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Graduate Catalog, 1970-1971

Eastern Kentucky University

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GRADUATE
CATALOG

COMMONWEALTH OF KENTUCKY
STATE ARCHIVES AND RECORDS
DEPARTMENT OF FINANCE
FRANKFORT

eastern kentucky university

BULLETIN

Volume 61, Number 4



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August, 1970

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EASTERN KENTUCKY UNIVERSITY

Graduate Catalog



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Vol. 61

August, 1970

No. 4

CALENDAR 1970

JANUARY							FEBRUARY							MARCH							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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CALENDAR 1971

JANUARY							FEBRUARY							MARCH							APRIL						
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SEPTEMBER							OCTOBER							NOVEMBER							DECEMBER											
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							31																									

EASTERN KENTUCKY UNIVERSITY 1970-1971 CALENDAR

FIRST SEMESTER

August 26	Wednesday	1:00 p.m.	Dormitories open for graduate assistants
August 29	Saturday	9-11:30 a.m.	Registration of evening and Saturday students, and graduate students.
September 2 September 2-8	Wednesday	8:00 a.m.	Classes begin Late registration and schedule changes.
September 7	Monday		Labor Day—No Classes
September 9	Wednesday		Last day to enter a class. Last day to change from audit to credit.
September 18	Friday		Last day on which a class may be dropped without a grade.
October 30	Friday		May and August, 1971, graduates must apply for graduation by this date in the Office of the Graduate School.
November 20	Friday		Last day to drop a course.
November 25	Wednesday	12:30 p.m.	School closes for Thanksgiving Holiday.
December 7-9			Pre-registration for second semester.
December 16-22			Final examinations.

SECOND SEMESTER

January 9	Saturday	9-11:30 a.m.	Registration of evening, Saturday, and graduate students.
January 13 January 13-19	Wednesday	8:00 a.m.	Classes begin. Late registration and schedule changes.
January 29	Friday		Last day on which a course may be dropped without a grade. Last day to change from credit to audit.
March 14-21			Spring Vacation.
March 22	Monday	8:00 a.m.	Class work resumes.
April 7	Wednesday	4:30 p.m.	Last day to drop a course.
April 30	Friday		December, 1972, graduates must apply for graduation by this date in the Office of the Graduate School.
May 3-8			Final examinations.
May 8			Close of semester.
May 9	Sunday		accalaureate Service.
May 10	Monday (tentative)		Commencement Exercises.

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1970-71

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Hydrogenation

The hydrogenation of alkenes is a reaction in which hydrogen gas (H₂) is added across the double bond of an alkene, resulting in an alkane. This process is typically catalyzed by transition metal complexes, such as those of nickel, palladium, and platinum. The reaction is exothermic and is used in the industrial production of saturated hydrocarbons.

The general reaction can be represented as follows:

$$\text{Alkene} + \text{H}_2 \xrightarrow{\text{Catalyst}} \text{Alkane}$$

For example, the hydrogenation of ethene (ethylene) yields ethane:

$$\text{C}_2\text{H}_4 + \text{H}_2 \xrightarrow{\text{Ni}} \text{C}_2\text{H}_6$$

The mechanism of hydrogenation involves the coordination of the alkene to the metal center of the catalyst, followed by the transfer of hydrogen atoms to the carbon-carbon double bond. This process occurs in a concerted manner, meaning that the two hydrogen atoms are added to the double bond simultaneously.

The reaction is highly selective, and the catalyst can be modified to control the stereochemistry of the product. For instance, the use of chiral ligands can lead to the formation of enantiomerically enriched products.

In addition to the hydrogenation of alkenes, the reaction is also used in the synthesis of pharmaceuticals and other fine chemicals. The hydrogenation of nitro compounds to amines is another important application of this reaction.

The reaction conditions, such as temperature and pressure, can significantly affect the rate and selectivity of the hydrogenation process. Higher temperatures and pressures generally lead to faster reaction rates, but they can also lead to side reactions and catalyst deactivation.

The hydrogenation of alkenes is a fundamental reaction in organic chemistry, and its study has led to the development of many new catalysts and reaction conditions. The reaction is also an important part of the petrochemical industry, where it is used to produce a wide range of saturated hydrocarbons.



The University

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EASTERN KENTUCKY UNIVERSITY . . .

Dedicated to Serving Kentucky Since 1906

INTRODUCTION

Eastern Kentucky University is a coeducational public institution of higher education offering general and liberal arts programs, pre-professional, and professional training in education and various other fields at both the undergraduate and graduate levels. Located in Richmond, Madison County, Kentucky, Eastern has a distinguished record of more than six decades of educational service to the Commonwealth. The institution is recognized as one of the nation's leading producers of teachers with over seventy-five per cent of its 20,000 graduates having entered the teaching profession.

Richmond is on the main line of the L & N Railroad, 112 miles south of Cincinnati, Ohio. Situated twenty-six miles southeast of Lexington, Kentucky, Richmond is conveniently reached by automobile over Interstate 75 from Northern Kentucky and Cincinnati to the North and over U. S. Route 25 (Dixie Highway) from Southeastern Kentucky. Richmond is also served by U. S. Route 227 and Kentucky Route 52. Combinations of major highways in the state with these highways make Richmond easily accessible from Eastern and Northeastern Kentucky as well as the Bluegrass and Central Kentucky area and the metropolitan area of Louisville.

Completion of Interstate Highways, I-64 (East-West) and I-75 (North-South), and the Eastern Kentucky Turnpike, will provide even greater convenience in automobile travel to Richmond, since the city is located near the convergence of these three arterial highways.

Richmond, the county seat of Madison County, is an expanding community of approximately 15,000 population. Served by fine churches representing most Christian faiths, the community provides an excellent environment for the University student.

In and around Richmond are many areas of historic and scenic interest. Boonesborough State Park, birthplace of Kentucky, is located twelve miles to the north. Many other historical places are within easy driving distance. Scenic and recreational areas surround this section of the state.

HISTORY

The General Assembly of 1906 enacted legislation establishing the Eastern Kentucky State Normal School. Governor J. C. W. Beckham signed the bill into law on March 21, 1906, and on May of that year, the Normal School Commission, meeting in Louisville, selected the campus of old Central University in Richmond, Kentucky, as the site of the new school. On June 2, 1906, Ruric Nevel Roark was chosen President of the Normal School and the training of teachers was initiated.

In 1922, Eastern became a four-year institution known as the Eastern Kentucky State Normal School and Teachers College. The first degrees were awarded by this institution in 1925. In 1928, the College was accredited by the Southern Association of Colleges and Secondary Schools. In 1930, the General Assembly renamed the school as the Eastern Kentucky State Teachers College.

In 1935, a graduate program was approved at Eastern, leading to the Master of Arts in Education. In 1948, the General Assembly removed the word "Teachers" from the name of the College and granted the College the right to award non-professional degrees.

The most significant day since its founding came for Eastern, February 26, 1966, when Governor Edward T. Breathitt signed into law a bill renaming the institution Eastern Kentucky University and sanctioning the awarding of graduate degrees in academic fields other than education.

During this period of time, Eastern Kentucky University has increased rapidly in size and stature. Beginning with a few students engaged in short review and certificate courses, the University today serves thousands of Kentucky's young men and woman by offering a curriculum leading to the Bachelor of Arts, or Bachelor of Science degree in teacher education, or in general or professional areas, and an expanding graduate program that presently offers degrees at the master's level in a wide variety of fields as listed in this *Catalog*, as well as the already well-established Master of Arts in Education Degree and the various fifth- and sixth-grade leadership programs in education. Specialist Degree programs are offered in technology and education. In addition to these programs, Eastern offers a joint doctoral program with the University of Kentucky leading toward the Ed.D. degree in education.

Ever-mindful of the purpose of its founding, Eastern continues to recognize its historic function of preparing quality teachers for the elementary and secondary schools of the Commonwealth. However, a strong liberal arts curriculum leading to appropriate degrees, together with pre-professional courses in several areas and other graduate programs, enable Eastern to serve the Commonwealth as a general university.

PURPOSE

The purpose of Eastern Kentucky University is to provide for its students those intellectual and cultural pursuits which will develop in them habits of scholarship and intellectual curiosity; which will provide for them a deep understanding of American democracy and their role in maintaining its strength and vitality; which will imbue them with an understanding of man and his aspirations; and which will enable them to communicate effectively and efficiently.

Within this general purpose, the University has three more specific purposes: (1) to provide instruction in the arts and sciences, in business, in professional education, and in technological subjects; (2) to provide service to the community and region through the faculty serving as consultants in their fields of specialization and engaging in research dealing with problems of our society, and (3) to engage in research to advance knowledge in the subject matter areas with which the various colleges of the University are concerned.

These purposes of the University are accomplished through the Central University College, College of Arts and Sciences, College of Business, College of Education, College of Applied Arts and Technology, and the Graduate School.

THE GRADUATE SCHOOL

The major purposes of graduate study at Eastern Kentucky University are delineated below:

Preparation of teachers and school leaders for greater service through the extension of those fields of study which result in improved classroom instruction, informed administration, and human understanding.

Provision in the initial stage of graduate study for those who seek advanced graduate degrees.

Provision of advanced study for personnel in industry, government, and education in biology, chemistry, criminal justice, English, geography, geology, history, business, physics, and technology.

Qualification of persons for creative leadership in a complex economic order through the enlargement of their knowledge, managerial acumen, and perspective.

Provision of opportunities for music students to pursue advanced study.

Training students to man service agencies as counselors and psychologists.

Advanced study is increasingly rewarding to students who delimit their own objectives with precision and broad understanding and pursue them toward the end of self-enhancement and societal improvement.

THE CAMPUS

The Eastern main campus embraces approximately 325 acres of gently-rolling bluegrass slopes, and is further enhanced by the thoughtful selection and placement of trees and shrubs.

The various academic buildings, dormitories, and other facilities, reflecting several styles of design, are centered around a replica of an ancient Greek amphitheater which seats 2,500 persons.

Special emphasis in beauty and usefulness has been placed upon the academic heart of the University found in the complex of the John Grant Crabbe Library, the University Building, and the Bert Combs Building. Following are brief descriptions of the major buildings and facilities of Eastern Kentucky University.

ACADEMIC BUILDINGS

ALUMNI COLISEUM

The Alumni Coliseum houses facilities for physical education, general college classrooms and a basketball playing arena. The physical education facilities include auxiliary gymnasiums, special purpose rooms, locker and shower spaces and both indoor and outdoor swimming pools. Classrooms are included for general university use. Spectator seating will accommodate approximately 6,500 persons for basketball games and approximately 7,500 persons for convocations, lectures, and similar events. The building provides office space for Physical Education faculty, Department of Athletics staff and R.O.T.C. staff.

BERT COMBS BUILDING

The Bert Combs Building was named to honor a former governor of the Commonwealth of Kentucky. Completed in 1964, the building houses the Colleges of Business and Education, and the Departments of English, Speech and Drama, and Political Science. The four-story building is completely air-conditioned and provides teaching stations for 2,200 students. It contains two large lecture rooms and provides offices for members of the faculties of these departments. Of striking design, the exterior of the building is faced with cut limestone and provides a unified concept in the heart of the academic campus.

CAMMACK BUILDING

The James W. Cammack Building was named to honor an appointee to the first Board of Regents of the University in 1906. In the summer of 1961, this building was completely renovated and is currently used to house the Art Department, Foreign Language Department and other departments of the University. The exhibit room of the Art Department is located on the first floor and a modern, well-equipped language laboratory on the second floor is used by the Foreign Language Department.

COATES ADMINISTRATION BUILDING

The Thomas Jackson Coates Administration Building was named in honor of Eastern's third president. The offices of the President, Vice President for Academic Affairs, Dean of Admissions and Registrar, Vice President for Public Affairs, Vice President for Business Affairs, Office of the Graduate School, and other administrative personnel are located in this building. The building contains the Hiram Brock Auditorium which has a seating capacity of 1,700. The auditorium has a stage 40 feet by 30 feet, equipped with adequate curtains and drops, and a modern motion picture projection room. In 1965 a thorough renovation of this facility was completed. In this renovation the building was completely air-conditioned and refurbished, a 40-rank Holtkamp pipe organ was installed in the Brock Auditorium.

CRABBE LIBRARY

The John Grant Crabbe Library, named to honor Eastern's second president, occupies a central and convenient position on the campus. A major reconstruction of this facility in 1966 enlarged the library to 148,000 square feet of floor space. The design provides diversified stacks with adjacent study areas. Individual study carrels are located throughout the building. Fully air-conditioned, the library provides seating space for approximately 3,000 students simultaneously and currently houses 214,000 volumes. It is designed ultimately to house a half million volumes.

DONOVAN BUILDING

The Donovan Building, named to honor the late Dr. Herman Lee Donovan, fourth president of Eastern Kentucky University and President Emeritus of the University of Kentucky, was first occupied in September of 1961. This building consists of several units housing the laboratory school of Eastern Kentucky University, and provides college classrooms. The facility is complete in all respects, utilizing modern concepts in design and equipment. Facilities are included for the laboratory school, from the nursery school through the twelfth grade, with appropriate units designed for physical education, music, arts and crafts, and general academic work at the elementary and secondary levels. Completely air-conditioned, this building compares favorably with any similar facility in the nation. The completion of an addition to the Donovan Building provides additional elementary classrooms, a nursery school and studios for educational television and an FM radio station.

FITZPATRICK ARTS BUILDING

This building was named to honor H. D. Fitzpatrick, Sr., a long-time member of the Board of Regents of the University. The Fitzpatrick Arts Building houses the Department of Industrial Arts. The Gibson Addition to the building in 1961 added to the Industrial Arts shop and classroom facilities.

ROBERT B. BEGLEY BUILDING

This new facility, completed in 1969, is a ten-story structure which houses the departments of Physical Education, Military Science and Law Enforcement. Its inclined terraced roof serves as a football stadium with seats for 20,000 spectators. The building contains 188,000 square feet of floor space and provides instructional facilities to serve more than 2,000 students simultaneously. In addition to 34 lecture and seminar rooms, there are three instructional gymnasiums, 12 handball courts, and locker and equipment rooms.

A. B. CARTER BUILDING

The A. B. Carter Building is designed as an agriculture technology center. The one-story structure, with brick exterior, contains 13,200 square feet of floor space. The building contains classrooms and shops for instructional and vocational training in farm mechanics, maintenance of farm machinery and horticulture.

BURRIER HOME ECONOMICS BUILDING

The Department of Home Economics is housed in the new four-story structure named for Miss Mary K. Burrier, former chairman of the Home Economics Department. The building, completed in 1968, contains lecture halls, research and study areas, 18 classrooms, and a "family-living center."

STEPHEN FOSTER BUILDING

The Stephen Foster Music Building houses the Music Department and provides classrooms for other divisions of the University. Facilities include, in addition to classrooms, nineteen practice rooms, ten studios, a band room and a chorus room, a number of auxiliary rooms such as offices for the head of the Music Department and the band director, listening rooms for music appreciation, student and faculty lounges, and storage and locker space. The building was air-conditioned in the spring of 1961.

ROARK BUILDING

Roark Building was named to honor Dr. Ruric Nevel Roark, Eastern's first president. In 1965, this building was renovated, refurbished and completely air-conditioned. The building provides facilities for the Departments of Mathematics, Geography, Geology, Anthropology and Sociology.

MOORE BUILDING

The Departments of Biology, Chemistry, and Physics are housed in the Moore Building. The air-conditioned building contains offices, modern laboratories and several lecture areas in addition to regular-sized classrooms.

MEMORIAL SCIENCE BUILDING

Memorial Science Building is a modern four-story structure housing spacious, well-equipped laboratories and lecture rooms for the Departments of Biology, Chemistry, and Physics.

UNIVERSITY BUILDING

The University Building was constructed in 1874 to house Central University. This four-story brick structure is the oldest academic building on the campus. In the summer of 1961 the building was completely renovated to house the Departments of History and Social Studies.

WEAVER HEALTH BUILDING

The Weaver Health Building is named for the late Charles F. Weaver of Ashland, Kentucky, who served on the Board of Regents at Eastern from 1920 to 1932. In 1965, a renovation of this building was completed, converting it into a health and physical education facility for women students. The building provides a large gymnasium, a spacious modern dance studio, an official size tile swimming pool, handball courts, several classrooms, and faculty offices.

FAMILY HOUSING FACILITIES

BROCKTON

Brockton is the family housing project at Eastern. It consists of 198 modern, fire-resistant apartments in all. There are 72 efficiency units, 95 one-bedroom units, and 32 two-bedroom units.

The apartments are furnished with an electric refrigerator and gas range. The efficiency units also contain a sleeper couch and a five-piece dinette set. Each apartment has an individual thermostatically-controlled gas furnace, tile floors, and acoustical ceilings. The bath includes both shower and tub. A coin-operated laundry with both washers and driers is conveniently located in the housing area.

Brockton was named to honor George Marshall Brock, who has been associated with the University since 1918, and as Business Agent or Comptroller since 1923, retired in 1969.

HENRY MARTIN HALL

Henry Martin Hall is the first of a series of three-story brick apartment buildings for married students. Located on John Hanlon Drive, near the Observatory, the Hall contains 54 one-bedroom apartments.

TRAILER PARKS

Two modern trailer park areas have been constructed adjacent to Brockton. Paved roadways, landscaped areas, adequate space and complete utility services are included. Both parks accommodate trailers of all sizes.

HOUSING FOR SINGLE STUDENTS

Comfortable living accommodations are provided single students in modern dormitories designed to give the Eastern student convenient accommodations. In all, there are 20 residence halls which house 7,000 students. In addition, two large complexes are presently under construction which, when completed, will increase the on-campus housing capacity to more than 11,000 students. Each complex will consist of four skyscraper dormitories and a large cafeteria. For information concerning on-campus housing, write:

Office of the Housing Secretary
Coates Administration Building

OTHER FACILITIES

In addition to the residence units listed herein, the University owns or operates several other facilities for the housing of students. Among these are Stateland House for single men students and several apartments and dwellings on campus for the housing of faculty and staff.

OTHER BUILDINGS

KEEN JOHNSON STUDENT UNION BUILDING

The Keen Johnson Student Union Building contains club rooms for students, recreation halls, the Little Theatre, bookstore, soda fountain and grill, cafeteria, faculty rooms, and a spacious reception room. It was named in honor of a former Governor of Kentucky who was a member of the Board of Regents at the time it was constructed. In 1961 the Student Union Building was renovated and refurnished to provide more extensive services for students, faculty and friends of the University.

BLANTON HOUSE

The two-story brick residence, which is the President's Home, was constructed in 1886 as a residence for the Chancellor of Central University but did not become the property of the University until 1912. This residence has served as the home of Eastern's presidents since that date.

AULT SERVICE BUILDING

The Ault Service Building was named in honor of William A. Ault, who served the University for 45 years as Superintendent of Buildings and Grounds.

This modern facility was completed in 1962. The building not only provides modern shops and office space for the entire maintenance department, but serves as a central supply and storeroom for all departments on the campus.

UNIVERSITY FARM

The University operates a modern farm, engaging in dairying and production of various crops. The farm operation is located away from the main campus and is housed in up-to-date buildings, providing modern sanitary facilities for the production of food products.

ARLINGTON

The Arlington Estate, which features a three-story Georgian-style mansion encompassed by 181 acres of gently sloping Bluegrass land, serves as a faculty-alumni club. The estate also serves the University as a conference center as well as for instructional and recreational purposes by students and faculty.

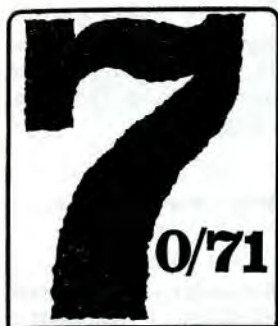
The mansion and surrounding 15 acres, valued at a quarter of a million dollars, were the generous gift of construction industrialist W. Arnold Hanger. The remaining acreage was purchased by the Eastern Kentucky University Foundation.

MARY FRANCES RICHARDS ALUMNI HOUSE

The Mary Frances Richards Alumni House is a two-story frame home just off the main campus on Lancaster Avenue that houses the Office of Alumni Affairs. Named to honor Mrs. Richards, retired member of the Geograph Department faculty and executive secretary of the Alumni Association for 19 years, the new alumni center has been re-modeled to provide offices, a lounge, and conference areas.

POWELL UNIVERSITY CENTER

Under construction on the site of Hanger Stadium, the University Center will be the single most expensive building ever constructed on the Eastern campus. Result of a three-year student-faculty committee study, the structure will include a total of 154,000 square feet on three floors. A 1,000-seat cafeteria, an 800 capacity grill, bowling alley, game rooms, television lounges, offices and meeting rooms will be contained in the structure. It will be completed during the 1970-71 year.



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EXPENSES AND LIVING ACCOMMODATIONS

REGISTRATION FEES AND OTHER EXPENSES

The following list of fees is required of students. All fees must be paid at the time of registration. Incidental fees paid each semester entitle the student to use of the library, the use of the Student Union Building, and to other services as directed by the Board of Regents.

REGISTRATION FEES AND OTHER EXPENSES (Per Semester)

Effective June 1, 1970

Registration and Incidental Fees (Per Semester)	Kentucky Resident	Out-of-State Resident
Registration Fee:		
Full time (Incidental fee, \$30.00, included)	\$150.00	\$400.00
Part-time (Fewer than 9 Semester Hours), per hour	14.00	42.00
Classroom fee (For Part-time Students)	2.50	2.50
Registration and Incidental Fees (Summer Term)		
Registration Fee:		
Full-time	75.00	200.00
Part-time (Fewer than 6 Semester Hours), per hour	14.00	42.00
Incidental Fee:		
Full-time	15.00	15.00
Part-time Includes: Classroom fee	1.25	1.25
Special Fees		Per Course
Health and Physical Education		4.00
Locker Fee		4.00
Music		
Full-time Music Major		35.00
Part-time Music Major		17.50
Full-time Non-Music Major		30.00

Other Expenses

Late Registration Fee (per day late)	1.00
Voluntary change of schedule	2.00
Transcript Fee (other than initial copy)	1.00
Graduation Fee (includes cost of diploma, cap and gown rental, and other graduation expenses)	
Master's Degree	21.00
Post Office Box Rent	1.00
Insurance (Optional)	10.00
(Accident, medical, and hospital benefits up to \$1,000.00)	
Returned Check Assessment	5.00
Auto Registration	10.00

(All fees are subject to change without notice)

DEFINITION OF RESIDENT STUDENT FOR FEE ASSESSMENT PURPOSES

The following policy, adopted by the Council on Public Higher Education, Commonwealth of Kentucky, in accordance with Section 164.020(2) of the Kentucky Revised Statutes, is applied to determine a student's eligibility for fees assessed Kentucky residents who enroll at any of the state-supported institutions of higher learning in the Commonwealth of Kentucky. This determination is made at the time of initial enrollment and shall not be changed thereafter except as provided below.

Students under twenty-one should refer to Page 27 of the University *General Catalog*.

A student twenty-one years of age or older is eligible to register as a resident if he has maintained continuous residence in the Commonwealth for twelve months immediately preceding the date of his original enrollment, exclusive of any time spent in attendance at any institution of higher learning. An adult student registered as a non-resident upon his original entrance cannot generally thereafter acquire resident status.

An adult student from out-of-state who seeks residence status must assume the burden of proving conclusively that he has been a resident of the Commonwealth the requisite time with the present intention of making his permanent home in this state. In general, it is assumed that the intent to remain indefinitely in the Commonwealth is evidenced not only by what a person states but what a person has actually done. Normally, persons with intent to establish residence will be expected to have done all those things which a person customarily does when establishing a permanent residence, some of which are: obtaining full time employment, establishing a home, buying property, filing tax re-

turns, transferring or establishing church membership, affiliating with local organizations, and the various other things which give evidence of intent to remain indefinitely within the Commonwealth.

Each Board of Trustees or Board of Regents is authorized to establish a Non-Resident Fees Committee to consider changes in resident status based on the above criteria. Application for change of resident classification should be made to the person who has been designated by the Board of Trustees or Regents as the Chairman of the Non-Resident Fees Committee. The Chairman will present each case to the Committee for a final decision.

This policy shall be applicable with exceptions allowable for possible conflicts with state and federal laws relating to residency such as the Federal Soldiers and Sailors Relief Act.

LIVING ACCOMMODATIONS

Eastern Kentucky University maintains a number of residence halls for single students. Within limits of the capacities of these halls all single students not living at home may live in University facilities. Single students over the age of twenty-one may elect to seek lodging in Richmond homes. Names and addresses of those who have rooms for rent will be listed with the Housing Secretary. All students, whether living in University or private facilities, are subject to the regulations of and supervision by the University.

All rooms have single beds for which pillows, pillow cases, and sheets are furnished. The University bears the expense of having these sheets and pillow cases laundered. Each student is expected to provide his own blankets, towels, and similar articles.

Residence Halls for Women

	Rent for Semester (Includes \$7.00 Linen Service)	Rent for Summer (Includes \$4.00 Linen Service)
Burnam	\$130.00	\$65.00
Case	130.00	65.00
McGregor	140.00	70.00
Sidney Clay	140.00	70.00
Sullivan	130.00	70.00
Telford Hall	140.00	70.00
Walters	140.00	70.00

Residence Halls for Men

Combs	\$140.00	\$70.00
Dupree	140.00	70.00
Keene Hall	140.00	70.00
Keith	130.00	65.00
Martin	130.00	65.00
Mattox	130.00	65.00
Miller, Beckham, and McCreary	130.00	65.00
O'Donnell	130.00	65.00
Palmer	140.00	70.00
Todd	140.00	70.00
Commonwealth	140.00	70.00
Telephone Service (if available)		
Per Student	\$12.00	\$6.00

All charges are subject to change without notice.

RESIDENCE HALL POLICIES

All students desiring housing at Eastern Kentucky University should complete an application for a room reservation and forward it to the Bursar's Office, Office of Business Affairs, Eastern Kentucky University, Richmond, Kentucky.

An advance rental payment of \$50.00 should accompany the application. This payment is necessary before a reservation will be made. It will be applied to the rent for the first semester following enrollment. The advance payment will be refunded in full if cancellation is received by July 15 for the first semester, December 15 for new students for the second semester, or May 15 for the summer term respectively.

Reservations will be held only through the day preceding the first day of classes, unless students have made arrangements with the Residence Hall Director for late arrival.

Partial refunds of rentals after a room is accepted may be made only in exceptional instances. In no case shall a refund of rent be made to students moving from University housing at their convenience.

Room rent is paid by the semester, and is due and payable at registration.

STUDENT IDENTIFICATION CARD

Each full-time student who has paid the full fees for a semester, including the activity fee, will be issued a personal identification card.

This card entitles the student to admission to all University athletic contests on the campus and to certain other programs sponsored by the University. It must be carried by the student at all times for official identification on the campus, and all full-time students must have a validated ID card before registration is completed.

Each part-time student is issued a non-laminated card for identification purposes only. It is not valid as an activity card.

If the full-time student card is lost, it must be replaced. A replacement fee of \$10.00 is assessed. Application for replacement must be made at the Office of Student Affairs.

REFUND POLICY

Refunds on fees and room rental charges, when authorized, shall be made on a schedule based on the time elapsed during the semester or summer term. During the semester, refund of a portion of the fees and room rental paid shall be made as follows: first and second weeks, 75%; third and fourth weeks, 50%; fifth and sixth weeks, 25%. After six weeks no refunds will be made. During the summer term, the following schedule will determine the portion refunded: first week, 75%; second week, 50%; third week, 25%. After three weeks, no refund will be made. (For the purpose of this calculation, the week will begin with the first day of registration for the semester or summer term.)

The percentage of refunds shall apply to all fees and room rentals paid, except that no refund can be made on fees collected for student insurance premiums, class dues, and similar fees.

No refund will be made for reduction of course load unless it results from cancellation of a class or the student having been permitted to enroll in a course for which he was not eligible. Refunds for reduction of course load must be approved by the Vice President for Academic Affairs.

FOOD SERVICE

The University operates several food service facilities on the campus. Large modern, air-conditioned cafeterias in the Johnson Student Union Building, Martin Hall, and Sidney Clay Hall serve attractive, wholesome meals at reasonable prices. In addition, snack bars are located in the Johnson Student Union Building, Case Hall, Martin Hall, Mattox Hall, and Weaver Health Building.

GRADUATE ASSISTANTSHIPS, SCHOLARSHIPS, FINANCIAL AID, AND STUDENT EMPLOYMENT

GRADUATE ASSISTANTSHIPS

Graduate assistantships are available to unusually well qualified students in some departments. Duties may include laboratory supervision, teaching, and research related tasks. Stipends include remission of the out-of-state registration fee and \$2,200.00 for the academic year. Applications of assistantships may be obtained from the Dean of the Graduate School. Preference in awarding assistantships will be given to individuals able to support applications with Graduate Record Examination scores.

Students holding a graduate assistantship should not carry a combined teaching and course load in excess of fifteen semester hours. A non-teaching assignment of sixteen to twenty hours of work per week is considered the equivalent of a three hour teaching load.

Applicants must meet all the requirements for admissions to the Graduate School prior to being awarded an assistantship.

PHI DELTA KAPPA SCHOLARSHIP

The Eastern Kentucky University Chapter of Phi Delta Kappa, an education fraternity for men in education, awards a full tuition scholarship each year to a full-time male graduate student. Applications and information may be secured by writing to the Graduate Office. Applications must be submitted by July first of each year.

LOAN FUNDS

The National Defense Student Loan Program at Eastern provides loans for students. Priority is given to all students who have superior records in high school and college. To get application forms and a statement of conditions relating to the loans, applicants should send their requests to the Office of Student Financial Assistance, Eastern Kentucky University.

The Student Aid Society Inc. Loan Fund of Eastern Kentucky University is designed to help worthy students complete their education. It has been augmented from time to time by gifts from different individuals and organizations and is being increased annually. Small loans are available to students who are currently enrolled. Those having high scholastic records will be given preference in the granting of loans. This fund makes it possible for a student to borrow a small amount of money on a personal note at a legal rate of interest. Students who desire further information concerning this fund should contact the Chairman of the Student Aid Committee.

United Student Aid Fund

Eastern Kentucky University is a participant in the United Student

Aid Fund (Guaranteed Loan Program). The United Student Aid Fund is a private non-profit corporation which endorses loans made by hometown financial institutions to deserving individuals who are either currently enrolled or have been accepted for admission to Eastern Kentucky University. The application for such a loan must be endorsed by Eastern Kentucky University before submission to the bank or other financial institution.

Under this program a full-time graduate student may borrow up to \$1,500 per year. To qualify for this assistance a student must be from a family whose adjusted income does not exceed \$15,000 per year. Application and further information for a guaranteed bank loan may be obtained from the student's hometown bank or other financial institution or by writing the Office of Student Financial Assistance.

STUDENT EMPLOYMENT

There is opportunity for student employment, whereby a limited number of students may earn part of their expenses by working in the cafeteria, library, bookstore, post office, dormitories, administrative officer, University dairy and farm, maintenance department, and faculty offices. Some students may also secure part-time employment in Richmond stores, restaurants, and other businesses.

Student labor should be limited so that work hours will not take too much of the student's study time. While ten hours per week is an average labor load, circumstances may permit a student to work more hours. No student, however, should enter the University without sufficient money for the semester unless there is a definite guarantee of work to support him. For further information and application forms, write to the Office of Student Financial Assistance, Eastern Kentucky University.

THE WORK-STUDY PROGRAM

Under a grant from the Federal Government, made possible by the Economic Opportunity Act of 1964, eligible students may be employed on a part-time basis while in full-time enrollment at Eastern. This program supplements the part-time institutional program which has been in effect at Eastern for many years.

A student or prospective student from a low-income family is eligible for employment under the Federal Work-Study Program. The student must enroll for a minimum of twelve semester hours of course work each semester and maintain at least a "B" average.

Placement in jobs will depend upon the skills, interests, and aptitudes of the student and the availability of positions open at a given time. Students may work up to 15 hours per week and can earn up to \$22 per week, depending upon the type of job assigned. Payments are made to the student employee on a semi-monthly basis.

It is the policy of the administration that prospective students should have a high school scholastic standing of "C" or better in order to apply for student financial aid. A statement from the student's principal or guidance counselor should accompany the application to verify the high school scholastic standing.

Students may continue working under this program as long as their academic performance and job performance are satisfactory.

This program is combined with other programs of financial assistance (the National Defense Loan Fund and the Work-Study Program mentioned above) to the extent necessary to enable the student to meet his educational expenses.

For further information and an application form, write to the Office of Student Financial Assistance.

OTHER FINANCIAL ASSISTANCE

The Veterans Program at Eastern Kentucky University is approved by the Veterans Administration for the education of veterans and their eligible dependents. Students concerned with veterans training should have, at the time of registration, a Certificate of Eligibility. This is secured from the Regional office of the Veterans Administration. The University is responsible for the completion of certain Veterans Administration forms and for the other necessary information about students who receive this aid.

VOCATIONAL REHABILITATION

Vocational Rehabilitation assistance for students with physical handicaps of various kinds may be approved. They may receive financial benefits as approved by the Department. Students who wish to consult with a representative relative to vocational rehabilitation should write the Department of Education, Department of Vocational Rehabilitation, Frankfort, Kentucky, for specific instructions.

VETERANS ADMINISTRATION BENEFITS

War Orphans, Widows, Children, and Wives of Deceased and Disabled Veterans should contact the Veterans Administration, 600 Federal Place, Louisville, Kentucky. Application forms are available in the Student Financial Aid Office.

STUDENT HEALTH SERVICES

University health services are furnished full time by a physician and a staff of registered nurses. Services at the Infirmary are available 24 hours a day with the exception of vacation periods and other announced dates. The modern infirmary has 10 beds for short time illness or overnight care. Surgery or serious illnesses will be referred to one of the several general hospitals in the area.

All new students must have a physician perform a complete physical examination and complete a medical record which is furnished the student when admissions information is being filed. The Medical Record is a part of admissions; and after the student is admitted to the University, the Medical Record becomes a part of the student's health folder and is filed at the University Infirmary. With this information, it is possible to be of greater assistance to all full-time students who use the Infirmary services.

GUIDANCE AND COUNSELING

Through its student affairs offices, the University relates to students in various aspects of campus life. Some of the more specific areas are: (1) physical and mental health of students; (2) coordination of student activities and clubs; (3) on-campus and off-campus living; (4) maintenance of personnel records; (5) operations of a student counseling office; (6) registration; (7) foreign student advisement; (8) social programs; (9) veterans affairs; and (10) student financial assistance.

The entire University faculty and administrative staff assists in various aspects of student personnel work, co-ordinated through the Office of Student Affairs.

The University Counseling Center has a staff of full-time counselors to assist students with problems of educational-vocational goal planning, curricular choice, personal-social adjustments and serves as a referral agent for University psychiatric services.

The Center is located in Room 212, Coates Administration Building.

CULTURAL ACTIVITIES

Every effort is made at Eastern to surround the students with cultural advantages. The programs presented are planned as part of the student's education and much time and effort is put forth to provide programs that will be of benefit to students.

Assemblies are held regularly and special assemblies are held when the occasion warrants. While programs at these assemblies are designed primarily for the students and faculty, visitors to the campus are welcome to attend. Programs planned for these assembly periods include appearances by nationally recognized lecturers and artists.

Concert Series are presented at the University in cooperation with the Community Concert Association. Students are admitted to these excellent programs without charge, but they must present identification cards for admission. These programs feature some of the outstanding individuals and groups in the nation.

Art Exhibits, arranged by the Art Department, are on continuous exhibition in the Art Gallery, Cammack Building. Every effort is made to include in the exhibits the works of major artists, past and present.

from across America and around the world. Also included are the works of art students, art majors, and faculty. In addition, special exhibits are periodically arranged for showing in the Student Union Building.

Church Affiliation is recognized as an important factor in the life of any student. Eastern is a state-supported institution and is, therefore, non-denominational. The University has a basic objective in helping to develop ethical character among all students. There is close cooperation between the institution and several fine churches in Richmond. Students are encouraged to attend church services in town. Eastern makes spaces available for several student church organizations to meet on the campus.

Presently, two downtown churches have built student centers adjoining the campus. Other student centers will be built in the near future on sites which have already been purchased.

Plays presented by Eastern Little Theatre are a significant contribution to Eastern's cultural life. Three major productions each year, along with studio productions, and a drama program in the summer, provide numerous opportunities in acting, directing, and technical theatre. Participation in every aspect of the theatre program is open to all students.

In conjunction with the theatre program, there is a chapter of Alpha Psi Omega, national honorary dramatics fraternity, which gives recognition to students of outstanding acting and technical ability.

Eastern Little Theatre is affiliated with the following professional dramatics and speech organizations: American National Theatre and Academy, American Educational Theatre Association, Speech Association of America, United States Institute of Theatre Technology, South Eastern Theatre Conference, Southern Speech Association, Kentucky Speech Association, and the Kentucky Council of Performing Arts.

Cultural Opportunities in Surrounding Centers: A broad panorama of cultural events is accessible by automobile in Louisville, Lexington, and Cincinnati. Students are encouraged to attend special events of interest.

PLACEMENT OFFICE

The Placement Office is maintained by the University and is a free service to assist students and alumni in obtaining positions in schools, business, and industry. Its objective is to assist job candidates to meet employers; it does not guarantee a job for the candidate.

Each year representatives of schools, industry, business, and government agencies come to this office searching for graduates with specific backgrounds, experience, and ability to fill their positions and vacancies.

The Placement Office provides up-to-date job listings in numerous fields. It offers the applicant opportunities to have interviews with numerous prospective employers.

The Placement Office prepares and distributes bulletins to those who have filed a request. The bulletins list all known employment opportunities supplied by employers by letter, telephone, telegraph, or through their own placement bulletins.

Students receive the information via campus bulletin boards, department heads, and the *Eastern Progress*, the weekly student newspaper. Alumni receive the listings by mail and through the *Progress*, which they receive every two weeks.

THE ALUMNI ASSOCIATION

The Alumni Association of Eastern has as its purpose to promote fellowship among the graduates and to stimulate mutual interest and concern between the University and the Alumni. Eastern now has over 20,000 graduates. Many of these men and women hold more than one degree from the University. All Eastern graduates are members of the Eastern Alumni Association, "with all the rights and privileges appertaining thereto." All former students who have as much as a semester's work at Eastern, former faculty and staff members, are eligible for associate membership. The Alumni Association encourages all alumni to make an annual gift to the Alumni Fund. The minimum gift is \$50.00, which serves as the "dues" for active membership in the Association. This is used by the Association's Alumni Office to help defray operating expenses. The remainder of any contribution will be used for the specific purpose designated by the contributor. Life memberships are \$75.00 for single and \$100.00 for joint memberships.

The Alumni Association sponsors Homecoming in the fall, KEA breakfast in the spring, and Alumni Day at commencement time. The latter features an Alumni Dinner honoring the 15, 25, 40 and 50 year classes, and the presentation of an Outstanding Alumnus Award. In addition, active Alumni Chapters at Louisville, Greater Cincinnati, Ashland-Huntington-Ironton (Tri-State) area, Pulaski County, Pike County, Perry County, Harlan County, Breathitt County, Fayette County, McCreary County, Dayton and Hamilton, Ohio, Washington, D.C., and three in Florida, have numerous meetings throughout the year, open to all alumni and former students in the area. Many more Eastern Alumni Chapters are expected to be installed in the future.

The Eastern Alumni Association is a member of the American Alumni Council and the Joint Alumni Council of Kentucky, an organization made up of the alumni of the six state-supported institutions: Eastern Kentucky University, Morehead State University, Murray State University, Western Kentucky University, University of Kentucky and Kentucky State College.

The Eastern Alumnus, official magazine of the Alumni Association, is published each fall and spring by the Association for its members. Subscription is included in the membership dues.

The Alumni Office is conveniently located in the Mary Frances Richards Alumni House where alumni and students may get bulletins and information. This is a good place for former students to find the addresses of their colleagues. Graduates, former students and faculty members are always welcome at the Alumni Office.

The Alumni Office is conveniently located in the Mary Landon House, Alumni House, whose plans and specifications are available for inspection. This is a good place for former students to find the names of their fellow graduates. Former students and faculty members are always welcome at the Alumni Office.

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ADMISSION TO THE GRADUATE SCHOOL

DEGREES, PROGRAMS, AND REQUIREMENTS

The Graduate School, in cooperation with the College of Applied Arts and Technology, the College of Arts and Sciences, the College of Business, and the College of Education, offers the following degrees and programs:

College of Applied Arts and Technology

- Master of Science in Criminal Justice.
- Master of Science in Industrial Education.
- Master of Science in Industrial Technology.
- Specialist in Technology.

College of Arts and Sciences

- Master of Arts in English.
- Master of Arts in Geography.
- Master of Arts in History.
- Master of Arts in Political Science.
- Master of Music Education.
- Master of Public Administration.
- Master of Science in Biology.
- Master of Science in Geology.
- Master of Science in Chemistry.
- Master of Science in Physics.
- Master of Science in Psychology.

College of Business

- Master of Business Administration.

College of Education

1. Master of Arts in Education—The College of Education offers the Master of Arts in Education Degree with emphasis in elementary education, counseling, library science, reading, school social work, special education, and most teaching areas in secondary education.
2. Master of Arts in Counseling—Emphases available in Non-School Counseling and Student Personnel Services in Higher Education.
3. Master of Science in Physical Education.
4. Specialist in Education.
5. A sixth year program leading to Rank I.
6. A joint doctoral program with the University of Kentucky.
7. A fifth year program for certificate renewal.
8. A program leading to the standard certificate for elementary and secondary principals and supervisors.

TYPES OF ADMISSION

Students who intend to pursue a particular graduate program should refer to the section of this *Catalog* pertaining specifically to that program. Students not intending to fulfill requirements of specific programs may be admitted to the Graduate School by meeting the requirements delineated in the section below entitled "General Admission Requirements."

GENERAL ADMISSION REQUIREMENTS

Admission to the Graduate School at Eastern Kentucky University is based upon evidence that the applicant will be able to pursue creditably a program of graduate study in his field. Admission to the Graduate School should not be construed, however, as **admission to candidacy for the degree**, described later. Application forms may be secured from the Office of the Graduate School.

Applicants should be graduates of accredited four year institutions authorized to grant the baccalaureate degree.

The minimum grade point ratio acceptable for unqualified admission is 2.4 overall (4.0—A). Conditional admission may be granted to a limited number of individuals whose overall standing is 2.25 provided they possess for the last 30 hours of their undergraduate work an average of 2.5.

Specific program requirements are listed in college and/or departmental sections.

Students assume responsibility for filing complete admission data with the Office of the Graduate School, including two official copies of transcripts of *all* college credits. An official transcript must bear the seal and signature of the sending institution and should be transmitted directly to the Dean of the Graduate School.

The Graduate School reserves the right to withdraw without credit or refund any student for whom applications are incomplete at the end of their first enrollment.

No student may receive graduate credit for a course without admission to the Graduate School.

All programs assume certain formal and informal prerequisites. Normally any deficiencies in preparation must be resolved during the first enrollment.

UNDERGRADUATE ADMISSION

An undergraduate student who needs not more than nine semester hours in one semester (or three semester hours in one summer session) to complete all of the requirements for a bachelor's degree may be allowed to register for graduate credit work under the conditions described below.

All work for undergraduate credit will be completed during that semester or summer session.

The total registration for all work will not exceed twelve semester hours in a semester (or six semester hours in a summer session).

All work to be counted for graduate credit will be approved in advance by his college dean and advisor and by the Dean of the Graduate School.

The student must meet all pertinent conditions for admission to the Graduate School, and credits must not be used to meet undergraduate requirements.

VISITING STUDENTS

Because of its unique programs and facilities, strong faculty, diversified institutes and workshops, Eastern is attractive to many students who have been admitted to other accredited graduate schools. Students in good standing may elect to gain admission for one term by having their graduate dean submit a statement to that effect or by having him sign and return to Eastern a "Visiting Student Certificate," copies of which may be obtained from the Office of the Graduate School.

FOREIGN STUDENT ADMISSION

Foreign students meeting general admissions requirements and for whom Eastern has appropriate work at the graduate level are invited to make application. Such applications should be supported, however, by satisfactory evidence of their ability to meet the requirements of scholarship in English. A copy of the results of the "TOEFL" examination (Test of English as a Foreign Language), given in a large number of centers throughout the world by Educational Testing Service of Princeton, New Jersey, should be submitted by applicants for whom English is not a native language.

GRADUATE RECORD EXAMINATION

All graduate students must submit, either at the time of application for admission or no later than the completion of the first session of their graduate work, the scores of the aptitude section of the Graduate Record Examination. Certain programs require Advanced Graduate Record Examinations in the subject field in addition to the aptitude sections. The Graduate Record Examinations are administered at Eastern in October, April and June. Applications to take the Graduate Record Examination must be received in the office of the Educational Testing Service, Princeton, New Jersey, more than three weeks in advance of the testing date. Application forms are available in the office of the Dean of the Graduate School. It is the student's responsibility to apply for, to take the examination, and to have the scores sent to the Dean of the Graduate School at Eastern.

RESIDENCE REQUIREMENTS FOR DEGREES

The minimum residence requirement shall be two semesters. At least one-half of the course requirements and one-half of the residence work shall be met as a full-time graduate student. A load of six semester hours of credit shall be regarded as full-time during an eight week summer term and a minimum load of nine hours of credit shall be regarded as full-time during one semester.

PROGRAM PLANNING

After receiving notification of admission to the Graduate School and of the appointment of an advisor or graduate committee, the student should take the initiative to contact his chairman and discuss his objectives carefully. This conference should take place after the student has familiarized himself with program purposes and pertinent regulations as they are described in the *Catalog* and *before registration*. When prior conferencing is not possible, the student may obtain approval for the first semester's work in writing or on Registration Day. However, the complete program should be developed, if at all possible, during the first semester of enrollment.

ACADEMIC LOAD

An academic load of nine to 15 hours is considered permissible during the regular semester for residence purposes. Graduate assistants are permitted to carry a maximum course load of 12 hours. Assistants carrying less than nine hours must register for Residence 600 (RES) and pay the full registration fee. During the summer session, students carrying five to nine hours are considered full-time.

REGISTRATION

Graduate students should register on the dates stipulated in the calendar. Registration packets should be obtained from the Office of the Graduate School; the advisor should approve and initial the Registrar's Schedule Card; the advisor and student bear responsibility for courses scheduled, subject to the policies and approval of the Graduate School; the student is responsible for clearance of motor vehicle, housing arrangements, and payment of all fees and assessments in accordance with prevailing University policy.

For each registration, it is necessary to submit as far in advance of registration as possible a re-admission form which may be obtained from the Office of the Graduate School.

GRADE POINT AVERAGE

Candidates for a master's degree must have an average standing of at least 3.00 on a 4.00 scale. No credit shall be granted for a grade below C.

ADMISSION TO CANDIDACY

A graduate student must be admitted to candidacy by the Graduate Council before he is eligible for the master's degree. At least nine hours of graduate credit must be earned before admission to candidacy, and at least 12 hours must be earned after admission to candidacy.

All conditions of admission to the Graduate School should have been satisfied.

Graduate Record Examination scores for the combined aptitude tests and departmental requirements on Advanced Tests shall have been satisfactorily met.

No student shall become a candidate without a minimum grade point standing of 3.0.

A complete program of studies for the program shall have been devised, approved, and filed with the committee chairman, department chairman, and Dean of the Graduate School. Subsequent changes, while permissible, must be approved by these parties in advance.

While the student should initiate candidacy proceedings, the committee chairman is responsible for the recommendation to the Graduate Council and such intermediate bodies as exist.

LANGUAGE REQUIREMENTS

In most Master of Arts programs, a reading knowledge of a modern foreign language is required. An appropriate language, usually French, German, Russian, or Spanish will be designated by the department. In some instances 12 hours of advanced credits in a single language will be accepted in lieu of an examination.

Students must satisfy the language requirement prior to scheduling of the comprehensive examinations.

TIME LIMIT

A graduate student is expected to complete requirements for the master's degree no later than eight years after beginning course work. However, the student should refer to the time limit requirement of the graduate program he selects.

MINIMUM HOURS REQUIRED

All master's degree programs and the sixth year programs for Rank I require a minimum of thirty semester hours.

At least half the course work required for any degree program must be satisfied with courses open only to graduate students, (600 level).

MASTER'S THESIS

Those who submit a thesis in partial fulfillment of the master's degree must prepare it in conformity with the regulations approved by the Graduate Council. The original (ribbon) copy and a clear copy must be deposited with the Dean of the Graduate School at least one week before the degree is conferred.

Theses shall be typed on paper with a rag content of not less than 50 percent, and margins of 1½ and 1 inch, left and right respectively, must be maintained. Reproduction by multilith is strongly recommended.

APPLICATION FOR THE MASTER'S DEGREE

A student planning to receive the master's degree in June should apply before the end of the first semester. Candidates for the August Commencement should apply not later than the beginning of the second semester. Applications should be filed in the Office of the Graduate School. Fees are to be paid at the Business Office and receipts presented in the Office of the Graduate School.

Students will be considered candidates for graduation only if they have a graduate gradepoint average of 3.0 or higher at the inception of the term prior to their scheduled commencement.

COMPREHENSIVE EXAMINATION(S)

All candidates shall perform satisfactorily on a written and/or oral examination of the contents of their program of studies. In some instances, the defense of the thesis shall suffice. Particulars are specified by program. Comprehensives are scheduled after application for the degree has been filed and evidence exists indicating that the student should complete all degree requirements during the term in question.

Committee chairmen shall certify satisfactory completion of the comprehensives to the Dean of the Graduate School no later than ten days in advance of Commencement.

A review period of not less than 60 days nor more than one year is usually required of candidates who fail the comprehensives initially.

TRANSFER OF CREDIT AND EXTENSION CREDIT

Candidates for the Master of Arts in Education Degree may complete a maximum of 12 semester hours of credit off the Eastern campus. No more than six of the above credits may be completed at another accredited institution.

Candidates for other degrees are restricted to a maximum of six semester hours of credit through extension and/or transfer.

In all cases, course work so completed must be acceptable to the student's graduate committee.

COURSE NUMBERING

Courses numbered in the 500 series are open to seniors and graduate students who meet course and program prerequisites. Courses numbered in the 600 series are open only to graduate students.

CHANGE OF SCHEDULE

The University reserves the right to cancel a course when the registration is not sufficient to warrant its continuance, to divide classes if the enrollment is too large for efficient instruction, and to change instructors when necessary. Additional courses will be organized if the demand is sufficient.

WITHDRAWAL FROM THE UNIVERSITY

Students who find it necessary to leave the University under any conditions must obtain an official Withdrawal Card from the Office of the Vice-President for Student Affairs. Students not officially withdrawing shall receive grades of "F" for the semester's course load.

SPECIALIST DEGREE REQUIREMENTS

The University offers advanced graduate work leading to the Specialist Degree. Beginning graduate students interested in two year programs with special preparation for teaching or professional service opportunities in post-secondary technical schools, junior or senior colleges should seek early advisement in order to assure proper program development.

Candidates for specialist degrees must possess an undergraduate grade point average of at least 2.5.

Candidates for specialist degree status must offer a graduate grade point average of 3.3.

Prior to admission to candidacy for the Specialist Degree, students must present a score on the combined aptitude tests of the Graduate Record Examination at the level of the 65th percentile, a value derived from scores achieved by Eastern seniors within programs.

Fifteen hours of course work must be completed prior to graduation after admission to candidacy for the degree.

JOINT DOCTORAL PROGRAMS

Eastern Kentucky University in cooperation with the University of Kentucky, offers the degrees, Doctor of Education and Doctor of Philosophy. The graduate student may make application for admission to the program after completion of 18 hours of graduate work or subsequently.

Admission to the program is considered by a joint screening committee selected from faculty representing the two institutions.

The candidate may continue in residence at Eastern Kentucky University for one school year, completing a maximum of 30 semester hours beyond the master's degree, prior to transfer to the University of Kentucky.

Throughout the program term, the student shall be enrolled in both schools but will pay fees only to the resident University.



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COLLEGE OF APPLIED ARTS AND TECHNOLOGY

William E. Sexton, Dean

Jack A. Luy, Associate Dean

Departments within the College of Applied Arts and Technology offer programs leading to Master of Science and Specialist in Technology Degrees. The Department of Industrial Education has programs leading to the Master of Science Degree in the field of industrial education and the Specialist in Technology Degree. The Department of Industrial Technology has a program leading to the Master of Science Degree in the field of industrial technology.

The Departments of Home Economics and Industrial Education, in cooperation with the College of Education and the Graduate School, offer programs in their respective disciplines leading to the Master of Arts in Education Degree.

The School of Law Enforcement, in cooperation with the Graduate School, offers programs leading to the Master of Science Degree in criminal justice.

AGRICULTURE (AGR)

W. Householder, Chairman

AGR 570. Advanced Study in Technical Agriculture. **Three-fifteen hours. Five three-hour segments. A.**

Advanced technical study in five agricultural areas with emphasis upon updating the technology and the development of understanding and technical competency in:

AGR 570. a. Ornamental Horticulture. **Three hours.**

AGR 570. b. Agricultural Mechanization. **Three hours.**

AGR 570. c. Dairy Herd Management. **Three hours.**

AGR 570. d. Farm Livestock Management. **Three hours.**

AGR 570. e. Farm Service and Supplies. **Three hours.**

Application of advanced technology in the production of agricultural products providing a means of updating in agricultural areas such as production methods, new equipment, economic trends, and labor management.

AGR 571-A. Greenhouse Management. **Three hours. A.**

AGR 577. Workshop in the Conservation of National Resources. **Three hours. S.**

Currently, this workshop is held four weeks in the summer for teachers returning for graduate work. Instruction is given in the areas of soil, water, fish and wildlife, and forest conservation and methods of teaching related units at the elementary and junior high level.

MASTER OF SCIENCE DEGREE WITH A MAJOR IN CRIMINAL JUSTICE

CRIMINAL JUSTICE (CRJ)

Robert W. Posey, Director

Major work leading to satisfaction of requirements for the degree of Master of Science in Criminal Justice is offered by the School of Law Enforcement.

The Master of Science Degree in criminal justice is designed to prepare the student to enter supervisory positions within the criminal justice system or college teaching. Optional graduate specialization is available in law enforcement and police administration, criminology and corrections, juvenile delinquency, and criminal justice education.

SPECIAL PROGRAM REQUIREMENTS*

MASTER OF SCIENCE

For Admission — Students who have completed an undergraduate major in law enforcement will be accepted into the program. Students from other disciplines will be admitted, but may be required by the graduate advisory committee to eradicate defined undergraduate deficiencies. An overall grade point average of 2.6 is expected. Provisions for conditional admission exist.

For Admission to Candidacy — Satisfactory scores on the aptitude tests of the Graduate Record Examination are required for admission to candidacy. Attributes related to professional and technical promise will be appraised by the graduate advisory committee.

For Program — A minimum of 30 semester hours of graduate credit is required. The following courses are required of all students: Special Problems in Criminal Law (CRJ 540), and Research Methods (SOC 670). Specialization may be chosen from criminal justice education, law enforcement and police administration, criminology and corrections, and juvenile delinquency.

Curriculum for Specialization in Criminal Justice Education.

Core Courses	6 hours
CRJ 540, SOC 670.	
Education Core	6 hours
ESH 695, ESH 696, or ESH 690.	
Subject Matter Core	9 hours
CRJ 610, CRJ 620, CRJ 630.	
Electives Outside School of Law Enforcement	3 hours
Thesis or Research in Criminal Justice	6 hours
	30 hours

*Students must also meet the general requirements of the Graduate School.

Curriculum for Specialization in Law Enforcement And Police Administration

Core Courses	6 hours
CRJ 540, SOC 670.	
Subject Matter Core	6 hours
CRJ 610, CRJ 611.	
Electives Outside School of Law Enforcement	6 hours
Electives Within School of Law Enforcement	6 hours
Thesis or Research in Criminal Justice	6 hours
	30 hours

Curriculum for Specialization in Criminology and Corrections

Core Courses	6 hours
CRJ 540, SOC 670.	
Subject Matter Core	6 hours
CRJ 630, CRJ 631.	
Electives Outside School of Law Enforcement	6 hours
Electives Within School of Law Enforcement	6 hours
Thesis or Research in Criminal Justice	6 hours
	30 hours

Curriculum for Specialization in Juvenile Delinquency

Core Courses	6 hours
CRJ 540, SOC 670	
Subject Matter Core	6 hours
CRJ 620, CRJ 621.	
Electives Outside School of Law Enforcement	6 hours
Electives Within School of Law Enforcement	6 hours
Thesis or Research in Criminal Justice	6 hours
	30 hours

For Thesis — A thesis is optional in this program.

For Comprehensives — A final oral examination in defense of the thesis or research project and related course work in required.

CRIMINAL JUSTICE (CRJ)

CRJ 540. Special Problems in Criminal Law. Three hours. A.

An advanced study of theories in criminal law and criminal procedure; the relationship of criminal law to the prevention of criminal behavior and to rehabilitation; techniques of legal research.

CRJ 610. Advanced Police Administration. Three hours. A.

An examination of the functions of the police in the system of criminal justice; principles of organization, administration, police formulation, and management of personnel; statutory limitations on authority and jurisdiction; professionalization of the police.

CRJ 611. Applied Study in Law Enforcement. Three hours. A.

Supervised study in an approved law enforcement setting designed to provide the student an opportunity to synthesize theory and on-the-job situations. Individual conferences.

CRJ 620. Seminar in Juvenile Delinquency. Three hours. A.

Theoretical and empirical study of the etiology, distribution, and extent of delinquency; problems involved in measuring delinquency; role of the police and courts; legal statutes; critical examination of treatment and prevention programs.

CRJ 621. Applied Study in Juvenile Delinquency. Three hours. A.

Supervised study in an approved agency dealing with juvenile delinquents designed to provide the student an opportunity to synthesize theory and on-the-job situations. Individual conferences.

CRJ 630. Seminar in Criminology and Corrections. Three hours. A.

A seminar designed to explore current criminological theories and practices regarding causes of criminal behavior; contemporary philosophies, legal codes, and methods of treating offenders; the social structure of the institution; measures for the prevention of crime.

CRJ 631. Applied Study in Corrections. Three hours. A.

Supervised study in an approved correctional setting designed to provide the student an opportunity to synthesize theory and on-the-job situations. Individual conferences.

CRJ 697. Research in Criminal Justice. Three or six hours. A.

Individual investigations in the field of criminal justice. Investigations may be conducted in the field and under the supervision of the research advisor and other staff members.

CRJ 698. Thesis I. Three hours. A.**CRJ 699. Thesis II. Three hours. A.**

HOME ECONOMICS

Roberta B. Hill, Chairman

In cooperation with the College of Education and the Graduate School, a Master of Arts in Education Degree with emphasis in Home Economics is offered. An applicant is expected to present a major in Home Economics Education with an overall grade point average of 2.40. Admission to candidacy requires satisfactory scores on the Graduate Record Examination Aptitude Test and satisfactory performance in content courses.

The student is expected to meet the requirements for the Master of Arts in Education Degree. In addition, to meet requirements for supervising teachers, 12 hours in content courses and 12 to 15 hours in Home Economics Education are needed. A thesis is optional.

TEXTILES AND DESIGN

HEC 508. Textile Testing and Evaluation. Five hours. I.

Prerequisites: CHE 102; HEC 202.

Chemical and physical tests of fibers and fabrics including dye properties and finishes. Study of textile legislation and standardization. Individual problems and projects.

HEC 510. Socio-Psychological Factors of Apparel. Three hours. II.

Prerequisite: HEC 320.

Social, cultural and psychological factors which influence personal satisfaction in the selection and use of apparel.

HEC 519. Special Problems in Textiles. One to three hours. I, II, S.

Prerequisite: Consent of instructor.

The student selects a problem and works under the supervision of the instructor. May be repeated by graduate students to a maximum of six hours.

FAMILY LIFE AND CHILD DEVELOPMENT

HEC 538. (Formerly HEC 505 and 405.) Seminar in Family Life. One to three hours. II.

Prerequisite: Consent of instructor.

Students will be able to concentrate their interests in an intensive study of specific areas of family life. The main focus will be on the family and its interpersonal relationships. Group projects and study, panel discussions, and conferences may be used. May be repeated by graduate students to a maximum of six hours.

HEC 547. (Formerly HEC 507 and 407.) Organization and Administration of Preschools. Three or five hours. A.

Prerequisite: HEC 345.

Study of the history of preschool education and its present organization and administration. Participation in programs for preschool children.

HEC 548. (Formerly HEC 504, 404, 338, and Current Trends in Child Development.) Seminar in Child Development. One to three hours. II.

Prerequisites: HEC 241, 341 and six hours in family life and child development. Current concepts and trends in child development; recent research and literature. May be repeated by graduate students to a maximum of six hours.

HEC 549. Special Problems in Child Development. One to three hours. A.

Prerequisites: HEC 548, and consent of instructor.

The student chooses a problem and works under the supervision of the instructor. May be repeated by graduate students to a maximum of six hours.

FAMILY ECONOMICS AND MANAGEMENT

HEC 556. (Formerly Special Problems in Home Economics.) Special Problems in Family Economics and Management. One to three hours. A.

Prerequisite: Consent of instructor.

The student chooses a problem and works under the supervision of the instructor. May be repeated by graduate students to a maximum of six hours.

HOME ECONOMICS EDUCATION

HEC 566. Special Problems in Home Economics Education. One to three hours. I, II, S.

Prerequisite: Consent of instructor.

The student chooses a problem and works under the supervision of the instructor. May be repeated by graduate students to a maximum of six hours.

HEC 660. Curriculum Development in Home Economics. Three hours. A.

Prerequisite: Consent of instructor.

Educational trends and their implications for home economics in the secondary school; principles of curriculum construction as applied to junior and senior high school home economics.

HEC 661. Supervision of Home Economics. Three hours. A.

Prerequisite: Consent of instructor.

Principles and techniques of effective supervision of home economics at different educational levels, with emphasis on supervision of student teaching.

HEC 662. Philosophy of Home Economics Education. Three hours. A.

Prerequisite: Consent of instructor.

Major ideas, trends, and past developments in home economics education and their influence and implications in the future directions of the field.

HEC 663. The Adult Homemaking Program. Three hours. A.

Prerequisite: Consent of instructor.

Materials, organization, and conduct of homemaking programs for adults; use of appropriate instructional media.

HEC 665. Seminar in Home Economics Education. One to three hours. A.

Prerequisite: Consent of instructor.

Discussion of current topics and research relevant to home economics. May be repeated to a maximum of six hours.

HEC 667. Evaluation in Home Economics Education. Three hours. A.

Prerequisite: Consent of instructor.

Theories and techniques of evaluation; construction and interpretation of devices used to measure progress and attainment in home economics.

HEC 668. Research in Home Economics Education. One to six hours. A.

Prerequisite: Consent of instructor.

Independent research. May be repeated to total six hours.

NUTRITION, FOODS, AND FOOD ADMINISTRATION (NFA)**NFA 501. Human Nutrition. Three hours. I.**

Prerequisite: NFA 301.

Interrelationships and functions of nutrients in normal nutrition; relation of nutrient requirements at the cellular level to dietary standards.

NFA 502. (Formerly HEC 506 and 406 and Newer Knowledge of Nutrition.) Therapeutic Nutrition. Three hours. II.

Prerequisite: NFA 501.

Theory and application of deviations in normal dietary patterns in disease.

NFA 503. Community Nutrition. Three hours. II.

Prerequisites: NFA 201 and consent of instructor.

Nutrition services and education facilities in the community. Application of the principles of nutrition to the varied needs of representative groups; food and drug laws and their implications in combating food faddism. Field experience.

NFA 515. (Formerly HEC 413.) Seminar in Nutrition. One to three hours. II.

Prerequisites: NFA 501 and consent of instructor.

Reports and discussions of current problems and research in nutrition. May be repeated by graduate students to a maximum of six hours.

NFA 516. Special Problems in Nutrition. One to three hours. I, II, S.

Prerequisites: NFA 501 and consent of instructor.

The student chooses a problem and works under the supervision of an instructor. May be repeated by graduate students to a maximum of six hours.

NFA 541. (Formerly HEC 319.) Food Service Organization and Management. Three hours. I.

Prerequisites: ACC 108, NFA 342.

Principles of organization and their application to various types of institutions; personnel management, financial and administrative problems.

NFA 542. (Formerly HEC 318.) Laboratory for Food Service Organization and Management. Two hours. I.

Prerequisite: Concurrent enrollment in NFA 541.

Supervised experience in planning, preparing and serving food in approved institutions.

NFA 555. (Formerly HEC 418.) Seminar in Food Administration. One to three hours. II.

Prerequisite: NFA 541.

Reports and discussions of topics relative to the area of food administration. May be repeated by graduate students to a maximum of six hours.

NFA 556. Special Problems in Food Administration. One to three hours. I, II, S.

Prerequisite: NFA 541.

The student chooses a problem and works under the supervision of an instructor. May be repeated by graduate students to a maximum of six hours.

INDUSTRIAL EDUCATION (IED)

CLYDE O. CRAFT, Chairman

Major work leading to satisfaction of requirements for the degrees of Master of Science in industrial education and Specialist in Technology is offered by the Department. Satisfaction of requirements for the Master of Arts in Education Degree is possible through the cooperation of the Department with the College of Education and the Graduate School. In the case of the latter degree, admissions and professional education requirements are detailed in the College of Education section of the *Catalog*.

The Master of Science Degree in industrial education is primarily designed to meet the needs of experienced and prospective teachers in technical subject in technical institutes, junior colleges, and similar institutions. By pursuing the program, the student has the opportunity for advanced study in such areas as wood technology, metals technology, printing technology, electronics technology, and drafting technology. The program is the logical prerequisite for the student interested in the Specialist in Technology Degree.

The Specialist in Technology Degree is designed for the experienced or prospective technical teacher in technical institutes, junior colleges, four-year colleges, and other post-secondary institutions. This program, as a capstone to the Master of Science in industrial education or a similar program, provides opportunities for extending technical and professional preparation.

SPECIAL PROGRAM REQUIREMENTS*:

MASTER OF SCIENCE

For Admission—Applicants are expected to present a major in Industrial Education at the undergraduate level and to provide evidence of acceptable professional and scholarly aptitude. An overall grade point average of 2.4 is normally expected.

For Admission to Candidacy—Satisfactory scores on the Graduate Record Examination Aptitude Tests are required. Attributes related to professional promise will be reviewed.

For Program—Individual plans of study will include work from four areas: I. Technical Education Core (six hours—IED 502, IED 633); II. Technical Specialty (nine hours—Selected electives from the technology of Printing, Woods, Electricity/Electronics, Metals, or Drafting); III. College Teaching (nine hours—ESH 695, 696, 697) or Vocational-Technical Teaching (eight hours—EDF 669 and two of the following courses: IED 561, 564, 661, 662, 663, 665); IV. Supporting Work (six-seven hours—Technical Specialty II, Research, Field Study, or Related Option).

For Thesis—Students who expect to continue graduate study to completion of the Specialist in Technology program may complete the research requirement as part of the master's curriculum. The thesis is optional in the Master of Science program, however.

For Comprehensives—The candidate will have an opportunity to demonstrate professional growth through a written and/or oral examination covering the four program components during the term in which graduation is scheduled.

SPECIALIST IN TECHNOLOGY

For Admission—Applicants are expected to present one year of graduate preparation in the field of Industrial Education and to possess unusual professional and scholarly competence. An overall undergraduate grade point average of 2.5 is expected. Conditional admissions provisions exist.

For Admission to Candidacy—Students should present a 3.5 grade point standing on graduate work attempted. A combined aptitude test score on the Graduate Record Examination of 900 is expected. Commitment to the program as evidenced by experience, interviews with the committee and letters of recommendation, must be demonstrated.

For Comprehensives—The candidate will have the opportunity to demonstrate professional maturity through a written and/or oral examination covering program components during the term in which graduation is anticipated.

*Students must also meet the general requirements of the Graduate School.

***IED 501.** (INT 501) Special Problems in Industrial Education. **Three hours. I, II.**
A course for graduates and exceptional undergraduates involving independent and research related to problems of a theoretical and/or practical nature.

***IED 502.** (INT 502) Industrial Materials and Processes. **Three hours. A.**
Characteristics, utilization and processing of industrial materials such as wood, metals, plastics, clay, glass, concrete, etc.; composition and working qualities; types, grades, availability, and suitability of materials for varying purposes; shaping, forming, cutting, and finishing processes; quality, prices and control of materials and products.

***IED 511.** (INT 511) Advanced Technical Problems in Graphic Arts. **Two-six hours. I, II.**
Technical instruction in the graphic arts field. Recent developments, advanced technical and experimental problems and preparation of technical reports in graphic arts.

***IED 533.** (INT 533) Workshop in Industrial Education. **Four hours. A.**
533a Design; **533b** Graphic Arts; **533c** Plastics; **533d** Power Mechanics; **533e** Electronics; **533f** Wood Technology; **533g** Metals; **533h** Crafts; **533i** Professional.

IED 540. Wood Technology. **Three hours. A.**
The technology of wood; includes structure, composition, and properties of wood; wood seasoning and preservation; machining characteristics of wood.

***IED 541.** (INT 541) Advanced Technical Problems in Woodworking. **Two-six hours. I, II.**
Technical instruction in the woodworking field. Recent developments, advanced technical and experimental problems, and preparation of technical reports in woodworking.

IED 544. Machine Woodworking. **Two hours. A.**

Prequisite: IED 242

Special machine operations; repairing and servicing power woodworking machinery.
Credit to be granted for only one of these cross-listed courses.

***IED 551.** (INT 551) Advanced Technical Problems in Electricity/Electronics. **Two-six hours. I, II.**
Technical instruction in the electricity-electronics field; recent developments, advanced technical and experimental problems, and preparation of technical reports in electricity-electronics.

***IED 561.** (INT 561.) Evaluation in Technical Education. **Three hours. A.**
Strategies and methods for evaluation in technical education; identification and analysis of context, input, process, and outcomes; preparation use, and analysis of measuring instruments.

***IED 563.** Planning of Technical Education Facilities. **Two hours. A.**
Pinciples and practices underlying the planning and designing of shops and laboratories for vocational, industrial, and technical education.

***IED 564.** History and Philosophy of Industrial Education. **Three hours. A.**
History of industrial education from its early beginning to the present; the contributions of leaders; movements in the development of industrial and vocational education; modern concepts of industrial education.

***IED 571** (INT 571.) Advanced Technical Problems in Power Mechanics. **Two-six hours. I, II.**
Technical instruction in the power mechanics field; recent developments; advanced technical and experimental problems, and preparation of technical reports in power mechanics.

*Credit is to be granted for only one of these cross-listed courses.

***IED 581.** (INT 581.) Advanced Technical Problems in Metalworking. **Two-six hours. I, II**

Technical instruction in the metalworking field; recent developments, advanced technical and experimental problems, and preparation of technical reports in metalworking.

***IED 591.** (INT 591) Advanced Technical Problems in Drafting. **Two-six hours. I, II.**

Technical instruction in the drafting field; recent developments, advanced technical and experimental problems, and preparation of technical reports in drafting.

***IED 611A.** (INT 611A.) Advanced Technical Study in Printing Technology: Photography. **Three hours. A.**

Advanced technical study, research and experimentation in photography; cameras and lenses, filters, films, enlarging, dodging, and finishing; color photography; dark-room techniques.

***IED 611B.** (INT 611B.) Advanced Technical Study in Printing Technology: Layout and Design. **Three hours. A.**

Advanced technical study, research and experimentation in layout and design; concepts of graphic design related to newspapers, books, brochures, flyers, and posters; practical experience in design and layout of graphic presentations.

***IED 611C.** (INT 611C.) Advanced Technical Study in Printing Technology: Color Separation. **Three hours. A.**

Advanced technical study, research and experimentation in color separation; copy preparation, camera techniques, developing, stripping, platemaking, and press operations.

***IED 611D.** (INT 611D.) Advanced Technical Study in Printing Technology: Photo-Offset-Lithography. **Three hours. A.**

Advanced technical study, research and experimentation in photo-offset-lithography; inks, fountain solutions, films, chemicals, type methods, layout, stripping, camera techniques and platemaking.

***IED 611E.** (INT 611E.) Advanced Technical Study in Printing Technology: Quality Control. **Three hours. A.**

Advanced technical study, research and experimentation in printing quality control; plant layout, temperature, humidity, chemicals, papers, and photographic materials.

***IED 633** (INT 633.) Creative Problem-Solving in Technical Fields. **Three hours. A.**
A review and analysis of basic and applied research in the development of creative behavior with emphasis on its application to industrial teaching and industrial problem-solving.

***IED 641A.** (INT 641A.) Advanced Technical Study in Wood Technology: Structure and Characteristics. **Three hours. A.**

Advanced technical study, research and experimentation in structure and characteristics of wood; species, chemical composition, botanical structure, physical characteristics, and identification techniques.

***IED 641B.** (INT 641B.) Advanced Technical Study in Wood Technology: Dimensional Stability. **Three hours. A.**

Advanced technical study, research and experimentation in dimensional stability of wood; moisture content effects and control, strength and density, seasoning, and drying defects.

***IED 641C.** (INT 641C.) Advanced Technical Study in Wood Technology: Veneer and Plywood Production. **Three hours. A.**

Advanced technical study, research and experimentation in veneer and plywood production: veneer production and specifications; strength characteristics, specifications, grades, and uses of hardwood and softwood plywood; grading and production processes.

*Credit is to be granted for only one of these cross-listed courses.

***IED 641D.** (INT 641D.) Advanced Technical Study in Wood Technology: Wood Substitutes. **Three hours. A.**

Advanced technical study, research and experimentation in wood substitutes; composition and characteristics of hardwood, particle board and plastic laminates; material specifications; principles of application to industrial use.

***IED 641E.** (INT 641E.) Advanced Technical Study in Wood Technology: Adhesives. **Three hours. A.**

Advanced technical study, research and experimentation in wood adhesives, types, characteristics and application techniques of natural and synthetic adhesives; jointery and control factors; curing and comparative testing.

***IED 651A.** (INT 651A.) Advanced Technical Study in Electricity/Electronics Technology: Solid State Electronics. **Three hours. A.**

Advanced technical study, research and experimentation in solid state electronics; amplifying devices; solid state and integrated circuit analysis and design.

***IED 651B.** (INT 651B.) Advanced Technical Study in Electricity/Electronics: Computer Electronics. **Three hours. A.**

Advanced technical study, research and experimentation in computer electronics; digital systems, logic, component functions, memory systems, and control circuitry.

***IED 651C.** (INT 651C.) Advanced Technical Study in Electricity/Electronics: Communicative Systems. **Three hours. A.**

Advanced technical study, research and experimentation in electronic communicative systems; signal analysis, transmission and modulation; intelligence and navigational transmission and reception; trouble-shooting analysis and procedures.

***IED 651D.** (INT 651D.) Advanced Technical Study in Electricity/Electronics: Microwave Electronics. **Three hours. A.**

Advanced technical study, research and experimentation in microwave electronics; field phenomena; equipment components and characteristics; measurement techniques; communication systems.

***IED 651E.** (INT 651E.) Advanced Technical Study in Electricity/Electronics: Instrumentation. **Three hours. A.**

Advanced technical study, research and experimentation in instrumentation; measurement concepts; industrial considerations; electrical and electronic instruments and applications; control and regulation systems.

IED 661. Supervision in Technical Education. **Three hours. A.**

Principles, objectives, methods, techniques, and practices of supervision; specific problems in the supervision of technical education; selection and organization of materials; planning and equipping of education facilities; professional relations and in-service education.

IED 662. Philosophy of the Practical Arts and Vocational Education. **Three hours. II.**
Background, purpose and philosophies of the practical arts and vocational education; relationship to general education; effects of legislation for the practical arts and vocational education; the state plan.

IED 663. Organization and Administration of Technical Education. **Three hours. A.**

Organization of industrial education on the local, state, and national level; federal legislation in technical education; federal-state relationship; types of technical, vocational, and general industrial education programs and schools.

IED 664. Special Problems in Industrial Education. **One-six hours, I, II.**

Problems of particular value to the teacher in the field, both of a practical and of a research nature, will be pursued by the student and developed through conferences and activities directed by the staff.

* Credit to be granted for only one of these cross-listed courses.

IED 665. Curriculum Practices and Trends in Industrial Education. Three hours. I.
Current concepts and trends in industrial education; principles underlying curriculum construction and development; long range planning for improvement of programs.

IED 666. Seminar in Industrial Education. Three hours. I.
Current problems and issues in the total field of industrial education will be studied with an emphasis placed on identifying their philosophical and/or psychological dimensions. Research techniques appropriate for industrial education with an emphasis on experimental design and statistical procedures of analysis. Each student will be expected to plan and complete a minor research paper, and to present his findings to the seminar.

IED 667. Thesis Research in Industrial Education. Four-six hours. I, II.
Students preparing thesis are expected to register for three hours of thesis research in each two semesters.

***IED 681A. (INT 681A.) Advanced Technical Study in Metals Technology: Industrial Metrology. Three hours. A.**

Advanced technical study, research and experimentation in industrial metrology; precision measurement equipment and techniques; high amplification pneumatic, electronic, mechanical, and optical comparators; interferometry, radiography and monochromatic light techniques.

***IED 681B. (INT 681B.) Advanced Technical Study in Metals Technology: Tool Design. Three hours. A.**

Advanced technical study, research and experimentation in tool design; design and fabrication of tooling jigs, fixtures and dies; modern metal forming production techniques; efficiency in machine utilization; heat treatment of metallic substances.

***IED 681C. (INT 681C.) Advanced Technical Study in Metals Technology: Materials Testing. Three hours. A.**

Advanced technical study, research and experimentation in materials testing; non-destructive tests including Zygló, Magniglo, dye penetrant, magniflux, X-ray, ultrasonic, nucleonic, and radiographic; destructive tests including tensile strength, compression, shear, torsion, and impact resistance; specimen preparation.

***IED 681D. (INT 681D.) Advanced Technical Study in Metals Technology: Mechanical Power Transmission. Three hours. A.**

Advanced technical study, research and experimentation in mechanical power transmission devices; properties and design application of the involute curve; gear types; spherical and planetary application systems; design and fabrication of power transmission devices.

***IED 681E. (INT 681E.) Advanced Technical Study in Metals Technology: Assembly Processes. Three hours. A.**

Advanced technical study, research and experimentation in metals assembly processes; adhesive bonding and seals; mechanical fasteners and components; brazing, soldering and welding techniques; pneumatic and hydraulic assembly applications.

***IED 691A. (INT 691A.) Advanced Technical Study in Drafting Technology: Theory of Projection I. Three hours. A.**

Advanced technical study, research and experimentation in drafting projection theory; Mongean method and adaptations; positional change and theorems; force systems; Bow's notation; Pappus and Guldinus Theorem; four-dimensional descriptive geometry.

***IED 691B. (INT 691B.) Advanced Technical Study in Drafting Technology: Theory of Projection II. Three hours. A.**

Continuation of IED 691A; axonometric, oblique, perspective, and stereographic projection; shades and shadows applied to pictorial representation.

* Credit to be granted for only one of these cross-listed courses.

***IED 691C.** (INT 691C.) Advanced Technical Study in Drafting Technology: Advanced Illustration. **Three hours. A.**

Advanced technical study, research and experimentation in industrial illustration; media; pencil, ink, Zip-a-tone, scratchboard, double and triple-tone board, coquille board, intaglio, airbrush, and planographic impression techniques; photo retouching; problems analysis; preparation of presentations.

***IED 691D.** (INT 691D.) Advanced Technical Study in Drafting Technology: Drafting Reproduction Processes. **Three hours. A.**

Advanced technical study, research and experimentation in drafting reproduction processes; exposure and development systems; dry and moist diazo, blueprint, Van Dyke, azograph, offset, microfilm, photostat, and reflex processes.

***IED 691E.** (INT 691E.) Advanced Technical Study in Drafting Technology: Drafting Standards. **Three hours. A.**

Advanced technical study, research and experimentation in drafting standards; study and comparison of ASA, military, SAF, AWS, and selected industrial standards; influences affecting standards; preparation of standards for a manufacturing or architectural establishment.

* Credit is to be granted for only one of these cross-listed courses.

INDUSTRIAL TECHNOLOGY (INT)

Kenneth S. Hansson, Chairman

Major work leading to satisfaction of requirements for the degree of Master of Science in industrial technology is offered by the Department.

The Master of Science Degree in industrial technology is primarily designed for the person who is working, or plans to work, in industry. The program is planned to provide opportunities for advanced study in technical subjects. Programs are planned individually and it is possible to include study from appropriate supporting disciplines such as business, psychology, mathematics, and the sciences.

The Department also cooperates with the Department of Industrial Education in offering course work in the major in support of the Master of Science Degree in Industrial Education, the Specialist in Technology, and the Master of Arts in Education Degree with emphasis in industrial education.

SPECIAL PROGRAM REQUIREMENTS*:

MASTER OF SCIENCE

For Admission—Applicants are expected to present appropriate prerequisite preparation. In some instances, such work will consist of a major in industrial education with a specialization in technology. The program may have appeal to individuals with engineering backgrounds also. An overall grade point average of 2.4 is normally expected. Conditional admissions provisions exist.

For Admission to Candidacy—Satisfactory scores on the Graduate

*Students must also meet the general requirements of the Graduate School.

Record Examination are required. The Advisory Committee will appraise attributes related to professional and technical promise.

For Program—Individual plans of study will include work from four areas: I. Technical Education Core (six hrs.—INT 502, INT 633); II. Technical Specialty (nine hrs.—Selected electives from the technology of Printing, Woods, Electricity/Electronics, Metals, and/or Drafting); III. Supporting Discipline (nine hrs.—Selected electives from Business, Psychology, Mathematics, Statistics, Science, etc.); IV. Additional Supporting Work (six hrs.—Thesis, or research, or Technical Specialty II, or Second Supporting Area).

For Comprehensives—The candidate will have an opportunity to demonstrate professional growth through a written and/or oral examination covering the various program components during the term in which graduation is scheduled.

INDUSTRIAL TECHNOLOGY (INT)

INT 501. (IED 501.) Special Problems in Industrial Technology. Three hours. I, II.
A course for graduates and exceptional undergraduates involving independent study and research related to problems of a theoretical and/or practical nature.

***INT 502. (IED 502) Industrial Materials and Processes. Three hours. A.**
Characteristics, utilization and processing of industrial materials such as wood, metals, plastics, clay, glass, concrete, etc.; composition and working qualities; types, grades, availability, and suitability of materials for varying purposes; shaping, forming, cutting, and finishing processes; quality, prices and control of materials and products.

***INT 511. (IED 511.) Advanced Technical Problems in Graphic Arts. Two-six hours. I, II.**

Technical instruction in the graphic arts field. Recent developments, advanced technical and experimental problems, and preparation of technical reports in graphic arts.

***INT 533. (IED 533.) Workshop in Industrial Technology. Four hours. A.**
533b Graphic Arts; 533c Plastics; 533d Power Mechanics; 533e Electronics; 533g Metals.

***INT 541. (IED 541.) Advanced Technical Problems in Woodworking. Two-six hours. I, II.**

Technical instruction in the woodworking field. Recent developments, advanced technical and experimental problems, and preparation of technical reports in woodworking.

***INT 551. (IED 551.) Advanced Technical Problems in Electricity-Electronics. Two-Six hours. I, II.**

Technical instruction in the electricity-electronics field. Recent developments, advanced technical and experimental problems, and preparation of technical reports in electricity-electronics.

INT 561. (IED 561.) Evaluation in Technical Education. Three hours. A.
Strategies and methods for evaluation in technical education; identification and analysis of context, input, process, and outcomes; preparation, use, and analysis of measuring instruments.

* Credit is to be granted for only one of these cross-listed courses.

***INT 571. (IED 571.)** Advanced Technical Problems in Power Mechanics. **Two-six hours. I, II.**

Technical instruction in the power mechanics field. Recent developments, advanced technical and experimental problems, and preparation of technical reports in power mechanics.

***INT 581. (IED 581.)** Advanced Technical Problems in Metalworking. **Two-six hours. I, II.**

Technical instruction in the metalworking field. Recent developments, advanced technical and experimental problems, and preparation of technical reports in metalworking.

***INT 591. (IED 591.)** Advanced Technical Problems in Drafting. **Two-six hours. I, II.**

Technical instruction in the drafting field. Recent developments, advanced technical and experimental problems, and preparation of technical reports in drafting.

***INT 611A. (IED 611A.)** Advanced Technical Study in Printing Technology: Layout and Design. **Three hours. A.**

Advanced technical study, research and experimentation in layout and design; concepts of graphic design related to newspapers, books, brochures, flyers, and posters; practical experience in design and layout of graphic presentations.

***INT 611B. (IED 611B.)** Advanced Technical Study in Printing Technology: Layout and Design. **Three hours. A.**

Advanced technical study, research and experimentation in layout and design; concepts of graphic design related to newspapers, books, brochures, flyers, and posters; practical experience in design and layout of graphic presentations.

***INT 611C. (IED 611C.)** Advanced Technical Study in Printing Technology: Color Separation. **Three hours. A.**

Advanced technical study, research and experimentation in color separation; copy preparation, camera techniques, developing, stripping, platemaking, and press operations.

***INT 611D. (IED 611D.)** Advanced Technical Study in Printing Technology: Photo-Offset-Lithography. **Three hours. A.**

Advanced technical study, research and experimentation in photo-offset-lithography; inks, fountain solutions, films, chemicals, type methods, layout, stripping, camera techniques, and platemaking.

***INT 611E. (IED 611E.)** Advanced Technical Study in Printing Technology: Quality Control. **Three hours. A.**

Advanced technical study, research and experimentation in printing quality control; plant layout, temperature, humidity, chemicals, papers, and photographic materials.

***INT 633. (IED 633.)** Creative Problem Solving in Technical Fields. **Three hours. A.**

A review and analysis of basic and applied research in the development of creative behavior with emphasis on its application to industrial teaching and industrial problem solving.

***INT 641A. (IED 641A.)** Advanced Technical Study in Wood Technology: Structure and Characteristics. **Three hours. A.**

Advanced technical study, research and experimentation in structure and characteristics of wood; species, chemical composition, botanical structure, physical characteristics, and identification techniques.

***INT 641B. (IED 641B.)** Advanced Technical Study in Wood Technology: Dimensional Stability. **Three hours. A.**

Advanced technical study, research and experimentation in dimensional stability of wood; moisture content effects and control, strength and density, seasoning, and drying defects.

* Credit is to be granted for only one of these cross-listed courses.

*INT. 641C. (IED 641C.) Advanced Technical Study in Wood Technology: Veneer and Plywood Production. **Three hours. A.**

Advanced technical study, research and experimentation in veneer and plywood production; veneer production and specifications; strength characteristics, specifications, grades, and uses of hardwood and softwood plywood; grading and production processes.

*INT 641D. (IED 641D.) Advanced Technical Study in Wood Technology: Wood Substitutes. **Three hours. A.**

Advanced technical study, research and experimentation in wood substitutes; composition and characteristics of hardboard, particle board and plastic laminates; material specifications; principles of application to industrial use.

*INT 641E. (IED 641E.) Advanced Technical Study in Wood Technology: Adhesives. **Three hours. A.**

Advanced technical study, research and experimentation in wood adhesives; types, characteristics and application techniques of natural and synthetic adhesives; jointery and control factors; curing and comparative testing.

*INT 651A. (IED 651A.) Advanced Technical Study in Electricity/Electronics Technology: Solid State Electronics. **Three hours. A.**

Advanced technical study, research and experimentation in solid state electronics; amplifying devices; solid state and integrated circuit analysis and design.

*INT 651B. (IED 651B.) Advanced Technical Study in Electricity/Electronics: Computer Electronics. **Three hours. A.**

Advanced technical study, research and experimentation in computer electronics; digital systems, logic, component functions, memory systems, and control circuitry.

*INT 651C. (IED 651C.) Advanced Technical Study in Electricity/Electronics: Communicative Systems. **Three hours. A.**

Advanced technical study, research and experimentation in electronic communicative systems; signal analysis, transmission and modulation; intelligence and navigational transmission and reception; trouble shooting analysis and procedures.

*INT 651D. (IED 651D.) Advanced Technical Study in Electricity/Electronics: Microwave Electronics. **Three hours. A.**

Advanced technical study, research and experimentation in microwave electronics; field phenomena; equipment components and characteristics; measurement techniques; communication systems.

*INT 651E. (IED 651E.) Advanced Technical Study in Electricity/Electronics: Instrumentation. **Three hours. A.**

Advanced technical study, research and experimentation in instrumentation; measurement concepts; industrial considerations; electrical and electronic instruments and applications; control and regulation systems.

INT 665. Thesis I. **Three hours. A.**

INT 666. Thesis II. **Three hours. A.**

INT 667. Research in Industrial Technology. **Three hours.**

Individual investigators in the field of industrial technology. Investigations may be conducted in the field or laboratory and under the supervision of the research advisor and other staff members. (May be repeated for a maximum of six hours.)

*INT 681A. (IED 681A.) Advanced Technical Study in Metals Technology: Industrial Metrology. **Three hours. A.**

Advanced technical study, research and experimentation in industrial metrology; precision measurement equipment and techniques; high amplification pneumatic, electronic, mechanical, and optical comparators; interferometry, radiography and monochromatic light techniques.

* Credit is to be granted for only one of these cross-listed courses.

***INT 681B.** (IED 681B.) Advanced Technical Study in Metals Technology: Tool Design. **Three hours. A.**

Advanced technical study, research and experimentation in tool design; design and fabrication of tooling jigs; fixtures and dies; modern metal forming production techniques; efficiency in machine utilization; heat treatment of metallic substances.

***INT 681C.** (IED 681C.) Advanced Technical Study in Metals Technology: Materials Testing. **Three hours. A.**

Advanced technical study, research and experimentation in materials testing; non-destructive tests including Zyglo, Magniglo, dye penetrant, magniflux, X-ray, ultrasonic, nucleonic, and radiographic; destructive tests including tensile strength, compression, shear, torsion, and impact resistance; specimen preparation.

***INT 681D.** (IED 681D.) Advanced Technical Study in Metals Technology: Mechanical Power Transmission. **Three hours. A.**

Advanced technical study, research and experimentation in mechanical power transmission devices; properties and design application of the involute curve; gear types; spherical and planetary application systems; design and fabrication of power transmission devices.

***INT 681E.** (IED 681E.) Advanced Technical Study in Metals Technology: Assembly Processes. **Three hours. A.**

Advanced technical study, research and experimentation in metals assembly processes; adhesive bonding and seals; mechanical fasteners and components; brazing, soldering and welding techniques; pneumatic and hydraulic assembly applications.

***INT 691A.** (IED 691A.) Advanced Technical Study in Drafting Technology: Theory of Projection I. **Three hours. A.**

Advanced technical study, research and experimentation in drafting projection theory; Mongean method and adaptations; positional change and theorems; force systems; Bow's notation; Pappus and Guldinus Theorem.

INT 691B. (IED 691B.) Advanced Technical Study in Drafting Technology: Theory of Projection II. **Three hours. A.**

Continuation of INT 691A; axonometric, oblique, perspective, and stereographic projection; shades and shadows applied to pictorial representations.

***INT 691C.** (IED 691C.) Advanced Technical Study in Drafting Technology: Advanced Illustration. **Three hours. A.**

Advanced technical study, research and experimentation in industrial illustration; media, pencil, ink, Zip-a-tone, scratchboard, double and triple-tone board, coquille board, intaglio, airbrush, and planographic impression techniques; photo retouching; problems analysis; preparation of presentations.

***INT 691D.** (IED 691D.) Advanced Technical Study in Drafting Technology: Drafting Reproduction Processes. **Three hours. A.**

Advanced technical study, research and experimentation in drafting reproduction processes; exposure and development systems; dry and moist diazo, blueprint, Van Dyke, azograph, offset, microfilm, photostat and reflex processes.

***INT 691E.** (IED 691E.) Advanced Technical Study in Drafting Technology: Drafting Standards. **Three hours. A.**

Advanced technical study, research and experimentation in drafting standards; study and comparison of ASA, military, SAE, AWS, and selected industrial standards; influences affecting standards; preparation of standards for a manufacturing or architectural establishment.

* Credit is to be granted for only one of these cross-listed courses.

THE KENTUCKY SCHOOL OF CRAFTS (KYC)

K. Hansson, Chairman

KYC 500. Special Problems and Field Study. Three hours. A.

A course for teachers in crafts and related fields; problems and issues in vocational and avocational crafts are studied; planning of crafts programs for the community based on a study of the school, facilities, community, the people, and the teacher's interest and ability.

TRAFFIC SAFETY INSTITUTE

L. Leach, Director

TRS 585. Teacher Preparation in Driver Education. Three hours. I, II.

Analysis of traffic accidents, attitude factors, essential knowledge of automobile operation, and traffic laws and regulations. Includes introduction to laboratory experiences; use of psycho-physical testing and development of driving proficiency.

TRS 586. Administration and Supervision of Driver Education. Three hours. II.

Preparation for secondary school instruction. Problems of organization and administration of driver education on the secondary level. Emphasis on scheduling, public relations, competence in transferring knowledge and skills, and satisfactory attitudes in students.

COLLEGE OF ARTS AND SCIENCES

F. D. Ogden, Dean

Glenn O. Carey, Associate Dean

Departments within the College of Arts and Sciences offer programs leading to the Master of Arts, Master of Science, and Master of Music Education degrees. The Departments of English, Geography, History, and Political Science have programs leading to the Master of Arts in these disciplines. The Departments of Biological Sciences, Chemistry, Geology, and Physics offer programs leading to the Master of Science Degree. The degree, Master of Public Administration, is offered in the Department of Political Science. The Department of Music has a program leading to the Master of Music Education Degree. Several departments in cooperation with the College of Education, provide graduate study which enables the individual to obtain the Master of Arts in Education Degree with an emphasis in a particular discipline. These departments are: Art, Biological Sciences, Chemistry, English, Foreign Language, Geography, Geology, History, Mathematics, Music, Physics, Political Science, and Anthropology and Sociology. These programs are described under the department primarily responsible for them.

Courses offered for graduate credit by the departments in the College are listed below by department.

ANTHROPOLOGY AND SOCIOLOGY

(ANT and SOC)

Richard F. Armstrong, Chairman

The Department of Anthropology and Sociology, in cooperation with the College of Education and the Graduate School, offers coursework leading to the degree, Master of Arts in Education, with emphasis in school social work. Details of program requirements may be found on Page 144 of the *Graduate Catalog*. Courses comprising the social work component are enumerated below, identified by the prefix "SWK."

Anthropology (ANT)

ANT 555. (Formerly ANT 455) Anthropology Theory. **Three hours, II.**

Prerequisite: Nine hours in anthropology and consent of instructor.

Systematic analysis of major theories in anthropology, with emphasis on their meaning for research.

ANT 590. (Formerly ANT 490.) Tutorial in Anthropology. **Three hours, A.**

Prerequisite: Twelve hours in courses accepted toward major in anthropology, including ANT 110, 201, and 202; or departmental approval.

Individual reading and research on a problem or area within the field of anthropology by the student after consultation with the instructor.

ANT 600. (Formerly ANT 500.) Anthropology and Modern Life. **Three hours, A.**

Extensive review of the field of anthropology, with emphasis on implications of recent theoretical and factual developments for man in the modern world.

ANT 610. (Formerly ANT 510.) Anthropology and Education. **Three hours, A.**

Prerequisite: ANT 600 or an undergraduate background in anthropology.

Cross-culture analysis of educational processes; growth, adaptation, and personality development of the child (enculturation and socialization), including the transmission of skills, knowledge, attitudes and values; the relationship of the educational process to social structure.

Sociology (SOC)

SOC 590. Directed Study. **Three hours, A.**

Prerequisite: Departmental approval.

Individual reading and research on a problem or area within the field of sociology by the student after consultation with the instructor.

SOC 620. The Family. **Three hours, A.**

Prerequisite: Consent of instructor.

A study of the institutions of marriage and family from their earliest forms to present-day patterns; analysis of various forces which affect family structure and functioning.

SOC 625. The Sociology of Minority Groups. **Three hours, A.**

Prerequisite: Consent of instructor.

An examination of intergroup relations; the sociological significance of race and ethnicity, including the dynamics of prejudice and discrimination, Coping with intergroup tensions.

SOC 680. Survey Design and Analysis. Three hours. A.

Prerequisite: Departmental approval.

Systematic exploration of survey research problems with application of general methodological principles to the operating context of social surveys.

Social Work (SWK)

SWK 500. Problems and Issues in Social Work. Three hours. A.

Prerequisite: 6 hours in social work.

Discussion of current problems and issues in the fields of Social Work and Social welfare.

SWK 502. Human Behavior and Social Environment. Three hours. A.

Growth processes and development within the family, group, and community; relationship of human behavior and social functioning to native endowment and to cultural patterns.

SWK 505. Field Experience in Social Agencies. Three hours. A.

Prerequisite: SWK 500.

Supervised experience in a social agency with emphasis upon interdependence of theory and practice.

SWK 607. Social Work and Social Services. Three hours. A.

A survey of the broad field of social welfare including its basic philosophy and objectives. Attention is given to community resources including eligibility requirements and benefits of programs of public and private agencies.

SWK 608. Interviewing and Casework in the School Setting. Three hours. A.

An examination of school social work as it relates to the total field, with emphasis upon casework with the child and his family, and including interviewing with children and adults.

ART (ART)

D. N. Shindelbower, Chairman

The Art Department, in cooperation with the Graduate School and the College of Education, offers an emphasis in art applying toward the Master of Arts in Education Degree.

The regulations for the Master of Arts in Education Degree program may be found in the College of Education section of the *Graduate Catalog*. Students obtaining the M.A. Degree in Education with the emphasis in art may select the graduate courses for this purpose from the following:

ART (ART)

ART 521. Advanced Drawing. Three hours. I, II.

Prerequisite: ART 100, 101.

Designed to meet the needs of students who wish to develop further their skill in, and understanding of, drawing.

ART 522. Advanced Painting. Three hours. II.

Prerequisite: ART 203, 204.

Designed to meet the needs of students who wish to further develop their skill in, and understanding of, painting.

ART 562. Seminar in Art Criticism. **Three hours. I, II.**

Prerequisite: ART 390, 391.

The study of various topics and problems which relate to the student's understanding and critical awareness of the visual arts.

ART 563. Problems in Art. **Three hours. I, II.**

Prerequisite: All departmental courses in problem area identified. Limited to seniors and graduate students. May be repeated twice.

Continuation of study begun in regular departmental courses.

ART 602. The Art Program in the Public School. **Three hours. A.**

Prerequisite: Six hours in art.

An analysis of the history of art education in the public schools coupled with a study related to planning and organization of contemporary art education programs.

***ART 621.** Drawing. **Three hours. A.**

***ART 622.** Painting. **Three hours. A.**

***ART 627.** Sculpture. **Three hours. A.**

***ART 629.** Crafts, Clay. **Three hours. A.**

***ART 630.** Graphics. **Three hours. A.**

*Courses in the series, Art 621 through Art 630, share the prerequisite "six hours of work in the specialization named or consent of instructor." Students may register for no more than nine hours of any specialization offered.

BIOLOGICAL SCIENCES (BIO)

Edwin A. Hess, Chairman

The Department of Biological Sciences offers two types of graduate degrees, the Master of Arts in Education Degree, in cooperation with the College of Education, and the Master of Science Degree in the areas of physiology, microbiology, morphology, genetics, cytology, ecology, wildlife ecology and fisheries ecology.

The prospective graduate student in biology should obtain the copy of "Introduction to Graduate Programs in Biology" from the Office of Department of Biological Sciences. This guide provides more detailed information about the programs of the department and the student will be held responsible for the knowledge of the material therein.

Scholastic requirements of the Graduate School prevail for non-degree registration in courses in the Department of Biological Sciences.

SPECIAL PROGRAM REQUIREMENTS*:

MASTER OF ARTS IN EDUCATION

Students may elect to complete a research problem and thesis.

*Students must also meet the general requirements of the Graduate School.

For Admission to Candidacy—The prospective candidate should demonstrate competency for graduate work in biology through satisfactory performance before a committee of the biology faculty.

For Admission to Candidacy—The prospective candidate should demonstrate competency for graduate work in biology through satisfactory performance before a committee of the biology faculty.

For Comprehensives—The candidate electing to complete the thesis requirement will be required largely (in the oral examination) to defend his research. All candidates must write a satisfactory examination in biology.

MASTER OF SCIENCE

For Admission—The following special requirements normally are necessary for admission to the Master of Science program in biology:

A 2.75 grade point average (4.0-A) overall in biology courses attempted (exclusive of freshman biology).

Completion of a satisfactory major in biology at the undergraduate level with appropriate supporting science.

Three letters of recommendation from professors familiar with the student's scientific aptitude and development.

For Candidacy—In order to receive committee recommendation for admission to candidacy for the degree, the student must:

Have satisfactorily completed the Advanced Test in Biology of the Graduate Record Examination.

Demonstrate aptitude for advanced study in biology in a performance before a committee of biology faculty nominated to the Dean of the Graduate School to sit for this purpose.

For General Information—It is anticipated that most students will require a minimum of one academic year and a summer to complete degree requirements (minimum 30 semester hours).

An approved foreign language is required.

No more than six hours of course work may be applied toward degree requirements in which grades of "C" are earned.

For Comprehensives—A written examination will be administered covering the academic field of biology and an oral examination will be devoted to the student's field of research and thesis.

BIOLOGICAL SCIENCES (BIO)

BIO 510. (Formerly BIO 611.) Quantitative Biology. Two hours. A.

Prerequisite: Three hours of college mathematics or consent of instructor.

Statistical analysis of biological data. Students participate in the taking of data and processing data by the use of well-established statistical techniques. Students planning to participate in the graduate program in any school should seriously consider this course. Four laboratory—discussion hours.

BIO 514 Evolution. Three hours. A

The processes of organic evolution with emphasis on the theory of natural selection. Three lecture hours.

BIO 521. (Formerly BIO 627.) Advanced Plant Ecology. Three hours. A.

Plant life in relation to natural habitats and environmental factors; emphasis on instrumentation and methodology for ecological studies. Two lecture hours and three laboratory hours.

BIO 522. (Formerly BIO 622.) Bacterial Physiology. Three hours. A

Prerequisites: BIO 221 and CHE 362 r consent of instructor.

Advanced study in microbial activity which includes composition of bacteria, growth, energy transaction and nutrition, and the effects of various chemicals and physical environments on bacteria. Two lecture hours and three laboratory hours.

BIO 523. Mycology. Three hours. II in even years.

The morphology, physiology, taxonomy, and economic importance of fungi. Field trips are required. One lecture and four laboratory—discussion hours.

BIO 524. Phycology. Three hours. I in even years.

Morphology, taxonomy, ecology, and the economic importance of algae. Two lecture hours and two laboratory hours.

BIO 526. Plant Pathology. Three hours. A.

Prerequisite: BIO 328 or consent of the instructor.

Principles of plant pathology: significance and the nature of plant disease resistance, pathogenesis and control. Two lecture hours and two laboratory hours.

BIO 527. Immunology. Three hours. A.

Prerequisite: BIO 221, CHE 361 or consent of instructor.

Principles of the immune reaction; nature of antigens, antibodies, antigen-antibody reaction, and allergic phenomena. Two lecture hours and three laboratory hours.

BIO 540. Cellular Physiology. Four hours. A.

Prerequisite: BIO 348, CHE 361 and PHY 131.

A study of cellular and basic physiological mechanism essential to life processes which will include: cellular growth and environment; cellular organization and control of energy metabolism; energy utilization and transduction in specialized cells. Emphasis will be given to the regulatory mechanisms in homeostasis, with methodology and techniques typical in modern physiological research. Two lecture and four laboratory hours.

BIO 542. Natural History of Invertebrates. Three hours. I in even years.

Collection, systematics, distribution, behavior, ecology, and life histories of terrestrial and freshwater invertebrates. One lecture hour and four laboratory hours.

BIO 546. (Formerly BIO 446.) Histology. Three hours. I, II.

Microscopic anatomy of the normal vertebrate cells, tissues and organs. One lecture and four laboratory hours.

BIO 547. Comparative Vertebrate Embryology. Four hours. I, II.

Gametogenesis, fertilization, morphogenesis and organogenesis of the frog, bird and mammal. Particular emphasis is placed on mammalian development. Two lecture hours and four laboratory hours.

BIO 549. Endocrinology. Three hours. A.

Prerequisite: BIO 348 and CHE 361.

Basic principles of the functions of endocrine glands with emphasis on the hormonal regulation of physiological processes of the body. Two lecture hours and two laboratory hours.

BIO 550. Animal Behavior. Four hours. A.

The advanced study of behavior with emphasis on inherited behavior patterns in relation to the evolution and ecology of animals. Three lecture—discussion hours and two laboratory hours.

BIO 553. Mammalogy. Three hours. I.

Classification, distribution and natural history of mammals. One lecture hour and four laboratory hours.

BIO 554. Ornithology. Three hours. II in even years.

Avian biology with emphasis on field identification of local avifauna, anatomy, physiology, ecology, evolution, migration, economic importance, distribution and behavioral patterns. A special investigative study required for all graduate students. Some early morning field trips required. Two lecture hours and four laboratory hours per week.

BIO 556. Herpetology. Three hours. II in odd years.

The natural history of the amphibians and reptiles including taxonomy, general ecology, behavior, distribution, breeding, and food habits. Two lecture hours and three laboratory hours.

BIO 557. Ichthyology. Three hours. II in even years.

Internal and external morphology, taxonomy, life histories, ecology, and phylogeny of the fishes of North America. Two lecture hours and three laboratory hours.

BIO 558. Limnology. Three hours. II in odd years.

Ecology of lakes and streams with special reference to physical, chemical and biological factors of lotic and lentic environments. Comparative field investigations, methods and instruments of limnological field investigation of lakes and streams. One lecture hour and four field-laboratory-discussion hours.

BIO 561. Fisheries Biology. Four Hours. A.

Prerequisite: BIO 557 or consent of instructor.

Study of the anatomy, life histories, disease, conservation, methods of harvest, economic importance, and ecological interactions of fishes. Two lecture hours and six laboratory hours.

BIO 562. Fisheries Management. Four hours. A.

Prerequisite: BIO 558 and 561 or 557.

Methods of fish-catching in the world, making and setting nets, construction of fish ponds, management of lakes, ponds and streams. The culture of game fishes, fisheries, statistics, and field experiences. Two lecture and six laboratory hours.

BIO 571. (Formerly BIO 401.) Biology for High School Teachers. I. Four hours. A.

Basic principles of botany and zoology of special interest to in-service teachers of science; modern concepts and recent discoveries in biology; new approaches to biology at high school level. Lecture two hours, laboratory and discussion four hours.

BIO 572. (Formerly BIO 402.) Biology for High School Teachers II. Four hours. A.

A continuation of BIO 571. Lecture two hours, laboratory and discussion four hours.

BIO 585. Regional Wildlife Ranges. Three hours. II in odd years.

Prerequisite: BIO 316 and 382.

Distribution and management of game resources as determined by regional climate, physiographic, vegetative, and land-use factors. Three lecture hours.

BIO 587. Resident Wildlife Resources. Four hours. I.

Prerequisite: BIO 316, 382.

Taxonomy, life histories, distribution, environmental needs, economic status and plans for management of resident wildlife on forest, farm, and rangeland.

BIO 589. Migratory Wildlife Resources. Four Hours. I.

Prerequisite: BIO 316, 382.

Taxonomy, life histories, distribution, environmental needs, economic status and plans for management of doves, waterfowl, and marsh birds. Two lecture hours and four laboratory hours.

BIO 598. (Formerly BIO 498). Special Problems. One to three hours. A.

Prerequisite: Senior or graduate standing and permission of the Chairman of the Department or the thesis director. Permission must be obtained before registration in the course.

The student may repeat the course for a maximum of four hours. A study of special problems, special biological techniques, or group of organisms. A minimum of three laboratory hours per credit hour.

BIO 601. Scientific Literature of Biology. Two hours. A.

Directed readings in biology designed to acquaint the student with the major sources of literatures, the delimitation of problems, note taking and the making of bibliographies. Two lecture-discussion hours.

BIO 605. Development of Biological Thought. Three hours. A.

The history of man's attempt to discover and explain biological phenomena. Special attention will be given to the interrelation of scientific disciplines as they affect biological thought. Selected case studies will be employed as a means of achieving depth as well as introducing the student to the literature of the history of biology. Three lecture hours.

BIO 612. Cytology and Cytogenetics. Three hours. A.

Cytological basic structures, their function, and their relationships to heredity mechanism in both plants and animals.

BIO 616. Biogeography. Three hours. A.

Ecological, faunistic, and floristic distribution on a world-wide basis. Theory of distribution pathways as regards final distribution. Three lecture hours.

BIO 625. Advanced Plant Morphogenesis. Three hours. A.

Prerequisite: BIO 330 or consent of the instructor.

Advanced study of plant growth with respect to cells and meristems; phenomena of morphogenesis, correlation, polarity, symmetry, differentiation, regeneration, and tissue mixtures. Three lecture hours.

BIO 635. Advanced Plant Systematics. Three hours. A.

Prerequisite: BIO 335 or consent of instructor.

Principles of the systematics of vascular plants with emphasis on comparative and experimental techniques. Consideration of theory and systems of phylogeny, classification and nomenclature. One lecture hour and four laboratory hours.

BIO 645. Vertebrate Physiological Ecology. Three hours. A.

Prerequisite: BIO 348 or consent of instructor.

Comparative study of physiological mechanisms of vertebrates in response to changing environmental conditions. Topics emphasized include: temperature adaptation, color change, orientation and biological rhythms. Two lecture hours and three laboratory hours.

BIO 647. Advanced Animal Ecology. Three hours. A.

Prerequisite: BIO 316 or consent of instructor.

Structure, composition and classification of biotic communities; population growth and regulation; interaction of populations; and techniques for measurement of environmental factors in terrestrial and aquatic environments. Two lecture-discussion hours and three laboratory-field hours.

BIO 649. Experimental Endocrinology. Three hours. A.

Prerequisite: BIO 549 or consent of instructor.

The bioassay, synthesis, metabolism and mechanism of action of hormones emphasized through various experimental designs. One lecture hour and four laboratory hours.

BIO 671. Biology for Elementary Teachers. **Three hours.** A.
Experiments and demonstration essential to the teaching of biological concepts of science, Grades K through 6. Six discussion laboratory hours.

BIO 690. Graduate Seminar. **One hour.** I, II, S.
Prerequisite: BIO 601.
Required of all graduate students; this course may be repeated for a maximum of two hours of credit. Presentation and discussion of current trends and concepts in the disciplines of the biological sciences.

BIO 691. (Formerly BIO 571). Thesis Research **One to three hours.** A.
Prerequisite: Approval of thesis director.

CHEMISTRY (CHE)

Harry M. Smiley, Chairman

The Department of Chemistry offers the Master of Science Degree in chemistry and, in cooperation with the College of Education, offers major work in support of the Master of Arts in Education Degree.

The graduate of the Master of Science program should possess a depth of understanding in several of the branches of chemistry and should have a background of theory in at least one area of chemistry sufficient to permit independent study and creative thinking. The research phase of the program should provide the student with an opportunity to integrate the use of modern chemical literature with fundamental laboratory techniques and, thereby to arrive at the threshold of independent research.

SPECIAL PROGRAM REQUIREMENTS*:

MASTER OF SCIENCE

For Admission—The applicant is expected to provide evidence of ability to pursue scientific study. An overall grade point average of 2.75 is usually expected. Applicants offering a 3.0 grade point average for upper division work in chemistry may be considered providing they meet general requirements for admission to the Graduate School. Other applicants will be considered on an individual basis.

For Prerequisites—Students should have completed an undergraduate major in chemistry which includes the chemistry courses required for an accredited program by the American Chemical Society.

The following requirements must be completed prior to admission to graduate study: Three semesters of introductory chemistry, one year of organic chemistry, and one year of physical chemistry.

*Students must also meet the general requirements of the Graduate School.

Additionally, CHE 514, 525, 550, and 565, must be included in the graduate program unless credit has been earned previously in the specific courses or their equivalents.

For Admission to Candidacy—Placement examinations in the areas of organic and physical chemistry will be given during orientation week. Background deficiencies will require remedial study as seems indicated.

The aptitude tests of the Graduate Record Examination and the Advanced Test in Chemistry must be taken during or prior to the first semester of graduate enrollment.

For Program—A minimum of 30 semester hours of graduate credit is required.

The program shall include the following:

Core courses in advanced analytical (CHE 520), advanced organic (CHE 650), and advanced physical chemistry (CHE 670).

Six elective credit hours in 600 level chemistry courses related to the student's area of research.

Two credit hours of graduate seminar (CHE 680).

A maximum of 6 credit hours of graduate research (CHE 695).

Any course deficiencies in CHE 514, 525, 550, or 565 must be made up as a part of the degree requirement.

Sufficient electives, approved by the graduate counselor, to reach the minimum of 30 credit hours. These credits should be from graduate level courses in chemistry, the related sciences or mathematics.

For Language—Proficiency must be demonstrated on a reading examination of scientific literature. Usually completion of two years of undergraduate study, with average grades of "C", in German, French or Russian will suffice to meet the requirement in lieu of examination.

For Thesis—A thesis based upon the student's research program must be submitted. In addition to the copies required by the Graduate School, one bound copy should be prepared for the director of the student's graduate research program.

For Comprehensives—A final oral examination in defense of the thesis and related course work is required.

MASTER OF ARTS IN EDUCATION

General requirements governing the degree, Master of Arts in Education, with an emphasis in chemistry are enumerated in the College of Education section of the *Graduate Catalog*.

For Prerequisites—The candidate should have taken one year of organic chemistry, equivalent to CHE 361 and CHE 362 and one year of physical chemistry, equivalent to CHE 471 and CHE 472, as an undergraduate. Undergraduate deficiencies should be removed during initial enrollments.

For Program—Programs of study should include CHE 514 and two hours of CHE 680, and nine additional hours from CHE 520, 525, 530, 545, 550, 555, 560, 565, 575, 595, and 600 level coursework.

For Thesis—The thesis is optional in this program.

For Comprehensives—A written and/or oral examination will provide the student with the opportunity to demonstrate scientific and pedagogical growth essential to secondary teaching.

CHEMISTRY (CHE)

CHE 511. Principles of Chemistry I. Three hours.

This course will treat selected concepts in chemistry in depth. Topics to be covered are equation of state, thermodynamics, and chemical equilibrium. Not available for credit if the student has taken CHE 471 and 472 or their equivalent.

CHE 512. Principles of Chemistry II. Three hours.

Continuation of CHE 511. Topics to be considered are chemical kinetics, electrochemistry and other selected topics. Not available for credit if the student has taken CHE 471 and 472 or their equivalent.

CHE 514. (Formerly CHE 401.) One hour. A.

Prerequisite: CHE 361, 472.

Introduction to the use of fundamental periodicals, abstract journals, handbooks, review series, and encyclopedias of chemistry. One lecture hour.

CHE 520. Advanced Analytical Chemistry. Three hours. A.

Prerequisite: CHE 362 and 472.

Advanced study of analytical methods usually classified as non-instrumental. Precipitation studies, aqueous and non-aqueous solvents, titrations, liquid-liquid extractions, chromatography, ion exchange, kinetics in analytical chemistry, sampling, statistics. Two lecture hours, three laboratory hours.

CHE 525. (Formerly CHE 320 and 420.) Instrumental Methods. Four hours. A.

Prerequisite: CHE 362 and 472 (or concurrent enrollment).

Principles and uses of optical and electrical instruments in analysis. Colorimetric, spectrophotometric (including infra-red), conductometric, potentiometric, polarographic and chromatographic methods and determinations, methods of nuclear chemistry. Two lecture and six laboratory hours.

CHE 530. (Formerly CHE 313.) Biochemistry. Three hours. II.

Prerequisites: CHE 362, 471, or permission of instructor.

Chemistry, metabolism and biosynthesis of carbohydrates, proteins, lipids, and nucleoproteins, the action of vitamins, hormones and enzymes related to cellular metabolism and body processes. Two lecture hours, three laboratory hours.

CHE 545. Chemistry Laboratory and Demonstration Techniques. Four hours. A.

Prerequisite: Six semesters of undergraduate work in chemistry or permission of instructor.

Techniques of constructing and demonstrating apparatus to illustrate principles of chemistry. Primarily for high school science teachers. Three lecture and three laboratory hours.

CHE 548. Issues in Chemical Education. Two hours. A.

A critical survey of issues in the teaching of chemistry.

CHE 550. (Formerly CHE 440.) Advanced Inorganic Chemistry. Three hours. I.
Prerequisite: CHE 472 or concurrent enrollment.

Modern concepts of atomic nuclei, atomic structure, and classification of elements. Complex ions and coordination compounds. Theories of bonding. Three lecture hours.

CHE 555. Inorganic Preparations. Three hours. II.

Prerequisite: CHE 550.

Techniques of crystallization, distillation, furnace methods, electrolytic processes and gas handling as involved in the synthesis of alloys, oxides, salts, coordination compounds, polyacids, anomalous salts, and colloids. One lecture and six laboratory hours.

CHE 560. Advanced Organic Chemistry. Three hours. A.

Prerequisite: CHE 362, 472.

Survey of new reactions and comprehensive study of reaction mechanisms. Three lecture hours.

CHE 565. Qualitative Organic Analysis. Three hours. A.

Prerequisite: CHE 362.

Identification of unknown organic substances through a systematic study of their physical and chemical properties and their chemical derivatives. One lecture and six laboratory hours.

CHE 575. Radiochemistry. Three hours. A.

Prerequisite: CHE 471.

The nature and uses of radioactive substances in chemistry. Radiolysis, isotope exchange, radiotracer applications; isotope dilution methods; applications to structural and kinetic studies, including solvent extraction and chromatography. Some demonstration experiments. Three lecture hours.

CHE 595. (Formerly CHE 430.) (Formerly called Research in Chemistry.) Introduction to Research. Three to five hours. I,II.

Prerequisite: CHE 361, 471.

Objectives and techniques of chemical research. Problems in all fields of chemistry.

CHE 625. Spectroscopy. Three hours. A.

Prerequisite: CHE 525 or 472.

The origin of spectra; arc and spark spectra; excitation energies; flame photometry; emission methods; the photographic process; Raman and atomic absorption methods; mass spectroscopy. Two lecture and three laboratory hours.

CHE 626. Electroanalytical Chemistry. Three hours. A.

Prerequisite: CHE 525.

Study of the fundamental principles underlying potentiometric measurements and titrations, conductometric titrations, polarographic analysis, amperometric titrations, coulometric titrations, chronopotentiometry, and other electrochemical methods in analytical chemistry. Two lecture and three laboratory hours.

CHE 630. Advanced Biochemistry. Three hours. A.

Prerequisite: CHE 530.

Advanced study of metabolic processes and biosynthetic routes. Three lecture hours.

CHE 652. Chemistry of the Transition Elements. Three hours. A.

Prerequisite: CHE 550.

A detailed treatment of the chemistry of the transition elements, the lanthanides and actinides, including the structure of coordination complexes, bonding, reaction mechanisms, and preparations. Three lecture hours.

CHE 653. Chemistry of Solutions. Three hours. A.

Prerequisite: CHE 550.

Reactions and substances in aqueous and non-aqueous media. Three lecture hours.

- CHE 660. Organic Synthetic Methods. Three hours. A.**
Prerequisite: CHE 560.
Modern synthetic methods with an emphasis upon mechanism. Topics will include oxidation, reduction, Diels-Alder reaction, 1,3-dipolar addition and synthesis using carbene and aryne intermediates. Three lecture hours.
- CHE 662. Quantum Organic Chemistry. Three hours. A.**
Prerequisites: CHE 362 and 472 or permission of instructor.
The basic principles of molecular orbital theory and its application to organic chemistry. Three lecture hours.
- CHE 663. Stereochemistry of Organic Compounds. Three hours. A.**
A study of configurations and conformations of organic molecules and the influence of molecular structure on reactions. Three lecture hours.
- CHE 670. Advanced Physical Chemistry. Three hours. A.**
Prerequisite: CHE 472; MAT 453 recommended.
Introduction to quantum theory; simple quantum mechanical systems; energy levels and statistical mechanics; atomic and molecular structure. Three lecture hours.
- CHE 671. Chemical Kinetics. Three hours. A.**
Prerequisite: CHE 472.
Theory of rate processes; reaction order and molecularity; mechanisms of reaction. Three lecture hours.
- CHE 673. Chemical Thermodynamics. Three hours. A.**
Prerequisites: CHE 472; MAT 453.
Variables and state functions; entropy, enthalpy, and free energy in ideal and non-ideal systems; activity and fugacity; partial molal quantities and chemical potential; thermodynamic properties from spectroscopic data. Three lecture hours.
- CHE 680. Graduate Seminar. One hour. I, II.**
Presentation of significant developments in chemistry to members of the chemistry faculty and department majors. One weekly meeting. May be repeated for a maximum of two hours credit.
- CHE 690. Graduate Literature Program. Three hours. I, II.**
An extensive survey of the literature related to a specific research problem.
- CHE 695. Graduate Research. One to six hours. I, II.**
Laboratory research in one of the major areas of chemistry. May be repeated for a maximum of six credit hours.

DRAMA AND SPEECH

Richard L. Benson, Chairman

DRAMA (DRA)

- DRA 500. History of Theatre I. Three Hours. I.**
Development of drama and theatre from the Greeks to the Elizabethans.
- DRA 501. History of Theatre II. Three Hours. II.**
Development of drama and theatre from the Elizabethans to the modern period.
- DRA 541. Special Problems in Play Direction. One to three hours. A.**
Prerequisite: DRA 331, 441.
Direction of a studio of major production under faculty guidance. Departmental permission required.

DRA 550. Play Production. Three hours. A.

Non-specialized course dealing with the basic elements of play production; selection, casting, rehearsals, types of dramatic literature, styles of acting, elementary principles of set design and decoration, costuming, make-up, lighting, and house management. Primarily for prospective teachers who may direct dramatics. Open to speech and/or drama majors only with the consent of instructor.

DRA 555. Special Problems in Play Production. One to three hours. III, A.

Prerequisite: Permission of the Chairman of the Department.

SPEECH (SPE)**SPE 560. (Also SED 560). Introduction to Speech Correction. Three hours. A.**

Prerequisite: SPE 100.

Designed to help identify and deal with speech defects. Study of basic types of disorders, emphasis on good environment for the handicapped and sources of specialized help.

SPE 570. Directed Study in Speech Pathology. One to three hours. A.

Directed projects in speech pathology. Proposal for the project must be submitted one semester in advance. Department permission is required.

SPE 580. Directed Study in Audiology. One to three hours. A.

Directed projects in audiology. Proposal for the project must be submitted one semester in advance. Departmental permission is required.

ENGLISH (ENG)

Kelly Thurman, Chairman

The Department of English offers the Master of Arts in English; and, in cooperation with the College of Education, a Master of Arts in Education Degree with emphasis in English. The graduate student in English may better prepare himself for a career of teaching on the college and pre-college levels and to engage in literary research and composition on advanced levels.

SPECIAL PROGRAM REQUIREMENTS*:**MASTER OF ARTS DEGREE**

The graduate program is designed to train the student in various areas of the discipline and to provide him with both breadth and depth in English appropriate to the advanced level. Areas of study include English and American literature, comparative literature, the history and structure of the language, bibliography, creative writing, and literary criticism.

*Students must also meet the general requirements of the Graduate School.

For Admission—Students must meet the general requirements of the Graduate School. In addition they should have completed an undergraduate major, or if they have not, be prepared to do additional hours to remove any deficiency in their undergraduate preparation. Ordinarily a 3.0 standing must have been achieved in upper division English courses taken.

To be eligible for the advanced degree, a student must achieve scores satisfactory to the Department in both the verbal Aptitude Test and the Advanced Literature Test of the Graduate Record Examination, or, in lieu of the latter requirement, the student must indicate special strengths which, in the judgment of the Department, are at least of equal importance to the achievement of satisfactory test scores on these examinations.

For Language—Students in either the thesis or non-thesis program must pass a language reading examination in a foreign language before the master's degree will be granted; however, the student may instead elect, unless he has already met the requirement, the completion of 12 hours (or the equivalent) of study in at least one language.

For Program Planning—Graduate work may be taken with or without a thesis. Under either option, work includes both preparation for independent study leading toward the Ph.D. in English and for teaching on the college and pre-college levels.

Students electing a **thesis** program may receive a maximum of six hours for ENG 698 and 699. Of the additional 24 hours required, at least 21 must be in English and selected from the following groups so as to meet the minimal requirements indicated: One course from 539, 540, 541, 605, 625, unless previously taken; two courses from 521, 522, 525, 526, 626, 630, 631, 632, unless previously taken; one course from 523, 524, 627, 628, 672, 692, unless previously taken; one course from 546, 547, 550, unless previously taken; and one course from 645, 647, or 652, unless previously taken.

The **non-thesis** student must present course work selected from the following groups so as to meet the minimal requirements indicated: two courses from 539, 540, 541, 605, 625, unless previously taken; two courses from 521, 522, 525, 526, 626, 630, 631, 632, unless previously taken; one course from 523, 524, 627, 628, 672, 692, unless previously taken; one course from 546, 547, 550, unless previously taken; one course from 645, 647, 652; and at least one course from 601, 615, 686, or 690.

For Thesis: Those who submit a thesis in partial fulfillment of the Master of Arts Degree in English must prepare it in conformity with the regulations approved by the Graduate Council and the Department of English. Detailed information concerning the preparation and submission of the thesis may be procured in the office of the departmental chairman.

For Comprehensive Examination—Graduate students not electing a thesis are required to take a written comprehensive examination after the completion of 24 hours of course work, usually close to the end of the student's second semester of course work. Comprehensive examinations will be scheduled in January, May, and the fourth or fifth week of each summer session.

Graduate students electing to complete a thesis are required to give an oral defense of their thesis and to be examined orally on related course work. The oral examination will be scheduled approximately one month before the end of the student's final semester of graduate work for the degree.

MASTER OF ARTS IN EDUCATION DEGREE

The Department of English, in cooperation with the Graduate School and the College of Education, offers an emphasis in English applying toward the Master of Arts in Education Degree—Secondary Education. Students obtaining this degree should have a minimum total of 30 graduate hours, 10 of which should be in education and 20 of which should be in English. These courses should be chosen from the specialization patterns specified for non-thesis M.A. candidates above, with at least one course from each group.

ENGLISH (ENG)

ENG. 502. (Formerly ENG 402.) Creative Writing I. **Three hours. I, A.**
Prerequisites: GSE 101, 102, and two other English courses; permission of instructor. Open to students who desire to have their manuscripts criticized; fiction, drama, poetry, biography, or the informal essay accepted; guest lectures by and discussion with writers-in-residence.

ENG 503. (Formerly ENG 403.) Creative Writing II. **One to three hours. II, A.**
Prerequisite: GSE 101, 102; permission of instructor.
A continuation of ENG 502 but open also to students enrolling for a writer's conference, which is a one-week course of fifteen informal lectures and discussions by faculty and visiting lecturers. Each student registering for the writer's conference must submit a short story, a one-act play, four poems, or the equivalent.

ENG 521. (Formerly ENG 421.) Renaissance Literature. **Three hours. I, A.**
Prerequisites: GSE 101, 102, and two courses in literature.
Study of poetry and prose of the English Renaissance, with emphasis on Sidney, Spenser, and Bacon.

ENG 522. English Poetry and Prose of the Seventeenth Century Exclusive of Milton. **Three hours. A.**
Prerequisite: GSE 101, 102, and two courses in literature.
Survey of poetry and prose of the first half of the 17th Century, with emphasis on Donne, Jonson, Herbert, Crashaw, Browne, and Burton.

ENG 523. (Formerly ENG 423.) Milton and His Age. **Three hours. A.**
Prerequisite: GSE 101, 102, and two courses in literature.
Study of the most important works of Milton; attention to the historical setting and to Milton's contemporaries.

ENG 524. (Formerly ENG 424, 44.) Chaucer. **Three hours. II, A.**
Prerequisite: GSE 101, 102, and two courses in literature.
Intensive reading of such works as *The Canterbury Tales* and *Troilus and Criseyde*;
other readings as time permits.

ENG 525. (Formerly ENG 425, 525.) The Age of Dryden and Pope. **Three hours. A.**
Prerequisite: GSE 101, 102, and two courses in literature.
Poetry, prose, and drama of the Restoration Period with emphasis on Dryden;
poetry of the Augustan period with emphasis on Pope.

ENG 526. (Formerly covered in part by ENG 525.) The Age of Johnson. **Three hours. A.**
Prerequisite: GSE 101, 102, and two courses in literature.
Poetry, prose, and drama of the later eighteenth century with emphasis on Johnson
and Boswell.

ENG 534. The Nineteenth-Century English Novel. **Three hours. A.**
Prerequisite: GSE 101, 102, and two courses in literature.
Study of the great 19th century English novelists from Jane Austen through
Hardy; Austen, Scott, Dickens, the Brontes, Thackeray, Eliot, Meredith, Trollope,
and Hardy.

ENG 539. (Formerly covered in part by ENG 540.) Introduction to Linguistic
Theory. **Three hours. I, A.**
Prerequisite: GSE 101, 102, and at least six additional hours of English.
Detailed attention to the International Phonetic Alphabet, phonemics, and mor-
phemics. Some attention to structural and transformational methods of analysis.
Introduction to the study of dialect.

ENG 540. Applied Grammar and Linguistics. **Three hours. II, A.**
Prerequisite: GSE 101, 102, and six additional hours.
Study of ways in which modern linguistic theory is put into practice. Emphasis
on linguistics field work, comparison of languages, and investigation of English as
a second language.

ENG 541. (Formerly ENG 441, 47.) History of the English Language. **Three hours. A.**
Prerequisite: GSE 101, 102, and six additional hours.
Study of the history of the English language in terms of social, historical and
linguistic forces from which it developed into modern English.

ENG 546. (Formerly ENG 646.) American Novel. **Three hours. I, A.**
Prerequisite: GSE 101, 102, and six additional hours of English.
Survey of the American novel from its beginning to the present.

ENG 547. Age of Emerson. **Three hours. A.**
Prerequisite: GSE 101, 102, and two courses in literature.
Intensive study of the prose and poetry of the American Renaissance; emphasis
on the writings of Emerson, Thoreau, Hawthorne, Melville, and Whitman.

ENG 550. Realism and Naturalism in American Fiction. **Three hours. A.**
Prerequisite: GSE 101, 102, and two courses in literature.
Study of the development of the realistic novel in the 19th century and the
rise of naturalism in the twentieth; emphasis upon Howells, James, Garland, Norris,
Crane, and Dreiser.

ENG 560. Continental Fiction. **Three hours. A.**
Prerequisite: GSE 101, 102, and two courses in literature.
Extensive reading in translation of important fiction of the Western world;
emphasis on selected novelists of the 19th and 20th centuries.

ENG 565. Greek and Roman Drama in Translation. **Three hours. A.**
Prerequisite: GSE 101, 102, and two courses in literature.
Brief study of dramatic criticism, theory of tragedy, and the Greek and Roman
theater; reading of plays by Aeschylus, Sophocles, Euripides, Aristophanes, Plautus,
and Seneca.

ENG 575. Poetry, Prose, Composition. Nine hours.

Intensive analysis of poetry and prose; laboratory in composition; demonstrations of recent instructional media. Designed to prepare elementary and secondary teachers for more effective teaching. Administered by the United States Office of Education.

ENG 601. Bibliography and Research. Three hours. A

Work in critical theory and practice with attention to bibliography and resources. Each student compiles an extensive bibliography on a subject or author of his or his instructor's choice.

ENG. 605. Seminar in the Structure of English. Three hours. A.

Examination of various descriptive, transformational, and comparative approaches to the study of language.

ENG 611. (Formerly ENG 511.) English Drama to 1642. Three hours. A.

English drama from its beginning in the Middle Ages to the closing of the theaters in 1642, excluding Shakespeare.

ENG 615. (Formerly ENG 515.) Literary Criticism. Three hours. II, A.

Study of the development of literary criticism from its beginning to the present.

ENG 625. Old English. Three hours. A.

Reading and study of selected works in original Old English dialects.

ENG 626. (Formerly ENG 526.) Middle English Literature. Three hours. A.

English literature from 1200 to 1500; emphasis on poetry; readings done primarily in the original dialect.

ENG 627. Seminar in Tudor Literature. Three hours. A.

Studies in depth of two or more major poets or prose writers of the period.

ENG 628. Seminar in Donne and Jonson: Poetry and Prose. Three hours. A.

Detailed study of the poetry of John Donne and Ben Jonson; some emphasis on 17th century prose.

ENG 630. Studies in the Romantic Period. Three hours. A.

Study in depth of selected major figures of the Romantic Period from the pre-romantics and Blake through Wordsworth, Coleridge, Byron, Shelley, and Keats.

ENG 631. Seminar in Nineteenth-Century English Prose. Three hours. A.

Studies in depth of two or more major English prose writers (fiction or non-fiction) of the 19th century.

ENG 632. Seminar in the Age of Tennyson and Browning. Three hours. I, A.

Primary emphasis on the poetry of Tennyson and Browning; selected readings from other Victorian writers.

ENG 645. Seminar in Whitman and James. Three hours. A.

Intensive study in scholarly problems related to the poetry of Whitman and the fiction of James.

ENG 647. Seminar in Hawthorne and Melville. Three hours. A.

Intensive study of scholarly problems related to the fiction of Hawthorne and Melville.

ENG 652. Seminar in Faulkner and Hemingway. Three hours. A.

Studies in the fiction of Faulkner and Hemingway.

ENG 655. Studies in Twentieth-Century Literature. Three hours. A.

Detailed study of selected major figures in poetry, fiction, and drama of the 20th century. Concentration upon British and American literature. May be repeated once.

ENG 660. The Epic. Three hours. A.

A study of the epic tradition; readings from Homer, Virgil, Dante, Milton, and others.

- ENG 672.** Seminar in Eighteenth-Century English Literature. **Three hours, A.**
Studies in depth of two or more major figures of the Augustan Age.
- ENG 686.** Literary Theory. **Three hours, A.**
Studies in the relationship of imaginative and non-imaginative literature; emphasis on philosophical approaches to English and American literature.
- ENG 690.** Special Studies. **One to three hours, A.**
Independent research and writing designed to fulfill the individual needs and interests of advanced students.
- ENG 692.** (Formerly ENG 592.) Seminar in Shakespeare. **Three hours, A.**
Concentration on selected works of Shakespeare; investigation and research of scholarly problems.
- ENG 698.** Thesis I. **Three hours, A.**
- ENG 699.** Thesis II. **Three hours, A.**

JOURNALISM (JOU)

JOU 501. School Publications Supervision Conference. (May be repeated for a maximum of 4 hours. **Two hours, A.**

Prerequisite: Permission of the instructor.

A two-week course of lectures and discussion by faculty and visiting lecturers. Each student will supervise secondary school students in the production of specimen school publications.

FOREIGN LANGUAGES

Charles L. Nelson, Chairman

The Department of Foreign Languages, in cooperation with the College of Education and the Graduate School, offers course work and advisement for students pursuing the Master of Arts in Education Degree with emphasis in French and Spanish.

SPECIAL PROGRAM REQUIREMENTS*:

MASTER OF ARTS IN EDUCATION

For Prerequisites—A minimum of an 18 hour minor composed of courses above the elementary level. A professional teaching certificate (in Kentucky, the provisional certificate) is a pre- or co-requisite.

For Program—At least 15 semester hours of French are required for the program. All students must complete FRE 563, Laboratory Techniques in Foreign Language Teaching. Additionally, six semester hours of work must be completed from the following: FRE 505, FRE 535, FRE 540, and FRE 650.

*The student must also meet the general requirements of the Graduate School.

Six semester hours may be elected from an allied area, subject to the approval of the advisor.

Suggested Arrangement of Program

First Semester: EDF 669, FRE 563, EDF elective,
FRE 505, FRE or allied elective(s) 12-15 hrs.

Second Semester: EDF electives, FRE 540, FRE 535,
or allied elective(s) 13-15 hrs.

Due to the heavy load of course work for two semesters, a graduate student is encouraged to take at least six hours of the program during a summer session.

For Comprehensives—The student must perform acceptably on an examination covering program components.

FRENCH (FRE)

FRE 505. (Formerly FRE 405.) Advanced Grammar and Composition. Three hours. I, II.

Prerequisite: FRE 202 or equivalent proficiency.

FRE 511. Twentieth-Century French Novel. Three hours. A.

Prerequisite: FRE 303 or equivalent.

Extensive readings from the works of contemporary French novelists.

FRE 535. (Formerly FRE 399). Introduction to French Linguistics. Three hours. II. Applied linguistics for the prospective teacher of French.

FRE 540. Advanced French Conversation. Three hours. I, II.

Prerequisite: FRE 206 or equivalent proficiency.

FRE 563. Laboratory Techniques in Foreign Language Teaching. Two hours. I, II.

Advanced methods in the coordination of electronic teaching devices to the total foreign language program.

FRE 570. Sixteen-Century French Literature. Three hours. A.

Prerequisite: FRE 504 or equivalent.

A survey of the major works of the Renaissance, with emphasis on those of Rabelais, Montaigne and Ronsard.

FRE 620. The Classical Drama of the Seventeenth-Century. Three hours. A.

A detailed study of the principal plays of Moliere and Racine.

FRE 630. Post-Romantic poetry of the Nineteenth Century. Three hours. A.

Intensive analysis of the works of Baudelaire and the symbolist poets.

FRE 640. The Contemporary French Theatre. Three hours. A.

An in-depth study of one or more of the following dramatists: Giraudoux, Cocteau, Anouilh, Ionesco, Camus, Sartre, Beckett.

FRE 650. History of the French Language. Three hours. A.

A survey of the evolution of the French Language from its origins to the present day.

FRE 660. Medieval French Literature. Three hours. A.

A survey of the French literature of the Middle Ages through the fifteenth century. Readings in modern French translation where needed.

FRE 680. Special studies. **One to three hours. A.**
Independent study in either language or literature on a subject of special need or interest to the advanced student.

GERMAN (GER)

GER 505. (Formerly GER 405). Advanced Grammar and Composition. **Three hours. I, II.**
Prerequisite: GER 202 or equivalent proficiency.

GER 511. Twentieth-Century German Novel. **Three hours. A.**
Prerequisite: GER 303 and GER 304 or equivalent proficiency.
In-depth study of one or more of the following novelists: Thomas Mann, Heimito von Doderer, Robert Musil, Hermann Broch.

GER 521. The Age of Classicism. **Three hours. A.**
Survey of the Classical Period with emphasis on the classical works of Goethe and Schiller.

GER 531. Survey of German Poetry. **Three hours. A.**
Designed to acquaint students with the characteristics of German prosody and to instruct them in the techniques of explication.

GER 535. Applied German Linguistics. **Three hours. II.**
Prerequisite: Consent of the department.
A historical and structural approach to German language and linguistics. Necessary for those who plan to teach the language.

GER 540. (Formerly GER 406). Advanced Conversation. **Three hours. II.**
Prerequisite: GER 206 or equivalent.
A conversation course for seniors or graduate students who need practice in speaking and understanding German.

GER 550. Brecht's Drama. **Three hours. A.**
Intensive study of works of one man to prepare students for advanced work and research on their own. Emphasis on Brecht's philosophical development as evidenced in his dramas.

GER 555. Literature of the Baroque Period. **Three hours. A.**
In-depth study of the drama and poetry of the period. Among authors included are: M. Opitz, A. Gryphius, D. V. Lohenstein, P. Fleming, P. Gerhardt, F. V. Logau, etc.

GER 570. Romanticism. **Three hours. A.**
A study of its philosophical basis, its themes and forms. Included among the authors are: Schlegel, Novalis, Tieck, etc.

GER 590. Nineteenth Century German Drama and Prose, (Realism and Naturalism). **Three hours. A.**
Study of works of Buchner, Stifter, Hebbel, Keller, Meyer, Fontane, Hauptmann, Sudermann.

LATIN (LAT)

LAT 503. (Formerly LAT 403 and LAT 31). Latin Literature of the Early Empire. **Three hours. A.**

Prerequisite: Lat 302 or equivalent proficiency.
Selections from a connected and contemporaneous discussion of politics, education, literature, philosophy, social types, and town and country life.

LAT 504. (Formerly LAT 404 and LAT 30). Latin Literature of the Late Republic. **Three hours. A.**

Prerequisite: LAT 302 or equivalent proficiency.

Selections from the works of Caesar, Sallust, Nepos, and Cicero, with emphasis on Ciceronian prose as a basis of much of the thinking and writing since his day; selections from works of poets of this age, with emphasis on the works of Catullus and Lucretius.

LAT 505. (Formerly LAT 405 and LAT 42). Roman Private Life. **Three hours. A.**

Lectures, discussions, and readings on Roman family, home, marriage, education, clothing, food, amusements, travel, religion, town, and country life.

SPANISH (SPA)

MASTER OF ARTS IN EDUCATION

For Prerequisites—A minimum of an 18 hour minor composed of courses above the elementary level. A professional teaching certificate (in Kentucky, the provisional certificate) is a pre-or co-requisite.

For Program—At least 15 semester hours of Spanish are required for the program. All students must complete SPA 563, Laboratory Techniques in Foreign Language Teaching. Additionally, six semester hours of work must be completed from the following: SPA 505, SPA 535, SPA 540, SPA 650. Six semester hours may be elected from an allied area, subject to the approval of the advisor.

SUGGESTED ARRANGEMENT OF PROGRAM

First Semester: EDF 669, SPA 563 EDF elective, SPA 505, SPA or allied elective(s)12-15 hrs.

Second Semester: EDF electives, SPA 540, SPA 535, SPA or allied elective(s)13-15 hrs.

Because of the heavy load of course work for two semesters, a graduate student is encouraged to take at least six hours of the program during a summer session.

For Comprehensives—The student must perform acceptably on an examination covering program components.

SPA 505. (Formerly SPA 405). Advanced Composition. **Three hours. I.**
Prerequisite: Senior status or graduate status.

SPA 507. (Formerly SPA 407). Spanish Drama. **Three hours. I.**
Prerequisite: SPA 303 and 304 or equivalent.
Intensive study of Spanish drama from the Middle Ages through the seventeenth century.

SPA 508. (Formerly SPA 408). Spanish Drama. **Three hours. II.**
Prerequisite: SPA 303 and 304 or equivalent.
Intensive study of Spanish drama of the eighteenth, nineteenth and twentieth centuries.

- SPA 509.** (Formerly SPA 309). Spanish Prose. **Three hours. I.**
Prerequisite: SPA 303 and 304 or equivalent.
Intensive study of Spanish prose from the Middle Ages through the eighteenth century.
- SPA 510.** Formerly SPA 310). Spanish Prose. **Three hours. II.**
Prerequisite: SPA 303 and 304 or equivalent.
Intensive study of Spanish prose of the nineteenth and twentieth centuries.
- SPA 511.** (Formerly SPA 409). Spanish Poetry. **Three hours. I.**
Prerequisite: SPA 303 and 304 or equivalent.
Intensive study of Spanish poetry from its beginnings through the seventeenth century.
- SPA 512.** (Formerly SPA 410). Spanish Poetry. **Three hours. II.**
Prerequisite: SPA 303 and 304 or equivalent.
Intensive study of Spanish poetry of the eighteenth, nineteenth and twentieth centuries.
- SPA 535.** (Formerly SPA 399). Linguistics. **Three hours. I, II.**
Prerequisite: SPA 303-304 or equivalent.
Introduction to linguistics for the Spanish major.
- SPA 540.** Advanced Spanish Conversation. **Three hours. II.**
Prerequisite: SPA 206 or equivalent.
- SPA 563.** Laboratory Techniques in Foreign Language Teaching. (Same as FRE 563 and GER 563). **Two hours. A.**
Advanced methods in the coordination of electronic teaching devices to the total foreign language program.
- SPA 620.** Medieval Spanish Literature. **Three hours. A.**
Spanish literature to 1492.
- SPA 625.** Golden Age Prose. **Three hours. A.**
Representative works and authors of the sixteenth and seventeenth centuries with an emphasis on Cervantes.
- SPA 630.** Golden Age Drama. **Three hours. A.**
Representative works and authors of the sixteenth and seventeenth centuries with an emphasis on Lope, Tirso, Calderon, and Alarcon.
- SPA 635.** Nineteenth-Century Prose. **Three hours. A.**
Representative works and authors with an emphasis on the development of the realistic novel.
- SPA 650.** History of the Spanish Language. **Three hours. A.**
The evolution of the Spanish language from its origins to modern Spanish.
- SPA 680.** Special Studies. **One to three hours. A.**
Independent study in either language or literature on a subject of special need or interest to the advanced student.

GEOGRAPHY (GEO)

J. R. Schwendeman, Jr., Chairman

The Department of Geography offers the Master of Arts Degree in geography and, in cooperation with the College of Education, the Master of Arts in Education Degree with emphasis in geography.

SPECIAL PROGRAM REQUIREMENTS*:

MASTER OF ARTS

For Admission—Applicants who possess grade point averages of 2.75 on all undergraduate work or, in certain instances, 3.0 for upper division work, are eligible for admission. Provisions for conditional admission exist.

Transcripts will be evaluated from the perspective of the undergraduate program required at Eastern Kentucky University.

For Admission to Candidacy—Satisfactory scores on the aptitude tests of the Graduate Record Examination are required. A departmental examination covering the general field of geography may be administered during the first semester in residence and any deficiencies reflected should be satisfied or incorporated by the plan of study prior to admission to candidacy for the degree.

For Program—Both a thesis and non-thesis program are available. The following courses are required in both programs: GEO 553, 556, 650, and 651. At present, specializations may be chosen from urban geography, regional planning, transportation geography, climatology, and/or geomorphology. The minimum length of the thesis program shall be thirty semester hours with an acceptable thesis required, or thirty-six semester hours if the candidate elects the non-thesis alternate plan. Courses in lieu of a thesis must be selected with the advice of the student's committee chairman. Provisions exist for an outside minor.

For Thesis—An acceptable thesis is required if a student selects the thesis master's program.

For Comprehensives—A final oral examination in defense of course work is required of all graduate students. Graduate students electing to write a thesis shall defend the thesis as part of those comprehensive examinations.

MASTER OF ARTS IN EDUCATION

General regulations governing requirements for the Master of Arts in Education Degree are contained in the College of Education section of the *Graduate Catalog*. Students seeking the degree with emphasis in geography should, with the assistance of an advisor, select courses from the offerings below. GEO 650 and 651 are required.

* Students must also meet general requirements of the Graduate School.

GEOGRAPHY (GEO)**GEO 500. Geography (.....). One to nine hours. A.**

A geography course designed for undergraduate and graduate institute participants. Course content will be developed to adequately serve the aims of the Institute, and the specific orientation will appear in parenthesis behind the course title; that is, Earth Science, Regional, Education, etc. The designated semester hours which can be earned will also be specified for a given institute.

GEO 501. (Formerly GEO 601.) Geography in Education. Three hours. I. S.

Prerequisite: Twelve hours of social science or six hours of geography.

Geography in the present day school systems from elementary school to university. Special emphasis directed toward course objectives, outlines, problems, evaluation of departments, geographic literature and equipment, and other material.

GEO 513. Physiography of Eastern United States. Three hours. I of alternate years.

Prerequisite: GEO 313.

Detailed study of the physiographic regions and features of Eastern United States. Two hours lecture and two hours laboratory.

GEO 514. Physiography of the Western United States. Three hours. II of alternate years.

Prerequisite: GEO 313.

Intensive study of the physiographic regions and features of Western United States. Two hours lecture and two hours laboratory.

GEO 516. Advanced Climatology. Three hours. I.

Prerequisite: GEO 216.

Current methods utilized in climatic studies of micro and macro areas, alternate climatological classification systems, and techniques employed in data collection, processing, and presentation.

GEO 530. Advanced Economic Geography. Three hours. II.

Prerequisite: GEO 330 and 331, or departmental approval.

Distribution and characteristics of various kinds of economic systems, and cultural and physical bases accounting for economic differentiation. Included are origin, development, and transformation of systems, comparative advantages and techniques for independent analysis. Research paper required.

GEO 540. (Formerly GEO 42, 372.) Geography of Europe. Three hours. I, of alternate years.

Prerequisite: General, none; geography majors, GEO 340.

Physical, cultural, and economic geography of Europe, with emphasis on problem areas or areas of current interest. Research paper required.

GEO 541. (Formerly GEO 33, 373.) Geography of Latin America. Three hours. I of alternate years.

Prerequisite: General, none; geography majors, GEO 340.

Physical, cultural, and economic geography of Latin America with emphasis on underdeveloped areas or areas of current political concern. Research paper required.

GEO 542. (Formerly GEO 41, 473, 573.) Geography of Asia. Three hours. II of alternate years.

Prerequisite: General, none; geography majors, GEO 340.

Physical, cultural, and economic geography of Asia, with emphasis on areas of current concern. Research paper required.

GEO 543. (Formerly GEO 43, 475, 575.) Geography of Africa. Three hours. II of alternate years.

Prerequisite: General, none; geography majors, GEO 340.

Physical, cultural, and economic geography of Africa, with emphasis on areas of current concern. Research paper required.

GEO 546. Regional Geography. Three hours. A.

Prerequisite: General, none; geography majors, GEO 340.

Intensive study of a selected area of less than continental size. Offered upon demand and by an instructor who has done extensive research in the selected region, or by a visiting lecturer. May be taken for a maximum of six hours. Research paper required.

GEO 553. Quantitative Applications in Research. Three hours. II.

Prerequisite: Elementary statistics course.

Study of data type normally encountered in social and earth science research, valid sampling techniques in regard to development of this data, analysis of samples by appropriate statistical methods, testing for validity and significance, and conclusion drawn. Two hours and two hours laboratory.

drawn. Two hours lecture and two hours laboratory.

Prerequisite: GEO 355 or departmental approval.

Advanced techniques of cartographic presentation of data and use of aerial photographs in map construction. One hour lecture and four hours laboratory.

GEO 556. Remote Sensing. Three hours. II, A.

Prerequisite: Departmental approval.

The mechanics and limitations inherent to remote sensing imagery, and the interpretation and use of this data in geographic research.

GEO 600. Geography (.....). One to nine hours. A.

A geography course designed for graduate institute participants. Course content will be developed to adequately serve the aims of the Institute. The specific orientation will appear in parenthesis behind the course title, that is, Earth Science, Regional, Education, etc. The designated semester hours which can be earned will also be specified for a given institute.

GEO 610. Seminar in Physical Geography. Three hours. I.

Prerequisite: Adequate background in physical geography as determined by department.

Seminar in some aspect of physical geography dictated by student interest, faculty speciality, or current problems in the field.

GEO 613. Research in Geomorphology. Three hours. II and alternate summers.

Prerequisite: Geography 313.

Directed research in selected geomorphological problems, such as hydrologic anomalies, sedimentation rates, quantitative geomorphology, and glacial studies.

GEO 616. Research in Climatology. Three hours. II and alternate summers.

Prerequisite: Geography 516.

Directed research in selected climatological problems, such as evapotranspiration, probability of single or multiple occurrences of weather phenomena, and flood forecasting.

GEO 621. Special Problems in Planning Geography. Three hours. I and alternate summers.

Prerequisite: GEO 421 or equivalent in related social science.

Directed research in urban or regional planning, such as functional zoning of cities and underdeveloped areas.

GEO 640. Directed Studies in Regional Geography. Three hours. A.

Prerequisite: Departmental permission.

Directed studies in micro regional geography. A student may take a maximum of six credit hours under this course number.

GEO 650. Field and Research Methods in Geography. Three hours. I and alternate summers.

Prerequisite: Geography graduate student.

Detailed reconnaissance field work, including classification of natural and cultural features, interview procedures, preparation of geographical reports and maps based on field data. Library facilities and research are also included.

GEO 651. Seminar in History and Philosophy of Geography. Three hours. II.
Prerequisite: Departmental permission.

A discussion of the history and development of geographic thought, various schools of geography, philosophies in geography, current and future trends.

GEO 690. Geography Seminar. Three hours. A.

Prerequisite: Departmental permission.

Selected geography topics for seminar discussion as student demand and faculty background dictate. Students may take this course for a maximum of six credit hours.

GEO 698. Independent Study. One to three hours. I, II, S.

Prerequisite: Departmental permission.

Semi-directed research on selected topics.

GEO 699. Thesis. Three to six hours. I, II, S.

GEOLOGY (GLY)

Donald C. Haney, Chairman

The Department of Geology offers the Master of Science Degree in geology, and in cooperation with the College of Education, the Master of Arts in Education Degree with emphasis in earth science. The Master of Science Degree is offered in the areas of mineralogy and petrology, paleontology and stratigraphy, and structural geology. Emphasis is placed upon solution of field problems through the use of specialities in the above areas.

SPECIAL PROGRAM REQUIREMENTS*:

MASTER OF SCIENCE

For Admission—Applicants who possess grade point averages of 2.75 on all undergraduate work are eligible for admission. Applicants who have a 3.0 grade point average for upper division work in geology may be considered providing they meet general requirements for admission to the Graduate School. Provisions for conditional admission exist.

For Prerequisites — Students who have completed an undergraduate major in geology will be accepted into the program. Students from other sciences or mathematics will be admitted, but will be required to make up deficiencies in undergraduate geology.

For Candidacy—In order to receive recommendation for admission to candidacy, the student must:

Have satisfactorily completed the Advanced Test in Geology of the Graduate Record Examination or U. R. E.

*Students must also meet the general requirements of the Graduate School.

Have satisfactorily passed a general examination in geology. This examination will be given the first week of the semester. Background deficiencies will require remedial study as seems indicated.

For Program—A minimum of 30 semester hours of graduate credit is required. The program shall include the following:

Core courses in igneous and metamorphic petrology (GLY 622), sedimentary petrology (GLY 623), advanced structural geology (GLY 510), and sedimentology (GLY 512). Three to six elective credits in 500 or 600 level geology courses related to the students' areas of research. Four credit hours of graduate seminar (GLY 680). A maximum of six credit hours of Graduate Research (GLY 699). Any course deficiencies in GLY 310, 311, 312, 410, 411, or 412 must be made up as part of the degree requirement. Sufficient electives, approved by the graduate advisor to reach the minimum of 30 credit hours. These credits should be from graduate level courses in geology, related sciences, or mathematics.

For Thesis—A thesis based upon the student's research program must be submitted.

For Comprehensive Examination—A final oral examination in defense of the thesis and related course work is required.

MASTER OF ARTS IN EDUCATION

General requirements governing the Master of Arts in Education Degree with an emphasis in earth science are outlined in the College of Education section of the *Graduate Catalog*.

For Prerequisites—The candidate should have taken courses equivalent to GLY 310, 351, 411, and 414 as an undergraduate. Deficiencies should be removed during initial enrollments.

For Program—Programs of study should include GLY 510, 511, 512, and 680. In addition, three to eight hours of graduate level courses in geology or related sciences.

For Thesis—The thesis is optional in this program.

For Comprehensives—A written and/or oral examination is required to test the student's scientific and pedagogical ability essential to secondary teaching.

GEOLOGY (GLY)

D. C. Haney, Chairman

GLY 500. Geology (.....). One to nine hours. A.

A geology course designed for undergraduate and graduate institute participants. Course content will be developed to adequately serve the aims of the institute. The specific orientation will appear in parenthesis behind the course title, that is, Earth Science, Physical Geology, Educational Geology, etc. The designated semester hours which can be earned will also be specified for a given institute.

GLY 510. Advanced Structural Geology. Three hours. A.

Prerequisite: GLY 410 or consent of instructor.

Advanced study of the architecture of the earth. Structures of mountains, regionally and world-wide, and mechanisms of deformation are considered in detail. Three lecture hours.

GLY 511. Advanced Paleontology. Three hours. A.

Prerequisite: GLY 411 or consent of instructor.

Study of taxonomy, biostratigraphy, and paleocology of fossils. Emphasis placed on foraminifera, brachiopods, mollusks, ostracodes, and conodonts. Two lectures and two laboratory hours plus field trips.

GLY 512. Sedimentology. Three hours. A.

Prerequisite: GLY 411 or departmental approval.

Study of sediments. Physical condition of deposition, time of formation of deposits, and provenance emphasized. Size, shape, and composition of sediments analyzed statistically. Two lectures and two laboratory hours.

GLY 532. Geology of Fuels. Four hours. A.

Prerequisite: GLY 430.

Origin, occurrences, and uses of natural fuels. Three lecture and two laboratory hours, plus field trips as deemed appropriate.

GLY 533. Industrial Minerals. Four hours. A.

Prerequisite: GLY 430.

Origin, occurrence and use of industrial rocks and minerals. Three lecture and two laboratory hours.

GLY 560. Geochemistry. Four hours. A.

Prerequisite: Chemistry 112, and Geology 310 or Departmental approval.

Principles of the distribution of the elements in the earth's crust. Phase equilibria pertinent to geologic problems. Major methods of geochemical analysis and exploration. Introduction to isotopes and their uses in geochronology. Three lecture and two laboratory hours.

GLY 598. Special Problems in Geology. One to four hours. I, II, S.

Prerequisite: Departmental approval.

Course topic determined by student and instructor.

GLY 600. Geology (.....). One to nine hours. A.

A geology course designed for graduate institute participants. Course content will be developed to adequately serve the aims of the institute. The specific orientation will appear in parenthesis behind the course title, that is, Earth Science, Physical Geology, Education Geology, etc. The designated semester hours which can be earned will also be specified for a given institute.

GLY 610. Geotectonics. Three hours. A.

Prerequisite: Departmental approval.

Topic selected by students and instructor in the area of structural geology.

GLY 612. Clay Mineralogy. Four hours. A.

Prerequisites: GLY 313 or Departmental approval.

Structure, origin, occurrence, and use of clay minerals. X-ray diffraction techniques and differential thermal analysis will be used to identify clay minerals. Two lecture and four laboratory hours.

GLY 622. Igneous and Metamorphic Petrology. Four hours. A.

Prerequisite: GLY 311 and 312.

Origin and occurrence and composition of igneous and metamorphic rocks. Emphasis on Precambrian batholiths and associated rocks. Three lecture and two laboratory hours.

GLY 623. Sedimentary Petrology. Four hours. A.

Prerequisite: GLY 311 and 312.

Origin, occurrence, and composition of sedimentary rocks. Three lecture and two laboratory hours.

GLY 630. Geophysical Exploration. Four hours. A.

Prerequisite: Departmental approval.

Principles and techniques of gravimetric, seismic, magnetic, and other geophysical methods of exploration for petroleum and economic minerals. Three lecture and two laboratory hours.

GLY 680. Seminar (.....). One to four hours. A.

Prerequisite: Departmental approval.

A geology course designated to fit specialized needs of individual students. May be taken in stratigraphy, paleontology, mineralogy, petrology, geomorphology, or structural geology.

GLY 699. Thesis. Three to six hours. I, II S.

HISTORY (HIS)

G. W. Robinson, Chairman

The Department of History offers the Master of Arts with a major in history; and, in cooperation with the College of Education the Master of Arts in Education Degree with an emphasis in history. Programs leading to these degrees prepare the student for careers in teaching on the college and secondary level,* advanced work toward a doctorate at other institutions and for a wide variety of public services within the United States.

SPECIAL PROGRAM REQUIREMENTS**

Master of Arts in History with Thesis

For Admission—Admission is determined by the Department of History in cooperation with the Graduate School. The following is required of each candidate:

*The M.A. in History with and without thesis qualify the recipient for a provisional teaching certificate providing the candidate has already completed an undergraduate professional education program in history. In such a case the provisional certificate would have to be renewed every ten years with renewal requiring that the holder had taught at least three of ten years in question. A standard certificate not requiring renewal would be awarded to each M. A. in Education (Secondary Education-History) graduate because of the ten hours of professional education included in the curriculum.

**Students must also meet the general requirements of the Graduate School.

Satisfactory performance on the Graduate Record Examination including the Advanced Test in History before or during the first summer or regular academic year the student is enrolled.

A high standard of undergraduate achievement, normally a 2.75 over-all average (on a 4.0 scale).

Completion of a satisfactory undergraduate major in history.

Two letters of recommendation from faculty members with whom the applicant has studied.

For Program Planning—Students may major in Twentieth Century American History, or Nineteenth Century English History, or Nineteenth Century Latin American History (Mexico). Minor fields may be chosen from the following list: Modern European Intellectual History, American Social and Intellectual History, English History, Russian History, Far Eastern History, Latin American History, Political Science, Sociology and Anthropology.

Each candidate must complete 30 semester hours work including six hours of general requirements as indicated below, twelve hours in the major field, six hours in the minor field, and six hours credit for the thesis.

For Language Requirement—The student must pass a reading examination on historical literature in a modern foreign language, determined in consultation with his advisor.

For Thesis—Each candidate must submit a thesis which demonstrates an appropriate level of skill in historical research and writing. The thesis shall be submitted to the student's major professor at least 30 days in advance of graduation. Acceptance of the thesis shall be at the discretion of a special reading committee. This committee shall be composed of the major professor and two other faculty members recommended by the chairman of the major department and appointed by the Dean of the Graduate School. The committee shall complete its review of the thesis at least one week prior to the final oral examination. Two bound copies of the accepted thesis, signed by the committee, must be deposited with the Dean of the Graduate School at least one week before graduation.

The thesis carries six semester hours of credit as indicated in the description under the section on courses.

For Comprehensive Examinations—The program will culminate in a written comprehensive examination designed to test the student's general knowledge of history, and an oral examination. The latter will concern only the candidate's mastery of his special field and his thesis topic. Passage of the language exam must be certified **PRIOR** to these examinations.

Suggested Arrangement of Graduate Work—It is suggested that the graduate student electing to major in **American History** take the following courses:

First Semester: HIS 603, 698, 611, U. S. History (elective), Minor elective	15 hrs.
Second Semester: HIS 601, 699, 610, U. S. History (elective), Minor elective	15 hrs.

A graduate student electing to major in **English History** would take the following courses:

First Semester: HIS 603, 698, 620, English History (elective), Minor elective	15 hrs.
Second Semester: HIS 601, 699, English History (elective), English History (elective), Minor elective	15 hrs.

A graduate student electing to major in **Latin American History** would take the following courses:

First Semester: HIS 603, 698, 625, 582, Minor elective	15 hrs.
Second Semester: HIS 601, 699, 535, 606 or 649, Minor elective	15 hrs.

Master of Arts in History without Thesis

Option I

For Admission—Applicants must meet special admission conditions cited for majors electing thesis option.

For Program Planning—Each candidate must complete 36 semester hours work including 12 hours of general requirements as indicated below, 12 hours in the major field, and six hours in each minor field.

Students may major in either American or European history. Two minor fields will be chosen from the following list with the stipulation that a major in American history requires two minors in European history areas and a major in European history requires at least one minor in American history.

Suggested minor fields include: Modern European Intellectual History, American Social and Intellectual History, English History, Russian History, Far Eastern History, Latin American History, Twentieth Century American History, Nineteenth Century American History, and Eighteenth Century American History.

All course work may be completed in residence at Eastern Kentucky University in no less than two regular academic semesters and one summer session.

Suggested Arrangement of Graduate Work—

First Semester: HIS 603, 605, Major elective (600 level), Major elective, Minor elective	15 hrs.
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Second Semester: HIS 601, 604, Minor elective
 (600 level), Major elective, Minor elective15 hrs.
 Summer Session: Major elective, Minor elective 6 hrs.

For Comprehensive Examinations—Upon completion of course work in the major field, the student's knowledge of the field will be tested by a comprehensive written examination. Upon completion of course work in each of the minor fields, the student's knowledge of these fields will also be tested by a comprehensive written examination. The program will culminate in an oral examination designed to test the student's general knowledge of history.

Option II

For Program—Each candidate must complete 36 semester hours work including 12 hours of general requirements as indicated below, 15 hours in the major field and nine hours in a minor field.

Students may major in American, European, or Latin American history. The major and/or minor fields will be chosen from the following list.

Suggested fields include: American Social and Intellectual History, English History, Russian History (minor only), Latin American History, Twentieth Century U. S. Nineteenth Century U. S., Eighteenth Century U. S., Modern European History, and Far Eastern History (minor only).

All course work may be completed in residence at Eastern Kentucky University in no less than two regular academic semesters and one summer session.

Suggested Arrangement of Graduate Work—

First Semester: HIS 603, 605, Major elective (600 level), Major elective, Minor elective15 hrs.
 Second Semester: HIS 601, 604, Minor elective (600 level), Major elective, Minor elective15 hrs.
 Summer Session: Major elective, Minor elective 6 hrs.

For Comprehensive Examinations—Upon completion of course work in the major field, the student's knowledge of the field will be tested by a comprehensive written examination. Upon completion of the course work in the minor field, the student's knowledge of this field will also be tested by a comprehensive written examination. The program will culminate in an oral examination designed to test the student's general knowledge of history as well as his understanding of his special field.

There is **no** language proficiency requirement for the M.A. in History without thesis.

Master of Arts in Education (Secondary Education-History)

For Admission—Admission is determined by the Department of History in cooperation with the Graduate School and the College of Education. The following special qualifications are required of each candidate:

An overall undergraduate point standing of at least 2.4 grade point ratio (4.0—A).

Completion of a satisfactory undergraduate major in history (at least 24 hours of courses in history).

A grade of no less than "C" in student teaching at the undergraduate level.

Satisfactory performance on the Graduate Record Examination including the Advanced Test in History before or during the first semester of the regular academic year the student is enrolled.

For Program—Each candidate must complete 30-31 semester hours work including 9-10 hours of core education courses, six hours of core history courses, nine hours in the major field and six hours in the minor field.

Students may major (nine hours) in either American history or European history. Students may minor (six hours) in any one of the following: American History, European History, Political Science, Geography, Sociology, Anthropology.

Suggested Arrangement of Graduate Work—A graduate student completing the M. A. in Education (Secondary Education-History) in one academic year would be expected to complete the following program:

First Semester: EDF 669, EDF Elective, HIS 605,
History major (elective), Minor elective15 hrs.

Second Semester: EDF Electives, HIS 604, History major
(elective), History major (elective), Minor elective16 hrs.

Due to the heavy load of course work for two semesters, a graduate student is encouraged to take at least six of the elective hours during a summer session.

HISTORY (HIS)

HIS 502 (Formerly HIS 402.) American Revolution and the Constitution. **Three hours, A.**

Colonial background of Revolution; internal and external nature of Revolution; problems associated with Confederation; events leading to the American Constitution.

HIS 503. Jacksonian Democracy. **Three hours, A.**

Prerequisite: **HIS 202.**

Criticism of the concept. Party issues, nationalism, and the importance of the age.

HIS 507. Civil War and Reconstruction. Three hours. A.

Prerequisite: HIS 202.

Ante-bellum South; ante-bellum North; anti-slavery agitation; growth of sectional consciousness; recurrent crises; secession; war; military operations; internal developments in the North and South; Confederate collapse; problems of reconstruction; social, political, and economic reconstruction; aftermath.

HIS 508. The Emergence of American Nationalism, 1789-1824. Three hours. A.

Prerequisite: HIS 202.

Federalists; Republicans and the Constitution; America and the French Revolution; War of 1812; break up of political parties; emergence of new political divisions.

HIS 511. The Progressive Era and World War I, 1898-1920. Three hours. A.

Prerequisite: HIS 203.

Progressive movement; imperialism; American entry into war; the Treaty of Versailles, League of Nations.

HIS 512. Prosperity, Depression, and War, 1920-1945. Three hours. A.

Prerequisite: HIS 203.

Internationalism and isolationism; prosperity in the twenties; depression and efforts to cope with it; the coming of World War II; United States participation in war.

HIS 525. Twentieth Century Afro-American History. Three hours. A.

Prerequisite: HIS 203 or consent of instructor.

An in-depth study of the contributions of Afro-Americans and their struggles for the privileges and immunities of citizenship, interwoven with the experiences of the United States from world power to probe of outer space.

HIS 530. American Social and Intellectual History to 1850. Three hours. A.

Prerequisite: HIS 202.

European influences; the colonial mind; revolutionary attitudes; New England's leadership; the movement of protest and reform; the rise of a native literature.

HIS 531. American Social and Intellectual History since 1850. Three hours. A.

Prerequisite: HIS 203.

The Civil War; Protestantism and capitalism; Social Darwinism; literature of naturalism and realism; the twentieth-century mind.

HIS 535. Ancient History in the Near East and Greece. Three hours. A.

Prerequisite: GSS 246.

Ancient Near East and Greece from prehistoric times to Alexander the Great and his successors; early food production; rise of civilization in Babylonia and Egypt; development of economic and political institutions; art; science; literature; and religion.

HIS 536. History of Rome. Three hours. A.

Prerequisite: GSS 246.

Rome from prehistoric village to the dominant power in the Mediterranean world; rise and decline of the Empire in the West.

HIS 541. The Age of the Enlightenment. Three hours. A.

Prerequisite: GSS 246.

European intellectual history, 1650-1789; scientific revolution, Cartesian and Newtonian schools; enlightenment as European phenomenon; emphasis on the eighteenth century as an age of political and social criticism.

HIS 542. The French Revolution and Napoleon 1789-1815. Three hours. A.

Prerequisite: GSS 247.

Background, analysis of various stages of the Revolution and their reflection of foreign policy; establishment of the First Empire; reasons for its collapse; effects of the Revolution upon France and Europe; 1815 as a watershed of European history.

HIS 544. Modern European Intellectual History. Three hours. A.

Prerequisite: GSS 247.

European civilization in the 19th and 20th centuries; emphasis upon institutions, ideas, and cultural forms distinguishing the period.

HIS 547. Tudor England, 1485-1603. Three hours. A.

Prerequisite: HIS 345 or consent of instructor.

Henry VII and resurgence of the monarchy; Henry VIII and revolt against Rome; Protestant Reformation; Cromwell's reforms; Edward VI and Marian Reaction; character and policies of Elizabeth I; Elizabethan settlement; Catholics vs. Puritans; Elizabethan diplomacy and Spanish War; Tudor Constitution and rise of Parliament; Elizabethan Renaissance.

HIS 548. Stuart England, 1603-1714. Three hours. A.

Prerequisite: HIS 346 or consent of instructor.

Characters and policies of early Stuarts; constitutional conflicts; Anglicanism vs. Puritanism; collapse of Tudor Constitution; English Civil War; Cromwell and Interregnum; Charles II and Restoration; growth of the Empire; Glorious Revolution; Britain as a great power; reign of Queen Anne.

HIS 550. Emergence of Victorian Britain. Three hours. A.

Prerequisite: HIS 346 or consent of instructor.

Economic and intellectual backgrounds of 19th century; French Revolution and Napoleonic threat; reaction and reform after 1815; Victorian thought; origins of the Commonwealth; age of Palmerston in foreign affairs.

HIS 551. Britain and the Empire in Adversity, 1867-Present. Three hours. A.

Prerequisite: HIS 346 or consent of instructor.

Characteristics of a new era; Reform Bill of 1867; economic and intellectual trends in late 19th century; decline of liberalism in politics; revival of imperialism; coming of World War I; emergence of the Commonwealth; impact of World War II; Conservative-Labor contention; Britain's role in the "cold" war.

HIS 557. Germany since 1870. Three hours. A.

Prerequisite: GSS 247.

Background; rise of Prussia; German nationalism and particularism; creation of the German Empire; its rule under Bismarck and William II; Peace Treaty and Weimar Republic; Nazi Germany; Second World War; allied occupation.

HIS 562. History of the Soviet Union. Three hours. II.

Prerequisite: GSS 247.

The 1917 revolution to the present. Establishment of the Soviet regime; New Economic Policy; Five-Year Plans; Soviet system of government; World War II; post-war years; cultural trends underlying political, economic, and social developments of the Soviet era.

HIS 564. (Formerly HIS 364.) History of Russian-American Relations. Three hours. A.

Prerequisite: GSS 246, 247.

Origin of Russian-American relations during the Colonial Period. Development of commercial relations and beginning of Russian-American diplomacy of Imperial Russia. Evolution of Soviet-American relations during the 20th century.

HIS 572. (Formerly HIS 372.) History of Southeast Asia. Three hours. A.

Prerequisite: GSS 246, 247.

History of Burma, Thailand, Laos, Cambodia, Vietnam, Malaysia, Indonesia, and the Philippines from the earliest time to the present. Special attention given to economic, social, and cultural change.

HIS 573. Twentieth Century China. Three hours. A.

Prerequisite: GSS 247.

Origins of communism in China; Revolution of 1911; Kuomintang; Mao Tso Tung; the Long March; World War II; Defeat of Chiang Kai-shek; Red China.

HIS 582. History of Mexico. Three hours. A.

Prerequisite: GSS 246, 247.

Mexican history from the Spanish conquest to present with emphasis on Mexican Revolution of 1910 and its effect on political, economic, social, and military institutions.

HIS 585. History of Brazil. Three hours. A.

Prerequisite: GSS 246, 247.

An examination of Brazil's history from 1500 to the present with emphasis on developments since 1930.

HIS 601. Survey of Historiography. Three hours. II.

Seminar approach to the history of historical writings and interpretation. Attention to selected works of great historians from Herodotus to the present. Required of all candidates.

HIS 603. Historical Criticism. Three hours. I.

Seminar in fundamental techniques of the historian; using basic bibliographical tools; locating and evaluating source materials; writing book reviews; critically interpreting historical evidence. Required of all candidates.

HIS 604. History as a Social Science. Three hours. A.

Scientific approach to social problems and their historical interpretations; analysis of economic, social, intellectual, and political backgrounds of contemporary civilization.

HIS 605. The Humanities Approach to History. Three hours. A.

The "American Character" and its development as an example of the humanities approach to the study of history.

HIS 606. Problems in Interpreting World History. Three hours. A.

Seminar on selected controversial developments in world history.

HIS 607. Problems in Interpreting American History. Three hours. A.

Seminar on selected controversial developments in American history.

HIS 610. Seminar in American History. Three hours. A.

Reading and investigations in a field other than the student's specialty. Required of all American history thesis majors.

HIS 611. Seminar in American History. Three hours. A.

Techniques of research, note-taking, documentation; occasional lectures and class discussions of major problems and controversies. Fields vary each semester. Required of all American history thesis majors.

HIS 620. Topics in Early 19th Century English History, 1815-1867. Three hours. A.

Seminar in the Victorian era. Students conduct original research; prepare papers; submit work to class for criticism and discussion. Required of all English history thesis majors.

HIS 625. Seminar in Latin American History. Three hours. A.

Research, discussion, and writing in Latin American history with special emphasis on Mexico. Required of all Latin American history thesis majors.

HIS 649. Readings and Research. Three hours. A.

Independent study in a specific field.

HIS 698. Thesis Tutorial I. Three hours. A.**HIS 699. Thesis Tutorial II. Three hours. A.**

MATHEMATICS (MAT)

B. R. Lane, Chairman

The Mathematics Department, in cooperation with the Graduate School and the College of Education, offers an emphasis in mathematics applying toward the M.A. Degree in Education.

The regulations governing the M.A. in Education Degree program may be found in the College of Education section of the *Graduate Catalog*. Students obtaining the Masters of Arts in Education Degree with the emphasis in mathematics may select the graduate courses for this purpose from the following:

MATHEMATICS (MAT)

MAT 505. Foundations of Mathematics. Three hours. I.

Prerequisite: MAT 308 or consent of instructor.

Nature of mathematical thought; logical systems, postulational concepts and methods; consideration of the work of Hilbert, Peano, Whitehead, Russell, and others.

MAT 506. Number Theory. Three hours. II.

Prerequisite: MAT 308 or consent of instructor.

Fundamental properties of integers; linear Diophantine equations; linear and quadratic congruences; famous problems of number theory.

MAT 508. Modern Algebra I. Three hours. I.

Prerequisite: MAT 213 and 308, or consent of instructor.

Some fundamental concepts, sets, mapping, equivalence relations, operations; rings and integral domains; isomorphisms; some properties of the integers; fields with emphasis on construction of the various number systems; groups.

MAT 509. Modern Algebra II. Three hours. II.

Prerequisite: MAT 508.

Matrix algebra; vector spaces; systems of linear equations; linear transformations.

MAT 515. (Formerly MAT 415) Introduction to Analysis II. Three hours. II.

Prerequisite: MAT 414.

Infinite sequences and series, power series, series of functions, convergence, uniform convergence; introduction to vector analysis; line integration; multivariable integration; Fourier series; introduction to the Lebesgue integral; allied topics.

MAT 533 (Formerly MAT 333.) Non-Euclidean Geometry. Three hours. II.

Prerequisite: MAT 213 or consent of instructor.

Finite geometries; foundations of Euclidean geometry with investigations of the tacit assumptions of Euclid; Hilbert's postulates; Euclid's Fifth Postulate; discovery of Non-Euclidean geometry; hyperbolic plane geometry; elliptic plane geometry; consistency of the Non-Euclidean geometries.

MAT 550. Complex Analysis. Three hours. A.

Prerequisite: MAT 414 or consent of instructor.

Complex numbers. Analytic functions and the Cauchy-Riemann conditions; the geometry of elementary functions. Line integrals and the Cauchy-Goursat Theorem. Cauchy's integral formula, Morea's Theorem and the Fundamental Theorem of Algebra. Power series, residues and poles.

MAT 556. Vector Analysis. Three hours. II.

Prerequisite: MAT 213 and PHY 202 or equivalent.

Algebra, geometry and calculus of vectors and applications.

MAT 571. Introduction to Numerical Analysis. Three hours. II.

Prerequisite: MAT 213 and 372 or equivalent.

Computer-oriented numerical methods course, basic operations, computation, approximation, interpolation, numerical solution of equations, numerical integration, matrices and systems of equations, numerical solution of ordinary differential equations. Exhibits techniques available; attempts to derive the relevant formulas and consider the mathematical analysis. Out-of-class laboratory work required.

MAT 607. Foundations of Secondary School Mathematics I. Three hours.

Designed for secondary school teachers of mathematics working toward the Master of Arts in Education Degree. Topics include: number and numeration; fundamental number theory; sets, relations, and functions; algebraic systems; consideration of these topics as they are likely to affect the modern high school mathematics program.

MAT 608. Foundations of Secondary School Mathematics II. Three hours.

Continuation of MAT 607. Topics include: history and development of geometry; logic and nature of proof; foundations of synthetic and analytic Euclidean geometry; discovery of non-Euclidean geometries; vector approaches to the study of geometry; consideration of these topics as they are likely to affect the mathematics program in the modern high school.

MAT 610. General Topology. Three Hours. A.

Prerequisite: MAT 308 or consent of instructor.

Set theory; concept of a topological space. Bases and subbases for topological spaces. Separation axioms, continuity, homomorphisms and topological invariants. Connectedness, compactness, and product spaces.

MAT 611. Topics in Topology. Three hours. A.

Prerequisite: MAT 610.

A continuation of MAT 610. Quotient spaces, compactification and metrizability. An introduction to algebraic topology.

MAT 650. Measure and Integration. Three hours. A.

Prerequisite: MAT 515.

Review of topology in E_n . The Riemann Integral and its defects. Construction of Lebesgue measure in E . Measurable functions. The Lebesgue Integral in E and its extension in E_n . Convergence theorems. Comparison of Riemann and Lebesgue Integrals. LP Theory and Fourier Series.

MAT 660. Topics in Algebra. Three hours. A.

Prerequisite: MAT 509 or consent of instructor.

Topics in groups, rings and fields. Introduction to homological and multilinear algebra.

MAT 690. Independent Study. Three hours. A.

Prerequisite: Graduate standing with a minimum of nine semester hours in 600 level mathematics courses.

Independent study on a problem in mathematics chosen by the student and the instructor. A final paper is required. This course may be repeated one time.

MUSIC (MUS)

George E. Muns, Chairman

The Department of Music offers major work which may lead to (1) the Master of Music Education Degree or (2) the Master of Arts in Education Degree with emphasis in music. The purpose of both degrees is to prepare students for leadership roles in music education at all levels; to build a sound foundation for further graduate study leading

to the doctorate; to develop more completely the performance skills of the candidate to help the student gain further insight into the structure of music; to increase the student's knowledge of musical culture through intensive study of music literature; and to provide the student with a core of knowledge from the field of learning theory, philosophy of education, and curriculum development enabling him to use educational principles in guiding the musical growth of others.

SPECIAL PROGRAM REQUIREMENTS*:

MASTER OF MUSIC EDUCATION DEGREE

For Admission—Applicants for admission to the graduate music program must hold a valid teaching certificate and must hold the degree of Bachelor of Music, Bachelor of Music Education, Bachelor of Science in Music Education, or an equivalent degree from an accredited institution. Admission is based on evidence that the applicant will be able to pursue creditably a program of graduate study in music education.

Normally, his scholastic record should reflect an overall grade-point average of 2.75 (4.0—A), and his undergraduate program must show adequate preparation in the major field and related fields, corresponding to the distribution of courses and credits usually found in departments certified by the National Association of Schools of Music.

Three letters of reference from persons qualified to judge competent work in the field of music or music education should be solicited by the candidate in support of his application. In addition, satisfactory performance on specific tests of musical knowledge and skills is a necessary prerequisite.

For Program Planning—The general format of the program appears below. Additional details are available in document form upon request to the Department of Music.

Music Education	10-16 hrs.
Teaching Techniques	0-6 hrs.
Music History & Literature, Structure and Organization of Music, Applied Music, Related Fields	8-12 hrs.
Research & Thesis (with option of Recital)	5 hrs.
Education**	5-10 hrs.

Total: 32 hrs. for graduation

For Thesis—Each candidate must submit a thesis which demonstrates an appropriate level of research and writing in the field of music education. Candidates may choose to (1) conduct experimental, descrip-

*Students must also meet the general requirements of the Graduate School.

**Five hours of education and four hours of music education will qualify the student for the Standard Teaching Certificate.

tive, historical, philosophical, or analytical research; (2) investigate a problem in music education in the schools; (3) write an original project such as a book for children and young people, a methods book, or some other creative endeavor; (4) complete a bibliography project; (5) complete a large curriculum project for school use.

For Recital—A graduate level recital may be presented in lieu of thesis. A paper, explaining in some detail the music to be performed on the graduating recital, will be prepared and submitted to the major professor at least two weeks prior to the recital date.

For Comprehensive Examinations—The program will be culminated by a written or oral comprehensive examination testing the candidate's general knowledge of music and education. In addition, those students electing to write a thesis will stand a final oral defense of thesis.

THE MASTER OF ARTS IN EDUCATION DEGREE

For Program Planning—The general format of the program appears below. Additional details are available in document form upon request to the Department of Music. See requirements outlined by the College of Education.

Music Education	10-15 hrs.
Teaching Techniques	0-6 hrs.
Music History and Literature, Structure and Organization of Music, Applied Music, Related Fields	8-12 hrs.
Education	9-12 hrs.
	32 hrs.

Rank I Certification

For Guidelines—Students interested in Rank I certification should consult the guideline outlined by the College of Education.

For Suggested Program 30 hrs.

Education

6 to 9 hours selected in consultation with advisor

Music and Music Education

9 to 16 hours selected in consultation with advisor

Electives

6 to 12 hours selected in consultation with advisor

For Options

Emphasis on Music and Music Education

Program as outlined above. Electives to include courses from behavioral and social sciences, philosophy, humanities, and communications.

Combination of Music and Music Education with Secondary Principalship

1. Music and music education courses chosen with advisor
2. Courses in education and electives should include the following:
 - (a) Required core for Secondary Principalship

EAD 600 Introduction to Educational Administration	3 hours
EAD 611 Supervision of Instruction	3 hours
EPY 616 Measurement and Guidance	3 hours
EAD 607 The Secondary School Principal	3 hours
ESH 663 Second School Curriculum	3 hours
 - (b) Courses should be selected with the advisor from:

EAD 601 School Personnel Administration	2 hours
EAD 602 School Buildings and Grounds	2 hours
EAD 603 School Finance	2 hours
EAD 605 Kentucky School Law	2 hours

Combination of Music and Music Education with Supervision of Instruction

1. Music and music education courses chosen with advisor
2. Courses in education and electives should include the following:
 - (a) Required core

ELE 610 Elementary School Curriculum	3 hours
ESH 663 Secondary School Curriculum	3 hours
EAD 611 Supervision of Instruction	3 hours
An Advanced Reading Course	3 hours
 - (b) Courses should be selected with the advisor from the following. One of each pair should be chosen.

EPY 616 Measurement and Guidance	3 hours
or	
EPY 521 Measuring and Evaluating Pupil Progress	3 hours
SED 521 Mentally Retarded Children	3 hours
or	
SED 610 Ecology of the Special Classroom	2 hours

MUSIC (MUS)

MUS 550. Teaching Techniques. One or two hours. I, II.

Analysis of current teaching methods and materials with the intention of developing sound teaching procedures. May include observation and performance. Topics announced in woodwinds, brass, percussion, strings, voice, piano and organ. May be repeated for credit maximum of two hours.

MUS 551. Performance Literature. One or two hours. I, II.

Study and analysis of literature for various performing media relative to performance practices and problems. Topics announced in woodwinds, brass, percussion, strings, voice, piano and organ. May be repeated for credit maximum of two hours.

- MUS 555. Symphonic Music Literature. Three hours. I.**
Prerequisite: MUS 371 and 372.
Evolution of the symphony from its beginning to the 20th century, with emphasis on score reading and listening.
- MUS 556. Choral Music Literature I. Two hours. A.**
Prerequisite: MUS 381 and 372.
Survey of choral music literature of the Renaissance and Baroque periods with particular emphasis on style and historical implications.
- MUS 557. Choral Music Literature II. Two hours. A.**
Prerequisite: MUS 371 and 372.
Choral music of the Classical, Romantic and Contemporary periods with particular emphasis on style and historical implications.
- MUS 560. Introduction to Musicology. Three hours. I.**
Systematic and historical musicology surveyed from the points-of-view of musical acoustics, musical psychophysiology, musical aesthetics, comparatology, theory-of-theory, musical historiography, music pedagogy and research in musicology.
- MUS 563. Teaching Piano in Classes. Two hours. A.**
Prerequisite: Three years of piano study at the college level, or the equivalent.
Methods and materials used in teaching of piano classes.
- MUS 564. Advanced Instrumental Conducting. Two hours. A.**
Prerequisite: MUS 366, or equivalent.
Designed to increase skills in score reading, preparation, interpretation and conducting of major orchestral or band works.
- MUS 565. Advanced Choral Conducting. Two hours. A.**
Prerequisite: MUS 366, or equivalent.
Conducting techniques and their application in choral rehearsal and performance.
- MUS 571. Band Administration and Procedures. Two hours. A.**
Problems in band administration, marching band techniques, band literature and conducting.
- MUS 581. (Formerly MUS 381.) Counterpoint I. Two hours. A.**
Survey of species. Writing in two, three and four parts with *cantus firmus*. Choral writing with the use of words. Analysis of Bach chorales and other polyphonic works. Writing of descants and canons.
- MUS 582. (Formerly MUS 382.) Counterpoint II. Two hours. A.**
Characteristics of good melodic lines. Interplay of metrical, melodic and harmonic rhythms. Techniques of imitation, and thematic treatment. Writing in two, three and four parts using instrumental combinations. Analysis of Bach Inventions and other works in polyphonic style.
- MUS 583. Composition. Two hours. A.**
- MUS 584. Scoring for Band. Two hours. A.**
Primary course in instrumentation and arranging for the band medium, including scoring for small ensembles, marching band, concert band, and other combinations of wind and percussion instruments.
- MUS 586. Workshop in Instrumental Music. Two or three hours. A.**
Topics in band or orchestral procedures.
- MUS 588. Pedagogy of Theory. Two hours. A.**
Comparative study of theory systems with emphasis on presentation and illustrative exercises dealing with related theoretical problems.
- MUS 612. Piano. One or two hours. I, II.**
Prerequisite: MUS 312. Four years or equivalent, as demonstrated by the student's proficiency on the instrument.

MUS 622. Voice. One or two hours. I, II.

Prerequisite: MUS 322.

MUS 632. String Instruments. One or two hours. I, II.

Prerequisite: MUS 332.

Graduate applied instruction in violin, viola, violoncello, or string bass.

MUS 633. Special Problems in String Teaching. One to three hours. A.

Specialized study of problems in studio or class teaching. Exposure to special techniques for successful teaching of skills at all levels.

MUS 642. Organ. One or two hours. I, II.

Prerequisite: MUS 342.

MUS 645. Brass Instruments. One or two hours. I, II.

Prerequisite: MUS 345.

Graduate applied instruction in trumpet-cornet, French horn, baritone horn, trombone, or tuba.

MUS 646. Woodwind Instruments. One or two hours. I, II.

Prerequisite: MUS 346.

Graduate applied instruction in flute, oboe, clarinet, bassoon, or saxophone.

MUS 647. Percussion. One or two hours. I, II.

Prerequisite: MUS 347.

MUS 672. Seminar in Music History. One to three hours. A.

May be repeated for maximum credit of three hours.

MUS 674. Supervision & Administration in Music Education. Two hours. A.

Functions, techniques and problems of supervision and administration in music education; development of effective music programs in city and county school systems; in-service education and workshop techniques; professional and community relationships.

MUS 675. (Formerly MUS 675 and 677) Current Trends in Secondary Music. Two hours. A.

Overview of the music curriculum in the junior and senior high school; relationship of the general and specialized aspects of music in secondary schools; characteristics of adolescents and their implications for musical growth.

MUS 676. Current Trends in Elementary Music. Two hours. A.

Current thought and practices in elementary music; knowledge of the learner and the learning process, structure of music, and methods of developing skills related to a practical program of experiences designed to promote children's musical growth.

MUS 678. Principles of Music Education. Three hours. I.

Presentation and discussion of basic educational principles and their implications for music education, with reference to all types of school situations.

MUS 679. Foundations of Music Education. Three hours. II.

Historical, philosophical and psychological foundations of music education and their relationship to curriculum development.

MUS 680. Field Work in Music Education. Two or three hours. A.

Professional activities in the field under guidance and supervision of members of Music Department staff. Emphasis on curriculum improvement through student work on projects and problems faced in actual teaching situations. Selected readings pertinent to individual problems and needs.

MUS 681. Workshop in Music Education. One to four hours.

Philosophy, objectives, literature, materials, and techniques pertinent to a particular area, or areas, of music instruction. Topics to be announced. May be repeated for credit maximum of four hours.

MUS 683. Seminar in Choral Procedures. Two hours. A.

Study of techniques and methods involved in preparation and performance of choral music, including emphasis on choral arranging for the various voice classifications. Includes a survey of junior and senior high school literature.

MUS 684. Organization & Administration of Instrumental Music. Two hours. A.

History and roles of instrumental music; methods of program initiation; student recruitment and testing; organizational and administrative aspects of various instrumental groups; administrative procedures for property and library materials.

MUS 687. Analytical Techniques I. Three hours. A.

An intensive study of the structure of Renaissance, Baroque and Early Classic music.

MUS 688. Analytical Techniques II. Three hours. A.

Prerequisite: MUS 687 or permission of instructor.

An intensive study of the structure of Late Classic, Romantic and Modern music.

MUS 698. Research & Writing in Music. Two hours. A.

Overview of important research in music; sources and procedures for investigating problems in the field; development of bibliographies.

MUS 699. Thesis. Three hours. I, II.

PHILOSOPHY (PHI)

John C. Cooper, Chairman

PHI 510. Aesthetics. Three hours. II.

(PHI 130 recommended preparation).

Examination of the major philosophical theories of art and beauty and of the place of aesthetic language in the general area of value judgments. Plato, Aristotle, Hume, Kant, Hegel, and several lesser figures will be critically considered.

PHI 520. Political Philosophy. Three hours. I, II.

An inquiry into the major forms of social control through political institutions and the use and meaning of key terms in the vocabulary of politics. Particular attention is given to the relationship of law and morality and the reconciliation of political obligation and personal freedom.

PHI 530. Seminar in Philosophy. Three hours. I.

Prerequisite: Consent of the Department.

An intensive and thorough examination of a subject selected by the instructor with the approval of the Department. Such subjects as metaphysics and epistemology as well as areas such as modern process thought will be considered.

PHYSICS (PHY)

T. M. George, Chairman

The Department of Physics offers the Master of Science Degree in physics and offers major work in support of the Master of Arts in Education Degree, in cooperation with the College of Education.

SPECIAL PROGRAM REQUIREMENTS*:

MASTER OF SCIENCE

The primary purpose of the Master of Science program is to prepare students for careers in industry, further graduate work, and/or community college teaching.

FOR ADMISSION—The student must meet the general requirements of the graduate school. Students should have an undergraduate major or minor in physics and should have completed upper division undergraduate courses in modern physics, electricity and magnetism, and mechanics. In addition, placement examinations will be given in these three areas during orientation week. A background deficiency in any of these areas may require additional study in the corresponding undergraduate course without graduate credit.

FOR DEGREE REQUIREMENTS—A minimum of 30 semester hours of graduate credit is required. Of these 30 hours, six hours may be taken in a minor field and a maximum of six hours in research leading to a thesis. The thesis is **optional** with the student. A final oral examination related to course work taken and/or in defense of the thesis is required of all students. There is **no** foreign language requirement. A well-prepared student may be able to complete this program in fifteen months.

MASTER OF ARTS IN EDUCATION DEGREE

The Physics Department, in cooperation with the Graduate School and the College of Education, offers an emphasis in physics applying toward the Master of Arts in Education Degree. This is a thirty hour program designed to provide graduate study in both physics and education for the secondary school teacher. Certification and at least an undergraduate minor in physics are required for admission. The other regulations for the Master of Arts in Education Degree program may be found in the College of Education section of the *Graduate Catalog*.

PHYSICS (PHY)

PHY 502. Physical Optics. Three hours. A.

Prerequisite: PHY 202 or consent of instructor.

Corequisite: MAT 112.

Wave motion, reflection and refraction, further study of lenses, the telescope, dispersion; facts concerning the spectrum, interference, diffraction, plane polarized light, the electromagnetic theory of light, the quantum theory, origin of spectra. Three lecture hours per week.

PHY 503. Thermodynamics. Three hours. A.

Prerequisite: PHY 202.

Corequisite: MAT 213.

Study of temperature, thermodynamic systems, ideal gases, First and Second law of Thermodynamics, Carnot cycle, Kelvin temperature scale, entropy.

*Students must also meet the general requirements of the Graduate School.

PHY 506. Physics for High School Teachers I. Three hours. A.

Prerequisite: One year of college physics and consent of instructor.

Topics from general physics to prepare teachers to teach high school physics. Topics from advanced and modern physics. Two lecture hours; three hours laboratory and discussion.

PHY 507. Physics for High School Teachers II. Four hours. A.

Prerequisite: PHY 506 or consent of instructor.

Continuation of PHY 506. Two hours lecture; three hours laboratory and discussion.

PHY 508. Topics in Physics for Teachers. Four hours. A.

Topics from general physics selected to aid the high school teacher to teach with greater confidence. Three lecture hours; three hours laboratory and discussion.

PHY 510. Special Problems in Physics. One to three hours. A.

Prerequisite: PHY 202 and PHY 306.

Working out of special laboratory experiments, development of new equipment, or solution of special mathematical problems related to physics.

PHY 511. Special Problems in Physics. One to three hours. A.

Prerequisite: PHY 202 and PHY 306.

Continuation of PHY 510.

PHY 516. (Formerly PHY 304.) Electricity and Magnetism I. Three hours. A.

Prerequisite: PHY 202.

Corequisite: MAT 453.

Introduction by means of calculus and vectors to formulation and use of principles of classical electricity and magnetism. Covers electric fields and potentials, capacitance, direct and transient currents, alternating currents. Three lecture hours per week. Offered in alternate years.

PHY 517. Electricity and Magnetism II. Three hours. A.

Prerequisite: PHY 516.

Continuation of PHY 516. Covers dielectrics, resistance, thermo-electricity, electromagnetic induction, magnetic properties of matter, Maxwell's equations. Three lecture hours per week. Offered on alternate years.

PHY 558. Classical Mechanics I. Three hours. A.

Prerequisite: PHY 202.

Corequisite: MAT 453.

Introduction by means of calculus to formulation and use of principles of classical mechanics. Covers force and motion of particles, work, Newton's Law of Gravitation, free and forced harmonic oscillations, translational and rotational motion of rigid bodies, wave motion. Three lecture hours per week. Offered on alternate years.

PHY 559. Classical Mechanics II. Three hours. A.

Prerequisite: PHY 558.

Continuation of PHY 558. Covers central forces, generalized coordinates, Lagrange's equations, Hamilton's equations, vibrating systems and normal coordinates. Three lecture hours per week. Offered on alternate years.

PHY 570. Quantum Mechanics. Three hours. A.

Prerequisite: PHY 553.

Basic principles of wave mechanics, solution of Schrodinger wave equation for simple systems. Interpretation of solutions and application to atomic and molecular problems. Three lecture hours per week.

PHY 601. Advanced Mathematical Physics. Three hours. A.

Prerequisite: MAT 453.

Physical applications of Fourier series; calculus of variations; gamma, beta, and error functions; coordinate transformations; tensor analysis; function of a complex variable; series solutions to differential equations; integral transforms, partial differential equations; probability. Three lecture hours.

PHY 605. Solid State Physics. Three hours. A.

Prerequisite: PHY 559.

Space lattices and crystal types; x-ray crystal analysis; dynamics of crystal lattices; thermal properties of crystals; free electron theory of metals; quantum theory of electrons in periodic lattices, semiconduction. Three lecture hours.

PHY 606. Selected Topics in Physics for Teachers I. Three hours. A.

Prerequisite: Consent of instructor.

Intensive study of topics in physics selected from: mechanics, thermodynamics, sound, electricity, magnetism, optics, and modern physics. Selection will depend upon the needs of the students enrolled in the course. Two lecture hours; three hours laboratory and discussion.

PHY 607. Selected Topics in Physics for Teachers II. Three hours. A.

Prerequisite: Consent of instructor.

Intensive study of topics in physics selected from: mechanics, thermodynamics, sound, electricity, magnetism, optics, and modern physics. Selection will depend upon the needs of the students enrolled in the course. Care will be taken not to duplicate subjects in PHY 606. Two hours lecture; three hours laboratory and discussion.

PHY 615. Advanced Nuclear Physics. Three hours. A.

Prerequisite: PHY 570.

General properties of the nucleus; two body scattering problems; nuclear forces; nuclear models; theory of nuclear reactions; theory of beta decay. Three lecture hours.

PHY 630. Electromagnetic Theory I. Three hours. A.

Prerequisite: PHY 517.

Detailed treatment of electrostatics; potential theory dielectric; magnetostatics and steady state current problems. Maxwell's equations; their solutions in dielectric and conducting media. The wave equation and plane waves. Three lecture hours.

PHY 631. Electromagnetic Theory II. Three hours. A.

Prerequisite: PHY 630.

The inhomogenous wave equation; special relativity; covariant formulation of electrodynamics; retarded potentials and gauge transformations; radiation from a Hertz oscillator; multipole radiation; Hamilton's formulation of Maxwell's equations. Three lecture hours.

PHY 640. Electronics II. Four hours. A.

Prerequisite: MAT 453, PHY 307.

Theory of solid state devices; rectifiers; amplifiers; oscillators; pulse and digital circuits. Three lecture hours; three laboratory hours.

PHY 660. Advanced Classical Mechanics I. Three hours. A.

Prerequisite: PHY 559.

Lagrange's equations; variational principles; the two body problem; rigid body mechanics; special relativity. Three lecture hours.

PHY 661. Advanced Classical Mechanics II. Three hours. A.

Prerequisites: PHY 660.

Hamilton's equations; canonical transformations; Hamilton-Jacobi theory; normal coordinates; small oscillations; Lagrange's and Hamilton's formulation for continuous systems and fields. Three lecture hours.

PHY 662. Statistical Mechanics. Three hours. A.

Prerequisite: PHY 559, PHY 503.

Systematic derivation of thermodynamic formulas; Maxwell-Boltzmann, Bose-Einstein, and Fermi-Dirac statistics; ensemble theory; distribution functions and partition functions; fluctuations; applications to gases and solids.

PHY 671. Intermediate Quantum Mechanics. Three hours. A.

Prerequisite: PHY 570.

Schrodinger wave equation; eigenfunctions and eigenvalues; energy levels; collision theory. Three lecture hours.

PHY 680 Special Topics in Physics. **One to three hours.** A.

Specially assigned theoretical or experimental work on problems to be announced.

PHY 690. Thesis Research. **One to six hours.**

Prerequisite: Approval of thesis-research advisor.

Research in physics followed by the preparation of a thesis under the guidance of the research advisor. This course may be repeated but a maximum of six hours of credit may be applied toward a degree.

POLITICAL SCIENCE (POL)

D. B. Pettengill, Chairman

The Political Science Department, in cooperation with the Graduate School, offers work leading toward the degrees, Master of Arts, Master of Public Administration, and, with the College of Education, the Master of Arts in Education.

PROGRAM CONTENT

MASTER OF ARTS

The Department of Political Science offers a Master of Arts Degree with emphases in the following fields: international relations, comparative government, public law, American political process or political theory. Objectives of the program are: to establish and maintain standards of scholarly excellence; improvement of political institutions in community, Commonwealth and nation; preparation for effective participation in the political process; attainment of a degree of sophistication in the use of general concepts in the discipline; appreciation of the relationships between political science and other disciplines; and development of a specialized creativity in an area of the discipline.

For Admission—A high standard of undergraduate achievement, normally 2.75 overall average (on 4.0 scale). Conditional admissions provisions exist. Completion of a satisfactory undergraduate major in political science is required as are two letters of recommendation from faculty members with whom the applicant has studied.

For Admission To Candidacy—Prior to or during the first semester in which the student is enrolled, satisfactory performance on the Graduate Record Examination including the Advanced Test in Political Science is required.

For Program—Each student must complete 30 semester hours including POL 600 and POL 655. Students will elect to emphasize one of the following fields: international relations, comparative government, public law, American political process, or political theory. Six hours of acceptable course work must be earned in the Departments of Economics, Geography, History, Sociology or an allied area.

For Language or Statistics—The student must pass a reading examination in a modern foreign language, determined in consultation with his advisor, or complete two semesters of mathematics and statistics, or the equivalent, as determined by his advisor.

For Thesis—Students will normally be expected to submit an acceptable thesis. The thesis carries six semester hours of credit as indicated in the description under the section on courses.

For Comprehensive Examinations—A comprehensive written examination is required as well as an oral defense of the thesis. The comprehensive examination may not be taken until the requirement in foreign language or statistics has been met.

MASTER OF PUBLIC ADMINISTRATION

It is not mandatory for students admitted to the M.P.A. program to have completed an undergraduate degree in political science. Rather, the chief consideration will be the student's aptitude for public service, and his capacity for thinking broadly across the borders of political science, economics, geography and history. Therefore, undergraduate preparation will be equated with the student's breadth of experience as well as his aptitude for a career in administration.

For Admission—A high standard of undergraduate achievement, normally 2.75 overall average (on 4.0 scale). Conditional admissions provisions exist. Completion of a satisfactory undergraduate major. (See section below on program).

For Admission to Candidacy—A preliminary examination in two areas of public administration (finance, personnel, organization or law) will be required. Students may be admitted to candidacy only after completion of at least 15 hours of their total programs. Students must also demonstrate competence in the use of statistical tools.

For Program—Course requirement for the M.P.A. Degree are as follows:

POL 650 (Internship)	12 hours
POL 565, POL 665, POL 675, POL 685	12 hours
2-4 courses from GEO 530, GEO 546, GEO 621, GEO 640	6-12 hours
(or) 2-4 courses from HIS 512, HIS 513, HIS 531, HIS 604, HIS 610	6-12 hours
(or) 2-4 courses from ECO 550, ECO 593, ECO 597, ECO 600, ECO 620	6-12 hours
Elective courses in Political Science	6-12 hours
	36 hours*

For Internship—Will be arranged for one semester with a government agency or an official of the Commonwealth or a local government. A written report of the internship must be submitted.

For Comprehensive Examination—Passage of an oral comprehensive examination will be required.

The regulations for the M.A. in Education Degree program may be found in the College of Education section of the *Graduate Catalog*. Students obtaining the M.A. in Education Degree with the emphasis in political science may select the graduate courses for this purpose from the following:

POLITICAL SCIENCE (POL)

POL 500. Practicum in Political Science. 1-3 hours. A.

Prerequisite: 12 hours of political science.

A supervised field study program available only for political science majors. Assignments may be made to the General Assembly of Kentucky or to officials of local government in accordance with the requirements of special projects.

POL 501. British Government and the Commonwealth. Three hours. I.

Prerequisite: POL 201 and either six additional hours of political science or six hours of English history, or graduate standing.

Study of constitutional system and political institutions of Great Britain. Attention to historical, geographical, social, and economic factors which influence the political system. Nature and development of the Commonwealth and significance of the Commonwealth for Great Britain are examined.

POL 510. American Foreign Policy. Three hours. II.

Prerequisite: Nine hours of political science or graduate standing.

Study of the processes and content of United States foreign policy.

POL 515. Workshop in International Affairs. Three hours. A.

Explores major problems in international affairs. Covers various areas of the world with reference to significant background factors and international problems of the people. Designed for secondary teachers in the social science field although open to other qualified students. Offered only during summer session.

POL 520. Workshop in Local Government and Politics. Three hours. A.

Focuses attention on major problem areas of Kentucky local government. A different area of concern will be explored each time the course is offered.

POL 530. Municipal Government and Administration. Three hours. II.

Prerequisite: Nine hours of political science.

Study of the powers, organization and current problems of municipalities and urban areas.

POL 535. The Political Systems of Mexico and the Caribbean. Three hours. A.

Prerequisite: Nine hours of political science or graduate standing.

An intensive analysis of governmental and political processes of Mexico, Cuba, and Central America. Attention focused on sociological, political, and economic factors.

POL 540. International Law. Three hours. A.

Prerequisite: POL 202 or permission of instructor.

A study of the nature and function of international law with regard to judicial solution of disputes among nations. Examination of the processes of growth and change in international law through cases in national and international courts, as well as strength and limitations of such laws.

POL 545. Theory of Public Administration. Three hours. A.

Prerequisite: POL 320 or permission of instructor.

This course identifies executive systems as expressed through individuals, small groups, and formal organizations; analyzes the functions, conditions and problems of executive value systems, activity and sentiment patterns. Action relationships in administration, administrative processes, and changes in executive systems from both historical and operational points of view are considered.

POL 555. History of Political Theory I. Three hours. I.

Prerequisite: Six hours in political science or graduate standing.

Survey of political thought from the time of Plato to the Reformation.

POL 556. History of Political Theory II. Three hours. II.

Prerequisite: Six hours in political science or graduate standing.

Survey of political thought from the sixteenth century to the present.

POL 557. American Political Thought. Three hours. I.

Prerequisite: Six hours in political science or graduate standing.

Intensive explorations of major currents in political thought which justified and guided the growth of the American republic. Largely organized on a chronological basis, but delves into main schools of thought that both reflected and energized the development of the American political process.

POL 560. The Judicial Process. Three hours. A.

Prerequisite: Graduate standing or permission of instructor.

A study of the development of legal and judicial systems from ancient times to the present day with particular emphasis on the Anglo-American experience.

POL 565. Administrative Law. Three hours. A.

Prerequisite: Graduate standing or permission of instructor.

Nature of the powers vested in administrative agencies; the problems of administrative procedure; and the methods and extent of judicial control over administrative action.

POL 600. Research Methods in Political Science. Three hours. A.

Prerequisite: Graduate standing in political science. Bibliography and development of political science.

POL 625. Seminar in Civil Liberties. Three hours. A.

Prerequisite: Permission of instructor.

The nature and scope of political and civil rights and liberties in the United States. Selected topics will be studied in depth.

POL 630. Seminar in the Political Process. Three hours. A.

Prerequisite: Permission of instructor.

Examination of theories of community power structure; analysis of political activity by pressure groups; legislative process; survey and evaluation of sources for political information. Conducted through discussion of problems arising in relationship between educational institutions and political affairs.

POL 635. Seminar on Intergovernmental Relations. Three hours. A.

Prerequisite: Permission of instructor.

Study of adoption, maintenance, and operation of the American federal system. Attention focused on different interlevel and inter-jurisdiction relationships within the system to analyze its development and ability to deal with current problems.

POL 640. Problems of Metropolitan Areas. Three hours. A.

Prerequisite: Permission of instructor.

Study of issues—economic, social and especially political—confronting our rapidly expanding metropolitan areas and regions. Proposed plans for possible amelioration of conditions examined.

POL 645. Seminar in Modern Political Theory. Three hours. A.

Prerequisite: Graduate standing.

Principles of political theory and the present theory of relationships between authority and individualism.

POL 650. Public Administration Internship. 3-12 hours. A. May be repeated for a total of 12 hours.

Prerequisite: Graduate standing in public administration.

Students will work under Department supervision in an office or with an official of a public agency or local government. A written report must be submitted to earn credit.

POL 655. Seminar in International Relations. Three hours. A.

Prerequisite: Permission of instructor.

An inquiry into contemporary problems of international affairs; the nation-state system and concepts of national interest in modern politics; the forms and distribution of power by which states seek to implement national interests; the making of foreign policy and methods of adjusting international conflict.

POL 660. The Politics of Developing Nations. Three hours. A.

Prerequisite: Permission of instructor.

Comparative analysis of political institutions, processes, and behavior in selected countries of South Asia, Africa, and the Near East. Special attention is given to the role of political ideologies and social forces in political modernization, and the involvement of these nations in world politics.

POL 665. Public Personnel Administration. Three hours. A.

Prerequisite: Graduate standing.

Principles and problems of recruitment, examination procedures, rating, classification and assignment to the job, with the philosophies of pay, promotion, employee motivation and discipline analyzed. The process of formulating and administering public personnel policies; concepts and principles utilized in selecting governmental personnel systems. Focus upon American national, state and local personnel systems.

POL 675. Public Finance Administration. Three hours. A.

Prerequisite: Graduate standing.

Interactions among the administrative, legal, and legislative aspects of the fiscal decision-making process at federal, state, and local levels.

POL 680. Public Management. Three hours. A.

Prerequisite: Graduate standing.

A survey of the tools of analysis available to overhead functions of public management in key areas of decision; emphasis on personnel administration and manpower utilization, budgetary processes and fiscal controls, and several methods of administrative analysis—organizational studies, procedures engineering, information processing, and operations research.

POL 685. Seminar in Theory of Public Administration. Three hours. A.

Prerequisite: Graduate standing.

POL 698. Thesis I. Three hours. A.**POL 699. Thesis II. Three hours. A.**

PSYCHOLOGY (PSY)

James A. Lee, Chairman

The Department of Psychology offers major work for the Master of Science Degree with emphasis in clinical psychology or school psychology. Students carrying a full program can expect to complete re-

quirements in four semesters and one summer term, including the full-time one semester internship. Students majoring in other departments may elect selected graduate courses in psychology.

SPECIAL PROGRAM REQUIREMENTS*:

MASTER OF SCIENCE

In addition to the general requirements of the Graduate School, candidates must satisfy the following special requirements:

For Admission—A minimum of five courses in psychology: general psychology, statistics and experimental psychology are required plus two other courses acceptable to the Departmental Admissions Committee.

Normally a grade point average of 3.0 in the major for the junior and senior years and a minimum overall undergraduate grade point average of 2.5 are expected.

Letters of recommendation from three instructors, two from the major and one from outside (at least from psychology) are required. Requests for such references must be initiated by the student.

Satisfactory performance on the Aptitude Sections and the Advanced Test in Psychology, of the Graduate Record Examination, is required prior to admission. Additional psychological tests for students entering the clinical and school emphases will be administered during their first term of study.

All applications should be received by March 15. Notification regarding admission and assistantships will be made by April 15. Students will be expected to make a binding acceptance by April 30. Students applying later may be accepted as space is available.

For Graduate Program Planning—All students admitted for study in this department are assigned as advisees to the department chairman. During the student's first term he is assigned to a temporary committee chairman who helps in developing the planned curriculum, subsequent registrations and presentation of the student to the faculty, for admission to candidacy. A student must have completed at least 15 credit hours before he may be admitted to candidacy for the master's degree. Such evaluations are scheduled by the departmental faculty during January, May and September only. After admission to candidacy, the student must elect a faculty member to serve as his permanent graduate committee chairman. The student and his committee chairman will then select two other faculty members to serve on his committee. This committee is charged with the responsibility of advising and super-

*The student must also meet the general requirements of the Graduate School.

vising the satisfactory completion of all remaining requirements for the degree, including courses, research comprehensive examinations and internship.

For Research—The student will complete Research I and II courses, involving classwork, experimental design data collection, analysis and written report of a selected topic. A typewritten copy of this report the degree, including courses, research, comprehensive examinations must be filed in the Departmental Office.

For Comprehensive Examination—The candidate for the degree will take written and/or oral examinations, at the discretion of the departmental faculty, as a measure of mastery of the area of study in which he seeks the master's degree.

For Internship—Students in both clinical psychology and school psychology programs must perform satisfactorily in PSY 679 in partial fulfillment of requirements for the degree.

For Clinical Psychology Emphasis—among others, a minimum total of 60 graduate credit hours, including 10 credit hours for the one semester internship, are requirements for the degree. Advanced practicum and internship placements and the research project should reflect the selected clinical emphasis.

Core Courses:	23 Hours
Required—PSY 620, 621, 622, 626, 640, 662, 680, 681, 682, 686	
Specialization courses:	17 Hours
Required—PSY 624, 625, 641, 642, 644, 661	
Practicum & Internship:	20 Hours
Required—PSY 643, 660, 684, 699	

For School Psychology Emphasis—Among others, a minimum total of 61 graduate credit hours, including 10 credit hours for the one semester internship, are requirements for the degree. Advanced practicum and internship placements and the research project should reflect the selected emphasis.

Core Courses:	23 Hours
Required—PSY 620, 621, 622, 626, 640, 662, 680, 681, 682, 686	
Specialization Courses:	16 Hours
Required—PSY 624, 625, 641, 642, 644, 683	
Practicum & Internship:	18 Hours
Required—PSY 643, 663, 685, 699	
Restricted Electives:	4 Hours
In Education—elect 2 credit hours in curriculum and 2 hours credit in a survey course.	

PSYCHOLOGY (PSY)

PSY 500. Social Psychology. Three hours. I, II.

Prerequisite: PSY 211.

The behavior of individual in relation to personality, social, and cultural systems.

- PSY 504. Psychology of Individual Differences. Three hours. I, II.**
Prerequisite: PSY 211 and 302.
Study and application of the facts of human variability, including differences in such areas as age, sex, class, intelligence and achievement.
- PSY 507. Problems in Psychology. One-three. A.**
Prerequisite: PSY 211, 213, and approval of instructor.
Qualified students may outline and study a definite problem in some area of psychology for varying credit. Amount of credit depends on nature and extent of the problem studied; results must be presented in a formal paper.
- PSY 620. Statistics. Three hours. I.**
Prerequisite: PSY 213.
Theory and practice in the analysis and interpretation of psychological measurements.
- PSY 621. Proseminar I. Two hours. I.**
Prerequisite: Consent of instructor.
Basic concepts, methods and current developments in selected areas of psychology.
- PSY 622. (Formerly PSY 601.) Theories of Personality. Three hours, I, II.**
Prerequisite: Consent of instructor.
Theories relating to structure, function and development of the individual to his dynamic behavior.
- PSY 624. (Formerly PSY 617.) Individual Intelligence Testing. Three hours. I, II.**
Prerequisite: Consent of instructor.
Theory, supporting evidence, and practice of individual measurement of intelligence, and communication skills.
- PSY 625. Personality Assessment. Two hours. I.**
Prerequisite: Consent of instructor.
History, theory, administration and interpretation of selected projective and nonprojective personality tests.
- PSY 626. Professional concerns. One hour. I.**
Prerequisite: Consent of instructor.
Consideration of ethical and related problems of psychologists.
- PSY 640. Proseminar II. Two hours. II.**
Prerequisite: Consent of instructor.
Continuation of Psychology 621.
- PSY 641. Psychopathology and Abnormal Psychology. Three hours. II.**
Prerequisite: Consent of instructor.
Description of symptoms and dynamics of psychological disorders with considerations of cause, development, modification and prevention.
- PSY 642. Projective Techniques I. Three hours. II.**
Prerequisites: PSY 624, 625.
History, theory, and rationale of projective techniques; administration and interpretation of the Thematic Apperception Test; and some familiarity with the Rorschach Inkblot Test.
- PSY 643. Practicum I: General. Three hours. II.**
Prerequisite: PSY 624, 625, 642.
Supervised practice in individual intelligence testing and personality assessment.
- PSY 644. Counseling and Psychotherapy. Three hours. II.**
Prerequisite: PSY 622, 641.
Survey of theories, principles and techniques with application to individuals and groups.

PSY 660. Practicum II. Clinical Psychology. Two hours. A.

Prerequisite: PSY 643, 644, 661.

Supervised practice in counseling/psychotherapy and advanced testing to include Rorschach Inkblot Test.

PSY 661. Projective Techniques II. Clinical Psychology. Three hours. I.

Prerequisite: PSY 625, 641, 642.

A continuation of Rorschach theory, method, practice and interpretation.

PSY 662. Research I. Two hours. A.

A laboratory course devoted to instrumentation, formulation of problems, and orientation to research methods.

PSY 663. Practicum II. School Psychology. Two hours. I.

Prerequisite: PSY 643, 644.

Supervised practice in counseling/psychotherapy and advanced testing.

PSY 680. Advanced Child and Exceptional Child Psychology. Two hours. I.

Prerequisite: PSY 622.

Theoretical issues and practical problems in intellectual, social, perceptual, physical and personality development with implications for education and adjustment.

PSY 681. Principles of Learning and Motivation. Three hours. I.

Prerequisites: PSY 640 or consent of instructor.

Principles and supporting evidence in each area with emphasis on human applications.

PSY 682. Social, Cultural and Family Dynamics. Three hours. A.

Prerequisite: PSY 622 or consent of instructor.

Interaction of the individual with groups to include the effects of family structure and minority status.

PSY 683. Advanced Tests and Measurements. Two hours. I.

Prerequisites: PSY 620.

Selected survey and application of group and individual tests used in both school and clinical settings.

PSY 684. Practicum II. Clinical Psychology. Five hours. II.

Prerequisites: PSY 660.

Supervised clinical practice toward assuming full responsibility for psychological evaluations and psychotherapeutic procedures.

PSY 685. Practicum III: School Psychology. Three hours. I.

Prerequisites: PSY 663.

Supervised experience toward assuming full responsibility for case evaluations, presentations and therapeutic procedures.

PSY 686. Research II. Two hours. I.

Prerequisite: PSY 662.

The investigation of independent problems under staff supervision.

PSY 687. Independent Work in Psychology. One-three hours. A.

Prerequisite: Consent of instructor.

Student responsibility for conceptualization and investigation of research problem and drawing formal conclusions.

PSY 699. Internship. Ten hours. A.

Prerequisite: Consent of student's committee.

Intensive supervised practice in approved setting.

COLLEGE OF BUSINESS

Joseph H. Young, Dean

The College of Business, in association with the Graduate School, offers the Master of Business Administration Degree and, in cooperation with the College of Education, offers the Master of Arts in Education Degree in business education.

MASTER OF BUSINESS ADMINISTRATION DEGREE PROGRAM

Program Objectives:

The Master of Business Administration Degree program is broad in nature and is designed to develop general competence in the functions of management. It provides for study in breadth in selected functional areas and for concentrated study in a specialized field of the student's choice.

The Master of Business Administration Degree program is designed to provide opportunities for developing skill in scientific analysis; the ability to integrate concepts and research findings of business and the behavioral sciences; to draw logically sound conclusions; to think creatively; to communicate effectively; and, to appreciate the role and responsibilities of business enterprise in our broad social framework.

SPECIAL PROGRAM REQUIREMENTS*:

For Admission—Applicants to the Master of Business Administration program must (1) hold a bachelor's degree from an accredited institution with work comparable to a Bachelor of Business Administration Degree, (2) normally present a 2.75 grade point average (4.0—A) on all previous work, and (3) make satisfactory scores on the Admission Test for Graduate Study in Business, administered by Educational Testing Service.

For General Information—Upon written petition, subject to the approval of the Chairman of the Graduate Committee of the College of Business, the student may transfer six semester hours of graduate level work from another accredited institution. The work must have been completed within six years of transfer and may not have been taken by extension or by correspondence.

The maximum course load for graduate students studying in the College of Business is twelve semester hours; registration in excess of this maximum must be approved by the Chairman of the Graduate Committee of the College of Business. Students employed by the University shall consult the Chairman of the Graduate Committee of the College of Business about his combined course and work load.

*Students must also meet the general requirements of the Graduate School.

At least twenty-four semester hours of work must be completed in courses open only to graduate students.

Students whose records, performance or examinations indicate deficiencies in the use of English will be required to take additional work to increase their proficiency in the use of English. The work will take precedence over all other courses in the student's graduate program.

For Admission to Candidacy—Admission to candidacy is granted only if (1) all admission to study conditions and course deficiencies have been removed, (2) the student has achieved at least a 3.0 grade-point average for not less than nine nor more than 15 hours of graduate level work in the College of Business, and (3) recommended by the student's graduate committee.

If, in any semester of study, the student fails to achieve at least a 3.0 grade-point average, he will automatically be placed on academic probation. If, in the following semester in residence, the student fails to achieve an overall 3.0 grade-point average, he will be automatically withdrawn from study in the College of Business. Following such withdrawal the student may be readmitted for further graduate study in the College of Business only if a petition (accompanied by a complete record of all college or university work previously undertaken) has been approved by the Chairman of the Graduate Committee of the College of Business and the Dean of the Graduate School.

For Prerequisites—All courses open only to graduate students are presented on the assumption that the students enrolled in them have had some foundation in accounting, economics, finance, management, marketing, business law or legal environment of business, and statistics. Students with deficiencies in any of these areas must supplement their formal degree programs with additional course work in the deficient areas.

For Program Planning—At least thirty semester hours of work must be taken in the functional fields of accounting, economics, finance, management, and marketing as follows: (1) 12 semester hours in a concentration of study; (2) students taking a concentration of study in accounting must select three semester hours of work from each of three of the functional fields of economics, finance, management, or marketing; (3) students taking a concentration of study in economics must select three semester hours of work from each of three of the functional fields of accounting, finance, management, or marketing; and, (4) students taking a concentration of study in one of the functional fields in business administration (finance, management, marketing) must select three semester hours of work from each of three of the functional fields of accounting, economics, and the remaining two functional fields in business administration.

No more than 12 semester hours of work from any functional area of study (exclusive of thesis credit) may be counted toward the degree.

For Thesis—Not more than six semester hours of credit may be earned for the thesis. A committee to direct and approve the thesis shall be nominated by the Chairman of the Graduate Committee of the College of Business.

For Non-Thesis—Students not electing to write a thesis must elect at least six semester hours of courses selected from among ECO 604, EDP 508, GBU 504, OAD 600, commonly called "tool" subjects.

For Comprehensives—Students electing to write a thesis shall pass an oral examination on the thesis and the course work. Students electing not to write a thesis shall pass a written comprehensive examination covering four areas of study, including the major area of study.

The comprehensive or oral examination shall be scheduled by the Chairman of the Graduate Committee of the College of Business in the semester in which the student expects to finish his course work or in the semester or summer session in which his thesis is accepted, but not later than three weeks before the end of the semester or summer session. Should a student fail either the comprehensive or the oral examination, he may petition the Chairman of the Graduate Committee of the College of Business for not more than one additional attempt to qualify. Re-examination must be taken and passed within the next three semesters, including summer sessions, following the semester or summer session in which the student first failed to qualify, but at least sixty days must elapse between examinations.

ACCOUNTING (ACC)

Claude K. Smith, Chairman

The Department of Accounting, in cooperation with the Graduate School and the College of Business, participates in the Master of Business Administration program. A student may take a concentration in accounting consisting of 12 hours of graduate level accounting courses. However, ACC 600 cannot be taken by students who have an undergraduate major in accounting. All accounting courses counting toward a concentration in accounting must be selected in consultation with the student's advisor. A detailed description of this program is presented elsewhere in this *Catalog*.

ACC 500. Public School and Governmental Accounting. Three hours. A.
Prerequisite: Senior Standing. Taught by announcement.

ACC 521. Fund Accounting. Three hours. I.
Prerequisite: ACC 126.

Advanced study in accounting and fiscal procedures for institutions and federal, state, county, and municipal governments.

ACC 525. Accounting Problems. Three hours. A.

Prerequisite: ACC 226.

This is an advanced course in accounting and the contents will be determined by the needs of the students registering for it.

ACC 527. Advanced Cost Accounting. Three hours. A.

Prerequisite: ACC 227.

Advanced problems in costs, budgets, distribution costs, measurements of departmental efficiency, and analysis of cost information for managerial decisions.

ACC 600. Managerial Accounting. Three hours. I.

Prerequisite: ACC 126.

A study of accounting procedures and systems to provide data for managerial decision making. Subjects include planning, analysis of relevant cost, impact of taxes and limitations of data.

ACC 620. Controllership. Three hours. A.

Prerequisite: Graduate standing and 24 hours of accounting.

The place of the controller in management. Includes such subjects as quantitative techniques, systems, internal auditing, planning, taxes, insurance, and departmental relationships.

ACC 625. Advanced Auditing. Three hours. A.

Prerequisite: ACC 441.

Rules of professional conduct; auditing standards and case studies of American Institute of Certified Public Accountants; auditing rules and regulations of Securities and Exchange Commission; analysis of problem areas in reporting.

ACC 627. Research in Taxes. Three hours. I.

Prerequisite: ACC 323.

An intensive analysis of the Internal Revenue Code. Research and discussion of tax problems affecting business and of tax planning and saving opportunities from the point of view of the professional accountant.

ACC 628. Accounting Theory. Three hours. II.

Prerequisite: Strong accounting background.

History and theory of accounting as discussed in accounting literature, periodicals, research bulletins, and publications of professional organizations.

ACC 640. Seminar in Accounting. Three hours. S.

Prerequisite: Strong accounting background.

This course involves directed readings and intensive investigation into controversial and specific areas of accounting. Oral and written reports required.

ACC 698-699. Thesis. Six hours. A.

Individual direction of research and thesis writing.

ECONOMICS (ECO)

Donald Shadoan, Chairman

The Department of Economics, in cooperation with the Graduate School and the College of Business, participates in the Master of Business Administration program. A student enrolled in this program may take a concentration in economics consisting of 12 hours of graduate level economics courses. In addition, the student is required to take ECO 604 as a tool subject. All economics courses counting toward a concentration in economics must be selected in consultation with the student's advisor. A detailed description of the program is presented in this *Catalog*.

ECO 510. History of Economic Thought. Three hours. I.

Prerequisite: ECO 231.

A study of the history of economic ideas from the ancient period to the end of the classical period. Stress is placed on the need for a critical analysis of the meaning, validity, and relevance of economic theories with respect to the social and economic environment of the theorists.

ECO 511. History of Economic Thought Since the Austrian School. Three hours. II.

Prerequisite: ECO 231.

A critical study of economic thought since 1870; forerunners of neoclassical economics; neoclassical thought; American Institutionalists; the Historicists; economic aggregates and econometrics; theories of business activities from Misselden to the depression of the 1930's; Keynesian and post Keynesian theories; association and planning.

ECO 550. National Income Analysis. Three hours. I.

Prerequisite: ECO 231.

A study of the fundamentals of macroeconomic analysis; the classical background; Keynes' objections to classical theory; basic national income concepts; consumption demand and the consumption functions; investment and income determination; interest and money; money wages and prices; employment theory; the development of Keynesian thought and the social philosophy toward which it leads.

ECO 593. Intermediate Economic Theory and Analysis. Three hours. I, II.

Prerequisite: ECO 231.

A development of the leading theories and analyses of value and distribution. Problems and policies of price determination of both the firm and the industry and factor pricing are considered at the intermediate level of analysis.

ECO 597. Private Enterprise and Public Policy. Three hours. I.

Prerequisite: ECO 231.

A study of the principal statutes pertaining to business behavior and their application by agencies and the courts. Specific policies are analyzed from the standpoint of legal and economic concepts and principles underlying them.

ECO 600. Managerial Economics. Three hours. II.

Prerequisite: ECO 231 or equivalent.

This course deals with the phases of micro and macro economics that are directly relevant to managerial decision-making. The concepts to be considered are: demand, costs, profits, competition, pricing, national income analysis, and economic stabilization. A considerable amount of emphasis will be placed upon the imperfect market conditions facing the decision-maker.

ECO 604. Statistical Methods. Three hours. I.

Prerequisite: ECO 391 or equivalent.

An intermediate course in statistical methods that deals with the following topics: sampling theory, elementary probability theory, multiple and linear correlation analysis, hypothesis testing, chi-square distribution, analysis of variance, economic forecasting, and non-parametric statistics.

ECO 620. Contemporary Economic Problems. Three hours. A.

Prerequisite: ECO 231 and approval of instructor.

This course deals with the application of economic principles to certain contemporary economic problems such as economic growth, economic stability, taxation, employment, poverty, national debt, gold outflow, monetary and fiscal problems.

ECO 698-699. Thesis. Six hours.

Individual direction of research and thesis writing.

GRADUATE COURSES

FINANCE (FIN)

FIN 600. Administrative Analysis in Finance. Three hours. S.

Prerequisite: Graduate standing.

Readings; problems and study of current controversial issues with emphasis on decision-making in the financial administration of the firm.

FIN 698-699. Thesis. Six hours. I, II, S.

Individual direction of research and thesis writing.

MANAGEMENT (MGT)

MGT 600. Administrative Analysis in Management. Three hours. I.

Prerequisite: Graduate standing.

Examines the evolution of management concepts and philosophies. An analysis of the contributions of various philosophies in the synthesis of an eclectic philosophy of management.

MGT 620. Administrative Analysis of Complex Organizations. Three hours. II.

Prerequisite: Graduate standing.

Parallel analyses of administrative practices in business and government with emphasis on administrative theory. Stress placed on administrative practices observed in the functions of planning, organizing, directing, and controlling.

MGT 698-699. Thesis. Six hours. I, II, S.

Individual direction of research and thesis writing.

MARKETING (MKT)

MKT 600. Marketing Problems. Three hours. S.

Prerequisite: Graduate standing.

A survey, analysis and evaluation of current trends, controversial issues and advanced technology in the field of marketing. The course is oriented toward decision-making from the standpoint of marketing administration in the firm.

MKT 698-699. Thesis. Six hours. I, II, S.

Individual direction of research and this writing.

BUSINESS EDUCATION AND OFFICE ADMINISTRATION (BED and OAD)

Alfred Patrick, Chairman

Students may earn the Master of Arts in Education Degree with a specialization in business education. For information concerning admission to this degree program, consult the College of Education section of the *Graduate Catalog*.

For Program. The Education Core (nine hours) and BED 600 must be completed; BED 570 is also required if the student has not had this course or the equivalent as an undergraduate. At least four of the

following business education courses must be completed: 550, 560, 610, 620, 630, 640, 650, 660. The remaining hours necessary to complete the 30-hour program will be chosen in consultation with the student's graduate advisor. Courses to correct undergraduate deficiencies in some areas of business may also be required.

BED 550. Workshop in Business Education. Three hours. A.

Offered during summer sessions only; enrollment will be limited to business teachers or seniors in business teacher education. A master's degree candidate may not count for graduate credit more than two of these workshops.

BED 560. Cooperative Business Education Programs. Three hours. A.

Background, aims, coordination techniques, and administrative policies for organizing and operating cooperative part-time programs in business occupations.

BED 570. Tests and Measurement in Business Education. Three hours. I.

Basic qualities of good tests; emphasis placed on construction, analysis, and revision of tests in business education subjects; attention also given to standardized tests and uses of test results.

BED 600. (Formerly 663) Principles of Business Education. Two hours. I.

Objectives, principles, curricula, trends, and major problems of business on the secondary level.

BED 610. Improvement of Instruction in Shorthand and Transcription. Two hours. A.

BED 620. Improvement of Instruction in Typewriting and Office Practice. Two hours. I.

BED 630. Improvement of Instruction in Basic Business Subjects. Two hours. A.

BED 640. Improvement of Instruction in Bookkeeping and Accounting. Two hours. II.

BED 650. (Formerly 665.) Administration and Supervision in Business Education. Two hours. A.

Problems in layout, equipment, curriculum planning, supervision in business education.

BED 660. (Formerly 664.) Seminar in Business Education. Two hours. II.

Reading and discussion relating to the major current problems in business education.

OAD 560. (MGT 560) (Formerly 501.) Office Management. Three hours. II.

Prerequisites: Senior standing; graduate enrollment on the basis of permission of instructor.

Function and organization of the office; office layout and equipment; office personnel—selection, training, supervision, and compensation; work simplification and control; automation in the office; planning, organizing, and controlling office services; systems and job analysis. OAD 560 and MGT may not both be counted for credit.

OAD 570. Advanced Administrative Office Management. Three hours, II.

Prerequisite: OAD 560 (or MGT 560) or equivalent or experience in office management.

Investigation of problems in such areas as office systems, systems analysis, work simplification, development of performance standards, forms design, mechanization and automation, work measurement, training programs.

OAD 600. Business Research and Report Writing. Three hours. II.

Prerequisite: Economics 391 or equivalent.

Nature, scope, and importance of business research; research methodology; principles and mechanics of formal report writing; collection of data and completion of a formal report by each class member. Enrollment is limited to students in the Master of Business Administration Degree program.

COLLEGE OF EDUCATION

Dixon A. Barr, Dean

Charles H. Gibson, Jr., Associate Dean

Eastern Kentucky University has maintained a strong interest in and commitment to the preparation of teachers since its founding in 1906. While teacher education at Eastern is viewed as an all-university function, the College of Education assumes major responsibility for students majoring in elementary education, guidance and counseling, library science, and physical education.

The College of Education in cooperation with the Graduate School has developed and implemented Master of Arts in Education Degree programs for elementary school teachers, guidance counselors, school librarians, special educators, and secondary school teachers of health and physical education. Other graduate programs include a fifth year program for certificate renewal, a sixth year program leading to Rank I certification, the Master of Arts Degree in guidance and counseling for non-school personnel, the Specialist in Education Degree in elementary education, physical education, school counseling and guidance. student personnel services in higher education, and a joint doctoral program in education (Ed.D. and Ph.D.) with the University of Kentucky. Work leading toward ultimate certification in school administration and/or supervision may be elected, subject to institutional approval, while pursuing the master's degree in a teaching field. Graduate programs leading to the Master of Arts in Education Degree have been developed in many secondary teaching fields in cooperation with the College of Applied Arts and Technology, the College of Arts and Sciences, and the College of Business. Specific information regarding these graduate programs is found elsewhere in this publication.

SPECIAL PROGRAM REQUIREMENTS*:

Master of Arts in Education

In addition to the general requirements for all master's degrees found elsewhere in this publication, the following specific requirements are in effect for the Master of Arts in Education:

For Admission—The student preparing for the standard secondary teaching certificate must select a major field of interest in which he has at least a minor of 18 hours. If he does not have at least a minor, he will be required to take work at the undergraduate level sufficient to develop a satisfactory minor.

All applicants must have earned a grade of "C" or better in student teaching in order to be eligible for admission to a Master of Arts in Education program.

* Students must also meet the general requirements of the Graduate School.

For Admission to Candidacy—Every candidate for the Master of Arts in Education Degree must have had a minimum of 15 semester hours professional work at the undergraduate and/or graduate level.

All candidates must possess a valid teaching certificate based on four years of standard college preparation in the state in which it was issued.

Students shall present an acceptable score on the aptitude test of the Graduate Record Examination prior to admission to candidacy for the degree.

Each candidate shall have had an interview with an appropriate graduate committee. The committee shall recommend an applicant's admission to candidacy to the Graduate Council following a positive appraisal of the student's personality, character, academic proficiency, and other factors deemed important for completion of the particular curriculum in which the student is working.

Additional criteria may be employed by a graduate committee providing these criteria shall first have been approved by the Teacher Education Committee and filed with the Dean of the Graduate School.

For Program Planning—Every candidate for the degree shall present a minimum of 9-10 semester hours in professional education as a component of the graduate program and a minimum of 27 semester hours in the combined undergraduate and graduate programs.

The remainder of the course work shall be determined by the institution in terms of the student's need, provided (1) that at least 12 hours shall be in an approved field or fields of interest outside professional education, and (2) that all such course work shall be approved upper division or graduate in level.

The degree will be granted only to candidates offering a minimum of 30 hours of course work in his major field of emphasis, including graduate and undergraduate work.

Students who plan to pursue post master's degree curricula for supervisors, elementary or secondary principals, or pupil personnel directors should incorporate at least six hours of approved behavioral science courses in their program of studies for the master's degree where possible.

For Residence—Candidates for the Master of Arts in Education Degree are permitted to complete up to 12 hours of approved course work through the Division of Continuing Education and/or by transfer from other accredited graduate institutions, with the restriction that not more than six hours may be accepted by transfer. However, one-half the program requirements **must** be completed in full-time residence. This requirement may be met during the academic year or through consecutive summer sessions.

The full-time residence requirement for students enrolling concurrently for initial certification and graduate study shall be extended to include one-half the total program requirements.

Teacher personnel are not permitted to enroll for more than four semester hours per semester while fully employed.

For Thesis—While the thesis is not required in any program leading to the Master of Arts in Education Degree, students with special research interests are encouraged to consider a thesis.

For Comprehensives — The candidate will have an opportunity to demonstrate professional growth through a written and/or oral examination covering education and major program components during the term in which graduation is scheduled. A representative of the College of Education shall participate in the evaluation process.

For Curriculum Requirements for Graduate Programs in Education Common to all programs leading to the degree, Master of Arts in Education, is the professional education core, from which a minimum of nine hours must be completed. Professional course options are presented below:

Required prior to the completion of nine hours, EDF 669, two hours.

A minimum of seven hours shall be elected from the following:

ESH 612	Curriculum Development	2 hours
EDF 615	Human Development	3 hours
EPY 616	Educational Measurement	3 hours
EDF 632	History of Education in the U.S.	2 hours
EDF 636	Philosophy of Education	2 hours
EDF 637	Comparative Education	3 hours
EDF 650	Educational Sociology	3 hours
EPY 652	Advanced Educational Psychology	3 hours
ESH 655	Integration of Modern Curriculum and Learning Principles	4 hours

The latitude of course selection provided above imposes an additional responsibility upon the student and his advisor. Individuals interested in post-master's degree certificates in administration and supervision should exercise particular care in course selection.

Students who wish to complete the maximum number of requirements by extension must file, through their advisor, a complete program of study with the Dean of the Graduate School prior to the completion of more than six hours of credit off-campus.

For Rank II Certification, the Fifth Year Program—In recognition of the increasing demands for the continuing education of teachers, the College of Education offers, in cooperation with other departments of the University, a **fifth year** of study leading to the Rank II elementary

or secondary certificate. This program will appeal to the teacher unable to qualify for a Master of Arts or Science degree program either because of prior preparation or level of previous academic achievement. It will be attractive to teachers unable or unwilling to meet the usual residence requirements.

Requirements include: (1) 12 hours must be completed at the graduate level; (2) 12 hours must be taken in an academic area or areas; (3) the remaining eight hours required should be chosen to fit general or specific needs of candidates without regard to offering department; (4) 12 of the 32 hours must be professional education.

Six hours of approved course work may be transferred from accredited four year colleges.

Programs of study must be approved and filed with the Dean of the Graduate School no later than the term during which six hours are to be completed.

Candidates for the certificate must maintain a 2.25 grade point standing. No more than 40 credits (32 required) may be submitted to achieve the necessary average.

All credits must be completed within ten years of enrollment in the program.

For the candidate who wishes to transfer later to a degree program, not more than 12 hours of appropriate credits will be allowed toward degree requirements.

For Rank I Certification

The College of Education in cooperation with offering departments within the College of Education, the College of Applied Arts and Technology, the College of Arts and Sciences, the College of Business, and the Graduate School, offers Rank I programs for guidance counselors, school administrators, supervisors, directors of pupil personnel, and teachers.

Program guidelines are highly flexible. General institutional guidelines for teachers include: six hours additional professional education electives, a minimum of 24 hours in the teaching field in the combined master's degree and sixth year program, and six hours free electives. Proposed programs should be filed through the advisor with the Dean of the Graduate School no later than the time 12 hours have been completed toward the program.

State guidelines by which the institution is governed in the administration of sixth year programs are reproduced below.

"1. Teacher education institutions desiring to offer programs leading toward a Rank I classification for teachers under the Foundation Law shall submit their guidelines for Rank I programs to the State Department of Education for approval.

2. For a Rank I classification under the Foundation Law the 30-semester-hour program of graduate study shall be planned in consultation with the student's adviser at the graduate school attended and shall be related to the professional needs of the teacher.

3. The appropriate official designated by the teacher education institution shall certify to the State Department of Education when the curriculum requirements have been completed for the Rank I program at the institution.

4. Of the 30-semester-hour program at least 15 semester hours shall be taken in residence at the college making the recommendation. The remaining 15 semester hours credit may be taken at the same institution or, upon approval of the college adviser, at other institutions.

5. All course work for Rank I shall carry graduate credit and at least 15 semester hours credit shall be from courses open only to graduate students. An academic standing of "B" shall be required on the 30 semester hours submitted for Rank I and no credit shall be accepted for courses carrying a grade lower than "C".

6. Twenty-four out of a total of 60 semester hours completed in a combination of the master's degree program and the 30-semester-hour program shall be in the candidate's major, or minor, or area of preparation or in supporting courses from other disciplines as approved by the institution, including such courses as the behavioral sciences, the social sciences, philosophy, the humanities and communications.

7. All guidelines except (6) are applicable not only to the programs for elementary and secondary teachers for Rank I but also for preparation-certification programs for school leaders, guidance counselors, librarians, and school psychometrists—effective September 1, 1962.

8. A person who has completed a specialist's degree in education with a total of 30 semester hours of graduate work or a specialist's program such as in reading, special education, and similar special programs with a total of 30 semester hours of graduate work or a doctorate shall qualify for Rank I."

For further details, the reader should consult the appropriate departmental section or advisor.

FOR SPECIALIST IN EDUCATION DEGREE (Ed. S.) NATURE AND PURPOSE OF THE DEGREE

The Specialist in Education Degree is a professional degree, designed for those preparing for positions which call for a level of study and specialization beyond the master's degree. Its specific functions are to:

Increase the effectiveness and competence of elementary and secondary classroom teachers as specialists in planning and guiding learning experiences.

Provide the additional preparation needed for certification and competence in a specialized school position, in the role of college teacher, and by those engaged in student personnel work.

The 30-hour minimum requirement is a structured and unified program oriented toward the student's professional objectives. For selected students, planning for the specialist degree may begin following completion of the baccalaureate degree. For some students the Specialist in Education Degree may lead to advanced study for the doctorate.

Students are urged to spend as much time in full-time residence as possible. Extensive use of the library, informal associations with fellow students and with staff, and participation in non-class activities provided by the University afford important learnings that can only be realized through full-time study.

ADMISSION REQUIREMENTS

The promise of the applicant as a successful professional worker in his chosen field is central to admission to the specialist program. To this end, admission to the Specialist in Education program is based upon the following entrance requirements:

1. Completion of requirements for the master's degree from an accredited college or university.
2. A score on the combined aptitude tests of the Graduate Record Examination at a level above the 65th percentile, based on scores achieved by Eastern Kentucky University seniors within programs.
3. Acceptable scores on one or a combination of appropriate standardized measures when required for specific programs.
4. Successful professional experience appropriate to and as required in specific programs.
5. Evidence of academic competence, physical and emotional health, and moral character based on letters of recommendation from graduate faculty and professional associates in administrative and/or supervisory roles.
6. Completion of application forms for admission to the program.
7. Personal interview, following receipt of the above data, with a screening and selection committee composed of three persons appointed by the department chairman. The interview should be held as early as possible, but not later than the student's first semester on campus and prior to application for admission to candidacy.

PROGRAM REQUIREMENTS

Each candidate's program of study will be designed to meet his specific needs as they relate to his chosen field of specialization. Provision is made for a core of courses, for additional courses in the area of specialization and in cognate fields as appropriate, for independent study, and for the development of a specialist project.

Core courses. A 12-hour block of courses is a part of all Specialist in Education programs. Nine of the 12 hours relate to the kind of experimentation and action research that are a part of the continuing work of the educator. The student is provided opportunity to become acquainted with research in his field of specialization and to gain the needed background in the methodology of experimentation. (Core courses are identified in the individual departmental sections).

Additional work in the area of specialization. Courses, seminars, and practica in the area of specialization are named and described in the section relating to the particular program.

Independent study. Students admitted to candidacy for the specialist degree may engage in independent study with credit. Other than those directly related to the specialist project, activities may include library research, conferences, discussions, writings, observations, visits, interviews, and direct practical experience in the field of specialization. Credit is based upon evidence of growth in accord with the goals outlined for the independent study by the student and his adviser.

Specialist project. The specialist project is another form of independent study in which each student engages. It is planned with reference to the professional goals of the student and his needs and interests as related to those goals. A written report will be made embodying the results of the investigation.

Overall guides for program requirements. In addition to the previously stated requirements, the following guides should be noted.

1. A **minimum of 30 semester hours** of graduate work beyond the master's degree, including the specialist project, must be **completed**.
2. **Fifteen hours** of course work must be completed **after admission to candidacy**.
3. Candidates may take a maximum of six semester hours through extension and/or transfer from an institution with a recognized sixth-year graduate program. Course work so completed must be approved by the student's advisory committee as meeting program requirements.
4. At least 15 semester hours must be in **courses numbering 600 and above**.

5. Minimum **residence requirements** can be met through two semesters of work, or a semester and a summer, or two summers as a full-time student.
6. The expected **time limit** for the completion for all requirements for the Ed. S. Degree is six years from the date of admission to the specialist degree program. All course credits must be earned within the eight-year period prior to the awarding of the degree.

The candidate for the Ed.S. Degree advances toward the awarding of that degree as he takes the following steps in the order indicated.

STEPS IN ADVANCEMENT TOWARD THE DEGREE

1. **Admission to the Graduate School.** The candidate has completed admission requirements when he has:

- a. Filed admission data on forms secured through the Graduate School, including two official copies of transcripts from all colleges attended.
- b. Identified for the Graduate School persons who can respond to the student's qualifications to engage in graduate study. Requested recommendations from two college faculty members and from two professional associates in administrative and/or supervisory roles are sent directly to the Graduate School.
- c. Presented a score on the combined aptitude tests of the Graduate Record Examination above the 65th percentile, based on scores achieved by Eastern Kentucky University seniors within programs.
- d. Requested appointment of a graduate advisory committee, through the department chairman. Usually three faculty members in the student's field of specialization constitute the committee.

2. **Admission to graduate study in the Ed. S. program.** The candidates may apply for admission to graduate study leading to the Ed. S. Degree when he has been admitted to the Graduate School and taken the following additional steps:

- a. Satisfactorily completed admission examinations designated by the department.
- b. Attained approval by the Ed. S. screening and selection committee.
- c. Requested that the department chairman review with the candidate the membership on the graduate advisory committee. The student has the option of nominating at least one committee member from the graduate faculty.
- d. Developed with his advisory committee a tentative program of studies.
- e. Requested that his committee recommend admission to the Ed. S. program.

3. Admission to candidacy for the Ed.S. Degree. A letter of request for admission to candidacy for the Specialist in Education Degree should be filed by the student with the chairman of his advisory committee.

- a. When a minimum of nine semester hours of graduate credit beyond the master's degree has been earned at Eastern Kentucky University. (A minimum of 15 semester hours must be taken **after** admission to candidacy.)
- b. When work taken toward the Ed.S. Degree shows a grade point average of **3.3 or above**.
- c. When the advisory committee has approved the planned program of study and a copy of this program has been filed with the committee chairman, the department chairman, and the Dean of the Graduate School.

Following the student's initiation of application for candidacy, the committee through its chairman recommends candidacy to the Graduate Council.

4. Completion of degree requirements. In working with the student toward the completion of degree requirements, the chairman of the advisory committee will take a leadership role. Other members of the committee will serve in a supporting role as requested by the chairman and/or the student. Major activities of the committee include

- advising with the student regarding the selection of his specialist project, assisting him in its development, and recommending approval of the written report of the project.
- participating in the final oral presentation and defense of the project.
- recommending the awarding of the Ed.S. Degree.

The student will be awarded the Specialist in Education Degree when he has met the following requirements:

- a. Completed course requirements (minimum of 30 semester hours) with a grade point average of not less than 3.0 (4 point scale).
- b. Satisfactorily passed final comprehensive written and/or oral examinations required by the department.
- c. Submitted the report of his specialist project, in writing, to members of his committee and secured their approval to arrange for an oral examination and defense of the project. (The completed project must be submitted to committee members at least one week prior to the scheduled defense. The oral defense must be scheduled at least two weeks prior to the close of the semester in which the degree is to be awarded.)
- d. Satisfactorily defended the project in an oral examination.

- e. Presented three **approved** copies of the project, unbound in final form, to the Graduate School as least one week before the close of the term in which the student is to be certified for graduation. In preparing final copies of the project, as well as the copies submitted in "c" above, it is recommended that the Turabian "Manual for Writers" be followed.
- f. Has prepared and presented to the Graduate School four copies of an abstract of 400 to 600 words suitable for publication. The abstract is due when copies of the project are filed.
- g. Filed an application for graduation as instructed by the Graduate School.

FOR COLLEGE TEACHING

The College of Education cooperates with participating colleges and the Graduate School in offering a core of courses and supervised teaching experiences for prospective and in-service teachers intending to seek employment or now placed in post-secondary schools and colleges.

The College Teaching Core, for which responsibility is shared with participating departments, provides for formal attention to be given to such matters as the sociology of college students, varying academic climates, and teaching tools and strategies. Core courses include ESH 695, 696, 697, 698, and ESH 699.

Inquiries about program opportunities should be addressed to the Dean of the Graduate School.*

THE JOINT DOCTORAL PROGRAM IN EDUCATION (Ed. D. and Ph. D)

The College of Education provides course work for the major field of study in support of the Joint Doctoral Program cooperatively offered, through the Graduate School, with the University of Kentucky.

SPECIAL PROGRAM REQUIREMENTS:**

For Admission—The applicant should present a score of at least 1000 on the combined aptitude tests of the Graduate Record Examination.

A score of 600 on the National Teachers Examination is required.

The applicant should rank at or above the 60th percentile on the Miller Analogies Test.

Normally three years of appropriate experience are required.

*New programs are being proposed and early announcement is expected.

**Students must also meet the general requirements of the cooperating graduate school.

For Committee—The student's advisory committee shall be comprised of: the dissertation director, at least one faculty representative of the major area, and one representative from the minor area, from the University of Kentucky; and, one representative of the major area and one representative from the minor area from Eastern Kentucky University.

For Residence—The student must complete a minimum of 18 semester hours of his doctoral course work, take the qualifying examinations, and complete the dissertation project at the University of Kentucky.

The minimum residence period at the University of Kentucky is one academic year.

For Program—The following majors are offered through the program: administration and supervision, foundations, guidance and counseling, vocational education, business education, curriculum—elementary, secondary, and special education.

EDUCATIONAL ADMINISTRATION (EAD)

Henry G. Martin, Chairman

The Department of Educational Administration, cooperating with other departments in the Graduate School, offers course work for elementary and secondary principals, supervisors, school business administrators, and superintendents. Course work in these areas is designed for those who seek certification and Rank I and Rank II programs. The Specialist in Education Degree is offered in administration and supervision.

SPECIAL PROGRAM REQUIREMENTS*:

For Professional Certification in Administration and Supervision

For persons holding the standard elementary or secondary certificate based upon the master's degree, Eastern offers appropriate course work leading to the professional certificate in administration and supervision with endorsement in elementary or secondary administration or supervision of instruction (the standard certificate). These programs require completion of a minimum of fifteen semester hours of course work beyond the master's degree.

Curriculum for the Elementary Principal

Prerequisites: The master's degree and the standard elementary teaching certificate or its equivalent. ESH 612, EDF 615, EDF 669,

*Students must also meet the general requirements of the Graduate School.

and EDF 636 or EDF 650, and a graduate course in the teaching of reading.

Administrative Core: EAD 600, ELE 610, EAD 611, EPY 616, EAD 606. Minimum program length is 15 hours. Appropriate substitutions will be made for individuals having completed prescribed courses at the master's degree level.

Rank I Program Options: The individual holding the standard certificate in administration and supervision with specialization in the elementary principalship may, with the consent and assistance of his advisor, elect to complete additional areas of certification in administration, or he may elect to broaden his background for the elementary principalship.

Curriculum for the Secondary Principal

Prerequisites: The master's degree and the standard secondary teaching certificate or its equivalent. ESH 612, EDF 615, EDF 669, and EDF 636 or EDF 650

Administrative Core: EAD 600, EAD 611, EPY 616, EAD 607, and ESH 663. Minimum program length is 15 hours. Appropriate substitutions will be made for individuals having completed prescribed courses at the master's degree level.

Rank I Program Options: See statement under 'Elementary Principal'.

Curriculum for the Supervisor of Instruction

Prerequisites: The master's degree and either the standard elementary or the standard secondary certificate. EAD 612, EDF 615, EDF 669, and EDF 636 or EDF 650.

Administrative Core: ELE 610, ESH 663, EAD 611, EPY 616 or EPY 521, SED 521, and an acceptable graduate course in reading. Minimum program length is 15 hours.

Rank I Program Options: See statement under 'Elementary Principal'.

Curriculum for the Superintendency

The curriculum for the school superintendent shall include a minimum of thirty semester hours graduate credit beyond the master's degree. Those students having standard certificates in the elementary and secondary principalship may find that a minimum of fifteen additional semester hours will qualify them for the superintendency. The superintendency certificate and the Rank I program in this area shall include the master's degree, either the elementary or secondary principalship program listed above, and EAD 601, EAD 602, EAD 603, and EAD 605. The superintendency certificate also

requires ELE 610 or ESH 663. (One will have been taken in the principalship program). The program shall include no less than six semester hours of Behavioral Science.

Curriculum for the School Business Administrator

Program prerequisites include possession of the bachelor's degree from an accredited four year college or university with a major or minor in business or commerce, accounting or management. Candidates must be admissible to graduate study and provide evidence of commitment to a career in school management.

Provisional certificate for school business administrator requires: No less than eighteen semester hours applicable toward the standard certificate, nine of which must be completed at Eastern; six of these nine hours must be graduate level courses. The applicant must check with the advisor as to other institutional and state requirements.

Standard certificate requires: A master's degree in the appropriate field plus the following course requirements.

Educational Administration Core to include: EDF 632, EDF 636, EDF 637, EDF 638 or EDF 650.

Foundations of Administration to include: EAD 600, EAD 611, EAD 606, or EAD 607; or EAD 601 and EAD 605, EAD 602 and EAD 603.

Business Administration to include: ACC 108, ACC 109, ACC 500, FIN 460, OAD 560 and GBU 300.

The applicant must work with the advisor to make sure other institutional and state requirements are met.

Curriculum for the Specialist Degree in Education

The applicant for the Specialist in Education Degree must work closely with the advisor on such things as:

1. Evaluation of previous graduate work.
2. Fulfilling requirements set forth in the guidelines for the Ed.S. Degree.
3. Completing required application blanks.
4. Establishing a program which lists courses to be taken for the area of specialization.

Core requirements devoted to issues and scientific research include 10-12 semester hours. The core is: EAD 691, EAD 697, EAD 698, EAD 699. Those admitted to the program will work with the advisor in developing a list of classes required. A committee will supervise the research and the writing of the Specialist project.

For the Specialist in Education Degree

For Admission—Acceptable scores on the Graduate Record Examination, including the Advanced Test in Education; an acceptable undergraduate and prior graduate academic record; a record of professional experience satisfactory to the Department.

For Admission to Candidacy—Graduate School requirements, treated elsewhere in the *Catalog*, must be satisfied. Departmental requirements, including a positive assessment of the individual's professional promise, must be met.

For Program—Curricula shall be individually planned; the program outlined below will be useful for general advisory purposes only.

Research Core: EAD 691, 697, 698, 699.

Administrative Core: EAD 600, 601, 602, 603, 605, 606 or 607, EAD 611, ELE 610 or ESH 663.

For Project—All candidates must complete an acceptable Specialist Project, EAD 698-699.

For Comprehensives—Candidates will be expected to provide evidence of professional maturity through written and/or oral comprehensive examinations.

EDUCATIONAL ADMINISTRATION (EAD)

EAD 507. Problems in Educational Administration. **One to three hours. A.**

Prerequisite: Approval of advisor and the chairman of the department.

For independent work, special workshops, or a special topic, or seminar.

EAD 600. Introduction to Educational Administration. **Three hours. I, II.**

Study of theories of administration and practice of these theories at the system level and community level. Studies of administrative functions of school personnel are examined. Research in the administration field by CPEA makes up a large part of the material for the course.

EAD 601. School Personnel Administration. **Two hours. A.**

To acquaint school administrators with problems that arise in the management of school personnel.

EAD 602. School Buildings and Grounds. **Two hours. A.**

Emphasis on the cooperative planning of school buildings that will fit the school program as identified by educational specifications. Equipping, furnishing and maintaining the buildings are studied.

EAD 603. School Finance. **Two hours. A.**

A study of the financing of the public schools. Stress is given to the importance of the administrator's understanding the problems and issues of school finance at the local, state, and federal levels in order that he may provide leadership that will pave the way for adequate support.

EAD 605. Kentucky School Law. **Two hours. A.**

The principles of school law; constitutional provisions relating to public schools in Kentucky; school districts, buildings and other school property, school officers, the State Department of Education, school support, conduct of schools, compulsory

attendance, school faculties and other employees, retirement, tenure, vocational education, rehabilitation education, higher education and court interpretation of the laws.

EAD 606. The Elementary School Principal. Three hours. II.

Prerequisite: EAD 600.

The organization and management of the elementary school. A study of the various duties, demands, and responsibilities of the elementary school principal in providing professional and educational leadership.

EAD 607. The Secondary School Principal. Three hours. II.

Prerequisite: EAD 600.

The organization and management of the secondary school. A study of the various duties, demands and responsibilities of the secondary school principal in providing professional and educational leadership.

EAD 611. Supervision of Instruction. Three hours. I.

Objectives and problems of school supervision; techniques and functions of supervision; current practices in supervision; problems of organizing instruction to meet increasing responsibilities of public schools; analyzing teachers' difficulties, planning supervisory programs, selecting and organizing instructional materials; techniques for developing desirable professional relations, problems of in-service education for teachers.

Three hours. A.

EAD 691. Issues and Trends in Educational Administration and Supervision.

Exploration of basic issues and trends in the field of educational administration and supervision. Development and critical analysis of substantive positions on issues and of movements implementing those positions. Designed for graduate students in the Specialist in Education degree programs in Educational Administration and Supervision. Should be taken during the student's first nine hours in the Ed.S. program.

EAD 697. Independent Study. One to three hours. A.

Designed for advanced graduate students who desire to investigate special problems relating to educational administration and/or supervision.

EAD 698. Research Design in Educational Administration and Supervision. Two hours. A.

Study of research and investigation in the areas of educational administration or supervision, identification of significant findings and areas of needed study. Includes emphasis on selecting and designing a study leading to the specialist project.

EAD 699. Specialist Project. Four hours. A.

Prerequisite: Limited to candidates for the Ed.S. program.

Designed to guide the Ed.S. candidate in the development of a scholarly project in educational administration or supervision. The project may be one of several types, a field project, a creative study, or more formal types of research and inquiry.

EDUCATIONAL FOUNDATIONS (EDF)

William A. McKenney, Jr., Chairman

The Department of Educational Foundations provides graduate instruction as a service to all degree programs in education. Foundations courses contribute to that core of common learnings required of all master's degree programs in education and in other related fields.

EDF 507. Problems in Educational Foundations. One to three hours. A.

Prerequisite: Approval of advisor and the chairman of the department.

For independent work, special workshops, a special topic, or seminar.

EDF 516. Child Development Laboratory I. Three hours. A.

Each participant selects a child for study, writes a description of the child and gathers significant data about the child from all available sources of information. Emphasis is placed upon skills in observation, objectivity in recording, and realism in analysis of causes of behavior. The course, for in-service teachers, continues for the entire school year, and each participant must complete his analysis in a structured summary.

EDF 517. Child Development Laboratory II. Three hours. A.

Continuation of EDF 516, but with added emphasis on procedures for analysis of the dynamics of behavior. A structured framework of six broad areas of factors and processes in child development is employed. The record must be summarized in terms of developmental tasks within these areas.

EDF 518. Child Development Laboratory III. Three hours. A.

A continuation of EDF 617.

EDF 526. Applying Research to Classroom Problems. Two hours. I.

Study and interpretation of recent research for the help it can give in dealing with classroom situations and problems. Class members will be encouraged to focus on situations and problems directly related to their own teaching.

EDF 615. Human Development. Three hours. I, II.

Study of the forces which influence personality development and learning, implications for classroom procedures, and the role of the teacher in using these forces to promote optimum development and learning. Each student is expected to choose and conduct intensive research on some problem of interest in the area of human behavior.

EDF 632. History of Education in the United States. Two hours. I, II.

Rise and development of public education in the United States with special emphasis upon the work of Horace Mann; sociological, psychological, and scientific movements in education; desirable education reorganization; the influence of John Dewey; brief study of the development of public education in Kentucky.

EDF 636. Philosophy of Education. Two hours. I, II.

Meaning and scope of philosophy and education; contrasting philosophies and conceptions of education; the nature and meaning of education in relation to the individual and the social order; education and democracy; social progress and social control; the nature of thinking; educational aims and values; subject matter and methodology in relation to the educative process; character education; evaluation and interpretation of present-day issues and problems in education.

EDF 637. (Formerly EDF 537.) Comparative Education. Three hours. I.

Study of the development of educational thought and practice in selected nations of Europe, the Orient, and South America. Emphasis will be placed on intellectual, historical and sociological factors responsible for similarities and differences among the selected systems. Special emphasis will be given to a comparison of American and Communist educational techniques.

EDF 638. Modern Trends in Educational Philosophy. Two hours. A.

Prerequisite: EDF 636 or its equivalent.

Study of alternative philosophies and their implications for current educational theory and practice.

EDF 650. Educational Sociology. Three hours. I, II.

Relation of sociology to education; sociological problems and their educational implications; social groups and institutions in relation to education; social forces and their significance in society; the sociological determination of educational objectives; social elements and values in the curriculum; democracy in school administration and supervision; essential elements of a socialized educational program.

EDF 669. Research in Education. Two hours. I, II.

Fundamental principles of educational research; types of research and the technique of each type; discovering educational problems for study; organization and interpretation of data; preparing and evaluating research reports; class discussions and reading reports.

Required of all candidates for the Master of Arts in Education Degree who do not prepare a thesis. This course should be taken as early as possible in the graduate program.

EDF 670. Thesis. One to three hours. A.

Designed for students who are preparing a thesis in partial fulfillment of the requirements for the degree of Master of Arts in Education. If the thesis requirement is waived. EDF 669, Research in Education, is required.

EDF 681. Leadership in Child Study. Two hours. A.

Prerequisite: Master's degree or permission of chairman of the department.

Designed for those who expect to assume leadership roles in helping teachers understand the behavior of pupils. Both extensive and intensive attention is given to methods of observation, the keeping of anecdotal records, selection of data, home visitation and interpretation.

EDF 683. Analysis of Recent Research in Human Development. Three hours. A.

Prerequisite: EDF 615.

Designed for graduate students who are interested in current efforts to learn more about the behavior of children, and to find ways of utilizing this knowledge in the educative process. Experiences consist of individual and group research into current and recent exploration and study of factors and processes which affect the development and learning of children. Evaluation of this research is through critical group discussion in seminar like atmosphere.

EDF 695. Advanced Research Methodology. Three hours. A.

Prerequisite: EDF 669 or its equivalent.

Theories and models of various research designs in the study of human behavior and the educative process. Appropriate statistical analyses of population and data. Individual proposals may be developed.

Required of all students in Specialist in Education degree programs.

EDUCATIONAL PSYCHOLOGY AND GUIDANCE

Robert Hayes, Chairman

The Department of Educational Psychology and Guidance offers graduate programs of specialization for those students who plan to become school counselors, non-school counselors, and student personnel workers in higher education. A program with emphasis in school social work is offered in cooperation with the Department of Anthropology and Sociology. In cooperation with the Graduate School, the Department offers the following graduate degrees and/or programs:

Master of Arts in Education Degree

School Guidance and Counseling (Elem. and Sec.)

School Social Work

Master of Arts Degree

Non-School Guidance and Counseling

Student Personnel Services in Higher Education

Rank I Certification (Sixth Year Non-degree Program)

Specialist in Education Degree

School Guidance and Counseling

Student Personnel Services in Higher Education

SPECIAL PROGRAM REQUIREMENTS*

SCHOOL GUIDANCE AND COUNSELING

The Master of Arts in Education Degree in guidance and counseling is required for provisional certification in elementary or secondary guidance and counseling. The provisional certificate for guidance counselors shall be issued for a period of five years and may be renewed upon the completion of a minimum of eight semester hours of graduate credit every five years from a program leading to the standard guidance certificate. Applicants should have had one year of successful teaching experience or one year of approved supervised internship in the school setting for which the individual plans to seek certification as a counselor.

In Elementary School Guidance and Counseling

Persons with undergraduate preparation in elementary education are eligible to major in elementary guidance and counseling at Eastern Kentucky University. The typical course of study is outlined below:

Professional Core Courses

EDF 615 or EPY 652, EPY 616, EDF 636, 669 Minimum 10 hours

Guidance and Counseling Area

EPG 613, 614, 625, 620, 632, EPY 642, 624 Minimum 21 hours

Electives

EPG 640, 602 Minimum 3 hours

Course sequencing—First enrollment(s): EPY 669, EPG 613, EPY 616.

Practicum (EPG 632) should be scheduled during the student's final enrollment.

In Secondary School Guidance and Counseling

Persons with undergraduate preparation in secondary education are eligible to major in secondary guidance and counseling at Eastern Kentucky University. The typical course of study is outlined below:

Professional Core Courses Minimum of 10 hours

EDF 615 or EPY 652, EPY 616,
EDF 636, 669

Guidance and Counseling Area Minimum of 21 hours

EPG 613, 614, 622, 620, 630
EPY 642, 624

Electives Minimum of 3 hours

EPG 640, 602

Course sequencing—First enrollment(s): EDF 669, EPG 613, EPY 616.

Practicum (EPG 630) should be scheduled during the student's final enrollment.

*Candidates must also satisfy the general requirements of the Graduate School.

In Non-School Guidance and Counseling

Completion of this program leads to the Master of Arts Degree. The degree does not require teacher certification. The curriculum pattern is designed to prepare individuals for professional guidance positions with various private and governmental agencies with vocational and/or social welfare functions.

Professional Core Courses	Minimum of 11 hours
PSY 504, 622, EDF 615, 669	
Guidance and Counseling Area	Minimum of 21 hours
EPG 613, 614, 620, 622, 636	
EPY 616, 642	
Electives	Minimum of 2 to 3 hours
EPG 602, 624, 640, EDP 504,	
MGT 500	
Electives should be chosen to meet special areas of professional interest.	

In Student Personnel Services in Higher Education

Completion of this program leads to the Master of Arts Degree. The degree does not require teacher certification. This program is designed to prepare persons interested in various guidance functions inherent in institutions of higher education, i.e. the technical school, junior college or college. Normally an undergraduate grade point average of 2.75 is prerequisite to admission.

Professional Core Courses	Minimum of 11 hours
ESH 696 or ESH 690, EPY 616,	
EDF 669, ESH 695	
Guidance and Counseling Area	Minimum of 18 hours
EPG 613, 620, 622, 634, 644, 645	
Electives	Minimum of 3 hours
EPG 602, EPY 642, EPG 640, 646	

Specialist in Education, Student Personnel Services in Higher Education

An approximate thirty graduate hours beyond the master's degree for those with master's degrees in student personnel services is required. Those with master's degrees in other disciplines will complete approximately thirty-nine credit hours.

Professional Core Courses	12 hours
EPG 691, EDF 695, EPY 698, 699	
Guidance and Counseling Area	6 hours
EPY 642, EPG 651	
Electives	
ESH 697, MGT 500, PSY 622, PSY 500	
POL 630, PSY 504	
Persons with master's degrees in other disciplines must successfully complete	
EPG 644, 645, ESH 695	9 hours

Specialist in Education, School Counseling

A program of an approximately thirty hours beyond the master's degree is devised to provide depth in counseling content for the prospective or practicing school counselor.

Professional Core Courses	12 hours
EPG 691, EDF 695, EPY 698, 699	
Guidance and Counseling Area	Minimum of 6 hours
EPY 654, EPG 649 or 647	
Electives	Minimum of 12 hours
SED 522, ESH 569, PSY 500, PSY 504, PSY 622	

In School Social Work

The Master of Arts in Education Degree with emphasis in school social work is offered cooperatively with the Department of Anthropology and Sociology. Teaching certification is prerequisite or co-requisite to admission to the program.

Curriculum for the School Social Work Program

Professional Core Courses	Minimum of 14 hours
EAD 605, EPG 613, EDF 650, ESH 655, EDF 669	
Social Work Area	Minimum of 15 hours
SWK 500, 502, 505, 607, 608	
Electives	Minimum of 6 hours
PSY 504, EPG 620, EPY 616	

For the Standard Guidance Certificate (Rank I)

One year of full-time counseling with the provisional guidance certificate and an acceptable program of study at the sixth year level is prerequisite to endorsement of the standard guidance certificate.

Professional Core Courses	Minimum of 15 hours
EPY 654, EPG 640 or EPG 602, EPG 646, EPG 647 or 649, EPG 648	
Electives	Minimum of 15 hours
PSY 500, 504, 622, EPG 691, EAD 611, EPY 698, EAD 605, MGT 500, POL 530	

For the Standard Pupil Personnel Certificate

Persons interested in certification as directors of pupil personnel must complete the requirements for the standard certificate. The master's degree is prerequisite to admission to the program. Candidates may have completed the program for guidance counselors or in an appropriate teaching field.

Curriculum for the Pupil Personnel Program

For persons holding the standard teaching certificates—18 hrs.
EPG 608, 613, SED 521, PSY 504, EPG 614, EPY 616

For persons holding the provisional guidance certificate—15-16 hrs.
EPG 608, SED 521, PSY 504, EAD 601, EAD 605

Elective 3 hours
EPG 602 or ACC 500, EDP 504

EDUCATIONAL PSYCHOLOGY (EPY)

EPY 507. Problems in Educational Psychology and Guidance. **One to three hours.**

A. Prerequisite: Approval of the advisor and Chairman of the Department of Educational Psychology and Guidance.

For independent work, special workshops, or a special topic, or seminar.

EPY 521. Measuring and Evaluating Pupil Progress. **Three hours. A.**

Study of modern concepts of evaluation. Emphasis on assumptions, approaches, and procedures used in measuring, evaluation, and reporting pupil progress.

EPY 523. Guiding Classroom Learning. **Three hours. II.**

Understanding and applying principles of learning in a classroom setting. Study of ways in which a teacher can develop his instructional program insuring an optimal learning environment can be effected.

EPY 616. (Formerly EPG 616) Educational Measurement. **Three hours. I, II.**

Investigation of standardized and teacher made tests and other measuring devices. Emphasizes application and interpretation of statistical methods of evaluation and research in education.

EPY 624. Individual Appraisal of Intelligence. **Three hours. A.**

Prerequisite: EPY 616 and/or EPY 642.

Administration and interpretation of tests of individual intelligence from preschool through adult levels. Observations and demonstrations, field testing experiences, test interpretations, and report writing.

EPY 642. Applied Statistical Methods. **Three hours. I, II.**

Measurement in psychology and education; frequency distribution; measures of central tendency; variability; application of the normal distribution curve; prediction; correlations methods; reliability and validity of tests.

EPY 652. Advanced Educational Psychology. **Three hours. A.**

Prerequisite: Consent of instructor.

Applied science approach to developing spirit of inquiry, of empirical methods, understanding and appreciation of scientific methods, and testing subjective theories and hypotheses.

EPY 654. Mental Health and Personal Adjustment. **Three hours. A.**

Prerequisite: Consent of instructor.

Emphasis on positive aspects of mental health and adjustment and personal understanding of the affective and cognitive factors affecting personality development and inter-personal relations.

EPY 698. Research Design in Counseling. **Two hours. A.**

A comprehensive experience in research design in counseling and the helping relationship. Attention will also be given to methodology, measurement, observations, and data collection and analysis.

EPY 699. Specialist Project. Four hours. A.

Prerequisite: EPY 642 and approval of the Chairman of the Department.

For graduate students who are engaged in specifically approved research projects in the field of counseling and/or student personnel services, under the personal direction of a professor approved by the Chairman of the Department.

GUIDANCE (EPG)

EPG 515. (Formerly EDU 515) The Role of the Teacher in Guidance. Three hours. A.

Designed to aid the prospective teacher in examining the concepts, principles, and foundations of guidance as these apply to effective teaching.

EPG 602. (Formerly PSY 602) Counseling Psychology. Three hours. I.

Prerequisite: PSY 211.

Survey of counseling methods and concepts. Consideration of research findings and problems.

EPG 608. Administration of Pupil Personnel Services. Three hours. A.

Designed to prepare pupil personnel workers for service in an educational setting.

EPG 613. Introduction to Pupil Personnel Services and Guidance. Three hours. I, II.

Survey of philosophy and fundamentals of pupil personnel services with emphasis on the nature of the helping relationship. Emphasis is on philosophy, characteristics, and practices common to counseling services.

EPG 614. Organization and Administration of Guidance Services. Three hours. A.

Prerequisite: EPG 613 or consent of instructor.

A study of the administrative procedures and policies needed in establishing guidance services.

EPG 620. Group Counseling. Three hours. I, II.

Prerequisite: EPG 613 and/or consent of instructor.

Focus on understanding the dynamics of group interaction and the role of the counselor in assisting individuals in achieving self-direction.

EPG 622. Occupational and Educational Information. I, II.

Designed for counselors, industrial and social agency supervisors and teachers to give orientation to and experience with occupational, educational, and social information.

EPG 625. Elementary School Guidance. Three hours. A.

Understanding of counseling methods with elementary school children, including an awareness of working with teacher, administrator, pupil personnel worker, and parents, in making the school a secure environment for the student.

EPG 630. Counseling Practicum in the Secondary Schools. Three hours. I, II.

Practicum student will be assigned, under supervision, to counseling experiences with secondary school students in a secondary school setting.

EPG 632. Counseling Practicum in the Elementary Schools. Three hours. I, II.

Practicum student will be assigned, under supervision, to counseling experiences with elementary school students in an elementary school setting.

EPG 634. Counseling Practicum in Higher Education. Three hours. A.

Prerequisite: EPG 644.

Practicum student will assist with testing programs, record keeping, and counseling college students; may also be assigned as dormitory or resident counselors or as Student Affairs and Activities Counselor.

EPG 636. Counseling Practicum in Community Settings. Three hours. I, II.

Prerequisite: EPG 640.

Practicum student will be assigned, under supervision, to counseling experiences in a community center, public agency, social welfare center, or other institutional setting.

EPG 640. Counseling Theory and Practice. Three hours. A.

Supervised experiences in major theoretical and philosophical counseling orientations with individual and group examinations of personal values from actual counseling experiences.

EPG 644. Student Personnel Services in Higher Education. Three hours. I.

Principles of student personnel service, role function, and critical issues in student personnel. Emphasis upon communications, legal problems, community college needs, and structural organization.

EPG 645. Internship in Student Personnel Services. II. Three hours. A.

Supervised experience for student personnel trainees. Opportunities provided to share responsibilities for all phases of the school guidance program. Jointly supervised by counselor education staff and student personnel staff.

EPG 646. Innovations in Counseling Techniques. Three hours. A.

Exercises assumptions of major counseling techniques as they refer to nature of reality, truth, and human values in a dynamic changing scene. Emphasizes effective and meaningful change through counseling.

EPG 647. Advanced Counseling Practicum in Elementary Schools. Three hours. A.

Prerequisite: EPG 632.

Supervised practice in counseling with emphasis upon evaluation of counseling with elementary school students.

EPG 648. Internship: Counseling. Three hours. A.

On-the-job supervised experience for counselors. Joint supervision by local school directors of guidance and the counselor education staff. Opportunities provided to share responsibilities for all phases of the school counseling program.

EPG 649. Advanced Counseling Practicum in Secondary Schools. Three hours. A.

Prerequisite: EPG 634.

Supervised practice in counseling with emphasis upon evaluation of counseling interviews with secondary school students.

EPG 651. Advanced Counseling Practicum in Higher Education. Three hours. A.

Prerequisite: EPG 634.

Supervised practice in counseling with emphasis upon evaluation of counseling with college students.

EPG 691. Issues and Trends in Counseling. Three hours. A.

The challenging changes, current issues, and developing trends and consequent questions, problems, controversies, and directions in counseling emphasized and critically examined.

ELEMENTARY EDUCATION (ELE)

William A. Morris, Chairman

The Department of Elementary Education is primarily responsible for program advisement and development in the areas of elementary education, elementary education-reading (M.A. in Education), the Specialist in Education Degree with emphasis in elementary education, and Rank II and Rank I certification programs for elementary teachers. For the teacher certified in another field, a joint degree and standard certification program is available.

SPECIAL PROGRAM REQUIREMENTS*:

Master of Arts in Education with emphasis in Elementary Education—This curriculum is designed to improve the professional competence and skills of teachers in elementary schools. Successful completion of the approved program qualifies the graduate for receipt of the standard elementary teaching certificate.

Professional Education Core	9-10 hours
Elementary Education Component	8-9 hours
One course from ELE 668, ELE 673, ELE 675 is required. Additional electives should be made from departmental offerings as approved by advisor.	
Non-Professional Subject Mater	12 hours
Courses from other disciplines as mutually selected by the student and his advisor.	

Master of Arts in Education with emphasis in Reading—Eastern Kentucky University was the first institution in the Commonwealth to implement an organized program for the training of reading teachers. While state guidelines for certification have not yet been finally approved, it is expected that completion of the program will be honored when the specialized certificate is extant. At present, persons are recommended for the standard elementary certificate (Rank II) and should choose academic electives which support the certificate.

Program requirements follow.

Professional Education Core	9-10 hours
Reading Core	11-12 hours
ELE 665, 668, 675, 677.	
ELE 354, 358, or ESH 574 is prerequisite and must be taken for undergraduate credit prior to this sequence.	
Non-Professional Subject Matter	12 hours
Courses from other disciplines as mutually selected by the student and his advisor.	

Specialist in Education with emphasis in Elementary Education—The curriculum for the Specialist in Education Degree with emphasis in Elementary Education is designed to meet the needs of curriculum area specialists and regular classroom teachers who seek a high level of knowledge and competency. The degree program, which consists of a minimum of thirty hours beyond the master's degree, fulfills requirements for the Rank I Elementary Teaching Certificate.

Program requirements are:

Two years of successful experience in a certified position prior to formal admission.

*Candidates must also meet general requirements of the Graduate School.

Successful completion of admissions procedures and general requirements as specified in the general description for Ed.S. Degree programs. Completion of course requirements.

Core Requirements:

ELE 691	Issues and Trends in Elementary Education.	3 hours
EDF 695	Advanced Research Methodology.	3 hours
ELE 698	Research Design in Elementary Education.	2 hours
ELE 699	Specialist Project.	4 hours
Total Core—		12 hours

One course from either administrative aspects or psychosocial aspects of education.

A minimum of fifteen additional hours at graduate level subject to student needs and committee approval.

Completion of the general requirements for the Specialist in Education Degree as specified in the general description for Ed.S. Degree programs.

For Rank II Certification, the Fifth Year Program—General policies governing the fifth year program leading to Kentucky Rank II certification appear in the general section of the College of Education, Page . Requirements for elementary teachers, by area, appear below in general outline.

For the candidate who wishes to transfer later to a degree program, appropriate credits will be allowed toward degree requirements.

Curriculum for Elementary Fifth Year Program

Required Education Core EPY 521, 523, EDF 526	8 hours
Elementary Education An advanced course in reading (approved by advisor), three hours Choice of two from: ELE 356, 358, 670, 672, 674	9 hours
Discipline(s) other than Education Selected in consultation with advisor	12 hours
Electives (Chosen from either Education or other disciplines with consent of advisor.)	3 hours

ELEMENTARY EDUCATION (ELE)

ELE 501. Geography in Education. **Three hours.** I, II.

Prerequisite: Twelve hours of social science or six hours of geography.
Geography in present day school systems. Special emphasis directed toward course objectives, outlines, problems, evaluation of departments, geographic literature and equipment, and other materials.

ELE 507. Problems in Elementary Education. **One to three hours.** A.

Prerequisite: Approval of advisor and the chairman of the department.
For independent work, special workshops, special topic, or seminar.

ELE 517. (Formerly ELE 527.) The Child in Early Education. **Three hours.** I, II.
Focuses specifically on physical, social, psychological, and intellectual development of the child under six and role of the kindergarten teacher in working with young children.

ELE 519. Teaching in the Kindergarten. **Three hours.** I, II.

Prerequisite: **ELE 517.**
Content will focus upon the kindergarten movement; organization, equipment, curriculum, and procedures used with children of kindergarten age; leaders and literature of kindergarten education. Opportunity provided for observing and participating in kindergarten.

ELE 520. (Formerly ELE 528). Practicum in Kindergarten Education. **Four hours.** I, II.

Prerequisite: **ELE 517** and **ELE 519.**
Full day observation and teaching for four weeks of the student teaching experience under professional supervision.

ELE 522. (Formerly ELE 520.) Creative Experiences in Childhood Education. **Three hours.** A.

Designed for prospective and in-service teachers with focus upon the nature of creativity, development of skills used in creative expression; activities which promote creativeness in children and teachers.

ELE 541. Survey of Elementary Curricular Programs. **Three hours.** I, II.

Designed for students in physical education, art, or music seeking certification for grades 1-12. This course explores elementary curriculum as it meets the needs of the child for which the school is responsible. Interrelationship or role of special teachers, problems of individual learners, and function of the entire school-community are examined.

ELE 610. Elementary School Curriculum. **Three hours.** I, II.

Study in depth of principles, practices, materials, and procedures in current curriculum development and revision in the elementary school.

ELE 663. Improving the Teaching of Social Studies in the Elementary School. **Three hours.** A.

Emphasis on social education in elementary schools. New developments in social studies curricula are explored; issues in teaching social studies will be examined and evaluated.

ELE 664. Investigations in Language Arts. **One to three hours.** A.

For students who desire to make a critical study of the investigative and theoretical literature dealing with the teaching of language arts (listening, spelling, handwriting, oral and written expression) in the elementary school. Research in the teaching of reading is not included.

ELE 665. Investigations in Reading. **One to three hours.** II.

Prerequisite: Permission of the instructor:
Individual research and study of investigative and theoretical literature dealing with of teaching and reading in the elementary school.

ELE 666. Investigations in Elementary School Mathematics. **One to three hours.**

II.

For students who desire to make critical study of investigative and theoretical literature dealing with teaching of mathematics in the elementary school.

ELE 667. Investigations in the Teaching of Social Studies. **One to three hours.**

A.

For students who desire to make critical study of investigative and theoretical literature dealing with teaching of social studies.

ELE 668. (Formerly **ELE 576.**) Techniques and Materials for Remedial Reading. **Three hours. I, II.**

Methods, materials, and techniques appropriate to the correction of reading difficulties.

ELE 670. Trends in Elementary Science Education. **Three hours. A.**

Modern trends, practices, and foundation programs as they pertain to elementary and junior (high) science teaching. Major emphasis on laboratory investigations appropriate for elementary and junior science. Five laboratory discussion hours per week.

ELE 671. Reading Improvement in the Primary Grades. **Three hours. A.**

Intensive study of methods and materials appropriate for developing reading readiness and for guiding reading instruction in grades K-3. Emphasis upon the newer approaches and latest research.

ELE 672. Improving the Teaching of Mathematics in the Elementary School. **Three hours. I, II.**

Designed to help the experienced teacher and graduate student understand trends, issues, and concepts involved in initiating or continuing modern elementary mathematics programs. Influence of research findings on curriculum will be examined. Emphasis given to teaching of mathematics using multi-sensory materials.

ELE 673. Developmental Reading in the Elementary School. **Three hours. I, II.**

Advanced study of methods, materials, and organizational procedures appropriate for teaching developmental reading in the elementary school.

ELE 674. Improvement of Language Arts Instruction in the Elementary School. **Three hours. A.**

Examination of current trends and curriculum problems related to teaching of language arts in the elementary school. Major emphasis on listening, oral and written expression, spelling and handwriting. Attention is not given to the teaching of reading.

ELE 675. Diagnosis of Reading Problems. **Three hours. A.**

Prerequisite: **ELE 668** or permission of instructor.

Theory and implementation of diagnostic procedures for the appraisal of reading problems. Emphasis on assessing quantity and quality of reading disabilities including psycholinguistic correlates.

ELE 676. Investigations in Elementary School Science. **One to Three hours. A.**

Prerequisite: Permission of the instructor.

Individual research and study of investigative and theoretical literature dealing with the teaching of science in the elementary school.

ELE 677. Practicum in Remedial Reading. **Three hours. A.**

Prerequisite: **ELE 668** and **ELE 675.**

Supervised experiences in diagnosis and correction of reading problems.

ELE 678. Practicum in Elementary Mathematics Education. **Three hours. A.**

Prerequisite: **ELE 672.**

Practicum experiences in diagnosing children's problems in elementary school mathematics; observation and limited teaching to correct identified problems.

ELE 691. Issues and Trends in Elementary Education. Three hours. A.

Prerequisite: Permission of the instructor.

Under joint direction by elementary education faculty, this course is to be included in the student's first nine hours of specialist degree program. Opportunities provided for participation in discussion and analysis of critical issues relating to elementary education.

ELE 697. Independent Study. One to three hours. I, II.

Primarily for advanced graduate students who desire to investigate special problems relating to elementary education.

ELE 698. Research Design in Elementary Education. Two hours. A.

A study of research and investigation in the area of specialization. Examination of experimental and research designs, appropriate laboratory methods. Designing a project.

ELE 699. Specialist Project. Four hours. A.

Guided development of a scholarly project appropriate to the student and his field of specialization. The project may be one of several types: a field project, creation of media or instructional instruments, or more formal types of research and inquiry.

LIBRARY SCIENCE (LIB)

Juanita Phillips, Chairman

The Department of Library Science is responsible for program advisement and development leading to the Master of Arts in Education Degree with emphasis in library science and Rank II programs for elementary and secondary school librarians.

SPECIAL PROGRAM REQUIREMENTS:*

Curriculum for Master of Arts Degree

Professional Education Core 10 hours

Library Science Core 15 hours

LIB 500, 501, 521, 531, and LIB 541.

The certificate for the elementary librarianship may be validated for the secondary or twelve-grade librarianship upon completion of either ESH 498 or ESH 663.

The certificate for the secondary librarianship may be validated for the elementary or twelve-grade librarianship upon completion of (1) ELE 541, or ELE 610 and (2) ELE 354 or ELE 673.

Selected Electives 5-6 hours

Library Science 300 and 301 are prerequisite for admission to the program.

* Students must also meet the general requirements of the Graduate School.

Curriculum for Rank II Certification, the Fifth Year Program

The Library Science Department offers a fifth year of study leading to the Rank II certificate. This program will appeal to persons uninterested in or unable to qualify for the master's program.

Curriculum for Fifth Year Program

Required Education Core EPY 521, 523, EDF 615, 632, 636, 650, ESH 612, 655.	12 hours
Library Science Selected in consultation with advisor.	12-18 hours
Electives Chosen from Education, Library Science, or other disciplines with consent of advisor.	6-11 hours
Total hours required	32

LIBRARY SCIENCE (LIB)

LIB 500. (Formerly LIB 311.) School Library Management. Organization and Administration of the School Library. **Three hours.** I, II.

Philosophy, objectives, and administration of the library in the elementary and secondary schools.

LIB 501. (Formerly LIB 401.) Young People's Literature. **Three hours.** I, II.

For teachers and librarians planning to work with young people. Emphasis placed on library materials to supplement school curriculum and encourage recreational reading in grades 7-12. Stresses reading interests, levels, and needs of young people, including types of adult materials suitable for more mature students and problems of selection.

LIB 521. (Formerly LIB 321.) Reference. **Three hours.** I, II.

Provides information for satisfactory use of library resources. Stresses essential reference work including dictionaries, encyclopedias, atlases, yearbooks, periodical indexes, and the more important subject and trade bibliographies.

LIB 531. (Formerly LIB 331.) Classification and Cataloging. **Three hours.** I, II.

Fundamental principles and methods of classification and cataloging of books and related materials. Attention is centered upon classification and cataloging of school library books.

Skill in typing is necessary.

LIB 541. (Formerly LIB 441.) School Library Practice. **Three or four hours.** I, II.

Prerequisite: LIB 301, 500, 521 or 531.

Library practice is designed to give the trainee practical experience in many phases of school library service including circulation routines, teaching children the use of reference materials, and assisting in the cataloging of new books and materials. Reading guidance, story telling and the organization of unit materials are emphasized.

LIB 551. Reading Interests and Advanced Book Selection. **Three hours.** A.

The role of reading in the educative process; reading habits and interests of groups and individuals; selection of readable materials. Methods of working with children and young adults in the school library; study in depth of titles suitable for children and young adults.

LIB 561. Non-Book Materials. Three hours. I.

Prerequisite: LIB 531.

The evaluation, selection, acquisition, cataloging, use, and preservation of all non-book materials (e.g., pamphlets, pictures, films, filmstrips, slides, transparencies, recordings) in a media center.

LIB 563. (Formerly LIB 463, Instructional Materials for the School Library.) Preparation of Instructional Media. Three hours. II.

Selection and preparation of free and inexpensive materials; displays (boards, bulletin, flannel, magnetic, chalk, posters); graphics (maps, graphs, charts, diagrams); and models.

LIB 569. (Formerly LIB 369, Audio-Visual Methods.) Instructional Media. Three hours. I, II.

Philosophy and techniques of the effective utilization of instructional media. Emphasis is on slides, tape and disc recordings, films, filmstrips, transparencies, programmed instruction, and the operation of equipment for presenting such media.

LIB 607. (Formerly LIB 507). Problems in Library Science. One to three hours. A.

Prerequisite: Approval of advisor and Chairman of the Department of Library Science.

Designed for graduate students who wish to do independent work on a problem in library science, or who wish to enroll in a special workshop or seminar focusing on a particular topic.

LIB 609. History of Books. Three hours. A.

Considers the records of early man, invention of the alphabet, manuscript books, and the making of books from earliest times to the present. Acquaints the student with the techniques and standards for the appraisal of the physical book.

HEALTH, PHYSICAL EDUCATION and RECREATION**Ned L. Warren, Director**

The School of Health, Physical Education, Recreation and Athletics is primarily responsible for advisement and program development for the following programs: Master of Arts in Education with emphasis in physical education; Master of Science, physical education; Specialist in Education, for college teachers of physical education; Specialist in Education, physical education; Rank II and Rank I (fifth and sixth year non-degree) programs for teachers.

Curriculum for Master of Arts in Education with an emphasis in Physical Education

Professional Education	9-10 hours
Physical Education Core	15 hours
PHE 649, 650, 652, 680 or 695, and one additional 600 level PHE course.	
Other Electives	6 hours

Curriculum for Master of Science in Physical Education

Education (EDF) 669	2 hours
Physical Education Core PHE 621, 649, 652, and 680 or 695.	12 hours
Physical Education Restricted Electives (To be selected from the following) PHE 620, 622, 623, 624, 650, 651, 662, 669, 675, 680, 691, 695, 698.	8-9 hours
Other Electives	7-8 hours

Curriculum for Specialist in Education Degree in Physical Education for College Teachers

The Specialist in Education Degree in Physical Education for college teachers is a sixty hour graduate program which may be entered by a student holding a B.S., M.A., or M.S. Degree with an undergraduate major or minor in physical education. For those entering the program at the fifth year level, the M.A. in Education or M.S. Degree may be earned enroute to the Specialist in Education Degree. Requirements for the sixty hour program include:

Physical Education Core PHE 649, 650, 651, 675, 695, 698, and 699.	23 hours
College Teaching Core ESH 695, 696, 697, 698, 699.	16 hours
Education Requirement: EDF 695	3 hours
Physical Education Restricted Electives (To be selected from the following) PHE 620, 621, 622, 623, 624, 662, 669, 680, 691.	12 hours
Other Electives	6 hours

Curriculum for Specialist in Education Degree in Physical Education

The Specialist in Education Degree is a sixty hour graduate program which may be entered with a bachelor's or master's degree by the holder of an undergraduate degree with a major or minor in physical education. For those entering the program at the fifth year, the M.A. in Education or M.S. Degree may be earned enroute to the Specialist in Education Degree. Requirements for the sixty hour program include:

Physical Education Core PHE 649, 650, 651, 652, 675, 695, 698 and 699.	23 hours
Education Requirement: EDF 695 plus six approved hours	9 hours
Physical Education Restricted Electives (To be selected from the following) PHE 620, 621, 622, 623, 624, 662, 669, 680, 691.	21 hours
Other Electives	7 hours

Curriculum for Fifth Year Non-Degree Program in Physical Education

Education	8 hours
EPY 521, EPY 523, EDF 526	
Physical Education	15-16 hours
Electives	8-9 hours

Curriculum for Sixth Year Non-Degree Program in Physical Education

The sixth year non-degree program is available to students with a master's degree desiring an additional thirty hours of graduate course work. These thirty hours will include as many of the following courses as the student has not completed at the master's level:

Physical Education Core	17 hours
PHE 649, 650, 651, 652, 675, 695.	
Other Electives	13 hours
(Thirteen to thirty hours to complete a thirty hour program.)	

HEALTH (HEA)

HEA 588. School Health Services. Three hours. A.

Study of school health services, and the relationship to the total health and school program. Detailed study in theory, evaluation techniques, and follow-up procedures in the health screening program.

HEA 597. Health Instruction. Three hours. A.

Consideration of health problems, and health materials, and development of a curriculum guide for health instruction in grades 1-12.

PHYSICAL EDUCATION (PHE)

PHE 510. (Formerly PHE 410.) Non-Class Curricular Physical Education Activities for Women. Two hours. I, II.

Policies, principles and philosophy of participation in physical education programs for women. Attention given to intramurals, extramurals, sports days, play days, girls athletic and recreation associations, psychology of coaching women's sports, and administration of women's sports programs.

PHE 521. Developmental Physical Education. Three hours. A.

Prerequisite: EDF 317 or equivalent.

Developmental movement activities which are basic to readiness for performance at school—techniques of movement experiences and activities aimed at the prevention or amelioration of learning disabilities.

PHE 550. Advanced Dance Production and Workshop I & II. One-half hour. I, II.

Prerequisite: Consent of the instructor.

May be repeated once for credit.

Opportunities for directing the preparation, production, and performance of dance compositions culminating in a concert presentation. Three or more hours per week.

PHE 554. (Formerly PHE 354.) Modern Dance Technique and Choreography. **Two hours, I, II.**

Prerequisite: PHE 345.

Modern dance techniques, improvisation, choreography and production.

PHE 562. Physical Education for the Exceptional Child. **Two hours, I, II.**

Prerequisite: PHE 320 and 325.

Emphasis on conditions producing exceptional children; classification of atypical cases, purposeful physical education activities for exceptional children; and application of adaptive physical education activities.

PHE 568. (Formerly PHE 46 and 468.) Administration and Organization of Physical Education. **Two hours, I, II.**

Policies and procedures of administration on the elementary and secondary school level. Emphasis on construction and care of facilities, equipment, and supervision of personnel.

PHE 575. (Formerly HEA 475 and PHE 475.) Tests and Measurements in Physical Education. **Three hours, I, II.**

Administration and scoring of tests; evaluation and use of results obtained.

PHE 590. Workshop in Physical Education. **One to four hours, A.** (This course may be repeated but credit will not be awarded for two workshops by the same sub-title.)

Identification and study of significant problems, teaching methods, research findings, evaluation techniques and the use of appropriate demonstrations and participation important to the improvement of teaching.

PHE 596. (Formerly PHE 496.) Workshop for Elementary Teachers in Physical Education Activities. **Three hours, A.**

Comprehensive review of techniques used in teaching physical education in the elementary grades. Emphasis placed on health, evaluation, fitness testing, rhythmical activities, game activities, tumbling and self-testing activities.

PHE 620. Administration of Physical Education. **Three hours, I.**

Procedures, policies, and problems relating to administrative functions of physical education administration. Topical areas include program, facilities and equipment, public relations, personnel, finances and supervision.

PHE 621. Scientific Bases of Physical Education. **Three hours, I.**

Biological, sociological, and psychological interpretations of man as related to performance in physical education activities.

PHE 622. Sociology of Sport. **Three hours, II.**

The meaning of sport in contemporary societies and the impact of social order on development of attitudes about and promotion of amateur and professional sports.

PHE 623. Professional Preparation in Health, Physical Education and Recreation. **Three hours, II.**

Study of undergraduate curricula designed to prepare health, physical education, and recreation specialists with attention to curriculum development, recruitment, selective admission and retention, certification, placement and follow-up procedures.

PHE 624. Contemporary and Comparative Physical Education. **Three hours, II.**

Current trends in physical education resulting from political, sociological, and religious implications of various cultures of man.

PHE 649. (Formerly PHE 549.) Philosophical Bases of Physical Education. **Three hours, I.**

A development of philosophical approaches to physical education with an aim for discovering underlying principles on which physical education is based. Readings and discussion will relate to philosophical interpretations on questions of learning, curriculum, and administration, evaluation, and values.

PHE 650. (Formerly PHE 550.) Curriculum Designs in Physical Education. **Three hours, I.**

Problems relating to design of programs in physical education. Curriculum project developed by each student.

PHE 651. (Formerly PHE 551.) Equipment and Facilities in Physical Education. **Two hours, I.**

Problems relating to the programming of equipment and facilities. Visits to and evaluation of surrounding facilities.

PHE 652. Motor Learning and Performance. **Three hours, II.**

Physiological and psychological factors relating to the learning of motor skills.

PHE 662. (Formerly PHE 562.) Adapted Physical Education. **Three hours, II.**

Basic principles of a good adapted program for handicapped students. A project will be required of each student.

PHE 669. (Formerly PHE 569.) Organization and Administration of Athletics. **Three hours, A.**

Administrative problems of high school and college athletics. Considers staff, program, budget, safety, insurance, facilities, and other phases of administration.

PHE 675. Seminar in Physical Education. **Three hours, II.**

A course designed for research and discussion of critical questions in physical education. Issues to be selected will vary according to the concerns of seminar students.

PHE 680. (Formerly PHE 580.) Interpretation of Data in Physical Education. **Three hours, II.**

Statistical interpretation of physical education data. Written reports using statistics required.

PHE 691. (Formerly PHE 591.) Issues in Physical Education. **Three hours, I.**

Exploration of critical issues independently using resources and techniques appropriate for gathering supportive evidence and developing substantive positions. Written and oral presentations are required.

PHE 695. Advanced Testing and Evaluation in Health and Physical Education. **Three hours, I.**

Prerequisite: PHE 575, 680, or permission of the instructor.

Comparative statistics, construction of measurement instruments, and evaluation techniques applied to health and physical education.

PHE 698. Research Design in Physical Education. **Two hours, I.**

An introduction to physical education research including examination of experimental research designs, laboratory methods, execution and reporting. Delimitation of research problems and presentation of thesis plans will be central to the course.

PHE 699. Specialist Project. **Four hours, I, II.**

Open only to specialist degree candidates.

Designed to guide the student in his development of a scholarly project—a field project, a creative study, or more formal types of research and inquiry.

RECREATION (REC)

REC 501. Recreation and Park Administration. **Three hours, I, II.**

Community organization, administrative practices, legal aspects, recruiting, selecting leaders, personnel practice, and public relations.

REC 506. Planning, Design, and Maintenance of Recreation Facilities. **Three hours, II.**

Planning principles and procedures of recreation and park areas. Facilities, design problems, details of structure and equipment, master planning methods, study of standards and trends, and management of the custodial and maintenance program.

REC 511. Therapeutic Recreation. Three hours. I.

Prerequisite: Approval of the instructor.

Terminology and programming in a therapeutic setting. Modification of leadership techniques and activities; adaptation for the ill and handicapped. Field trips to observe programs.

SECONDARY AND HIGHER EDUCATION (ESH)

Joe Wise, Chairman

The Department of Secondary and Higher Education provides graduate level offerings in curriculum development, higher education, and the Master of Arts in Education with emphasis in secondary reading. Additionally, the Department cooperates with academic departments in providing programs toward the Master of Arts in Education with emphasis in the subject matter field and non-degree fifth year programs.

ESH 501. (Formerly EDU 501.) The Junior High School. Two hours. A.

Origin, development, and present status of the junior high school movement; the place of the junior high school in the public school system; the aims, purposes, and objectives of the junior high school; evaluation of types of programs; the junior high school plant; library, apparatus, and equipment of the junior high school.

ESH 507. (Formerly EDU 507.) Problems in Secondary Education. One to three hours. A.

Prerequisite: Approval of advisor and the chairman of the department.

For independent work, special workshops, or a special topic, or seminar.

ESH 569. (Formerly EDU 569.) Instructional Media. Three hours. I, II.

Philosophy and techniques of the effective utilization of instructional media. Emphasis is on slides, tape and disc recordings, films, filmstrips, transparencies, programmed instruction, and the operation of equipment for presenting such media. Sources of materials will be discussed. (Also LIB 569.)

ESH 574. (Formerly EDU 574.) Teaching Reading in the Secondary School. Three hours. A.

Designed to assist the secondary teacher in teaching reading in the content areas. Includes emphasis on developmental reading, reading skills, (vocabulary development, critical reading, concentration, and study techniques). Attention is given to appraisal of reading abilities, appropriate materials, evaluation, and organization of reading programs at the secondary level.

ESH 575. Advanced Materials and Methods for Modern Biology Teaching. Three hours. A.

Materials and methods of teaching modern biological science at the secondary level. The application of modern learning theories and psychological foundations with their applications for modern science curricula.

ESH 612. (Formerly EDU 612.) Curriculum Development. Two hours. II.

A critical study of issues and problems in curriculum development, the rationale underlying major positions of these issues, implications for work at various levels of the educational program, and principles and techniques of curriculum change.

ESH 628. (Formerly EDU 628.) Instructional Television. **Three hours. A.**

Exploration of television as a teaching tool. Theory and practice of planning the utilization of instructional television programs and courses. Emphasis on the cooperative role of the producer-director. The part of the television-studio teacher and the part of the television-classroom teacher is explored. History of educational television, television research, and the literature in the field are included. Supervised critical viewing of course segments is an integral part of the course.

ESH 655. (Formerly EDU 655.) Integration of Modern Curriculum and Learning Principles. **Four hours. I.**

Study of issues and problems in curriculum development with emphasis on the application of principles of learning to curriculum decisions. These decisions relate to such areas as the selection and guidance of learning experiences at various levels of the educational program and to principles and techniques for curriculum change.

ESH 663. (Formerly EDU 663.) Secondary School Curriculum. **Three hours. II.**

Aims of the public secondary schools; plans for evaluating curriculum procedures; qualities of good teaching; procedures of evaluating and improving classroom teaching; methods of making the school a more effective agency.

ESH 680. (Formerly EDU 680.) Organization and Supervision of Student Teaching. **Three hours. I.**

Prerequisite: Teaching experience.

For school and college personnel concerned with improving student teaching experiences.

ESH 685. (Formerly EDU 685.) Seminar: Problems in the Supervision of Student Teaching. **Three hours. A.**

Prerequisite: ESH 680 and prior or current experiences with student teachers.

Designed to provide opportunity for school and college personnel to explore in depth problems and procedure relating to the supervision of student teaching. Direct experience will be an aspect of the critical study of individual and group problems.

ESH 690. (Formerly EDU 690.) College Teaching. **Three hours. II.**

Designed for students who are teaching or who expect to teach in junior or senior colleges. Critical exploration of the major decisions to be made by the college teacher in the changing scene in higher education. Attention will be given to knowing students as individuals and class groups, planning college courses, practical problems of selecting and guiding learning experiences, using varied instructional media, evaluating student progress.

ESH 691. The Community Junior College. **Three hours. A.**

Designed for the prospective or in-service junior college teacher or administrator. Attention will be given to the philosophy, objectives, organization, and operation of community junior colleges. Stress will be placed on the unique role of the junior college in American higher education and the rapidly evolving nature of the two-year college.

ESH 695. Perspectives in Higher Education. **Three hours. I.**

Study of the origins, evolution, and trends in post-secondary education; the technical school, the junior college movement, the role of public and private colleges and universities in American education. Stress will be placed upon the sociology of higher education.

ESH 696. Theories of College Teaching. **Three hours. II.**

Prerequisite: ESH 695 or permission of instructor.

Psychology of college youth; a survey of cognitive and affective systems; the development of a system of instructional principles; an over view of standardized and classroom evaluation. Direct experience a requirement.

ESH 697. Curriculum in Higher Education. Three hours. II.

Consideration of issues, trends, and principles in curriculum development in higher education; the nature, place, and interrelationship of general education and work in fields of specialization. Opportunity for students from various fields to observe and appraise innovative practices, and to project programs of higher education.

ESH 698. Seminar in College Teaching. One hour. I, II.

To be taken concurrently with ESH 699. Topics in higher education. A research paper is required one semester. Restricted to candidates for the specialist degree.

ESH 699. Practicum in Higher Education. Three hours. I, II.

Supervised teaching in an acceptable post-secondary school or college. Restricted to candidates for the specialist degree.

SPECIAL EDUCATION AND REHABILITATION

W. de Hoop, Chairman

The Department of Special Education and Rehabilitation offers a program leading to the Master of Arts in Education Degree in special education for teachers of mentally retarded children and children with behavior disorders and learning disabilities.

Curriculum

Plan I. Students with sufficient undergraduate preparation in special education.

Professional Education Core	9-10 hours
Special Education Core	
SED 511, *SED 541, SED 631, SED 632, SED 685 or 686	12-15 hours
Electives	

*Exempt, if taken in undergraduate program.

Plan II. Students not having undergraduate preparation in special education.

Professional Education Core. Same as Plan I.	
Special Education Core. Same as Plan I.	
Additional Requirements:	
SED 521, 522, 523, *599	9-14 hours

*If and when required for Kentucky Certification

Plan III. Students with certification in secondary education who lack preparation in both, elementary and special education.

Professional Core	9-10 hours
Special Education Core	12-15 hours
SED 511, 541*, 631, 632 and 685 or 686.	

*Exempt if completed in the undergraduate program with a grade of B or better

Additional Requirements in Special Edu. 9-14 hours
 SED 521, 522, 523 and 699*

*SED 599 will be required only if and when needed for Kentucky certification

Additional Requirements in Elementary Edu. 12 hours

- a. Teachers of the Mentally Retarded:
 ELE 672, 683, 674; one of the following:
 ELE 522, ESH 569, PHE 521 or REC 511
- b. Teachers of Children with Behavior Disorders and Learning Disabilities:

The selection of courses for teachers of children with behavior disorders and learning disabilities will depend on the academic majors of the candidates. Generally speaking, courses in remedial reading and arithmetic will be likely to be selected. However, the need of preparation at the elementary level of the individual candidate will be the determining factor.

SPECIAL EDUCATION (SED)

SED 507. Problems in Special Education. One to three hours. A.

Prerequisite: Approval of advisor and the chairman of the department.

For school-related work, special workshops, special seminars.

SED 511. Psychological Aspects of Exceptional Children. Three hours. I.

Study of selected psychological aspects of exceptionality. Emphasis is on aspects relevant to the teacher training programs offered. Students select two major and two related aspects acceptable to the major professor.

SED 521. Mentally Retarded Children. Three hours. A.

Mental retardation as an educational, psychological and social problems. Characteristics, identification, prevalence and educational provisions.

SED 522. Behavioral Disordered and Socially Deviant Children. Three hours. (2 hrs. lecture, 2 hrs. laboratory). A.

Definition and description of behavior disorders in childhood including a study of major theoretical bases for child therapy. Concurrent laboratory experiences with individual child therapy and development of a case study.

SED 523. Learning Disabilities in Children. Three hours. A.

Definition and description of learning disabilities in childhood with an emphasis on physiological and neurological correlates of disability and their assessment.

SED 534. Teaching the Educable Mentally Retarded. II. Three hours.

Curriculum, methods and materials for teachers of the mildly retarded with emphasis on individualized instruction. Individual and small group tutoring.

SED 535. Teaching the Trainable Mentally Retarded. II. Three hours.

Same as SED 534, for teachers of the severely retarded.
 (Students should complete either SED 534 or SED 535, depending on the area of exceptionality for which they wish to be certified).

SED 536. Teaching Children with Behavior and Learning Disabilities. Three hours. (2 hours lecture, 2 hours laboratory). A.

SED 541. Behavior Modification of Exceptional Children. **Three hours. A.**
Directive and non-directive techniques used in educating exceptional children, with emphasis on operant conditioning.

SED 560. (CL SPE 560.) Introduction to Speech Correction. **Three hours. A.**
Designed to help identify and deal with speech defects. Study of basic types of disorders, emphasis on good environment for the handicapped and sources of specialized help.

SED 599. Supervised Practicum in Special Education. **Five hours. A.**
This course is taken as a part of, and in conjunction with, ELE 499a.
Students will earn five semester hours credit for ELE 499a and five semester hours for SED 599 (if taken for undergraduate credit)

Observation, participation and teaching in special classes in the selected area of exceptionality; participation in professional activities. Approximately 50 percent of the supervised student teaching will be done in regular elementary classes, approximately 50 percent in special classes in the selected area of exceptionality.

SED 610. Ecology of the Special Classroom. **Three hours. A.**
Study of human interrelationships in, and the impact of the spatial organization of the special classroom. Dyadic interaction as the basis for individualized instruction of exceptional children. Group formation, leaderships; monitoring teacher and student behaviors as an instrument of change. Prosthetic and responsive environments.

SED 611. Bio-medical Aspects of Exceptional Children. **Three hours. A.**
Implications of biological (including genetic) differences, and the medical treatment of such differences, for special educators, counselors, and other educational personnel.

SED 615. Administration of Special Education. **Three hours. A.**
Administration as a catalyst in special education; societal rules and regulations regarding education of exceptional children at the local, state, and federal level, with emphasis on Kentucky's teacher preparation and certification. Cooperative programs of special education and rehabilitation education.

SED 631. Case Studies I: Mental Retardation. **Three hours. II.**
Study of: a. methods of identification, diagnosis and characteristics; b. behavioral management in the total educational setting; c. teaching methods and materials. The total program of studies, organized in detail, is in the form of case studies performed by the student.

SED 632. Case Studies II: Behavioral Disorders and Learning Disabilities. **Three hours. II.**
Same course description as SED 631.

SED 685. Independent Project. **Three hours. A.**
A study of some topic (other than research) which is of interest to the student and to his major professor, and which is of importance to special education in the geographic area, or in general. The topic must provide for considerable investigation and study.

SED 686. Research Project. **Three hours. A.**
As SED 685, but topic must call for an original investigation.

SED 691. Foundations of Special Education. **Three hours.**
A study of the defining characteristics of special education and its place in the total of American education and society.

REHABILITATION (RHB)

RHB 501. Professional Orientation in Rehabilitation. Three hours. I.

This course is designed to precede the supervised field experiences in rehabilitation. Many opportunities for observing rehabilitation setting and talking with rehabilitation professionals will be provided. Government agencies and private programs at the local, state and federal level are studied.

RHB 502. Practicum. (Supervised Field Experiences in Rehabilitation). Six hours. A.

Rehabilitation majors are placed in a field situation of their choice to work six hours a week under the direct supervision of a rehabilitation counselor or professional worker.

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NOTES

2001

1. The first part of the report deals with the general situation of the country. It is a very interesting and informative study of the country's development. The author has done a great deal of research and has put together a very comprehensive picture of the country's progress. The report is well written and easy to read. It is a valuable contribution to the study of the country's development.

2. The second part of the report deals with the country's economic situation. It is a very detailed and thorough study of the country's economy. The author has done a great deal of research and has put together a very comprehensive picture of the country's economic progress. The report is well written and easy to read. It is a valuable contribution to the study of the country's economic development.

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