Social Work Perspectives on Human and Cultural Diversity ..... (2)
SW 722 Social Work Perspectives on Psychopathology ..... (3)
SW 730 Advanced Social Welfare Policy and Services I ..... (3)
SW 731 Advanced Social Welfare Policy and Services II ..... (2)
SW 736 Organization and Management Methods for Social Workers ..... (2-3)
SW 740 Advanced Graduate Educational Practicum I ..... (5)
SW 741 Advanced Graduate Educational Practicum II ..... (5)
SW 749 Dissertation Research ..... (0)
SW 750 Research Design and Implementation in Social Work Practice I ..... (2)
SW 751 Research Design and Implementation in Social Work Practice II ..... (2)
SW 769 Dissertation Research ..... (0-12)
SW 780 Independent Work ..... (1-6)
SW 781 Theory Development in the Social Work Profession ..... (3)
SW 782 Advanced Analysis of Social Problems, Policy and Practice ..... (3)
SW 783 Human Behavior and Change Theories in Social Work Practice ..... (3)
SW 784 Ethics, Social Work and Society ..... (3)
SW 785 Proseminar in Social Work Research . (1)
SW 786 Doctoral Research Practicum ..... (3-6)
SW 787 Doctoral Teaching Practicum ..... (3-6)
SW 788 Research in Social Work Seminar ..... (3)
SW 790 Advanced Doctoral Seminar in Social Work (Subtitle required) ..... (3)

Sociology

Graduate Faculty: *Professors* Walter Abbott, Dwight B. Billings, Richard Clayton, Eugene Gallagher, Lorraine E. Garkovich, Thomas Garrity, James Hougland, Carl Leukefeld, Paul Warner, and Doris Wilkinson. *Associate Professors* Larry Burmeister, Patricia Dyk, Thomas Greider, Rosalind Harris, Laurie Hatch, Scott Hunt, Patrick Mooney, Shaunna Scott, William Skinner, Gerald Slatin, and Rick S. Zimmerman.

Associate Members: *Professor* Richard C. Maurer. *Associate Professor* Gary Hansen. *Assistant Professors* Paola Bacchetta, Joanna M. Badagliacco, Jeffrey Bridger, Thomas Janoski, Matthew McKeever, Graham C. Ousey, Pamela W. Rountree, Clarence R. Talley, and Barbara Warner. *Extension Assistant Professors* Ronald J. Hustedde, Scott A. Samson, and Julie N. Zimmerman.

Joint Appointment: Professor Alan J. DeYoung.

Emeritus Professors: Howard Beers, C.M. Coughenour, Thomas Ford, William Kenkel, Robert Straus, Willis A. Sutton, Jr., and George Wilbur.

The Sociology graduate program offers graduate work leading to the Master of Arts, Master of Science in Agriculture, and Doctor of Philosophy. Both Plan A and Plan B are offered for the Master's degrees.

Graduate students pursuing the Ph.D. degree are expected to choose a major area of specialization within sociology and to take work in secondary interests within either sociology or a related area. Areas of specialization in sociology currently stressed are: criminology and deviance (including the sociological study of drug abuse); medical sociology; rural sociology; social inequities, and work, organizations, and social change. While core seminars in these specialities are offered, individual program flexibility is maintained so that a student's own interests may develop. In addition to passing the qualifying examinations in their specialization, doctoral students must demonstrate competence in theory and methods.

To aid in financing graduate education, a number of assistantships are available to qualified students. Outstanding students may compete for fellowships.

Sociologists at the University of Kentucky carry on a substantial variety of research projects, consultative activities, extension education programs and community services. Specialized experience and training are available to graduate students in rural sociology at the Agriculture Experiment Station and opportunities for applied sociology experience are available in the Cooperative Extension Service.

Opportunities for multidisciplinary work exist in conjunction with Centers and programs such as the Appalachian Center, the Sanders Brown Center on Aging, the Center for Prevention Research, the Women's Studies Program, and the African American Studies Program. The Department of Behavioral Science, College of Medicine, includes sociologists on its staff and conducts research and other activities of a sociological nature. Sociology graduate students with appropriate interests and training are eligible for assistantships and other appointments in these several units.

Department standards for admission to graduate work in sociology are similar to those of the Graduate School, including satisfactory scores on the verbal and quantitative tests of the Graduate Record Examination (GRE). For additional information on departmental requirements and opportunities for financial assistance, write to the Director of Graduate Studies in Sociology.

SOC 442G Sociology of Work and Occupations ... (3)
SOC 451G Foundations of Sociological Theory ... (3)
SOC 452G Contemporary Social Theory ..... (3)
SOC 501 Population Analysis ..... (3)
SOC 509 The U.S. Family in Historical Perspective ..... (3)
SOC 517 Rural Sociology ..... (3)
SOC 525 Religion, Society and Culture ..... (3)
SOC 527 Society and Health ..... (3)
SOC 533 Social Anthropology ..... (3)
SOC 534 The Southern Appalachians: A Sociological Interpretation ..... (3)
SOC 542 Human Relations in Administration of Organizations ..... (3)
SOC 546 Social Factors in Mental Health ..... (3)
SOC 547 Social and Psychological Aspects of Apparel ..... (3)
SOC 555 Geographic Information Systems and Landscape Analysis ..... (3)
SOC 556 Advanced Geographic Information Systems and Landscape Analysis ..... (3)
SOC 565 Special Problems in Sociology ..... (1-3)
SOC 603 Seminar in Teaching Sociology ..... (3)
SOC 605 Values, Research, and Public Policy ... (1)
SOC 606 Applied Social Research: An Overview of Types, Uses and Designs ..... (1)
SOC 610 Proseminar in Complex Organization (3)
SOC 622 Topics and Methods of Evaluation ..... (3)
SOC 630 Proseminar in Deviant Behavior ..... (3)
SOC 635 Proseminar in Work, Gender, and Inequality ..... (3)
SOC 637 Sociocultural Dimensions of Economic Development ..... (3)
SOC 638 Food Systems and Agrarian Change ... (3)
SOC 640 Science, Agriculture, and Development (3)
SOC 641 Gender Issues in Development ..... (3)

SOC 642	The Sociology of Work, Occupations and Labor Markets	(3)
SOC 645	Topics in Political Sociology	(3)
SOC 646	Social Movements and Social Change	(3)
SOC 650	Concepts and Theories in Sociology	(3)
SOC 651	Sociological Theory in Transition	(3)
SOC 661	Sociology of Education	(3)
SOC 680	Methods of Social Investigation	(4)
SOC 681	Research Design and Analysis	(3)
SOC 682	Special Topics in Advanced Sociological Methods	(1-3)
SOC 684	Farming Systems Research Methods	(3)
SOC 691	Structure of U.S. Agriculture	(3)
SOC 730	Special Topics in Deviant Behavior	(1-3)
SOC 735	Topical Seminar in Social Inequalities	(3)
SOC 748	Master's Thesis Research	(0)
SOC 749	Dissertation Research	(0)
SOC 750	Special Topics in Social Change and Development	(1-3)
SOC 751	Seminar in Sociological Theory	(3)
SOC 752	Seminar in Family Theory Construction	(3)
SOC 766	Concepts in Medical Sociology	(3)
SOC 780	Special Problems in Sociology	(1-6)
SOC 785	Comparative Health Care Systems	(3)
SOC 790	Research in Rural Sociology	(1-3)
SOC 792	Research in Sociology	(1-6)
SOC 797	Community Development Practicum	(1-9)

Soil Science

Graduate Faculty: *Professors* R.I. Barnhisel, V.P. Evangelou, W. W. Frye, A.D. Karathanasis, H.F. Massey, and M.S. Smith. *Associate Professors* M. S. Coyne and J.H. Grove.

Associate Members: *Extension Professor* K. L. Wells. *Extension Associate Professor* William O. Thom. *Assistant Professor* J.A. Thompson.

Joint Appointments: *Professor* J. W. Hendrix. *Associate Professor* P. J. Kalisz. *Extension Associate Professor* D.C. Ditsch. *Assistant Professors* M.A. Arthur and E. Perfect. *Extension Assistant Professor* R. C. Pearce.

Emeritus Professors: R.L. Blevins, R.E. Phillips, J.L. Ragland, J.L. Sims, and G.W. Thomas.

The Soil Science graduate program offers graduate work leading to the Doctor of Philosophy degree with areas of specialization in soil chemistry, soil fertility, soil genesis, morphology and classification, soil mineralogy, soil microbiology and soil physics. The Soil Science faculty also participate in the interdepartmental Plant and Soil Science graduate program, which offers programs of study leading to the Master of Science degree.

Work leading to advanced degrees must conform to the general rules and regulations of the Graduate School.

Preparation for graduate work in soil science should include some course work in mathematics, chemistry, physical and biological sciences. Students will be expected to make up deficiencies in any of these areas early in the course of their graduate study.

PLS 450G	Biogeochemistry	(3)
PLS 455G	Wetland Delineation	(3)
PLS 456G	Constructed Wetlands	(3)
PLS 468G	Soil Use and Management	(3)
PLS 470G	Fertilizers and Soil Fertility	(3)
PLS 477G	Land Treatment of Waste	(3)
PLS 501	Reclamation of Disturbed Land	(3)
PLS 564	Forest Soils	(3)
PLS 566	Soil Microbiology	(3)
PLS 567	Methods in Soil Microbiology	(1)
PLS 573	Soil Morphology and Classification	(3)
PLS 575	Soil Physics	(2)
PLS 576	Laboratory in Soil Physics	(1)
PLS 581	Chemical Analysis of Soils and Plants	(4)
PLS 597	Special Topics in Agronomy (Subtitle Required)	(1-3)
PLS 660	Advanced Soil Biology	(2)
PLS 671	Soil Chemistry	(4)
PLS 712	Advanced Soil Fertility	(4)
PLS 721	Pedogenic Processes	(4)
PLS 741	Clay Mineralogy	(3)
PLS 749	Dissertation Research	(0)
PLS 769	Residence Credit for the Doctor's Degree	(0-12)
PLS 799	Research in Agronomy	(1-4)

Spanish and Italian Languages and Literatures

Graduate Faculty: *Professors* John Allen, Brian Dendle, Stephen Hart, Joseph Jones, Margaret Jones, Daniel Reedy, and Edward Stanton. *Associate Professors* Anibal Biglieri, Susan DeCarvalho, Michael Impey, and Lourdes Torres.

Emeritus Professors: John Lihani, and Gerardo Sáenz.

The Department of Spanish and Italian offers the Master of Arts and the Doctor of Philosophy degrees. Graduate Record Examination scores are required for admission. Supervised teaching experience within the department is a requirement for both the master's and doctoral degrees.

Master of Arts

Prerequisites. Attainment in Spanish equivalent to that required for the undergraduate major in Spanish at the University of Kentucky.

Requirements. Standard Graduate School requirements; reading knowledge of a second foreign language; successful completion of SPI 603 (Critical and Historical Perspectives on Medieval, Renaissance and Golden Age Literature), SPI 604 (Critical and Historical Perspectives on Modern Spanish Literature), SPI 605 (Critical and Historical Perspectives on Spanish American Literature); 9 credits in Hispanic Civilization and Linguistics; 12 hours of course work (Plan B) or 6 hours of course work and an acceptable thesis (Plan A), which may be selected according to a choice of options in either Hispanic Literature or Hispanic Civilization and Linguistics. The M.A. written and oral examination is designed to test the candidate's knowledge of the following areas: 1) Hispanic civilization and literary history, 2) the M.A. reading list, and 3) the candidate's composite course work. SPI 502 (Survey of the Spanish Language) is recommended but not required. For individuals who contemplate further work leading to the doctorate, SPI 651 (Bibliography and Methods of Research) is recommended but not required.

Doctor of Philosophy

Recommendations and Requirements. Standard Graduate School requirements; SPI 502 (Survey of the Spanish Language), SPI 601 (Old Spanish), SPI 651 (Bibliography and Methods of Research) are recommended but not required; a reading knowledge of two languages other than Spanish and English is required; successful completion of written and oral examinations is required for qualification for candidacy for the doctorate (see remarks below); presentation of acceptable dissertation.

Candidates are to devise a program of studies and research around the major area of specialization in which they expect to write the dissertation. A minor area and two allied fields must be selected as support divisions for the major area. Minimum graduate credit expectations are 24 credit hours in the combined Major and Minor areas and 15 credit hours in the Allied Fields; 6 graduate credits in Hispanic Linguistics and in each of the two remaining areas not chosen as Major, Minor, or Allied Fields. Two seminars (one in the major field) are required.

Specialization by area: 1) Medieval Spanish Literature; 2) Renaissance and Golden Age Spanish Literature; 3) Eighteenth and Nineteenth Century Spanish Literature; 4) Twentieth Century Spanish Literature; 5) Colonial and Nineteenth Century Spanish American Literature; 6) Twentieth Century Spanish American Literature.

Specialization by genre or Hispanic Linguistics: 1) Hispanic poetry; 2) Hispanic prose fiction; 3) Hispanic drama; 4) Hispanic Linguistics. (The term Hispanic includes both Peninsular and Spanish American Studies.)

The qualifying examination consists of a three-hour written examination over a research area in the special field with specific concentration on the topical area of the dissertation, and two six-hour examinations. The first will cover all aspects of the major and minor areas; the second will cover aspects of the major and minor areas as well as questions on the allied fields. The two-hour oral will cover the dissertation area, the major and minor areas, and the allied fields.

SPI 411G Advanced Spanish Language ..... (3)
SPI 438G Literature of Social Protest in Spanish America ..... (3)
SPI 443G Survey of Italian Literature I ..... (3)
SPI 444G Survey of Italian Literature II ..... (3)
SPI 500 Studies in Hispanic Literature, Language and Culture (Subtitle Required) ..... (3)
SPI 501 Spanish Phonetics, Pronunciation and Phonemics ..... (3)
SPI 502 Survey of the Spanish Language ..... (3)
SPI 504 Advanced Spanish Grammar and Composition ..... (3)
SPI 506 Introduction to Comparative Spanish, Portuguese, and Italian Linguistics ..... (3)
SPI 512 Spanish Culture Through the 17th Century ..... (3)
SPI 513 Modern Spanish Culture ..... (3)
SPI 514 Studies in Spanish American Culture . (3)
SPI 518 Hispanic Film ..... (3)
SPI 522 Survey of the Comedia ..... (3)
SPI 532 The Generation of 1898 ..... (3)
SPI 541 Spanish American Short Story ..... (3)
SPI 551 Tutorial Seminar for Majors in Spanish ..... (1)
SPI 553 Teaching of Spanish ..... (3)
SPI 563 Studies in Dante ..... (3)
SPI 566 Literature of the Italian Renaissance .. (3)
SPI 569 Topics in Italian Language, Literature or Culture (Subtitle Required) ..... (3)
SPI 601 Old Spanish: Phonology and Paleography ..... (3)
SPI 603 Critical and Historical Perspectives on Medieval, Renaissance and Golden Age of Spanish Literature ..... (3)
SPI 604 Critical and Historical Perspectives on Modern Spanish Literature ..... (3)
SPI 605 Critical and Historical Perspectives on Spanish American Literature ..... (3)
SPI 611 Medieval Spanish Literature I ..... (3)
SPI 612 Medieval Spanish Literature II ..... (3)
SPI 613 Spanish Epic and Long Narrative Poetry ..... (3)
SPI 615 Spanish Poetry of the Thirteenth, Fourteenth, and Fifteenth Centuries .. (3)
SPI 617 Spanish Medieval and Renaissance Drama ..... (3)
SPI 621 The Spanish Novel to Cervantes ..... (3)
SPI 622 Cervantes I ..... (3)
SPI 626 Lope de Vega and Tirso de Molina .... (3)
SPI 628 The Theatre of Calderon de la Barca ..... (3)
SPI 629 Spanish Poetry of the Sixteenth and Seventeenth Centuries ..... (3)
SPI 631 The Romantic Movement in Spain ..... (3)
SPI 632 Spanish Drama from the Generation of 1898 to the Present ..... (3)
SPI 633 The Spanish Novel of the Nineteenth Century ..... (3)
SPI 634 Prose Fiction from the Generation of 1898 to the Present ..... (3)
SPI 635 The Spanish Essay from the Eighteenth Century to the Present ..... (3)
SPI 637 Spanish Poetry from the Generation of 1927 to the Present ..... (3)
SPI 641 Spanish American Drama ..... (3)
SPI 642 Spanish American Poetry: Colonial Period to Independence ..... (3)
SPI 643 Spanish American Poetry: 1800-1910 ..... (3)
SPI 644 Spanish American Poetry: 1910 to Present ..... (3)
SPI 645 Spanish American Novel: 1800-1910 ... (3)
SPI 646 Spanish American Novel: 1910-1940 ... (3)
SPI 647 Spanish American Novel: 1940 to Present ..... (3)
SPI 648 Literary Currents in Contemporary Spanish American Fiction ..... (3)
SPI 649 Spanish American Essay ..... (3)
SPI 651 Bibliography and Methods of Research ..... (3)
SPI 748 Master's Thesis Research ..... (0)
SPI 749 Dissertation Research ..... (0)
SPI 768 Residence Credit for the Master's Degree ..... (1-6)
SPI 769 Residence Credit for the Doctor's Degree ..... (0-12)
SPI 770 Seminar in Spanish Studies ..... (3)
SPI 772 Seminar in Medieval Spanish Literature ..... (3)
SPI 774 Seminar in Golden Age Theatre ..... (3)
SPI 775 Seminar in Modern Spanish Literature ..... (3)
SPI 776 Seminar in Spanish American Literature ..... (3)
SPI 782 Special Studies in Spanish ..... (1-3)

Special Education

Graduate Faculty: *Professors* William H. Berdine, A. Edward Blackhurst, Charles M. Nelson, and Deborah Bott Slaton. *Associate Professors* Belva C. Collins, Donald P. Cross, Ralph Crystal, Mary Louise Hemmeter, John W. Schuster, and Kay B. Stevens.

Associate Members: *Assistant Professors* Jennifer Grisham-Brown, Debra A. Harley, Elizabeth A. Lahm, and Terrance Scott. *Adjunct Assistant Professor* Harold Kleinert.

Joint Appointment: *Associate Professors* Charlotte Clarke and Judith Page.

Students may enroll for either degree or certification graduate programs in special education. Programs not leading to a degree are designed primarily for those who are seeking Kentucky Provisional, Rank II or Rank I, Teacher Certification at the graduate level in the following certification areas:

1. Learning and Behavior Disorders
2. Moderate/Severe Disabilities
3. Director of Special Education
4. Interdisciplinary Early Childhood Special Education

Advanced programs of study are available in the following areas:

1. Early Childhood Special Education
2. Learning and Behavior Disorders
3. Emotional and Behavioral Disorders
4. Moderate/Severe Disabilities
5. Assistive Technology in Special Education
6. Distance Education in Special Education

The degree programs that are offered lead to the Master of Science in Education, Specialist in Education and Doctor of Education degrees. Within the framework of College and University requirements, all advanced graduate degree programs are individually planned. This flexibility makes it possible to structure an appropriate program for each student, based upon previous background and career aspirations. Following are brief descriptions of the various graduate degree programs.

Minimum hours for the Master of Science in Education degree are distributed as follows:

Department of Special Education and support areas in College	30
Course work outside program area of emphasis	6
	Total 36

It should be noted that these are minimum requirements. Program deficiencies may result in programs of study that exceed the minimum. **The Director of Graduate Studies should be contacted to obtain the specific number of courses required for each program of study.**

At least 15 semester hours must be earned in courses at the 600-700 level (excluding practica, independent study, and theses hours). All students are also required to take the following courses: Survey of Special Education, Applied Behavioral Analysis, Methods for Teaching Students with Disabilities, Single Subject Research Design, and advanced curriculum course, an advanced practicum, and 15 hours in their respective program areas. In addition, a thesis is required of all Master of Science in Education students in the Department of Special Education.

Students entering without a teaching certificate and who plan to receive an M.S. degree and teach in a Special Education certificate area must meet certificate program deficiencies, including certification requirements, as outlined by their adviser, in addition to completing the degree requirements listed above. Depending on their program of studies, students may obtain Rank II or Rank I certification concurrently with their master's degrees.

General requirements for the Specialist in Education (Ed.S.) degree have been described in a previous section of this Bulletin. Ed.S. programs are individually planned for in-depth study in an area of special education and require a research project and written product for completion.

The Doctor of Education (Ed.D.) program is designed to prepare leadership personnel for the field of special education. Primary emphasis is placed upon training persons for positions in higher education personnel preparation, technology applications in special education programs, and research in special education. Within the context of personnel preparation in special education, various program areas of emphasis can be planned. The requirements for this program are described in the Doctor of Education section of the Bulletin.

Financial assistance is available, on a competitive basis, to graduate students in special education. Students may apply for graduate assistantships at all levels of graduate study. Scholarships and assistantships are awarded from funds granted

to the Department by the Office of Special Education and Rehabilitation Services, U.S. Department of Education.

EDS 510 Early Childhood Special Education .... (3)
EDS 511 Speech-language Development and Disorders for the Severely Handicapped ..... (3)
EDS 512 Speech-language Development and Disorders for the Mildly Handicapped ..... (3)
EDS 513 Legal Issues in Special Education ..... (3)
EDS 514 Instructional Technology in Special Education ..... (3)
EDS 516 Principles Of Behavior Management and Instruction ..... (3)
EDS 517 Assistive Technology in Special Education ..... (3)
EDS 528 Educational Assessment for Students with Mild Disabilities ..... (3)
EDS 529 Educational Programming for Students with Mild Disabilities ..... (3)
EDS 530 Moderate and Severe Disabilities ..... (3)
EDS 546 Transdisciplinary Services for Students with Multiple Disabilities ..... (3)
EDS 547 Collaboration and Inclusion in School and Community Settings ..... (3)
EDS 548 Curriculum Design for Students with Moderate and Severe Disabilities ..... (3)
EDS 549 Methods for Students with Moderate and Severe Disabilities ..... (4)
EDS 550 Student Teaching: Moderate/Severe Disabilities ..... (6-12)
EDS 558 Issues in Special Education ..... (1-9)
EDS 570 Emotional and Behavioral Disabilities ..... (3)
EDS 589 Field Experiences: Mild Disabilities ... (3)
EDS 600 Survey Of Special Education ..... (3)
EDS 601 Applied Behavioral Analysis ..... (3)
EDS 602 Administration and Programs in Special Education ..... (3)
EDS 603 Behavioral Consultation in the Schools ..... (3)
EDS 610 Advanced Educational Assessment for Students with Mild Disabilities ..... (3)
EDS 611 Advanced Educational Programming for Students with Learning Disabilities ..... (3)
EDS 612 Advanced Practicum: Special Education ..... (3-6)
EDS 616 Vocational Programming for Handicapped Youth and Adults ..... (3)
EDS 620 Instructional Programming and Assessment in Early Childhood ..... (3)
EDS 621 Issues in Early Childhood Education of the Handicapped ..... (3)
EDS 622 The Family's Role in Early Childhood Education ..... (3)
EDS 623 Advanced Practicum: Early Childhood Special Education ..... (3-9)
EDS 630 Methods for Teaching Students with Disabilities ..... (3)
EDS 631 Programming for Students with Moderate and Severe Disabilities ..... (3)
EDS 632 Advanced Practicum: Moderate and Severe Disabilities ..... (1-12)
EDS 633 Single Subject Research Design ..... (3)
EDS 640 Assistive Teaching ..... (3)
EDS 641 Assistive Technology Assessment ..... (3)
EDS 643 Telecommunication in Special Education and Rehabilitation ..... (3)
EDS 645 Hypermedia Development for Special Education ..... (3)
EDS 647 Seminar in Special Education Technology (Variable Topic) ..... (1-3)
EDS 648 Coordinating Special Education Technology Programs ..... (3)
EDS 649 Advanced Practicum: Special Education Technology ..... (1-9)
EDS 701 Seminar For Special Education Leadership Personnel ..... (1)
EDS 710 Seminar in Mild Disabilities ..... (3)
EDS 711 Seminar in Moderate and Severe Disabilities ..... (3)
EDS 712 Seminar in Special Education Professional Services ..... (3)
EDS 720 Seminar in Special Education Teacher Preparation ..... (3)
EDS 721 Practicum in Special Education Personnel Preparation ..... (1-9)
EDS 730 Seminar in Special Education Administration ..... (3)
EDS 731 Advanced Practicum: Special Education Administration ..... (1-9)
EDS 748 Master's Thesis Research ..... (0)
EDS 749 Dissertation Research ..... (0)
EDS 768 Residence Credit for the Master's Degree ..... (1-6)
EDS 769 Residence Credit for the Doctoral Degree ..... (0-12)
EDS 779 Seminar in Special Education (Variable Topic) ..... (1-3)
EDS 789 Independent Study in Special Education ..... (1-6)
EDS 799 Research Techniques in Special Education ..... (1)

Statistics

Graduate Faculty: *Professors* David Allen, Vasant Bhapkar, Zakkula Govindarajulu, Richard J. Kryscio, and Cidambi Srinivasan. *Associate Professors* William S. Griffith, William Rayens, Richard Stockbridge, Arnold J. Stromberg, Constance Wood, and Mai Zhou.

Associate Member: *Assistant Professor* Kert Viele.

Joint Appointment: *Professor* Paul Cornelius.

Emeritus Professors: Richard L. Anderson and Harlley McKean.

The Department of Statistics offers programs of study leading to the degrees of Master of Science (Plan A or B available), and Doctor of Philosophy. The M.S. degree is professionally oriented for the student who plans a career in government, business or industry. The Ph.D. program offers a broad training in both statistical theory and methods while affording options to suit the student's interests. The statistics Ph.D. is well-suited for academic, business, government and industrial positions. In addition to formal course work and research training, the advanced student has opportunities to gain valuable practical experience by participating in consulting activities under faculty supervision.

Course work is available in areas associated with statistics such as biological modelling, computer science, control theory, econometrics, mathematics and operations research.

A student intending to pursue a master's degree in statistics should have one course each in advanced calculus (equivalent of MA 432 or 471) and matrix algebra (equivalent of MA 462) for the first year's graduate courses. A graduate level course in real analysis (equivalent of MA 571) is a prerequisite for the Ph.D. core curriculum. If possible, mathematical deficiencies should be corrected during the summer prior to entering The Graduate School.

Students with an undergraduate major in any of the mathematical, physical, biological, social or applied sciences are encouraged to apply.

The University of Kentucky is represented on the Committee on Statistics of the Southern Regional Education Board.

Master's Program

The Department offers the degree of Master of Science with (Plan A) or without (Plan B) a thesis. The core curriculum expected of all master's degree students consists of the following courses:

STA 503 ..... (4)
STA 531 ..... (3)
STA 532 ..... (3)
STA 601 ..... (3)
STA 603 ..... (4)
STA 624 ..... (3)

Programs of study for Plan B require a total of at least 35 semester hours, which should include the equivalent of the six courses in the core curriculum and at least 15 additional credit hours. Of these 15 credit hours, at least 6 should be from the following list of statistics courses:

STA 612, 616, 621,643, 644, 661, 665

Programs of study for Plan A (with thesis) require a total of at least 29 semester hours, which should include the core curriculum and at least two courses from the previous list. Candidates should also satisfy the requirements that at least 18 hours for Plan B and 15 hours of non-thesis courses for Plan A must be at the 600 level or higher. The free electives courses can be selected from a variety of courses both within and outside the Department of Statistics. Before the end of the second semester, the M.S. candidate must present a proposed plan of study for approval by the Director of Graduate Studies. There are no formal minor requirements.

All master's candidates are required to take a departmental written examination on the core curriculum. These exams are normally administered in August.

Doctoral Program

The doctorate is a research degree that demonstrates independent and comprehensive scholarship and is granted on the basis of broad statistical competence and the exhibition of creative ability. There are thus two components to the doctoral program: 1) a comprehensive program of probability, statistics and related courses, and (2) in depth research in a particular area and the preparation, under faculty supervision, of a dissertation.

The core curriculum consists of the following courses:

STA 503, STA 531, STA 532, STA 601, STA 603, STA 701, STA 702, STA 703, STA 704, MA 571, and an additional two courses selected by the Director of Graduate Studies.

A student will normally require two years of study to complete the core requirements. Beyond the core, the student must take at least 18 credit hours at the 600-700 level of which at least 9 hours must be in statistics courses including 3 hours of STA 690 but excluding STA 692.

A student must pass the master's examination at a Ph.D. level of performance to be eligible for the doctoral qualifying examination. The qualifying examination consists of two parts: Part I is an exam designed by the student's Advisory Committee and covers areas of core plus special topics the Committee deems appropriate for the student's research area. Part II is an oral examination administered to each student individually by the student's Advisory Committee.

When a student passes the qualifying examination the Advisory Committee, under the leadership of the student's major professor, supervises the subsequent specialized program of study that culminates in the preparation of the doctoral dissertation.

Areas of current research interest are:

a) mathematical statistics including statistical inference, categorical data analysis, nonparametric models, asymptotic theory, sequential analysis, decision theory;
b) statistical analysis and design including the design of experiments, variance components models, linear and non-linear models;
c) stochastic processes including applications of probability in biology, queueing and storage systems, reliability.

All students, master's and doctoral, will be required to take part in an internship program. This will usually consist of teaching (three of six semester hours) or an equivalent amount of work in the Statistics Consulting Laboratory or the Biostatistics Consulting Unit.

STA 417G	Principles of Operations Research II	(3)
STA 422G	Basic Statistical Theory II	(4)
STA 424G	Basic Probability and Distribution Theory	(3)
STA 503	Introduction to Statistical Methods	(4)
STA 515	Mathematical Programming and Extensions	(3)
STA 524	Probability	(3)
STA 525	Introductory Statistical Inference	(3)
STA 531	Theory of Probability	(3)
STA 532	Theory of Statistical Inference I	(3)
STA 570	Basic Statistical Analysis	(4)
STA 600	Communication in Statistics	(0)
STA 601	Theory of Statistical Inference II	(3)
STA 603	Introduction to Linear Models and Experimental Design	(4)
STA 612	Sequential Analysis	(3)
STA 616	Design and Analysis of Sample Surveys	(3)
STA 619	Problems Seminar in Operations Research	(3)
STA 621	Nonparametric Inference	(3)
STA 624	Applied Stochastic Processes	(3)
STA 626	Time Series Analysis	(3)
STA 635	Survivability and Life Testing	(3)
STA 643	Advanced Experimental Design	(3)
STA 644	Advanced Linear and Nonlinear Models	(3)
STA 661	Multivariate Analysis I	(3)
STA 665	Analysis of Categorical Data	(3)
STA 671	Regression and Correlation	(2)
STA 672	Design and Analysis of Experiments	(2)
STA 673	Distribution-free Statistical Inference and Analysis of Categorical Data	(2)
STA 675	Survey Sampling	(2)
STA 676	Quantitative Inheritance in Plant Populations	(3)
STA 677	Applied Multivariate Methods	(3)
STA 679	Design and Analysis of Experiments II	(3)
STA 690	Seminar in Statistics	(1)
STA 691	Special Topics in the Planning and Analysis of Experiments (Subtitle Required)	(1-3)
STA 692	Statistical Consulting	(3)
STA 695	Special Topics in Statistical Theory (Subtitle Required)	(1-3)
STA 701	Advanced Statistical Inference I	(3)
STA 702	Advanced Statistical Inference II	(3)
STA 703	Advanced Probability	(3)
STA 704	Advanced Probability-Stochastic Processes	(3)
STA 715	Readings in Statistics and Probability (Subtitle Required)	(1-6)
STA 748	Master's Thesis Research	(0)
STA 749	Dissertation Research	(0)
STA 768	Residence Credit for the Master's Degree	(1-6)
STA 769	Residence Credit for the Doctor's Degree	(0-12)

Theatre

Graduate Faculty: *Professors* Rhoda-Gale Pollack and James W. Rodgers. *Associate Professors* Russell Jones and Geraldine Maschio.

Associate Members: *Associate Professors* Russell A. Henderson and John R. Holloway.

Theatre lives at the moment of contact between actor and audience. This department expects its graduate students to approach that moment from several points: historical, critical, practical, theoretical and experimental. Within this framework, each candidate for a master of arts degree must complete a minimum of 30 semester hours. A maximum of six of these may be taken in allied subjects. Graduate students are encouraged to concentrate in one of the following areas: acting/directing, design/production.

It is assumed that a student who seeks a master's degree in the Department of Theatre will have had courses approximating those required for a B.A. degree with a major in theatre arts. If not, the student must remove the deficiency by taking (without graduate credit) courses in addition to those normally specified for the master's degree.

The department offers the master's degree according to Plan B only at the present time.

TA 516	Playwriting	(3)
TA 524	Dialects for the Stage	(3)
TA 525	Vocal Production for the Stage II	(3)
TA 530	Theatre Directing II	(3)
TA 590	Production Practicum	(1)
TA 591	Performance Practicum	(1)
TA 596	Summer Theatre	(1-6)
TA 600	Readings in Theatre	(3)
TA 625	Advanced Styles of Acting	(3)
TA 660	Studies in Technical Theatre: Production	(3)
TA 661	Studies in Technical Theatre: Lighting	(3)
TA 692	Studies in Directing	(1-3)
TA 770	Seminar in Theatre	(3)
TA 780	Independent Study in Theatre	(1-3)

Toxicology

Graduate Faculty: *Professors* Davy Jones, Edward J. Kasarskis, Hartmut H. Malluche, Craig McClain, William N. O'Connor, Peter R. Oeltgen, Larry Robertson, and David Watt. *Associate Professors* L. Creed Pettigrew, Steven Shedlofsky, and Daret St. Clair.

Associate Members: *Assistant Professors* Harry G. Enoch, Niranjan Goud, and Zhigang Wang.

Joint Appointments: *Professors* David Allen, Wesley J. Birge, Robert Blouin, Gilbert Boissonneault, Subbarao Bondada, Geza Bruckner, Rajender K. Chawla, Ching K. Chow, Donald Cohen, Peter Crooks, Douglas L.Dahlman, George A. Digenis, James W. Flesher, Vincent Gallicchio, Howard Glauert, Ramesh Gupta, Bernhard Hennig, Louis B. Hersh, Alan Kaplan, Patrick J. McNamara, John Slevin, Thomas Tobin, Mary Vore, and Robert A. Yokel. *Associate Professors* Kathryn M. Albers, Rosemarie Booze, Lisa Cassis, Linda Dwoskin, C. Gary Gairola, Charles Mactutus, Joseph P. McGillis, Daniel Noonan, Todd D. Porter, Vivek Rangnekar, Roy A. Smith, Charles Snow, Peter Wedlund, and Stephen Zimmer. *Assistant Professors* Christer Hogstrand, Isabel Mellon, H. Peter Spielmann, and Hollie Swanson.

Emeritus Professors: T. Z. Csaky and H.A. Gordon.

Toxicology is the science of poisons and their interactions with living systems. The University of Kentucky Graduate Center for Toxicology trains individuals to use the biological, physical, and mathematical sciences in the study of the causes, mechanisms, and evaluation of poisonings as well as the sources, identification and quantitation of poisons. The center has six core and fifty jointly-appointed faculty, who are drawn from several departments and colleges including Agriculture, Biological Sciences, Chemistry, Medicine, Pharmacy, Pharmacology, Preventive Medicine and Radiation Medicine. The program offers both Ph.D. and M.S. degrees in Toxicology. The Center's primary toxicologic emphases are in the areas of Environmental Toxicology, Immunotoxicology, and Molecular Mechanisms of Toxicology with areas of special study available to students in arthropod toxins, behavioral toxicology, clinical and forensic toxicology, environmental medicine and chemistry, equine toxicology, genetic and biochemical toxicology, inhalation toxicology, mechanisms of carcinogenesis, neurotoxicology, nutritional toxicology, pesticide toxicology, radiation toxicology, and reproductive toxicology.

The University of Kentucky Graduate Center for Toxicology (G.C.T.) has been in existence for more than twenty years and has awarded more than 150 graduate degrees. Program trainees include the 1988 Burroughs Welcome Scholar in Toxicology. Many G.C.T. graduates have gone on to take important positions in academia, government and business. The G.C.T. was recently ranked in the top quartile of Toxicology programs nationwide by the National Research Council.

The current student body consists of over fifty predoctoral fellows, several postdoctoral fellows and eight summer students. The average entering class size is six. Financial support consists of stipends in the amount of $13,000 per year. The Center also provides minority fellowships, National Institute of Environmental Health Sciences Pre- and Post-doctoral Fellowships and research assistantships. Outstanding candidates may also qualify for Academic Excellence Supplements which offer stipends over and above regular fellowship support.

The G.C.T. is located in the new Health Sciences Research Building in the Medical Center within easy walking distance of all major research units and colleges. Excellent research support facilities are available, including hybridoma, transgenic mouse, macromolecular structure, mass spectrometry, nuclear magnetic resonance, and electron microscopy facilities.

The University of Kentucky and the Graduate Center for Toxicology have a strong commitment to cultural diversity. The program offers excellent minority fellowships and currently has students enrolled from four under-represented groups.

Applicants should have strong undergraduate preparation in chemistry, biology and mathematics. Applicants should be graduates of accredited colleges with an appropriate baccalaureate degree (e.g. chemistry, biological sciences, etc.), hold a minimum grade-point average of 3.0 on a 4.0 scale and have a combined Graduate Record Examination score (verbal and quantitative) of 1100 or more.

The Toxicology Graduate Program is included in the Academic Common Market of the Southern Regional Education Board. Those interested should direct inquiries to:

The Graduate Center for Toxicology
University of Kentucky
306 Health Sciences Research Building
Lexington, KY 40536-0305
Telephone: (606) 257-3760
Fax: (606) 323-1059
E-mail: gctinfo@pop.uky.edu
http://www.mc.uky.edu/toxicology/

TOX 508	**Research in Toxicology**	**(1-3)**
TOX 509	**Contemporary Toxicology**	**(3)**
TOX 560	**Environmental Physiology and Toxicology**	**(4)**
TOX 600	**Ethics in Scientific Research**	**(2)**
TOX 645	**Neurotoxicology**	**(2)**
TOX 649	**Molecular Pharmacology**	**(3)**
TOX 650	**Cellular and Histotoxicology**	**(2)**
TOX 663	**Drug Metabolism and Disposition**	**(2)**
TOX 670	**Chemical Carcinogenesis**	**(3)**
TOX 680	**Advanced Toxicology**	**(5)**
TOX 690	**Practical Analytical Toxicology**	**(3)**
TOX 748	**Master's Thesis Research**	**(0)**
TOX 749	**Dissertation Research**	**(0)**
TOX 768	**Residence Credit for the Master's Degree**	**(1-6)**
TOX 769	**Residence Credit for the Doctor's Degree**	**(0-12)**
TOX 770	**Toxicology Seminar**	**(0-1)**
TOX 780	**Special Problems in Toxicology**	**(2)**
TOX 790	**Research in Toxicology**	**(1-12)**

Veterinary Science

Graduate Faculty: *Professors* George P. Allen, Ernest Bailey, Charles J. Issel, E.T. Lyons, William H. McCollum, T.W. Swerczek, John F. Timoney, Peter J. Timoney, and Thomas Tobin. *Associate Professors* Thomas M. Chambers, Barry P. Fitzgerald, Karen J. McDowell, and Roy A. Smith.

Associate Members: *Professors* James M. Donahue, Ralph Giles, Lenn R. Harrison, C.B. Hong, and K.B. Poonacha. *Extension Professor* David G. Powell. *Associate Professors* M.B. Petrites-Murphy, Robert Tramontin, and Mary. L. Vickers. *Research Associate Professor* E. Gus Cothran. *Assistant Professors* Roberta M. Dwyer and Neil M. Williams. *Research Assistant Professor* Kathryn Trembicki Graves.

Emeritus Professor: John Bryans.

The Department of Veterinary Science offers a program of study and research leading to the Master of Science (Plan A only) and Doctor of Philosophy degrees. Possible areas of concentration are comparative pathology, immunogenetics, parasitology, reproductive physiology, pharmacology and toxicology, microbiology and virology. Individuals electing pathology as their area of concentration must be graduate veterinarians. Individual programs of study must conform with the general rules and regulations of the Graduate School.

Students pursuing an M.S. degree in Veterinary Science are required to take BCH 501, BCH 502 (graduate level biochemistry) and STA 570 (graduate level, general statistice) or demonstrate that they have previously taken equivalent courses.

A limited number of research assistantships and fellowships are available.

VS 600	**Ethics in Scientific Research**	**(2)**
VS 650	**Cellular and Histotoxicology**	**(2)**
VS 690	**Practical Analytical Toxicology**	**(3)**
VS 748	**Master's Thesis Research**	**(0)**
VS 749	**Dissertation Research**	**(0)**
VS 768	**Residence Credit for the Master's Degree**	**(1-6)**
VS 769	**Residence Credit for the Doctor's Degree**	**(0-12)**
VS 770	**Veterinary Science Seminar**	**(1)**
VS 781	**Correlative Pathology**	**(1-3)**
VS 785	**Advanced Veterinary Parasitology**	**(3)**
VS 786	**Advanced Veterinary Pathology**	**(3)**
VS 791	**Techniques in Veterinary Microbiology**	**(1-9)**
VS 792	**Techniques in General Veterinary Pathology**	**(1-9)**

Vocational Education

Graduate Faculty: *Professors* Charles Byers and Sandra Miller. *Associate Professor* Rodney Tulloch.

Joint Appointments: *Associate Professor* Douglas C. Smith. *Assistant Professors* Joyce P. Logan and Rosetta F. Sandidge.

Emeritus Professors: Herbert Bruce, Bernard Fagan, Leonard McDowell, David McMurtry, Vernon Musselman and Clayton Omvig.

The Colleges of Agriculture and Human Environmental Sciences offer the

Master of Science in Vocational Education, emphasizing Agricultural Education and Home Economics Education. Additionally, the Department of Vocational Education offers an advanced degree program leading to the Doctor of Education (Ed.D.). These advanced degree programs are designed to prepare candidates for leadership positions in vocational education in such areas as: administration, curriculum, teacher education, research, and vocational guidance.

In addition, programs are offered for: 1) the professional certification for supervision and coordination of vocational education, and certification for vocational school principal, 2) Rank II classification for Kentucky teachers through the Planned Fifth-Year Program, and 3) Rank I classification for Kentucky teachers, and 4) initial teacher certification.

Master's Degree Program in Vocational Education

The focus of the master's degree program in vocational education is the further development of competencies needed as a teacher. However, provisions are made to accommodate a wide variety of individuals from diverse settings such as administration, curriculum, corporate or military training, or cooperative extension.

The master's degree in vocational education requires 24 graduate course hours for a Plan A thesis option and 30 hours for the Plan B non-thesis option. Twelve (fifteen for Plan B) hours must be taken in AED/HEE courses, of which at least nine hours (twelve for Plan B) are at the 600-700 level. A minimum of twelve hours (15 for Plan B) of course work at the 600 level or above is required.

Teachers seeking a Standard Certificate must meet the above criteria and the university's approved certification program requirements which specify work in professional education and course work related to the individual's teaching specialty. (Certification requirements are available from the Director of Graduate Studies.)

Doctoral (Ed.D.) Degree in Vocational Education

The doctoral program in vocational education is designed to prepare individuals for leadership positions in the field. The program is research based and provides for development of a broad knowledge of vocational education and in-depth preparation for careers in teacher education, research, curriculum development, vocational administration, and career counseling. The program requires completion of at least 42 semester hours beyond the master's degree, passage of comprehensive examinations, and the preparation and defense of a doctoral dissertation.

The Doctor of Education (Ed.D.) degree in Vocational Education is not presently accepting new applicants.

Certification Programs

For information concerning the certification programs, please contact the Director of Graduate Studies.

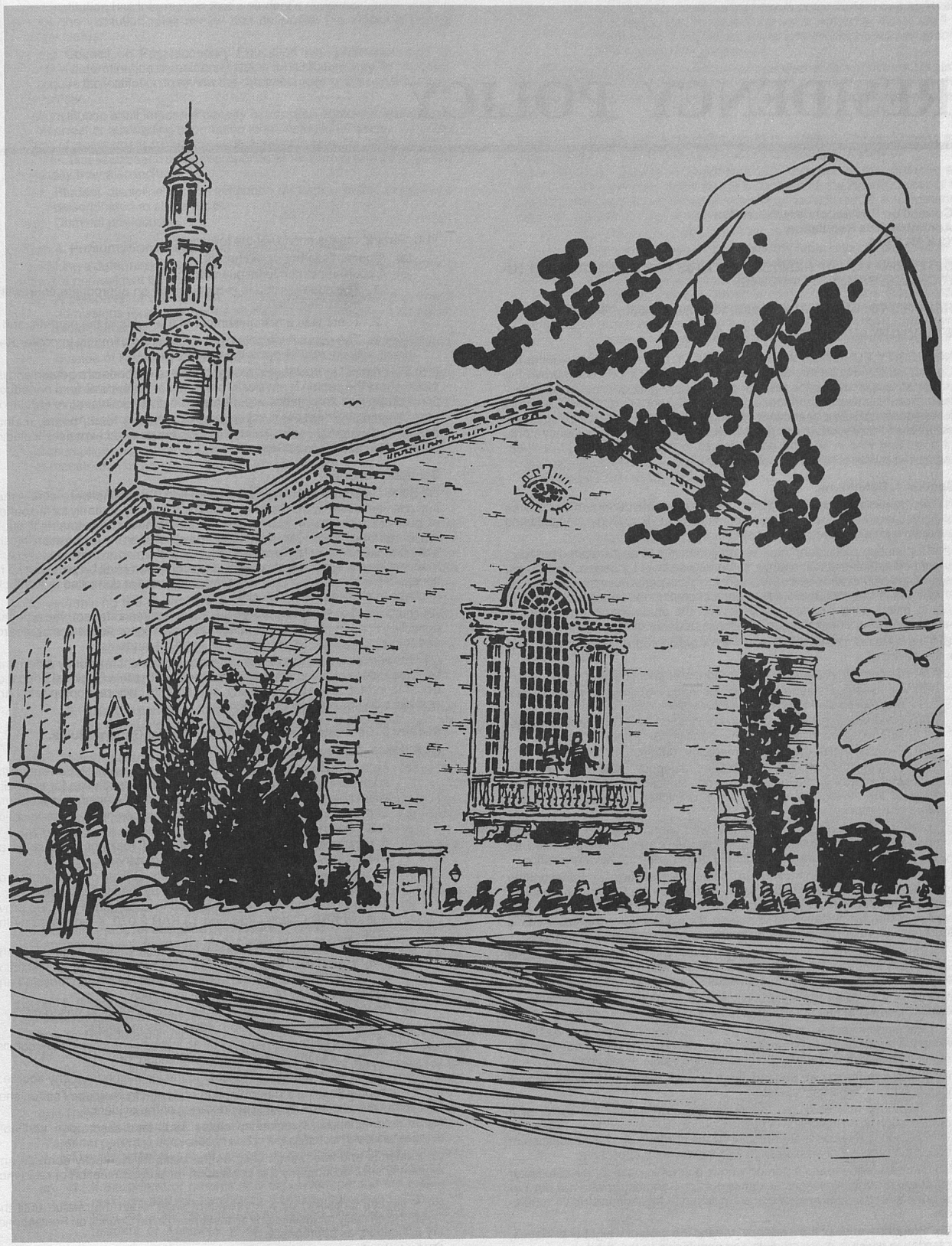
AED/HEE 501 Practicum in Vocational Education (1-12)
AED/HEE 535 Principles and Philosophy of Vocational Education ..... (3)
AED/HEE 580 Methods of Teaching Vocational Education I ..... (3)
AED/HEE 586 Methods in Teaching Vocational Education II ..... (3)
AED/HEE 590 Problems in Vocational Education ..... (3)
AED/HEE 670 Advanced Methods in Teaching Vocational Education ..... (3)
AED/HEE 671 Youth Organizations in Vocational Education ..... (3)
AED/HEE 672 Curriculum Construction in Vocational Education ..... (3)
AED/HEE 678 Selecting Teaching Materials ..... (3)
AED/HEE 679 Adult Education in Vocational Education ..... (3)
AED/HEE 680 Directing Experience Programs in Vocational Education ..... (3)
AED/HEE 684 Current Trends in Vocational Education ..... (3)
AED/HEE 686 Evaluation in Vocational Education ..... (3)
AED/HEE 693 Supervision in Vocational Education ..... (3)
AED/HEE 694 The Administration of Vocational Education ..... (3)
AED/HEE 695 Special Problems in Vocational Education ..... (3)
AED/HEE 748 Master's Thesis Research ..... (3)
AED/HEE 768 Residence Credit for the Master's Degree ..... (1-6)
AED/HEE 779 Seminar in Vocational Education ..... (1-3)
AED/HEE 789 Independent Work in Vocational Education ..... (1-3)
AED/HEE 799 Research in Vocational Education ..... (1-3)

BUS 519 Records Management ..... (3)
BUS 556 Business Reports and Communications ..... (3)

EDV 516 Problems of the Coordinator in Vocational Education ..... (2-3)
EDV 517 Determining Teaching Content in Distributive Education ..... (2-3)
EDV 583 Experience Programs in Vocational Agriculture ..... (3)
EDV 615 Problems in Business Education ..... (3)
EDV 687 Home Economics Supervision ..... (3)
EDV 702 Career Development: Research, Theories and Practices ..... (2-3)
EDV 749 Dissertation Research ..... (0)
EDV 769 Residence Credit for the Doctor's Degree ..... (0-12)

OTHER GRADUATE COURSES

A&S 500 Special Course (Subtitle Required) .. (1-3)
CEX 501 Principles of Cooperative Extension .. (3)
CLS 501 Seminar in Advanced Hematology ..... (2)
CLS 610 Ethics in Clinical Sciences Research ... (1)
CPC 501 Perspectives in Religion and Health ... (3)
EDU 645 Foundations of Pedagogical Theory and Practice in the Secondary School ..... (0-9)
EDU 745 Interdisciplinary Instruction in the Secondary School ..... (0-3)
EM 506 Mechanics of Composite Materials .... (3)
EM 513 Mechanical Vibrations ..... (3)
EM 527 Applied Mathematics in the Natural Sciences I ..... (3)
EM 531 Advanced Strength of Materials ..... (3)
EM 533 Aircraft and Missile Structural Analysis ..... (3)
EM 556 Introduction to Composite Materials .. (4)
EM 585 Fourier Series and Boundary Value Problems ..... (3)
EM 601 Principles of Continuum Mechanics ... (3)
EM 603 Mechanics of Plastic Solids I ..... (3)
EM 613 Nonlinear Oscillations ..... (3)
EM 628 Applied Mathematics in the Natural Sciences II ..... (3)
EM 645 Advanced Dynamics I ..... (3)
EM 646 Advanced Dynamics II ..... (3)
EM 651 Mechanics of Elastic Solids I ..... (3)
EM 652 Mechanics of Elastic Solids II ..... (3)
EM 653 Methods of Applied Differential Equations ..... (3)
EM 748 Master's Thesis Research ..... (0)
EM 749 Dissertation Research ..... (0)
EM 760 Research Project in Engineering Mechanics ..... (0)
EM 768 Residence Credit for the Master's Degree ..... (1-6)
EM 769 Residence Credit for the Doctor's Degree ..... (0-12)
EM 780 Special Problems in Engineering Mechanics ..... (3)
ES 600 Environmental Systems Seminar ..... (1)
ES 610 Engineering and Physical Sciences in Environmental Systems ..... (3)
ES 620 Natural, Biological and Medical Sciences in Environmental Systems ..... (3)
ES 630 Legal, Social and Economic Sciences in Environmental Systems ..... (3)
GS 600 Special Topical Graduate Course .... (1-3)
GS 610 College Teaching ..... (1)
GS 650 Preparing Future Faculty ..... (1)
HSE 502 Performance Evaluation in the Clinic and Laboratory ..... (3)
HSE 510 Older Women and their Health ..... (3)
HSE 595 Directed Studies ..... (1-3)
HSE 660 Advanced Clinical Practicum in Allied Health ..... (1-6)
HSE 670 Advanced Seminar in Allied Health ..... (1-3)
HSE 690 Research Problems in Allied Health .... (3)
HSM 502 Organization and Supervision in Health Care Delivery ..... (3)
HSM 510 Organization of the Long-Term Care Sector ..... (3)
HSM 511 Independent Study in Health Services Administration ..... (1-3)
HSM 538 Financial Management Techniques for the Clinical Manager ..... (3)
ISP 599 Study Abroad ..... (1)
LIN 515 Phonological Analysis ..... (3)
LIN 516 Grammatical Analysis ..... (3)
LIN 517 Special Topics in Linguistics (Subtitle Required) ..... (3)
LIN 519 Historical Linguistics ..... (3)
LIN 617 Studies in Linguistics (Subtitle Required) ..... (3)
MD 500 Special Topics Course ..... (1-3)
NEU 605 Contemporary Neurosciences ..... (4)
OR 515 Mathematical Programming and Extensions ..... (3)
OR 524 Probability ..... (3)
OR 525 Introductory Statistical Inference ..... (3)
OR 563 Simulation of Mine Production Systems ..... (3)
OR 616 Numerical Techniques for Nonlinear Optimization ..... (3)
OR 617 Markovian Decision Problems ..... (3)
OR 618 Combinatorics and Networks ..... (3)
OR 619 Problems Seminar in Operations Research ..... (3)
OR 624 Applied Stochastic Processes ..... (3)
OR 674 Heuristic Algorithms ..... (3)
PAT 660 Clinical Toxicology and Drug Monitoring ..... (3)
PAT 665 The Forensic Application of DNA Typing Methods ..... (3)
PAT 698 Clinical Microbiology ..... (3)
RAE 400G Seminar on Special Topics in Russian (3)
RAE 430G Business Russian ..... (3)
RAE 450G Dostoevsky (in English) ..... (3)
RAE 460G Tolstoy (in English) ..... (3)
RAE 462G Advanced Readings in the Sciences and Technology (in Russian) ..... (3)
RAE 553 Teaching of Russian ..... (3)
RAE 495G Advanced Independent Work in Russian and Eastern Studies ..... (1-3)
ST 500 Introduction to Social Theory ..... (3)
ST 600 Multidisciplinary Perspectives in Social Theory (Subtitle Required) ..... (3)
ST 610 "disClosure" Editorial Collective ..... (1)
WS 600 Topics in Women's Studies (Subtitle Required) ..... (3)
WS 650 Feminist Theory ..... (3)
WS 750 Readings in Women's Studies ..... (1)



RESIDENCY POLICY

Council on Postsecondary Education
Administrative Regulation
13 KAR 2:045.

DETERMINATION OF RESIDENCY STATUS FOR ADMISSION AND TUITION ASSESSMENT PURPOSES.

RELATES TO: KRS CHAPTER 13B, 164.020, 164.030, 164A.330(9)

STATUTORY AUTHORITY: KRS 164.020(8)

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

Section 1. Definitions.

(1) "Academic term" means a division of the school year during which a course of studies is offered, and includes a semester, quarter, or single, consolidated summer term as defined by the institution.

(2) "Continuous enrollment" means enrollment in a state-supported postsecondary education institution at the same degree level for consecutive terms, excluding summer term, since the beginning of the period for which continuous enrollment is claimed unless a sequence of continuous enrollment is broken due to extenuating circumstances beyond the student's control, including serious personal illness or injury, or illness or death of a parent.

(3) "Degree level" means enrollment in a course or program which could result in the award of a:

(a) Certificate, diploma or other program at an institution;
(b) Baccalaureate degree or lower including enrollment in a course by a nondegree seeking postbaccalaureate student;
(c) Graduate degree or graduate certification other than a first-professional degree in law, medicine, dentistry or "Pharm.D"; or
(d) Professional degree in law, medicine, dentistry, or "Pharm.D".

(4) "Demonstration of Kentucky domicile and residency" means the presentation of documented information and evidence sufficient to prove by a preponderance of the evidence that a person is domiciled in Kentucky and is a resident of Kentucky.

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

(6) "Determination of residency status" means the decision of a postsecondary education institution and a subsequent decision by the Council on Postsecondary Education including an administrative hearing, if appropriate, that results in the classification of a person as a Kentucky resident or as a nonresident for admission and tuition assessment purposes.

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

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

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

(10) "Institution means an entity defined in KRS 164.001(10) if the type of institution is not expressly stated.

(11) "Kentucky residency" or "Kentucky resident" means the result of a determination by an institution or by the Council on Postsecondary Education that a person is a resident of Kentucky for the purpose of tuition assessment and for the purpose of admission to that institution, if applicable.

(12) "Nonresident" means a person who is domiciled outside of Kentucky or who currently maintains legal residence outside Kentucky or who has not met the criteria for Kentucky residency established in this administrative regulation.

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

(14) "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.

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

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

Section 2. Scope

(1) State-supported postsecondary education institutions were established and are maintained by the Commonwealth of Kentucky primarily for the benefit of qualified residents of Kentucky. The substantial commitment of public resources to postsecondary education is predicated on the proposition that the state benefits significantly from the existence of an educated citizenry. As a matter of policy, access to postsecondary education shall be provided so far as feasible at reasonable cost to an individual who is domiciled in Kentucky and who is a resident of Kentucky.

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

(3) This administrative regulation applies to all student residency determinations regardless of circumstances, including the Southern Regional Education Board contract spaces, reciprocity agreements, where appropriate, and academic common market programs.

Section 3. Determination of Residency Status; General Rules.

(1) A determination of residency shall include:

(a) An initial determination of residency status by an institution during the admission process or upon enrollment in an institution for a specific academic term or for admission into a specific academic program;
(b) Each administrative and residency review committee determination made by an institution;
(c) A reconsideration of a determination of residency status by an institution based upon a changed circumstance;
(d) An intermediate review by the Appeals Officer of the Council on Postsecondary Education if requested by the student; and
(e) An administrative hearing conducted in accordance with the provisions of KRS Chapter 13B and 13 KAR 2:070, if requested by the student.

(2) (a) An initial determination of residency status shall be based upon 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) An initial determination of residency status shall be based on:
1. Information derived from admissions materials;
2. Other materials required by an institution and which are consistent with this administrative regulation; or
3. 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 or the Council on Postsecondary Education, as appropriate.

(7) A student may apply for a review of a determination of residency status

once for each academic term.

(8) If an institution has information that a student's residency status may be incorrect, the institution shall review and determine the student's correct residency status.

(9) If the Council on Postsecondary Education has information that an institution's determination of residency status for a student may be incorrect, it may require the institution to review the circumstances and report the results of that review.

(10) An institution shall impose a penalty or sanction against a student who gives incorrect or misleading information to an institutional official, including payment of nonresident tuition for each academic term for which resident tuition was assessed based on an improper determination of residency status. The penalty may also include:

(a) Student discipline by the institution through a policy written and disseminated to students; or
(b) Criminal prosecution.

Section 4. Presumptions Regarding Residency Status.

(1) In making a determination of residency status, it shall be presumed that a person is a nonresident if:

(a) A person is, or seeks to be, an undergraduate student and whose admissions records show the student to be a graduate of an out-of-state high school;
(b) A person's admission records indicate the student's residence to be outside of Kentucky at the time of application for admission;
(c) A person moves to Kentucky primarily for the purpose of enrollment in an institution;
(d) A person moves to Kentucky and within twelve (12) months enrolls in an institution of higher education more than half time; or
(e) A person has a continuous absence of one (1) year from the state.

(2) A presumption arising from subsection (1) of this section shall be overcome by a demonstration of Kentucky domicile and residency.

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

(1) In a determination of residency status, an institution shall first determine whether a student is dependent or independent. This provision is predicated on the assumption that a dependent person lacks the financial ability to live independently of the person upon whom the student is dependent and therefore lacks the ability to form their requisite intent to establish domicile.

(2) In determining the dependent or independent status of a person, the following information shall be considered as well as other relevant information available at the time the determination is made:

(a) 1. That the person has not 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. That 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) That the person has financial earnings and resources independent of both parents or a person other than an independent spouse necessary to provide for the person's own sustenance.

(3) An individual who enrolls in 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) A gift from, made, or cosigned 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 or Independent Status on a Determination of Residency Status.

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

(a) The domicile and residency of a dependent person shall be the same as either parent. The domicile and residency of the parent shall be determined in the same manner as the domicile and residency of an independent person.
(b) The domicile and residency of a dependent person whose parents are divorced, separated, or otherwise living apart shall be Kentucky if either parent is domiciled in and is a resident of Kentucky regardless of which parent has legal custody or is entitled to claim that person as a dependent pursuant to Kentucky income tax provisions.
(c) 1. If the parent or parents of a dependent person are Kentucky residents and are domiciled in Kentucky but subsequently move from the state, the dependent person shall be considered a resident of Kentucky while in continuous enrollment at the degree level in which currently enrolled.
2. If continuous enrollment is broken or the current degree level is completed, the dependent person's residency status shall be reassessed when the circumstances detailed in subparagraph 1 of this paragraph are present.

(2) If the sole parent or both parents of a dependent person moves out of state, Kentucky domicile and residency, having been previously established, shall be retained until steps are taken to establish domicile and residency elsewhere.

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

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

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

(2) (a) A member, spouse or dependent of a member of the Armed Forces of the United States stationed in Kentucky on active military orders shall be considered a Kentucky resident while the member is on active duty in this state pursuant to those orders if the member is not:
1. Stationed in Kentucky for the purpose of enrollment at an institution; or
2. On temporary assignment of less than one (1) year.
(b) A member, spouse or dependent of a member, shall not lose Kentucky residency status if the member is thereafter transferred on military orders while the member, spouse or dependent requesting the status is in continuous enrollment at the degree level in which currently enrolled.

(3) 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, I, L, N, O, P, R, S, TD or TN shall establish domicile and residency the same as another person.

(3) (a) An independent person holding a nonimmigrant visa with designations B, C, D, F, J, K, M, or Q shall not be classified as a Kentucky resident, because that person does not have the capacity to remain in Kentucky indefinitely and therefore cannot form the requisite intent necessary to establish domicile within the meaning of this administrative regulation.
(b) A dependent person holding a visa as described in paragraph (a) of this subsection, but who is a dependent of a parent holding a visa as described in subsection (2) of this section, shall be considered as holding the visa of the parent.
(c) A dependent person holding a visa described in subsection (2) of this section or paragraph (a) of this subsection, if a parent is a citizen of the United States and is a resident of and domiciled in Kentucky, shall be a resident of Kentucky for the purposes of this administrative regulation.

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(9).

Section 10. Criteria Used in a Determination of Residency Status.

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

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

(a) Acceptance of an offer of full-time employment or transfer to an employer in Kentucky or contiguous area while maintaining residence and domicile in Kentucky;
(b) Continuous physical presence in Kentucky while in a 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 of Kentucky resident income tax return for the calendar year preceding the date of application for a change in residency status; or

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

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

(e) Attendance as a full-time, nonresident student at an out-of-state institution based on a determination by that school that the person is a resident of Kentucky;

(f) Abandonment of a former domicile or residence and establishing domicile and residency in Kentucky with attendance at an institution following and incidental to the change in domicile and residency;

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

(h) Payment of real property taxes in Kentucky;

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

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

(k) Marriage of an independent student to a Kentucky resident;

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

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

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

(a) Kentucky automobile registration;

(b) Kentucky driver's license; and

(c) Registration as a Kentucky voter.

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

(5) Kentucky residency status shall not be conferred by the performance of an act which is incidental to fulfilling an educational purpose or by an act which is performed as a matter of convenience. Mere physical presence in Kentucky, including living with a relative or friend, shall not be sufficient evidence of domicile and residency.

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 an institution.

(2) Upon transfer to a Kentucky institution, a student's residency status shall be reassessed 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. Institutional Requirements; Designation of Office and Officer and Publication of the Administrative Regulation.

(1) Each institution shall designate:

(a) A person or office at the institution with responsibility for a determination of residency status at that institution; and

(b) An administrative office or person with delegated day-to-day responsibility for administration of this administrative regulation.

(2) The designation of an administrative office or person pursuant to subsection (1) of this section shall be in writing setting forth the duties and responsibilities. A copy shall be provided to the Council on Postsecondary Education.

(3) Each institution shall establish an operational policy for the determination of residency status which shall be filed with the Council on Postsecondary Education and which shall include:

(a) Procedures describing the steps in the initial determination of residency status;

(b) Designated responsibilities of each institutional official;

(c) Responsibilities of a person requesting:

1. Admission to an institution or to an academic program; or
2. A change in residency status;

(d) Procedures for the operation of a residency review committee created pursuant to Section 13 of this administrative regulation;

(e) Timetables and deadlines for student and institutional responses to a request for a review of an institutional determination of residency status;

(f) Training of institutional officials responsible for a determination of residency status; and

(g) The role of the residency review committee.

(4) The administrative regulation shall be published in its entirety in all of each institution's catalogs and disseminated to each student.

(5) Copies of the administrative regulation shall be maintained in the office designated pursuant to subsection (1) of this section and shall be made available to each student requesting Council on Postsecondary Education review of an institution's initial determination, review or reconsideration of residency status.

Section 13. Establishment of a residency review committee by an Institution.

(1) Each institution shall establish a residency review committee, which shall be a standing committee, to review, evaluate, and act upon:

(a) A student appeal related to an initial determination of residency status;

(b) A recommendation of the administrative office or person designated pursuant to Section 12 of this administrative regulation, that the residency review committee review, evaluate, and act upon an initial determination of residency status; and

(c) A student request for a reconsideration of a residency classification because of a changed circumstance.

(2) The Kentucky Community and Technical College System may establish uniform operating policies and procedures for each branch within the system as defined in KRS 164.001(11) including a provision for separate institutional residency review committees.

(3) Membership on the residency review committee shall include at least one (1) faculty and one (1) student member.

(4) The policies and procedures of an institution's residency review committee shall be in writing and published for student use.

(5) A copy of the document authorizing and creating an institution's residency review committee, and a copy of the operating policies and procedures of the residency review committee shall be provided to the Council on Postsecondary Education.

Section 14. Student Responsibilities.

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

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

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

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

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

(3) (a) If a student fails to provide, in a timely manner, information required by an institution in a determination of residency status or by the Council on Postsecondary Education in an appeal of a determination of residency status, the student shall be notified by the institution or by the Council on Postsecondary Education, as appropriate, that the review has been canceled and that a determination has been made.

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

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

(4) A student shall not be entitled to appeal a determination of residency status if the determination made by an institution or by the Council on Postsecondary Education is made 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 15. Procedures for an Initial Determination of Residency Status, an Institutional Review of Residency Status and for a Reconsideration of a Determination of Residency Status.

(1) Application for a review of a determination of residency status shall be made to the administrative office or person designated by an institution pursuant to Section 12 of this administrative regulation.

(2) The application, with supporting documentation, shall be made by the student no later than thirty (30) calendar days after the first day of classes of the academic term for which a review of a determination of residency status is sought.

(3) An application shall consist of:

(a) An affidavit authorized by the Council on Postsecondary Education and submitted by the student or the parent of a dependent student asserting the claim for a determination of residency status and asserting that the documentation and information are accurate and true; and

(b) Information and documentation required by an institution and consistent with this administrative regulation which is necessary to substantiate a request for a change in a determination of residency status.

(4) (a) An application shall be first reviewed by the office or person designated by the institution pursuant to Section 12 of this administrative regulation.

(b) If a student asks, in writing and in a manner set forth by the institution consistent with this administrative regulation, to appeal the decision of the designated office or person, the residency review committee shall review, evaluate, and act upon that appeal.

(c) An application for a review of residency status which is not submitted

in a timely manner shall result in a determination of residency status consistent with an initial determination of residency status.

(5) The decision of the designated office or person, or of the residency review Committee shall be set forth in a letter that includes:

(a) Findings of fact;
(b) Determination of whether the applicant is deemed to be a "dependent person" or "independent person";
(c) Whether the applicant is a resident or nonresident, and the reasons consistent with institutional policy and this administrative regulation; and
(d) A citation of the specific section of the administrative regulation that provided the basis for the institutional determination.

(6) If a student has requested an institutional review of a residency determination, the student shall be notified in writing, by registered or certified mail, of the decision of the administrative officer designated by the institution or the residency review committee, as appropriate, within forty-five (45) calendar days after receipt of a person's application for a change.

(7) A change in a determination of residency shall not be made retroactive beyond the academic term in which the request for a change is made.

(8) A student shall have the right to appeal a decision of the residency review committee to the Council on Postsecondary Education pursuant to Sections 16, 17, and 18 of this administrative regulation

(9) An institution shall, by written policy, establish deadlines for the submission of written documentation by a person seeking a review of an initial determination of residency status and shall not consider an appeal which does not conform to the timetable requirements for documentation and for the process established in the institution's operational policy.

Section 16. Procedure for Appeal to the Council on Postsecondary Education and Intermediate Review by the Council on Postsecondary Education Appeals Officer.

(1) The President of the Council on Postsecondary Education shall designate a person on the staff of the Council on Postsecondary Education to serve as an appeals officer.

(2) The appeals officer's review of an institutional determination of residency status shall be to determine whether the residency review committee's written decision was supported by a preponderance of evidence and whether the decision conforms to this administrative regulation.

(3) Upon receipt of notice from the residency review committee of an institution's decision by certified or registered mail, the student shall have fourteen (14) calendar days to appeal that decision to the Council on Postsecondary Education by giving notice in writing to the office or person designated by the institution to administer this administrative regulation.

(4) An appeal filed more than fourteen (14) calendar days after receipt of the decision of the residency review committee shall be dismissed and the decision of the residency review committee shall be final.

(5) The office or person designated by the institution pursuant to Section 12 of this administrative regulation shall be responsible for forwarding to the Council on Postsecondary Education a complete copy of the student's file within fourteen (14) calendar days of the receipt of a notice of appeal. The student may review the content of the file before it is forwarded to the Council on Postsecondary Education.

Section 17. Determination of the Council on Postsecondary Education Appeals Officer.

(1) Except as provided in subsection (2) of this section, the appeals officer shall make a determination, based solely on the written record submitted, to affirm or reverse the residency review committee's decision.

(2) The appeals officer may order the appeal remanded to the residency review committee for further proceedings before the appeals officer renders a final determination if the appeals officer determines that:

(a) The residency review committee failed to consider all information and evidence submitted;
(b) The residency review committee failed to follow institutional policies and procedures; or
(c) The information provided by an institution does not support a determination of residency status.

(3) (a) New information provided by the student that was not available to the institution at the time of the institution's determination of residency status shall result in a decision by the appeals officer to remand the case to the residency review committee for further action.
(b) A remand by the appeals officer shall require the residency review committee to reconsider the determination of residency status in light of the new information.
(c) An institution shall notify a student in writing of additional information required and shall establish a deadline for the receipt of that information.
(d) The residency review committee shall consider the new information or evidence and shall forward a written recommendation to the appeals officer within twenty-one (21) calendar days after receipt of the notice of remand.
(e) A copy of the residency review committee recommendation shall be provided to the student.
(f) A remand shall be part of the appeal to the Council on Postsecondary Education and shall not constitute a determination by the appeals officer.

(4) The determination of the appeals officer shall be in writing and shall state the reason for the decision.

(5) (a) Except as provided in paragraph (b) of this subsection, within twenty-one (21) calendar days after receipt of the student's file, the recommendation of the appeals officer shall be forwarded to the student by certified or registered mail with a copy to the office or person designated by the institution to administer this administrative regulation.
(b) If the appeals officer remands an appeal under subsection (2) of this section, the twenty-one (21) days shall not include the time the order was made until the time the residency review committee's written recommendation was received by the appeals officer.

(6) The student shall have ten (10) calendar days after receipt of the appeals officer's recommendation to file a written appeal by registered or certified mail with the Council on Postsecondary Education requesting a formal adjudicatory hearing pursuant to KRS Chapter 13B and 13 KAR 2:070.

Section 18. Administrative Hearing to be Held If Requested by Student.

(1) An administrative hearing on a request for a change in a determination shall be held in accordance with the provisions of KRS Chapter 13B and 13 KAR 2:070.

(2) The recommended order shall be received by the President of the Council on Postsecondary Education who shall issue a final decision on the appeal.

(a) The decision of the president shall be in writing and in accordance with KRS 13B.120.
(b) The decision of the president shall be provided to the student and the institution within twenty-one (21) calendar days after receipt of the hearing officer's decision.

(3) Upon receipt of the notification of the final decision of the president, the student shall have the right to appeal the decision to the appropriate court in accordance with KRS 13B.140.

Section 19. Charges to Institutions for Administrative Hearings.

The Council on Postsecondary Education, upon receipt of a bill for the conduct of an administrative hearing on an appeal of a determination of residency status, shall assign one-half (1/2) of the cost of the administrative hearing to the institution from which the appeal is taken. An institution shall provide payment to the Council on Postsecondary Education or to the office or administrative entity so designated by the Council on Postsecondary Education within thirty (30) calendar days of receipt of the notice of payment. (17 Ky.R. 2557; eff. 4-5-91; Am. 22 Ky.R. 1656; 1988; eff. 5-16-96; 23 Ky.R. 3380; 3797; 4099; eff. 6-16-97; 24 Ky.R. 2136; 2705; 25 Ky.R. 51; eff. 7-13-98.)

Revised Effective August 1, 1998

For further information about residency, please contact the Registrar's Office, Funkhouser Bldg., University of Kentucky, Lexington, KY 40506-0054.

Index

A

Academic Common Market 7
Academic Load 17
Accounting 48
Accounts Payable to University 19
Add/Drop 17
Administration 6
Administration and
Supervision 49
Admission 10
Advanced Degrees
for Faculty Members 16
Information and Requirements 16
Advisory Committee 23
Agricultural Economics 50
Agronomy 50
Anatomy and Neurobiology 50
Animal Sciences 51
Anthropology 51
Art 53
Asbury Theological Seminary 14
Assistantships
Research 29
Teaching 29

B

Behavioral Science 54
Biochemistry 54
Biology 55
Biomedical Engineering 55
Biosystems and Agricultural
Engineering 55
B.S. in Engineering/MBA Dual
Degree 14
Business Administration 57

C

Calendar 3
Campus Map 124
Changing Programs, Students 18
Chemical Engineering 60
Chemistry 60
Civil Engineering 61
Classical Languages and
Literatures 62
Classification 16
Clinical Nutrition 63
Combined Medical and Graduate
Studies 14
Communication 64
Communication Disorders 65
Computer Science 66
Computing Services 30
Concurrent Degree Programs 20
Confidentiality of Student
Records 16
Copyright 25
Counseling and Testing
Center 37
Courses and Curricula 20
Credit Equivalence 18
Credits, Transfer of 20
Crop Science 66
Curriculum and Instruction 67

D

Dean of The Graduate School,
Role of 8
Degrees Conferred 21
Degree Requirements 40
Dentistry 68
Diplomacy and International
Commerce 69
Diplomas 19
Directors of Graduate
Studies 8,45
Dissertation 25
Doctor of Education 25,27
Joint Doctoral Program with
State Universities 28
Doctor of Musical Arts 25
Doctor of Philosophy
Education 28
Doctor of Philosophy
Requirements 23
Doctoral Degrees
General Requirements 23
Doctoral Programs with Other
Universities 26
Doctoral Residency 23, 24
Double Competency Programs
Asbury Theological Seminary .. 14
Lexington Theological
Seminary 14
Dual Degrees
B.S. in Engineering/MBA 14
JD/MPA 14
JD/MBA 14
Pharm.D./MBA 14
Pharm.D./MPA 14

E

Economics 70
Education, College of 26
Educational and Counseling
Psychology 71
Educational Policy Studies
and Evaluation 72
Electrical Engineering 73
English 75
Entomology 76
Equivalence, Credit 18
Examinations
Final 22,25
Qualifying 24
Special 18
Extended-Campus Graduate
Programs 9

F

Family Studies 76
Fellowships
Non-Service 36
Post-Doctoral 29
Final Examination
Doctor of Philosophy 25
Master's Degree 22
Foreign Language
Requirement 20,24
Forestry 77
French Language and
Literature 78

G

Geography 78
Geology 79
Germanic Languages and
Literatures 79
Gerontology 80
Grades and Grade Point Averages 17
Graduate Council 8,9
Graduate Courses 17
Graduate Degree Programs 48
Establishment of 9
Modification of 9
Graduate Faculty 7
Graduate and Professional
Student Association 29
Graduate Record Examination
(GRE) 10
Graduate School
Organization of 7
Requirements, Changes in 16
Staff Directory 47
Graduate Students
International 11,12
Non-Degree Certification 13
Part-Time 13
Post-Baccalaureate 12
Provisional 13
University Scholars 13
Graduate Work in the College of
Education 26

Graduating Seniors as Part-Time Graduate Students 13
Graduation 19

H

Health Administration 81
Health Services 12,37
Historic Preservation 82
History 82
Horticulture 83
Housing 38

I

Independent Study Programs 22
Interior Design, Merchandising and Textiles 83
International Applicants 11,12

J

Joint Doctoral Programs 26
JD/MBA Dual Degree Program 14,58
JD/MPA Dual Degree Program 14

K

Kinesiology and Health Promotion 84

L

Language Requirement 20,24
Lexington Theological Seminary . 14
Libraries 29
Library Science 85

M

Major Professor 23
Major Subjects 23
Manufacturing Systems Engineering 86
Master of Arts in Education 26
Master of Engineering 74
Master's Degree, General Requirements 20
Materials Science and Engineering 87
Mathematics 87
Mechanical Engineering 88
Medical and Graduate Studies, Combined 14
Microbiology 89
Mining Engineering 90
Minor Subjects 23
Multidisciplinary Research Centers 32
Multidisciplinary Graduate Programs 31
Music 91

N

Non-Service Fellowships 36
Non-Thesis Option 22
Nursing 94
Nutrition and Food Science 95
Nutritional Sciences 95

O

Off-Campus Courses 18
On-Campus Residence 20
Organization of the Graduate School 7
Other Graduate Courses 116

P

Pharmaceutical Sciences 97
Pharmacology 97
Pharm.D./MBA Dual Degree 14
Pharm.D./MPA Dual Degree 14
Philosophy 98
Physical Therapy 98
Physics and Astronomy 99
Physiology 100
Plant Pathology 101
Plant Physiology 101
Plant and Soil Science 101
Political Science 102
Post-Baccalaureate Graduate Students 12
Post-Doctoral Fellowships 29
Probation, Scholastic 18
Provisional Admission 13
Psychology 103
Public Administration 103
Public Health 105

Q

Qualifying Examination 24

R

Radiation Medicine 105
Radiation Science 106
Rank II, Rank I (Education) 26
Readmission 15
Registration 16
Rehabilitation Counseling 106
Repeat Option 18
Research at the University of Kentucky 29
Research Assistantships 29
Residency 10,36
Residency Policy 117
Residency Requirements
Doctoral 23,24
Model I 23
Model II 24
Model III 24

S

Scholastic Probation 18
Short Courses 18
Social Work 107
Sociology 109
Soil Science 110
Spanish and Italian Languages and Literatures 110
Special Admission
Graduating Seniors 13
Non-Degree Certification 13
Post-Baccalaureate 12
Provisional 13
University Scholars 13
Special Education 111
Special Examinations 18
Specialists in Education Requirements 28
Statistics 112
Student Association, Graduate and Professional 29
Student Responsibility 14
Student Support 36
Students Changing Programs 18

T

Teaching Assistantships 29
Termination 18
Theatre 113
Thesis Option 22
Time Limit for Degrees 19
Toxicology 113
Transfer of Credits 20

U

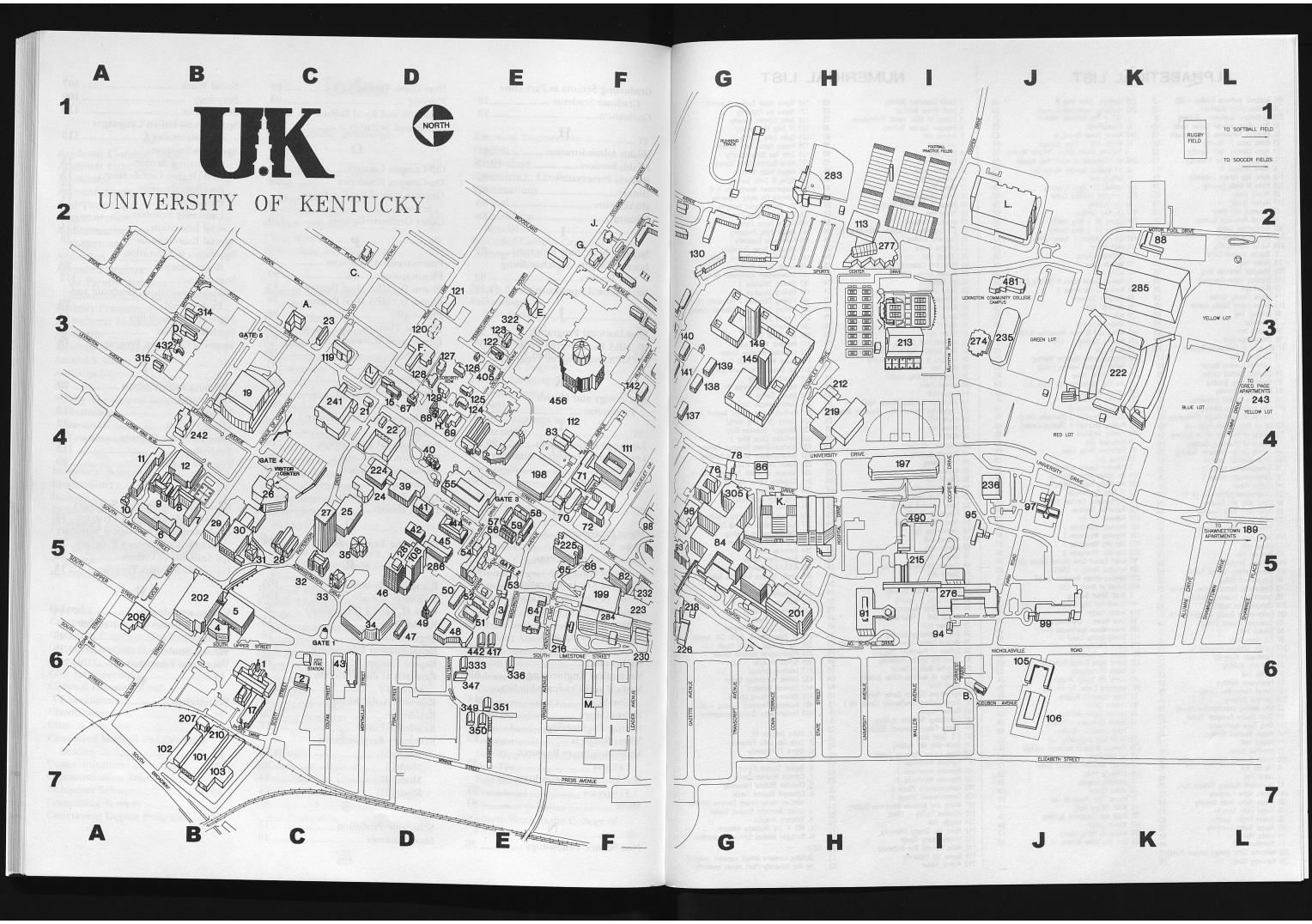
UK-Asbury Theological Seminary Double Competency Program . 14
UK-Lexington Theological Seminary Double Competency Program . 14
UK Students as Visitors 19
University Scholars Program 13

V

Veterinary Science 114
Visiting Scholars and Advanced Study 29
Visiting Students 15,19
Vocational Education 114

W

Withdrawal 17


U.K
UNIVERSITY OF KENTUCKY
NORTH
A B C D E F G H I J K L
1 2 3 4 5 6 7
GATE 1
GATE 2
GATE 3
GATE 4
GATE 5
VISITOR CENTER
SOUTH LIMESTONE STREET
PRESS AVENUE
RUGBY FIELD
TO SOFTBALL FIELD
TO SOCCER FIELDS
LEXINGTON COMMUNITY COLLEGE CAMPUS
GREEN LOT
YELLOW LOT
BLUE LOT
RED LOT
UNIVERSITY DRIVE
NICHOLASVILLE ROAD
ELIZABETH STREET
TO SHAWNEETOWN APARTMENTS
TO CREG PAGE APARTMENTS

ALPHABETICAL LIST

481 Academic Technical Building – LCC J3
32 Administration Building C5
276 Agricultural Engineering Building I5
91 Agricultural Science Center North H5
66 Agronomy Headhouse & Greenhouses F5
69 Alpha Delta Pi Sorority D4
127 Alpha Gamma Delta Sorority D3
115 Alpha Gamma Rho Fraternity F3
A. Alpha Omicron Pi C3
112 Alpha Tau Omega Fraternity F4
129 Alpha Xi Delta Sorority D4
29 Alumni Gym B5
119 Alumni House C3
46 Anderson Hall Tower D5
76 Animal Pathology Building G4
333 Appalachian Center E6
207 Arts Metal Building B6
286 A.S.T.E.C.C. Building D5
E. Baptist Student Center E3
28 Barker Hall C5
225 Biological Sciences Bldg. E5
145 Blanding Tower Dormitory G3
12 Blazer Hall B4
14 Boone Faculty Center E4
213 Boone Indoor Tennis Center I3
59 Bowman Hall E5
8 Boyd Hall B5
58 Bradley Hall E5
56 Breckinridge Hall E5
34 Business & Economics Building D6
23 Campus Police C3
F. Catholic Newman Center D3
84 Chandler Medical Center G5
55 Chem/Physics Building D4
67 Chi Omega Sorority D4
G. Christian Student Fellowship F2
281 Civil Engineering Building D5
3 College of Allied Health Professions E5
350 Col. of Educ. School Psych. Lab E6
86 College of Medicine Office Building G4
82 College of Pharmacy Building F5
96 Combs Cancer Research Building G5
222 Commonwealth Stadium K3
106 Commonwealth Village 1 J6
105 Commonwealth Village 2 J6
94 Cooper House I6
130 Cooperstown Apartments (A–G) F2
98 Davis–Mills MRI Building F5
68 Delta Delta Delta Sorority D4
122 Delta Gamma Sorority E3
B. Delta Tau Delta Fraternity I6
124 Delta Zeta Sorority E4
17 Dickey Hall C6
72 Donovan Hall F5
442 Donovan Scholars E6
147 Dorm Complex Central Facility H3
64 Employment Office E5
43 Engineering Transportation Research C6
95 Entomology Research Building I5
314 Environmental Health B3
490 Environmental Quality Management Ctr. I5
H. Episcopal Student Center D4
50 Erikson Hall D5
97 E.S. Good Barn J5
347 Faculty Scholars Program E6
142 Farmhouse Fraternity F3
22 Fine Arts Building D4
31 Frazee Hall C5
54 Funkhouser Building E5
432 Gaines Humanities Center E5
215 Garrigus Building I5
33 Gillis Building (Administration Annex) C5
99 Gluck Equine Research Center J5
243 Greg Page Apartments L3
283 Hagan Baseball Stadium H2
111 Haggin Hall F4
10 Hamilton House A5
305 Health Science Research Building G4
6 Holmes Hall B5
7 Jewell Hall B5
42 Journalism Building (Grehan Hall) D5
141 Kappa Alpha Fraternity F3
125 Kappa Alpha Theta Sorority E4
128 Kappa Delta Sorority D3
D. Kappa Kappa Gamma B3
140 Kappa Sigma Fraternity G3
44 Kastle Hall D5
11 Keeneland Hall A4
223 Kentucky Clinic (Wright Medical Plaza) F5
284 Kentucky Clinic F6
226 Kentucky Clinic Wing B G6
315 Kentucky Humanities Council B3
L. KET – The Kentucky Network J2
57 Kinkead Hall E5
149 Kirwan Tower Dormitory G3
71 K–Lair Grill – Food Storage F4
I. Koinowa House United Campus Ministry D3
349 KY Elderhostel & Appal. Col. Assess. E6
M. KY Medical Services Foundation F6
24 Lafferty Hall D4
137 Lambda Chi Alpha Fraternity G4
212 Lancaster Aquatics Center H3
48 Law Building D6
417 Learning Services E6
224 Library (M. I. King North) D4
39 Library (M. I. King South) D4
456 Library (William T. Young Library) F3
322 Math House E3
47 Mathews Building D6
40 Maxwell Place D4
45 McVey Hall D5
78 Medical Center Annex 5 (Wilford Building) G4
218 Medical Center Annex 3 G5
19 Memorial Coliseum B4
49 Memorial Hall D5
35 Miller Hall C5
51 Mineral Industries E6
107 Mining and Minerals Resources Building E4
274 Moloney Building – LCC I3
88 Motor Pool K2
232 Nursing/Health Sciences Building F5
277 Nutter Football Training Facility H2
285 Nutter Field House K2
21 Old Eng. Residence (421 Rose St.) D4
235 Oswald Building (LCC) J3
197 Parking Structure 1 I4
198 Parking Structure 2 E4
199 Parking Structure 3 (Kentucky Clinic) F5
201 Parking Structure 4 (Medical Center) H5
202 Parking Structure 5 B5
9 Patterson Hall B5
27 Patterson Office Tower C5
41 Pence Hall D5
5 Peterson Service Building B6
139 Phi Kappa Alpha Fraternity G3
138 Phi Sigma Kappa Fraternity G3
123 Pi Beta Phi Sorority E3
351 Psychological Services Center E6
206 Publishing Services A6
216 Research Facility E5
101 Reynolds Warehouse 1 B7
102 Reynolds Warehouse 2 B7
103 Reynolds Warehouse 3 B7
210 Reynolds Warehouse 4 B7
93 Roach Patient Care (Markey Cancer Ctr.) F5
108 Robotics Facility – CRMS D5
230 Sanders–Brown Research Center F6
405 School of Music – Lab E3
2 Scott Street Building C6
64 Scovell Hall (Ag. Experiment Station) E6
219 Seaton Center H4
92 Seed House – Greenhouse H5
189 Shawneetown Apartments (A–F) L5
113 Shively Sports Center H2
116 Sigma Chi Fraternity F3
121 Sigma Nu Fraternity D3
120 Sigma Alpha Epsilon Fraternity D3
C. Sigma Pi Fraternity C3
83 Sigma Phi Epsilon Fraternity E4
241 Singletary Center for the Arts C4
53 Slone Research Building E5
30 Student Center B5
26 Student Center Addition C4
15 Sturgill Development Building D4
1 Taylor Education Building C6
52 Terrell Civil Engineering Lab E5
236 Tobacco & Health Research Institute I4
26 UK Bookstore C4
J. United Methodist Student Center F2
336 University Press E6
K. Veterans HospitaL G4
26 Visitor Center C4
70 Wenner Gren Research Lab F5
45 WUKY (McVey Hall) D5
25 White Hall Classroom Building C5
242 Wildcat Lodge B4
456 William T. Young Library F3
126 Zeta Tau Alpha Sorority D3

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1 Taylor Education Building C6
2 Scott Street Building C6
3 College of Allied Health Professions E5
5 Peterson Service Building B6
6 Holmes Hall B5
7 Jewell Hall B5
8 Boyd Hall B5
9 Patterson Hall B5
10 Hamilton House A5
11 Keeneland Hall A4
12 Blazer Hall B4
14 Boone Faculty Center E4
15 Sturgill Development Building D4
17 Dickey Hall C6
19 Memorial Coliseum B4
21 Old Engineering Residence (421 Rose St.) D4
22 Fine Arts Building D4
23 Campus Police C3
24 Lafferty Hall D4
25 White Hall Classroom Building C5
26 Student Center Addition C4
26 UK Bookstore C4
26 Visitor Center C4
27 Patterson Office Tower C5
28 Barker Hall C5
29 Alumni Gym B5
30 Student Center B5
31 Frazee Hall C5
32 Administration Building C5
33 Gillis Building (Administration Annex) C5
34 Business & Economics Building D6
35 Miller Hall C5
39 Library (M.I. King South) D4
40 Maxwell Place D4
41 Pence Hall D5
42 Journalism Building (Grehan Hall) D5
43 Engineering Transportation Research Bldg. C6
44 Kastle Hall D5
45 McVey Hall D5
45 WUKY D5
46 Anderson Hall Tower D5
47 Mathews Building D6
48 Law Building D6
49 Memorial Hall D5
50 Erikson Hall D5
51 Mineral Industries Building E6
52 Terrell Civil Engineering Lab E5
53 Slone Research Building E5
54 Funkhouser Building E5
55 Chem/Physics Building D4
56 Breckinridge Hall E5
57 Kinkead Hall E5
58 Bradley Hall E5
59 Bowman Hall E5
64 Campus Employment Office E6
64 Scovell Hall E6
67 Chi Omega Sorority D4
68 Delta Delta Delta Sorority D4
69 Alpha Delta Pi Sorority D4
70 Wenner–Gren Research Lab F5
71 K–Lair Grill – Food Storage F4
72 Donovan Hall F5
76 Animal Pathology Building G4
78 Medical Center Annex 5 (Wilford Building) G4
82 College of Pharmacy Bldg. F5
83 Sigma Phi Epsilon Fraternity E4
84 Chandler Medical Center G5
86 College of Medicine Office Building G4
88 Motor Pool K2
91 Agricultural Science Center North H5
93 Roach Patient Care(Markey Cancer Ctr.) F5
94 Cooper House I6
95 Entomology Research Building I5
96 Combs Cancer Research Building G5
97 E.S. Good Barn J5
98 Davis–Mills MRI Building F5
99 Gluck Equine Research Center J5
101 Reynolds Warehouse 1 B7
102 Reynolds Warehouse 2 B7
103 Reynolds Warehouse 3 B7
105 Commonwealth Village 2 J6
106 Commonwealth Village 1 J6
107 Mining and Minerals Resources Building E4
108 Robotics Facility – CRMS D5
111 Haggin Hall F4
112 Alpha Tau Omega Fraternity F4
113 Shively Sports Center H2
115 Alpha Gamma Rho Fraternity F3
116 Sigma Chi Fraternity F3
119 Alumni House C3
120 Sigma Alpha Epsilon Fraternity D3
121 Sigma Nu Fraternity D3
122 Delta Gamma Sorority E3
123 Pi Beta Phi Sorority E3
124 Delta Zeta Sorority E4
125 Kappa Alpha Theta Sorority E4
126 Zeta Tau Alpha Sorority D3
127 Alpha Gamma Delta Sorority D3
128 Kappa Delta Sorority D3
129 Alpha Xi Delta Sorority D4
130 Cooperstown Apartments A–G F2
137 Lambda Chi Alpha Fraternity G4
138 Phi Sigma Kappa Fraternity G3
139 Phi Kappa Alpha Fraternity G3
140 Kappa Sigma Fraternity G3
141 Kappa Alpha Fraternity F3
142 Farmhouse Fraternity F3
145 Blanding Tower Dormitory G3
147 Dorm Complex Central Facility H3
149 Kirwan Tower Dormitory G3
189 Shawneetown Apartments (A–F) L5
197 Parking Structure 1 I4
198 Parking Structure 2 E4
199 Parking Structure 3 (Kentucky Clinic) F5
201 Parking Structure 4 (Medical Center) H5
202 Parking Structure 5 B5
206 Publishing Services A6
207 Arts Metal Building B6
210 Reynolds Warehouse 4 B7
212 Lancaster Aquatics Center H3
213 Boone Indoor Tennis Center I3
215 Ag. Science Ctr. South (Garrigus Bldg.) I5
216 Research Facility E5
218 Medical Center Annex 3 G5
219 Seaton Center H4
222 Commonwealth Stadium K3
223 Kentucky Clinic (Wright Medical Plaza) F5
224 Library (M.I. King North) D4
225 Biological Sciences Bldg. E5
226 Kentucky Clinic Wing B G6
230 Sanders–Brown Research Center F6
232 Nursing/Health Sciences Building F5
235 Oswald Building (LCC) J3
236 Tobacco & Health Research Institute I4
241 Singletary Center for the Arts C4
242 Wildcat Lodge B4
243 Greg Page Apartments L3
274 Moloney Building – LCC I3
276 Agricultural Engineering Building I5
277 Nutter Football Training Facility H2
281 Civil Engineering Building D5
283 Hagan Baseball Stadium H2
284 Kentucky Clinic F6
285 Nutter Field House K2
286 A.S.T.E.C.C. Building D5
305 Health Science Research Building G4
314 Environmental Health B3
315 Kentucky Humanities Council B3
322 Math House E3
333 Appalachian Center E6
336 University Press E6
347 Faculty Scholars Program E6
349 KY Elderhostel & Appal. Col. Assess. E6
350 Col. of Educ. School Psych. Lab E6
351 Psychological Services Center E6
405 School of Music – Lab E3
417 Learning Services E6
432 Gaines Humanities Center B3
442 Donovan Scholars E6
456 William T. Young Library F3
481 Academic Technical Building – LCC J3
490 Environmental Quality Management Ctr. I5

A. Alpha Omicron Pi C3
B. Delta Tau Delta Fraternity I6
C. Sigma Pi Fraternity C3
D. Kappa Kappa Gamma B3
E. Baptist Student Center E3
F. Catholic Newman Center D3
G. Christian Student Fellowship F2
H. Episcopal Student Center D4
I. Koinowa House United Campus Ministry D3
J. United Methodist Student Center F2
K. Veterans Hospital G4
L. KET – The Kentucky Network J2
M. Kentucky Medical Services Foundation F6

NOTE:
Building numbers reflect numbers assigned by the University Plant Assets Inventory.

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