Bulletin of the

UNIVERSITY OF KENTUCKY

GENERAL CATALOG

1943-44

Announcements

1944-45

Published monthly, January to September inclusive, by the University of Kentucky, Lexington. Entered as Second-Class Matter at the Post Office, Lexington, Ky., under the Act of July 16, 1894.

Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized June 30, 1920.

Vol. 36 MAY No. 5

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1944

Ex Officio Members

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John Fred Williams, Superintendent of Public Instruction
Elliott Robertson, Commissioner of Agriculture

From the State Board of Agriculture

Robert Tway, Louisville, 1948
Harry W. Walters, Shelbyville, 1946
H. S. Cleveland, Franklinton, 1944

Members at Large

Mrs. Paul G. Blazer, Ashland, 1950
John C. Everett, Maysville, 1950
Richard C. Stoll, Lexington, 1948
R. P. Hobson, Louisville, 1948
John S. Cooper, Somerset, 1946
Harper Gatton, Madisonville, 1946

Alumni Members

Grover Creech, Louisville, 1950
H. D. Palmore, Frankfort, 1948
[1]James Park, Lexington, 1946
[2]Thomas H. Cutler, Frankfort, 1946

Officers of the Board

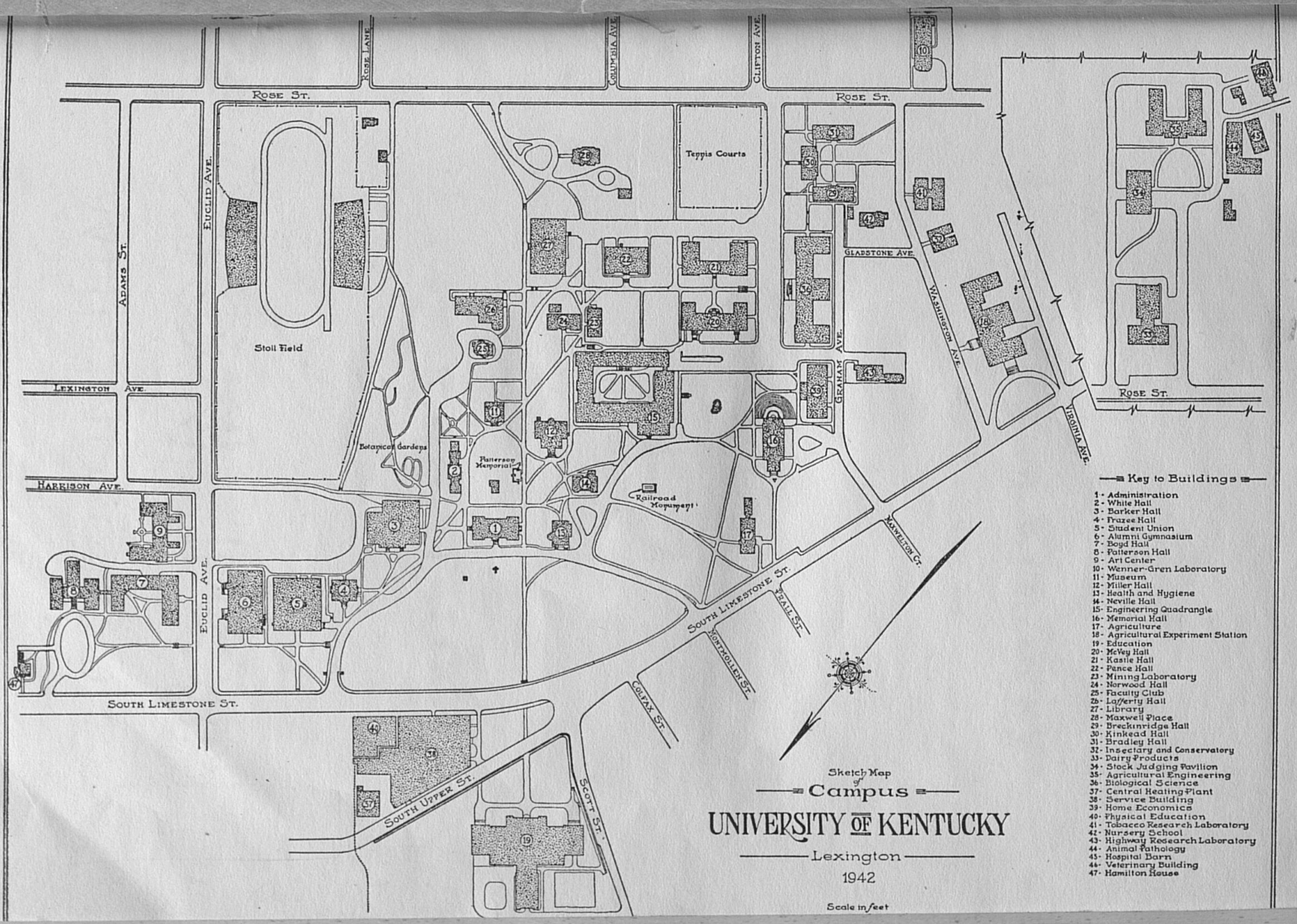
Simeon S. Willis, Chairman
Richard C. Stoll, Vice Chairman
Frank D. Peterson, Secretary
John Skain, Treasurer

Executive Committee

Richard C. Stoll, Chairman
H. S. Cleveland
[2]John C. Everett
R. P. Hobson
H. D. Palmore
[1]James Park
Frank D. Peterson, Secretary

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[1] Resigned May 2, 1944.
[2] Beginning May 2, 1944.



Key to Buildings

1 - Administration
2 - White Hall
3 - Barker Hall
4 - Frazee Hall
5 - Student Union
6 - Alumni Gymnasium
7 - Boyd Hall
8 - Patterson Hall
9 - Art Center
10 - Wenner-Gren Laboratory
11 - Museum
12 - Miller Hall
13 - Health and Hygiene
14 - Neville Hall
15 - Engineering Quadrangle
16 - Memorial Hall
17 - Agriculture
18 - Agricultural Experiment Station
19 - Education
20 - McVey Hall
21 - Kastle Hall
22 - Pence Hall
23 - Mining Laboratory
24 - Norwood Hall
25 - Faculty Club
26 - Lafferty Hall
27 - Library
28 - Maxwell Place
29 - Breckinridge Hall
30 - Kinkead Hall
31 - Bradley Hall
32 - Insectary and Conservatory
33 - Dairy Products
34 - Stock Judging Pavilion
35 - Agricultural Engineering
36 - Biological Science
37 - Central Heating Plant
38 - Service Building
39 - Home Economics
40 - Physical Education
41 - Tobacco Research Laboratory
42 - Nursery School
43 - Highway Research Laboratory
44 - Animal Pathology
45 - Hospital Barn
46 - Veterinary Building
47 - Hamilton House

BULLETIN OF THE

University of Kentucky

LEXINGTON, KENTUCKY

GENERAL CATALOG

1943-44

Announcements

1944-45

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Sarah Bennett Holmes, M. A., Dean of Women
Frank D. Peterson, A. B., University Comptroller
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Alvin E. Evans, M. A., Ph. D., J. D., Dean of the College of Law
William Septimus Taylor, M. A., Ph. D., Dean of the College of Education
Edward Wiest, M. A., Ph. D., Dean of the College of Commerce
William Delbert Funkhouser, M. A., Ph. D., D. Sc., Dean of the Graduate School

PUBLICATIONS AND SOURCES OF INFORMATION

The following publications are issued by the University for the purpose of giving prospective students and others necessary information about the institution and its various divisions. Opposite each publication is listed the office or offices from which it may be obtained.

Bulletin of General Information	Registrar's Office
General Catalog	Registrar's Office
Summer Quarter Bulletin	Registrar's Office
Law Bulletin	College of Law or Registrar's Office
Graduate Bulletin	Graduate School or Registrar's Office
Commerce Bulletin	College of Commerce or Registrar's Office
Agriculture and Home Economics Bulletin	College of Agriculture and Home Economics or Registrar's Office

In order to assist those who may wish special information about some part of the University's program, there are listed below the names of officials to whom inquiries of various types may be sent. In each case, the University of Kentucky, Lexington 29, Kentucky, is the post office address.

The general policies of the University	President of the University
General information, all admissions, and transcripts of records	Registrar
Living accommodations, student help, social affairs	Dean of Men or Dean of Women
Information about a particular college and its program	Dean of the College
Graduate work	Dean of the Graduate School
Summer Quarter	Registrar
Class extension and correspondence study	Director of University Extension
Agricultural extension	Director of Agricultural Extension

CALENDAR

1944

July

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UNIVERSITY CALENDAR
1944-45

Fall Quarter

1944	
September 19	Tuesday—Meeting of the Board of Trustees
September 22, 23	Friday, Saturday—Classification Tests and Physical Examinations for all new students
September 25	Monday forenoon—Freshman advisory conferences
September 25	Monday afternoon—Freshman Registration and Classification
September 26	Tuesday—Registration and Classification of upper classmen
September 27	Wednesday—Class work begins
October 4	Wednesday—Last date on which one may enter an organized class
October 16	Monday—Last date on which one may drop a course without a grade
October 23, 24	Monday, Tuesday—Period for filing applications for degrees
November 23	Thursday—Thanksgiving Holiday
December 11-13	Monday through Wednesday—Examinations for the Fall Quarter
December 14	Thursday, 8 a. m.—Quarter ends

Winter Quarter

1945	
January 2	Tuesday—Classification Tests, Physical Examinations, and Advisory Conferences for all new students
January 3	Wednesday—Registration and Classification of all students
January 4	Thursday—Class work begins
January 10	Wednesday—Last date on which one may enter an organized class
January 22	Monday—Last date on which one may drop a course without a grade
January 29	Monday—Period for filing applications for degrees
March 14-16	Wednesday through Friday—Examinations for Winter Quarter
March 17	Saturday—Quarter ends

Spring Quarter

March 19	Monday—Classification Tests, Physical Examinations and Advisory Conferences for new students

March 20	Tuesday—Registration and classification for all students
March 21	Wednesday—Class work begins
March 28	Wednesday—Last date on which one may enter an organized class
April 3	Tuesday—Meeting of the Board of Trustees
April 9	Monday—Last date on which one may drop a course without a grade
April 16	Monday—Period for filing applications for degrees
May 27	Sunday—Baccalaureate Services
May 31, June 2	Thursday through Saturday—Final examinations for the spring quarter
June 1	Friday—Seventy-Eighth Annual Commencement
June 2	Saturday—Quarter ends
June 4-9	Monday through Saturday—Junior Club Week

Summer Quarter

June 11	Monday—Registration for First Term
June 12	Tuesday—Class work begins
June 18	Monday—Last date on which one may enter an organized class
June 22	Friday—Last date on which one may drop a course without a grade
June 22	Friday—Period for filing applications for degrees
July 4	Wednesday—Holiday
July 18	Wednesday—First term ends
July 19	Thursday—Registration for Second Term
July 20	Friday—Class work begins
July 23	Monday—Last date on which one may enter an organized class
July 26	Thursday—Last date for filing applications for degrees
July 31	Tuesday—Last date on which one may drop a course without a grade
August 25	Saturday—Quarter ends

REGISTRATION SCHEDULES FOR 1944-45

Fall Quarter

September, 1944

September 22, 23 Friday and Saturday—All freshmen and all other new students will report in Memorial Hall for classification tests and physical examinations. All freshmen and all other new students, except those enrolling in the graduate school, must have the tests and examinations completed before they will be permitted to register. The student will find it advantageous to report as early as possible after 8 a. m.

September 25 Monday forenoon—Freshman advisory conferences

September 25 Monday afternoon—Freshman registration according to an alphabetical schedule

September 26 Tuesday forenoon—Freshman classification

September 26 Tuesday—Registration and classification of all upper classmen according to the following alphabetical schedule:

Tuesday forenoon	Tuesday afternoon
8:00 to 8:50—A through B	1:30 to 2:20—O through S
9:00 to 9:50—C through F	2:30 to 3:20—T through Z
10:00 to 10:50—G through K	3:30 to 4:30—Miscellaneous A through Z
11:00 to 11:50—L through N	

September 27 Wednesday—Class work begins

Winter Quarter
January, 1945

January 2 Tuesday—Classification tests, physical examinations, and advisory conferences for new students. All freshmen and all other new students, except those enrolling in the graduate school, must have the tests and examinations completed before they will be permitted to register. All new students should report to the Registrar's Office for these tests and examinations

January 3 Wednesday—Registration and classification of all students according to the following alphabetical schedule:

Wednesday forenoon	Wednesday afternoon
8:00 to 8:50—L through N	1:30 to 2:20—C through F
9:00 to 9:50—O through S	2:30 to 3:20—G through K
10:00 to 10:50—T through Z	3:30 to 4:30—Miscellaneous A through Z
11:00 to 11:50—A through B	

January 4 Thursday—Instruction resumed

Spring Quarter
March, 1945

March 19 Monday—Classification tests, physical examinations, and advisory conferences for new students. All freshmen and all other new students, except those enrolling in the graduate school, must have the tests and examinations completed before they will be permitted to register. All new students should report to the Registrar's Office for these tests and examinations

March 20 Tuesday—Registration and classification of all students according to the following alphabetical schedule:

Tuesday forenoon		Tuesday afternoon	
8:00 to 8:50	T through Z	1:30 to 2:20	C through F
9:00 to 9:50	O through S	2:30 to 3:20	A through B
10:00 to 10:50	L through N	3:30 to 4:30	Miscellaneous A through B
11:00 to 11:50	G through K		

March 21 Wednesday—Instruction resumed

PART I

GENERAL INFORMATION OF SPECIAL INTEREST TO THE PROSPECTIVE STUDENT

THE UNIVERSITY OF KENTUCKY AND THE WAR

The University of Kentucky, like all colleges in the country, is doing its utmost to aid the nation to win the war. To military service and related work have gone many thousands of its former students and more than a hundred and forty members of the instructional and research staff. Curricular adjustments have been made with a view to lending the most immediate and direct aid to the war effort and many special research projects have been established. Since May, 1943, the University has operated a unit of the Army Specialized Training Program, involving at times as many as 1200 soldier trainees.

In March, 1944 the University's quota in the Army Specialized Training Program was reduced to 220, in conformity with the general limitations placed on this program by the War Department. The future of the University's participation in soldier training cannot be foretold. It should be emphasized, however, that the army training programs of the past have been operated without detriment to the regular schedule of classes and the future will see no change in this general policy.

A complete program of studies will be operated for women and for men not in service, utilizing the regular instructional staff. Rooming and boarding facilities will be adequate and as carefully supervised as usual. It is the purpose of the University to maintain its program of liberal education and its professional schools at the same high level on which they have been operated in the past, while at the same time meeting in every way possible the immediate demands of the nation for trained military personnel.

THE UNIVERSITY OF KENTUCKY

The University of Kentucky is located at Lexington, an urban community of about 65,000 population. It is a state-supported institution operated under the direction of a board of trustees of fifteen members. The membership of this board includes the Governor, the Superintendent of Public Instruction, and the Commissioner of Agriculture, ex officio, and twelve members appointed by the Governor, three of whom are alumni of the University and three, members of the State Board of Agriculture. The University is one of a number of institutions known as land-grant colleges which were established by the Morrill Act of 1862 and which have continued to receive federal assistance under the provisions of this and subsequent laws relating to the teaching of agriculture and the mechanic arts and the provision of agricultural experiment stations and extension services in agriculture and home economics.

The University of Kentucky is on the approved list of the Association of American Universities, and is a member of the Southern Association of Colleges and Secondary Schools and the Kentucky Association of Colleges and Secondary Schools. It is accredited in its respective colleges or departments by the Association of American Law Schools, the American Association of Collegiate Schools of Business, the American Association of Schools and Departments of Journalism, the American Library Association, the National Association of Schools of Music, and the Engineers' Council for Professional Development.

The major function of the University is that of instruction. For the performance of this function it is organized into the College of Arts and Sciences, the College of Agriculture and Home Economics, the College of Engineering, the College of Law, the College of Education, the College of Commerce, the Graduate School, and a Department of University Extension. Residence instruction is given through four quarters of approximately twelve weeks each, the summer quarter being divided into two terms.

In addition to giving instruction to its student body, the University contributes to the welfare of the state through research, experimentation, and public service. While all departments make important contributions along these lines, certain divisions and bureaus have been established specifically for these purposes. Included in this group are the Experiment Station and the Extension Division of the College of Agriculture and Home Economics, the Bureau of Business Research, the Bureau of Government Research, the Bureau of School Service, the Bureau of Source Materials in Higher Education, the Personnel Bureau, the Teachers

Placement Bureau, the Department of University Extension, and the Department of Public Relations.

The University of Kentucky began as a part of Kentucky University under a cooperative plan authorized by the legislature in 1865. The purpose of this plan was to unite sectarian and public education under one organization. This experiment was tried for a number of years. In the meantime, the federal funds authorized under the Morrill Act were used to develop agriculture and mechanic arts in Kentucky University. In 1878, when the people of Kentucky decided to establish a state institution of higher learning, the College of Agriculture and Mechanic Arts was separated from Kentucky University and reestablished on land given by the City of Lexington and the County of Fayette. Thirty years later the legislature changed the name of the institution to the State University of Kentucky, and gave it additional financial support. In 1916 the name was again changed, this time to the present title, and additional maintenance was arranged by legislative act.

ADMISSION TO THE UNIVERSITY

Students are admitted to the University of Kentucky as freshmen; with advanced standing from other institutions; as special students; and as auditors. Admission to certain colleges is also governed by special regulations.

Applications for admission to the University should be made to the Registrar on forms furnished by the Registrar's Office. Certified copies of high school credentials and of work done in other institutions should be submitted to the Registrar's Office in advance of the registration period. Failure to file credentials in time for checking before the registration period will delay the student in aranging his program. **All admissions, including those to the professional schools and the Graduate School must be passed on by the Registrar's Office. Students who come to the University without having had their admission approved, do so at their own risk. The University reserves the right to refuse consideration of applications not made before the beginning of the registration period. Prior to the assignment of any new undergraduate student to University classes, the student must take the University classification test.**

Admission to the Freshman Class

Applicants who are graduates of accredited high schools will be admitted to the University on certificate, provided they have at least fifteen units of acceptable high school work. A unit represents the study of any subject for a school year of at least thirty-two weeks, with five recitation periods a week, each of at least forty-five minutes in length, or the equivalent thereof. Double

periods are required in shop, drawing, typewriting, and all other courses requiring no out-of-class preparation. One unit is the minimum credit accepted in any foreign language, and one-half unit the minimum in any other subject.

While the University does not prescribe a pattern of work for admission, it is strongly recommended that at least ten of the units presented be chosen from the English studies, the social studies, mathematics, the foreign languages, and the laboratory sciences, and that within these ten units the student offer at least three units in English, one and one-half in algebra, and one in plane geometry. Should a student lack these courses as prerequisites for any of his college work, he will be required to take them in college without credit, thus delaying his graduation.

Applicants who have graduated from unaccredited high schools and those not graduated from high school may be admitted as freshmen if, in addition to presenting the fifteen acceptable units, they successfully pass the University classification examinations.

Admission to the University does not necessarily qualify a student for admission to a particular college. In every case the student must meet the admission requirements of the college in which he is to enroll.

Admission to Advanced Standing

Resident Students. A resident of Kentucky who applies for admission with advanced standing is expected to present evidence that he is in good standing in every respect in the institution last attended and in general is required to have maintained a standing of 1.0 in all previous college work. Where all circumstances seem to warrant, the student may be admitted on probation when his standing is below 1.0. In no case, however, shall a student be admitted whose record is such that he would have been dropped at the University of Kentucky.

The University does not disregard at any time or under any conditions college or university records in order to admit applicants solely on the basis of their high school records.

A transfer student is allowed only as many advanced credits as he can present quality points. Otherwise, work done at a fully accredited college or university is recognized credit for credit.

In order to be classified as fully accredited, a college must be a member of a regional accrediting association or it must be on the approved list of the state university of the state in which it is located. Advanced standing from an unaccredited college may be obtained at the University only by special subject examinations.

Non-Resident Students. A non-resident who applies for admission with advanced standing must in all cases have maintained

a standing of 1.0 in all previous college work. In other respects, the requirements and conditions of transfer are the same as for resident students.

Written applications for admission with advanced standing should be submitted to the Registrar's Office on forms furnished by that office.

Admission as a Special Student

A graduate of another university or college may enter the University as a special student. Other persons may be admitted as special students provided they are fully prepared to do the work desired and provided they are at least twenty-one years of age.

Before a special student can become a candidate for a degree he must have his status changed to that of a regular student. This may be done in one of two ways:

1. Satisfying the requirements for admission to the freshman class.
2. Completing in residence one hundred quarter hours of credit with a standing of at least 1.5 in all work attempted.

Admission as an Auditor

By payment of the required fees any person may be admitted to a class or classes as an auditor. A student regularly enrolled in any college must apply to the Dean of the College in which he is registered in order to be an auditor. Other persons should apply to the Registrar's Office for admission. No credit can be given for a class audited, nor is the student permitted an examination for credit. No instructor is authorized to admit an auditor to any of his classes except on presentation of an auditor's card from the Registrar's Office.

Admission to Colleges and Schools

College of Arts and Sciences. Admission to this college is governed by the general admission requirements of the University outlined on the preceding pages.

College of Agriculture and Home Economics. Admission to this college is governed by the general admission requirements of the University outlined on the preceding pages.

College of Engineering. Admission to the freshman class of the College of Engineering is limited to students rated in the upper three-fourths on the University placement tests.

In addition to meeting the general requirements for admission to the University, the high school credits presented by the appli-

cant shall include one unit in Plane Geometry, one-half unit in Solid Geometry, and one and one-half units in Algebra. If the student lacks only the half unit in Solid Geometry, he may be admitted, but this subject will be added to the requirements of the freshman year.

College of Law. An applicant for admission to the College of Law must offer ninety quarter hours completed in residence in colleges other than Law, nine of which must be in English and not more than nine of which may be in physical education, military science, or other "non-theory" courses. A standing of 1.0 is the minimum qualitative requirement, but in other than exceptional cases an applicant will not be accepted unless he has maintained a standing of 1.3 on all previous work. While there is no prescribed pre-law curriculum, the applicant's record is evaluated in terms of its relationship to the study of law, and in terms of the requirements of the Association of American Law Schools.

College of Education. Admission to the freshman class of the College of Education is limited to students rated in the upper three-fourths on the University placement tests. In order to transfer to the College of Education from another institution or from another college of the University, a student must have a standing of 1.0 or higher. The freshman applicant must meet the general admission requirements of the University.

College of Commerce. Admission to the freshman class of the College of Commerce is limited to students rated in the upper three-fourths on the University placement tests. The freshman applicant must meet the general admission requirements of the University.

The Graduate School. A student may be admitted to the Graduate School upon evidence of having completed the requirements for graduation from a fully accredited institution of higher learning and an official transcript of undergraduate courses, together with a written application. These should be sent to the Registrar's Office. The application form may be obtained from that office. However, such admission does not obligate the University to accept all credit granted by the undergraduate school. When full credit is not granted, the student will be required to do more than the normal amount of work to complete a graduate degree. Applications from graduates of institutions not fully accredited will be individually evaluated. However, students from such schools are encouraged to secure a bachelor's degree from a fully accredited institution before applying.

FEES AND EXPENSES

Fees at the University vary according to the privileges granted and the classification of the student; that is, as a resident, non-

resident, full-time, part-time, auditor, etc. The table on page 19 gives the schedule of regular fees per quarter and term. Checks are accepted by the University in payment of fees, room rent, and board, if they are made out for the exact amount due. That is, no money is returned on a check. In transmitting funds to students, drafts, money orders, and certified checks should be used. **All checks should be made payable to "University of Kentucky." All fees should be paid at registration and not sent in advance. For the fee indicated the full-time student receives: class instruction, health service, admission to athletic contests and to convocations, use of the Library and Student Union building, a discount on admissions to the Guignol Theatre, and a subscription to "The Kentucky Kernel," the student newspaper.**

Fees for Graduation and Special Privileges

Graduation Fee. Candidates for the bachelor's degree will be charged a graduation fee of $9.00. This will cover the rental of cap and gown, the cost of **The Kentuckian,** diploma fee, and other necessary expenses. Candidates for advanced degrees will be charged a fee of $15.00, which will include the above and in addition the candidate will be presented with the hood. Graduation fees are payable not later than the fourth day preceding the commencement.

Late Registration. Students entering the University after the regular registration periods will be charged an additional fee of $1.00 per day, the total not to exceed $3.00.

Special Examination. A fee of $2.00 will be charged for a special examination in a single course.

Special Fees for Students in Applied Music

Students taking courses in applied music are charged the following special fees in addition to the regular fees.

$30.00 per quarter for each student for a three quarter hour course in applied music.

$24.00 per quarter for organ practice for two hours daily.

$4.00 per quarter for each student for rental of a University practice room for two hours daily.

$2.50 per quarter for Music 7, 8, and 9.

Deposit for Military Uniform

Each student taking basic military science makes a deposit of $10.00. This deposit is returned after the uniform and all equipment have been checked in at the close of the school year.

SCHEDULE OF FEES PER QUARTER*

Classification	Resident Students			Non-Resident Students		
	General Deposit†	Registration and Incidental Fee	Total	General Deposit†	Registration and Incidental Fee	Total
Full-Time Students:						
All Colleges except Law	$6.00†	$35.00	$41.00	$6.00†	$55.00	$61.00
College of Law	6.00†	38.00	44.00	6.00†	58.00	64.00
Part-Time Students:						
All Undergraduate Colleges except Law	6.00†	3.00 per quarter hour		6.00†	4.75 per quarter hour	
College of Law	6.00†	4.50 per quarter hour		6.00†	6.50 per quarter hour	
Graduate School	6.00†	4.00 per quarter hour		6.00†	6.25 per quarter hour	
Auditors:						
In lecture and recitation courses		2.00 per quarter hour			2.00 per quarter hour	
In studio and laboratory courses		4.00 per quarter hour			4.00 per quarter hour	

* This schedule is applicable to all students enrolled in both terms of the summer quarter. For the fees for one term only, see the lower schedule.

† Made only once each school year; applicable to four quarters; not charged a student taking fewer than nine quarter hours. This deposit is refunded less any charges that may have been made against it.

SCHEDULE OF FEES FOR ONE TERM OF SUMMER QUARTER

Classification	Resident Students	Non-Resident Students
Full-Time Students:		
All Colleges except Law	$23.00	$28.00
College of Law	25.00	30.00
Part-Time Students:*		
All Colleges except Law	$3.50 per quarter hour	$4.50 per quarter hour
College of Law	4.00 per quarter hour	5.00 per quarter hour

* The full-time fee is paid in all cases when the student load for one term equals or exceeds six quarters hours. Auditors in the summer quarter are charged the same fee that they would pay for credit.

Fees for Correspondence and Extension Courses

The fee for correspondence courses is $3.00 per quarter hour and for extension classes, $4.00 per quarter hour.

Members of the armed forces who register in correspondence courses through the Armed Forces Institute will have half of their fees and the cost of textbooks paid by the Federal Government.

Privileges to War Orphans

Children not under sixteen years of age and not over twenty-one years, who have had their homes in Kentucky for the preceding twelve months and whose fathers were killed in action or died from other causes in the World War from April 6, 1917, to July 2, 1921, while serving in the army, navy, or marine corps of the United States, are entitled to receive aid under Sections 4376b-11 to 4376-13 of the Kentucky Statutes. Each war orphan is entitled to receive not more than $150 a year, this fund to be used in attending state maintained educational or training institutions and for the sole purpose of providing for matriculation fees, board, room rent, books and supplies. For this privilege, application must be made to the State Board of Education, Frankfort, Kentucky.

Definition of Residence for Payment of Fees

1. For the purpose of assessing fees, no person will be considered eligible to register in the University as a resident student unless he has resided in the state for twelve consecutive months next preceding the date of his original enrollment.
2. The legal residence of minors will follow that of the parents or legal guardians, except in the case of minors who have always resided in Kentucky but whose legal guardians are residents of other states.
3. No student shall be deemed to have gained residence privileges at the University by his mere presence at the institution. A student once classified as a non-resident will continue to be thus classified unless he can establish a change of domicile by evidence other than his residence as a student.
4. Aliens who have received their first citizenship papers may be classified under the foregoing provisions.

Refund of Fees

The registration fee and any late registration fee assessed are never refunded, and no other fees are refunded after the sixth week of a quarter. Students leaving during the first six weeks of a quarter will receive a refund, the amount of which will depend upon the date of withdrawal.

During the first week after the opening of either term of the summer quarter, students withdrawing from the University may receive a refund not to exceed 70 per cent of all fees paid. During the second week a refund of 50 per cent may be secured and during the third week a refund of 30 per cent. In no case shall the amount refunded exceed 70 per cent and in no case will refunds be made after the first three weeks.

A refund will not be granted unless the student makes his withdrawal official. All refunds must be claimed within the fiscal year of the withdrawal.

Living Expenses

The cost of room and board in the residence halls for women is $330 a year (fall, winter, and spring quarters). Rooms in the men's residence halls range in price from $26 to $33 a quarter and board may be obtained in the University cafeteria for a minimum of $7.00 per week.

Following are estimates of **minimum** expenses for an academic year, not including the general deposit or the deposit for military uniforms. The actual expenses, of course, vary greatly according to the habits of economy or extravagance of the individual student. Fees for law students are $9.00 more than the amounts shown, and for law and engineering students the cost of books and supplies may be greater than the estimate shown.

Items of Expense	Resident Students*	Non-Resident Students*
Fees	$105.00	$165.00
Board and Room	330.00	330.00
Laundry and Cleaning	20.00	20.00
Books and Supplies	40.00	40.00
Incidentals	50.00	50.00
Totals	$545.00	$605.00

RESIDENCE HALLS FOR WOMEN

The University of Kentucky has three residence halls which in peace time house 360 women. Two of these halls have for some time been occupied by soldiers in training at the University. It appears now, however, that all residence facilities for women will be available for normal use by the opening of the summer quarter of 1944. The residence units are under the supervision of the Dean of Women and the Director of Residence Halls for Women, assisted by a head resident in each unit.

Applications for reservations in the women's halls should be made to the Director of Residence Halls for Women and should

* For distinction between resident and non-resident students see p. 20.

be accompanied by a deposit of $10.00 which will be refunded at the end of the year less any charges for damage to the room. If the room is reserved and the reservation cancelled, the deposit will be forfeited unless notice of cancellation is given to the Director of Residence Halls for Women ten days prior to the opening of the term for which the reservation is made.

A trained dietitian and an assistant dietitian supervise the food unit which is located in Jewell Hall. A well equipped infirmary is maintained under the care of a graduate nurse.

All freshmen women are required to live in the residence halls unless residing with relatives in town. After the freshman year, students may reside in sorority houses. Permission for upperclass women to live in town must be secured from the Office of the Dean of Women. Unmarried women are not permitted to live in apartments.

The cost of room and board in all residence units is $330.00 a year, payable at the rate of $110.00 at the beginning of each quarter. Arrangements may be made for the payment of the quarterly board in two installments. No refunds on room and board are allowed for temporary absence from the residence halls.

Students leaving during the first eight weeks of the quarter will receive a refund on payments made for room and board. There shall be deducted from the quarterly payment 12 per cent for each week the student remains officially in the residence halls. A student is considered as living in a residence hall until she makes her withdrawal official.

The University maintains two cooperative houses for women, housing approximately forty students. Application for reservation in a cooperative house should be made to the Dean of Women. Applicants are selected by the Cooperative House Committee on the basis of scholarship and recommendations. A high scholastic average must be maintained to continue to live in a cooperative house.

All facilities of the residence halls are available to summer school students except meal service. Rates per quarter per person are $32.00. The rate for a room for one term of the Summer Quarter is one-half the above amount.

RESIDENCE HALLS FOR MEN

The University maintains three residence halls for men. However, at the present time these are occupied by trainees in the

Army Specialized Training Program and are not available to civilian students. There are a number of private rooming and boarding houses near the University where civilian students may live at reasonable rates. The office of the Dean of Men keeps a list of rooms which have been inspected and approved, and will assist students in making satisfactory living arrangements.

OPPORTUNITIES FOR FINANCIAL HELP

Self-Help. Many students pay a portion of their expenses at the University through part-time employment within the institution or outside. While the Y.M.C.A., the Dean of Men, and the Dean of Women render all assistance possible in helping students to obtain part-time employment, positions cannot usually be found for all who need such help. It is advised that no student attempt entire self-support, and **all new students are urged to come prepared to meet their expenses in full for at least one quarter.** The student who is to be partially self-supporting should seek advice in adjusting his study load to the end that his employment will not prevent him from obtaining the largest benefit from his courses.

Funds, Scholarships, and Fellowships. To a limited extent financial assistance is rendered worthy students through certain loan funds and through scholarships and fellowships. Applications for loans or scholarships which are limited to certain colleges or departments should be addressed to the dean of the college or the head of the department concerned. Applications for loans from the general University loan funds should be addressed to the Dean of Men or the Dean of Women. Graduate scholarships and fellowships are awarded from the office of the Dean of the Graduate School. The following special loan funds and scholarships are available as indicated:

The Ashland Oil and Refining Company Scholarship. This award amounts to $500 a year and is given to one or two advanced students who have made exceptional records in industrial chemistry or mechanical engineering, and who are in need of financial assistance.

The Inland Steel Company Scholarships. These scholarships, of $400 each, are available to high school graduates of Floyd, Knott, and Pike Counties, and are awarded upon the basis of competitive examinations. Nominations for these scholarships are to be made by the county superintendents of the counties named.

The Kellogg Scholarship Fund. This scholarship is available to seniors in Medical Technology. The amount in each case is suf-

ficient to pay the fees for the senior year.

The Kellogg Loan Fund. Any student in Medical Technology may apply for a loan from this fund.

Jonas Weil Memorial Scholarship. This scholarship of $100 is awarded annually by Mr. Herschel Weil of the class of 1922, to the junior in Agriculture who has the highest standing in all of his college work.

Republic Steel Corporation Scholarships. Scholarships of $100 each are awarded annually by the Republic Steel Corporation to juniors in Agriculture who are interested in agricultural engineering.

Sears-Roebuck Agricultural Foundation Scholarships. These scholarships are awarded annually to entering freshmen in agriculture. They cover fees for the year. The number of scholarships available varies from year to year.

4-H Club Scholarships. Through the 4-H Club Department of the Extension Division certain scholarships are available for freshmen in agriculture and home economics. These scholarships are awarded to those with outstanding records in 4-H Club work.

WHAT IS EXPECTED OF THE STUDENT

The University has adopted certain rules and regulations and has made certain provisions designed to bring about the best adjustment between the institution and the student and to insure the fullest development of the latter, intellectually, spiritually, and physically. Registration by a student carries with it the obligation to cooperate to the fullest extent in observing the regulations and traditions of the institution, in making the most of the state's investment in him, and in furthering the welfare of the University.

The Dean of Men and the Dean of Women

The Dean of Men and the Dean of Women assist students with their problems and aid them in their adjustment to college life. Their offices serve as a general clearing house for matters pertaining to the welfare of all students. The Dean of Men and the Dean of Women seek at all times to help each student gain his maximum academic and personal development through normal, interesting, and important activities.

Personnel Service

Every student is given an opportunity to avail himself of the services of the Personnel Office. These services include the use of standardized tests to determine the courses the student is capable of carrying, the kind of course that fits in with his interests, and the amount of academic load he can successfully carry.

For certain groups of students, special help is given in the form of help classes, and limitation of academic load. The academic progress of most new students entering the University is followed throughout their first quarter by securing grades from instructors at the end of the six weeks' period. In the event the student is not making satisfactory progress, he is interviewed and every attempt is made to discover the particular difficulty involved.

Student Health Service

The University recognizes a special obligation to protect and promote the health of its students. It has, therefore, established a Student Health Service under the direction of competent medical men.

The staff consists of two full-time physicians and two part-time physicians; in addition there are two registered nurses and a laboratory technician and bacteriologist. The Student Health Service has modern X-ray equipment and other laboratory equipment equal to that found in any first class clinic. The function of the service is primarily preventive and it is not designed to give extensive treatment in other than exceptional cases.

A boarding and rooming student may request the physician to call at his or her dormitory or rooming house in case the illness is such that the student cannot come to the Health Service for treatment. Such calls are ordinarily for preliminary and relatively minor treatments. The student living at home shall receive the same service and under the same conditions as boarding and rooming students, except that the physicians shall not call at their homes or in any respect give other than out-patient treatment.

The services are rendered without charge to the students as a portion of the incidental fee is assigned to cover the cost of the health service.

The Student Health Service is open to students from Monday through Friday, from 8:30 to 11:30 a. m., and 1:00 to 3:00 p. m., and on Saturday from 8:30 to 11:30 a. m., all through the school year.

Rules Affecting the Student

The following list of rules does not include all of the regulations of the University, but only the most important of those relating to studies, examinations, attendance, and discipline.

Committee on Scholarship and Attendance. This committee considers cases of students delinquent in studies or attendance

referred to it by the deans of the colleges, appeals for reinstatement of students dropped for unsatisfactory work, and other related matters.

Student Load. During any quarter the maximum load to be carried by any undergraduate student without special permission (including both residence and extension courses) shall not exceed either one-twelfth of the curriculum requirement for graduation, plus three quarter hours, or the amount specified in the curriculum for the particular quarter, whichever is larger.

A student with a standing of 2.0 or more for the preceding quarter, or a beginning freshman ranking in the upper 25 per cent on the University's classification tests, may carry extra work with the approval of his dean, provided that the amount of extra work shall in no case exceed three quarter hours or the total load exceed twenty-three quarter hours.

The maximum load for a summer term (including both residence and extension) shall in no case exceed half of that which would be allowed for a quarter. Two short courses of three weeks or less in length shall not be carried concurrently either by undergraduate or graduate students.

In all cases a correspondence course shall be considered as carried during the quarter or term during which the last assignment is completed, and it shall be counted as a part of the load of that quarter or term.

Auditors or Visitors. No instructor is authorized to admit an auditor to any of his classes except on presentation of an auditor's card from the Registrar's office. **A student who visits a class as an auditor is not allowed an examination for credit.**

Probation. A regular student who fails to pass in three-fourths of the normal load required by his college in his preceding quarter may be placed on probation by the dean of his college. If during the quarter of probation, he again fails to pass in three-fourths of the normal load, he may be dropped from the University by the dean of his college. A student who has been dropped from the University may be reinstated only by the Committee on Scholarship and Attendance.

The above rule will apply to a part-time student, carrying less than three-fourths of the normal load, if he fails to pass in half of the scheduled load.

Transfer from One Curriculum to Another. A student transferring from one curriculum of the University to another will not be allowed credit in excess of the normal load of the curriculum to which he is transferred, except as the student may be eligible for extra work.

Poor Work in English. Any instructor who finds the written work of any student seriously defective in its English is expected

to report the case, together with specimen papers, to a committee consisting of the dean of the student's college and the Head of the Department of English, who shall have power to require additional work in composition without credit.

Unsatisfactory Scholarship and Attendance. Students who are doing unsatisfactory work, or who are irregular in attendance, are reported to their deans. Such a student is under the special supervision of his dean. If after a suitable length of time it becomes apparent that no improvement is being made, the student may be dropped from the course, on recommendation of the dean to the Registrar.

Repeated Failures. The head of a department may refuse to allow a student to register in a course for a third time.

Classification. A student in any college except Law shall be classified as a sophomore, junior, or senior, when he has within 10 quarter hours of the normal requirement and a standing of 1.0. However, no student may be classified as a sophomore until he has had college residence of at least three quarters, nor as a junior until he has had college residence of at least five quarters.

A Law student is classified as a second year student when he has completed 36 or more hours and as a third year student when he has completed 75 or more hours. He shall not, however, be classified as a second year student until he has been in residence at least three quarters, nor as a third year student until he has been in residence at least five quarters.

Classification of Transfer Students. A student who transfers to the University as a junior and ranks in the lowest quarter on the entrance tests will be classified as a junior conditionally. The continuance of junior classification will depend on the student's making a standing of 1.0, or more, on his first quarter's work.

Examinations for Credit. A student regularly enrolled in the University may be given a special examination for credit, provided the request for the examination is approved by the Registrar, the dean of the college, and the head of the department concerned. Application should be made in writing to the Registrar. A student who visits a class as an auditor is not allowed an examination for credit.

Extension Work. Not more than forty-eight of the quarter hours required for a bachelor's degree may be gained by extension, special examination, or both. A student may not satisfy in excess of one-half of the requirements for a major by extension, special examination, or both.

Not more than eighteen quarter hours of extension work done by a student during one calendar year will be accepted by the University unless it may be definitely shown that the work has been done under conditions where the student has been engaged

in full-time study and has not been otherwise employed. This includes extension work done in other institutions.

A minimum of forty-five of the last fifty-four quarter hours presented for an undergraduate degree must be completed in residence (exclusive of credit by extension and special examination).

Entrance Examinations. All new students, other than those entering the Graduate School, are required to take the University placement tests and the University physical examination.

Absences. Absences shall be counted beginning with the first day of recitations.

The instructor shall keep a record of absences for each student. When, in his opinion, the number of absences for any student becomes excessive or appears to be unjustified, he shall report such student to the dean concerned. A student may be dropped from a course for excessive absences by the Registrar upon recommendation of the dean and the instructor. When a student is so dropped, the instructor shall report the grade the student is making at the time he is dropped.

A student who has been absent for more than one-fourth of the total number of class exercises in any course is barred from the final examination in that course, unless special permission to take the examination is granted by the instructor and dean.

Any student absent from class on the day immediately preceding or following a holiday shall have a penalty of one quarter hour and one quality point added to his requirements for graduation unless excused by the committee on Scholarship and Attendance.

Absences due to officially authorized trips, such as those of athletic teams; musical, oratorical, and dramatic organizations; and University classes, shall be considered as being excused absences. The faculty member in charge of an authorized trip shall give to each student concerned a statement to present to his teachers certifying that the absence is official.

No report of absences shall be required for graduate students. Any undergraduate student whose standing on the work of the previous quarter is 2.4 or better, upon application to the Registrar, shall be extended the same privilege relative to absence as graduate students.

Conduct. In issuing rules for the regulation of the affairs of the University and the government of its students, it is not deemed necessary to set out details. The University expects all students to hold to the strictest standards of honesty in all University work and to conduct themselves in a seemly manner, bearing in mind that their conduct determines in a large measure the reputation of the institution.

The Marking System. Results of work will be recorded in the Registrar's Office as follows:

A—Exceptionally high quality, valued at 3 points for each quarter hour.
B—Good, valued at 2 points for each quarter hour.
C—Fair, valued at 1 point for each quarter hour.
D—Unsatisfactory, indicates a deficiency and gives no points but gives credit for graduation if with such credits the student's standing is 1 or more.
E—Failure, valued at 0 quarter hours and 0 points.
I—Incomplete.
X—Absent from examination.
WP—Withdrew, passing.
WF—Withdrew, failing.

A grade of E means that the work must be taken over in class to be credited.

A grade of I (incomplete) means that some relatively small part of the term's work remains undone, because of sickness or other reason satisfactory to the instructor. This work must be completed within one month after the student re-enters the University if credit for the course is to be gained. The Grade I is not to be given to the student whose work is below passing.

A grade of X may be changed by special examination within one month after the student re-enters the University.

An extension of time for the removal of an I or an X may be granted by the dean of the college in which the student is enrolled.

The standing of a student is defined as the ratio of his total number of points to his total number of quarter hours. For example, a student who makes an average mark of C throughout his course of 192 quarter hours, would have 192 points and 192 quarter hours, and a standing of 1.0. An average mark of B would give the student 384 points and 192 quarter hours, and a standing of 2.0. For all purposes other than classification and graduation, "standing" is understood to be the ratio of the number of points gained to the number of quarter hours attempted.

Recording of Marks. Through the fourth Monday of any quarter, and through the tenth class day of either summer term, students who withdraw from a class or who are dropped from a class will have no mark recorded. After these dates, students who withdraw or who are dropped from a class are to be given WP, WF, or E, as reported by the instructor of the class.

In computing standings for all university purposes, a WF shall be treated as an E.

A mark once reported to the Registrar's Office shall not be changed except when the instructor states that an error has been made or that an injustice would be done the student if the mark remained unchanged.

Definition of a Quarter Hour. A quarter hour represents one hour of recitation or lecture or two hours of laboratory a week for one quarter. Drawing, shopwork, physical education and other courses requiring no outside work are reckoned at three hours for one quarter hour.

Prizes and Awards

The following prizes and awards, other than the scholarships mentioned on page 23, are available at the University of Kentucky, primarily for excellence in scholarship.

General

Algernon Sidney Sullivan Medallions (Three)
Elizabeth Waddy Scholarship (Members of Alpha Xi Delta)
Mortar Board Prizes (Two cups)
Phi Beta Kappa Awards
Samuel M. Wilson Library Prizes (For book collections by undergraduate students, $30 and $20)
Young Men's Christian Association Key

College of Arts and Sciences

Chemistry Department
Willard Riggs Meredith Memorial Award

History Department

Charles S. Brent Memorial Prize in American History (Books purchased with income from $1,000)
Philo M. Bennett Prize ($25.00)

College of Agriculture and Home Economics

Agronomy Club Cups
Alpha Zeta Freshman Medal
Alpha Zeta Merit Key
Block and Bridle Cups
Block and Bridle Plaque
Phi Upsilon Omicron Freshman Medal

College of Engineering

E. B. Ellis Prize ($100)

College of Law

Lawyers Co-operative Publishing Co. Prize
Nathan Burkan Prize ($100)

College of Education

Kappa Delta Pi Prize ($25)

College of Commerce

Chi Omega Sorority Prize ($25)

Requirements for Graduation

Undergraduate Colleges. To be eligible for graduation from any undergraduate college of the University, a student must have completed the requirements of the curriculum as approved by the Faculty of the University. In addition to gaining the specified number of quarter hours, he must have an equal number of quality points—that is a standing of 1.0.

Curriculum substitutions may be made on recommendation of the college dean to the Registrar's Office.

To be eligible for a degree at any commencement, the student must file with the Registrar an application for such degree at least four weeks prior to the commencement date. The University requires the student to use his full and proper name in registering, in applying for a degree, and in other similar circumstances. The institution accepts no responsibility for difficulties arising from a student's failure to comply with this requirement.

Regardless of the length of time the student has attended the University, a minimum of forty-five of the last fifty-four quarter hours presented for the degree must be completed in residence at the University. The last eighteen quarter hours of residence work must be completed while registered in the college through which the degree is granted.

Not more than forty-eight of the quarter hours required for an undergraduate degree may be gained by extension, special examination, or both. A student may not satisfy in excess of one-half the requirements for a major by extension, special examination, or both.

The Graduate School. For the requirements for graduate degrees see the statement of the Graduate School, p. 113.

Commencement Honors. Students are graduated "With High Distinction" who attain a standing of 2.6 or higher for at least three years of residence work.

Students are graduated "With Distinction" who attain a standing of 2.4 up to 2.6 for at least three years of residence work.

A student who does only two years at the University may receive the appropriate commencement honors if he attains a standing of .2 greater than the above. The amount of credit is the basis of determining the two years' work, and varies according to the degree for which the student is an applicant.

The bachelor's degree with Honors in the student's major subject will be conferred upon the student who, in addition to having completed the requirements for the degree, shall have (1) attained high standing in his major subject; (2) passed with distinction a thorough, comprehensive examination in his major subject; (3) been recommended for the said degree by the faculty of the department in which his major work was done and by the dean of his college. Students majoring in those departments that require the final comprehensive examination are automatically candidates for department honors.

A Second Bachelor's or Master's Degree

A student may be eligible for a second bachelor's or a second master's degree when he has completed the requirements of the second curriculum. The total work for both degrees shall consist of not less than three quarters of residence and three quarters of credit beyond that of the first degree. With the approval of his dean, the student may pursue the work in the two courses simultaneously, but two degrees will not be granted at the same commencement.

OPPORTUNITIES OUTSIDE THE CLASSROOM

The University emphasizes the development of the whole individual. Toward this end it provides a diversified program of extra-class activities. These activities are briefly reviewed in the following paragraphs.

Special Cultural Opportunities

Convocations. All-University convocations are held in Memorial Hall. At these convocations students and faculty are given opportunity to hear able speakers discuss a variety of current problems. From January, 1943, through December, 1943, the following speakers were presented:

Dr. Sigmund Skard, Royal Norwegian Information Services; Miss Helen White, Professor of English at the University of Wisconsin, and President of the A.A.U.W.; Hon. Keen Johnson, Governor of Kentucky; Dr. Charles Russell, American Museum of Natural History; Mr. Virginius Dabney, Editor of the *Richmond Times-Dispatch;* Mr. Gregor Ziemer, W.L.W., Cincinnati; Dr. H. L. Donovan,

President of the University of Kentucky; Mr. A. H. Tandy, British Consul, Cincinnati; Dr. Frank L. McVey, President Emeritus of the University of Kentucky; and Mr. John Temple Graves, II, Editor of the *Birmingham Ace-Herald.*

Sunday Musicales. These musical programs are arranged for the enjoyment of the students, faculty, and friends of the University. There is no admission charge. The program for 1943-44 was as follows:

Sunday Musicales

October 31—
John Dudley, Tenor, Metropolitan Opera Association.

November 28—
Angel Reyes, Cuban Violinist.

December 5—
John Shelby Richardson, Pianist, University of Kentucky

December 12 (4:00 p.m. and 8:00 p.m.)—
Christmas Choral Program by the University Choristers, Mildred S. Lewis, Director

February 6—
Marisa Regules, Argentine Pianist

February 13—
University Philharmonic Orchestra, Carl A. Lampert, Director

February 20—
University Women's Glee Club, Mildred S. Lewis, Director

February 27—
Program by University Chapter of Phi Beta, Honorary Fine Arts Fraternity

March 5—
Robert Kuhlman, Baritone, University of Kentucky

March 12—
Program of Violin and Piano Sonatas. Lee Crook, Lexington, Violinist; John Shelby Richardson, Pianist, University of Kentucky

March 19—
William Primrose, Violist, New York City

March 26—
Florence Kirk, Soprano, Metropolitan Opera Association

April 2—
Sacred Oratorio—*The Seven Last Words*—Dubois. Mildred S. Lewis, Director; Lela W. Cullis, Organist

Other Cultural Opportunities. The University provides many other cultural opportunities in addition to the regular convocations and musicales. Some of the colleges hold assemblies either weekly or by-weekly at which matters of college interest are discussed. The various departments bring special lecturers to the University. The Art Department introduces not only to its students, but also to the whole University, exhibits of great paintings, of etchings, and of drawings. The Music Department sponsors a philharmonic orchestra, a University band, a men's glee club and a women's glee club,

all of which give concerts and furnish music for convocations. The Y.M.C.A. sponsors a series of forums and informal discussions in the Student Union, the men's dormitories, and in the various fraternities. Pan Politikon, a student organization to promote knowledge of countries other than our own, studies through the various departments and activities of the University the social, political, and cultural life of foreign countries. Departmental clubs add effectively to the cultural life of the University.

Each year the Guignol Theatre presents a series of plays in which students, faculty, and others interested in dramatics may participate. Regular radio programs are broadcast daily except Saturday and Sunday and special broadcasts are given frequently. These radio programs are participated in by students and faculty members. They originate in the University Studios in Lexington and are broadcast through the facilities of WHAS, Louisville, and WLAP, Lexington. Excellent exhibits, books, pictures, and museum materials of a variety of kinds are presented at frequent intervals by the University Library.

Religious Life

The University, because it is distinctly interested in the religious life of students, encourages them to maintain their memberships in the churches of their choice and to attend religious worship regularly. On the campus the Young Men's Christian Association and the Young Women's Christian Association are active organizations, each with a paid full-time secretary. Frequently great spiritual leaders are brought to the University to speak to students. Through these resident secretaries and visiting ministers opportunity is given the students to consult with sympathetic and able persons.

Since the University and its staff are interested in the best all-round development of the student, every encouragement is given him to maintain high moral and spiritual standards. The vitality of religious life on the campus of the University of Kentucky is evidenced by the Pitkin Club, organized in 1925, and named for Horace Tracey Pitkin, a missionary to China who lost his life during the Boxer Rebellion. It is an organization of students, now limited to seventy-five, and at present there is a long waiting list of students who wish to become members. There are also active student denominational groups and Sunday School classes for students in the respective churches. The Y.M.C.A. and the Y.W.C.A. have various active religious groups meeting regularly.

Student Activities

Many opportunities are given to the student to take part in various activities outside of his college studies. He may engage in newspaper work in connection with the student paper. If he is

interested in dramatics he has the opportunity of taking part in plays presented in a real theater and under competent direction. Through cooperation with the Student Government Association, the student in maintaining the integrity and honor of the campus and of the student body, will be training himself for future leadership. The member of the Hi Y Club or of the Girl Reserves finds a welcome in the University Y.M.C.A. or Y.W.C.A. The student can enter into the management of various enterprises, participate in debating and in oratorical contests, take part in athletics, become a member of the orchestra, band or glee club, and go to social affairs sponsored by the University and by the various organizations. There is opportunity at the University for the student to exercise his many interests not only in hard work with his studies but in activities which bring him in contact with his fellow students.

Student Publications. The students of the University of Kentucky, through the Department of Journalism, publish a semi-weekly newspaper, **The Kentucky Kernel.** This paper is ably edited and ranks high among college publications. The students also issue a year book known as **The Kentuckian.** The annual contains a list of organizations, pictures of the junior and senior classes, and the usual features found in college year books. Both of these publications have had a long history.

Student Organizations. The University approves and through its faculty sponsors a number of professional, honorary, and departmental organizations. A list of these follows:

Agricultural Council
Agronomy Club
Alma Magna Mater
Alpha Chi Sigma (Chemistry)
Alpha Lambda Delta (Freshman Honorary for Women)
Alpha Zeta (Agriculture)
American Institute of Electrical Engineers (Student Branch)
American Institute of Mining and Metallurgical Engineers (Student Branch)
American Society of Civil Engineers (Student Branch)
American Society of Mechanical Engineers (Student Branch)
Art Club
Ateneo Castellano
Aviation Club
Bacteriological Society
Baptist Student Council
Beta Gamma Sigma (Honorary Commerce)
Block and Bridle Club
Business Education Club
Chi Delta Phi (Literary Society for Women)
College Chamber of Commerce
Cosmopolitan Club
Cub Club (Journalism—Women)
Cwens (Sophomore Women)
Dairy Club
Delta Sigma Chi (Journalism—Men)
Dutch Lunch Club
Future Teachers of America
German Club
Graduate Club
Home Economics Club
Hort Club
House Presidents' Council
Inter-Fraternity Council

International Relations Club
K-Club
Kappa Delta Pi (Honorary Education)
Keys (Sophomore Men)
Lamp and Cross (Senior Men)
Lances (Junior Men)
Le Cercle Francais
Men's Glee Club
Mortar Board (Senior Women)
Newman Club
Omega Beta Pi (Pre-Medical)
Omicron Delta Kappa (Senior Men)
Order of the Coif (Honorary Law)
Outing Club
Pan-Politikon
Patterson Literary Society
Pershing Rifles (Military)
Phalanx Fraternity
Phi Alpha Delta (Law)
Phi Alpha Theta (History)
Phi Beta (Music—Women)
Phi Beta Kappa
Phi Delta Kappa (Professional Education—Men)
Phi Delta Phi (Law)
Phi Epsilon Phi (Botany)
Phi Mu Alpha (Music—Men)
Phi Upsilon Omicron (Home Economics)
Philosophy Club
Photography Club
Pi Mu Epsilon (Mathematics)
Pi Sigma Alpha (Honorary Political Science)
Pitkin Club (Religious)
Pryor Pre-Medical Society
Poultry Club
Scabbard and Blade
Sigma Gamma Epsilon (Geology)
Sigma Pi Sigma (Honorary Physics)
Sigma Xi
Student Bar Association
Student Government Association
Student Union Board
SuKy (Pep Organization)
Tau Beta Pi (Honorary Engineering)
Tau Sigma (Physical Education —Women)
Theta Sigma Phi (Journalism—Women)
University Band
University 4-H Club
University Orchestra
University of Kentucky Troupers (Physical Education)
White Mathematics Club
Women's Administrative Council
Women's Athletic Association
Women's Glee Club
Women's Panhellenic Association
Y.M.C.A.
Y.W.C.A.

The Alumni Association

The Alumni Association was established to render service both to the University and to its former students. It is the purpose of this Association to aid in the growth and development of the University, to promote the best interests of alumni, and to enable them to keep in touch with the institution and with each other. As the basis for its activities it maintains records of alumni, showing where they are located and what they are doing. Its program includes the sending of information to alumni about University affairs, the sponsoring of class reunions in the spring, and home-coming in the fall. It seeks to establish alumni groups both in Kentucky and in larger cities

throughout the country in order that alumni may come in contact with each other.

The Alumni Office is located in the Student Union Building, and alumni, students, and friends of the University are welcome at all times. The annual business session of the Association is held during commencement and the Executive Committee meets on the second Monday of each month except during June, July, and August. By legislative act alumni representation has been secured on the Board of Trustees so that they may have a direct influence in the administrative affairs of the University. The officers for 1943-44 are as follows: President, H. D. Palmore, '14; Vice-President, Dr. E. C. Elliott, '02; Executive Secretary, Marguerite McLaughlin, '03; Assistant Secretary, Mrs. Ethel Rix, '34; and Acting Treasurer, Helen King, '25.

THE FACILITIES OF THE UNIVERSITY

The facilities of the University of Kentucky include the 106-acre campus and the Experiment Station Farm of 600 acres at Lexington; a forest reserve and sub-experiment station of 15,000 acres at Quicksand, and the sub-experiment station of 600 acres at Princeton. The buildings on the Lexington campus now number more than fifty. The location of each building is shown on the map in the front of this publication. Following is a list of the buildings, with brief enumerations of the services housed.

Administration Building. In this building are located the offices of the President, the Dean of the University, the Dean of the College of Arts and Sciences, the Dean of Men, the Dean of Women, the Comptroller, the Registrar, the Department of Public Relations, and the Assistant Dean of the College of Arts and Sciences. The building also houses the Geological Museum and the departments of Ancient Languages and Political Science.

Agriculture Building. The offices of the Assistant Dean of the College of Agriculture are located in this building. The remainder of the building furnishes classroom and laboratory space for horticulture and agronomy.

Agricultural Engineering Building. Designed primarily to house the shops and laboratories for farm engineering, this building also provides classroom and laboratory space for the Department of Agricultural Entomology.

Agricultural Experiment Station. In the Agricultural Experiment Station are located the offices of the Dean of the College of Agriculture, the Director of the Experiment Station and the Director of Agricultural Extension. The building also houses the offices, laboratories, and research facilities for agronomy, chemistry, en-

tomology and botany, farm economics, markets and rural finance, fertilizer, feed, and seed control, and agricultural extension. The public service laboratories are also located in the Experiment Station.

Alumni Gymnasium. In this building are located the offices of the Department of Athletics, the ticket office for athletic contests, and the men's gymnasium. The gymnasium is used for athletic practice, for basketball games, and for classes in physical education.

Animal Pathology Building. This houses the offices and laboratories of the Department of Animal Pathology.

Art Center. In this building are located the Department of Music and the Guignol Theatre.

Barker Hall. This building houses the Buell Armory, the offices, classrooms, and storerooms of the Military Department, the rifle range, the women's gymnasium, and the Department of Physical Education for Women.

Biological Sciences Building. This building houses the Departments of Art, Anatomy and Physiology, Bacteriology, and Zoology. The office of the Dean of the Graduate School is also located here.

Boyd Hall. This is a residence hall for women.

***Bradley Hall.** This is a residence hall for men.

***Breckinridge Hall.** Breckinridge is also a residence hall for men.

Central Heating Plant. This plant contains three steam boilers which supply heat to all buildings on the main campus, to the Experiment Station, the Tobacco Research Laboratory, the Animal Pathology Building, the Small Animal House, the Dairy Products Building, the Livestock Judging Pavilion, the Agricultural Engineering Building, the Meat Laboratory, the Wenner-Gren Laboratory, the Animal Pathology Building, and the Insectary and Conservatory.

This plant is especially equipped, instrumented, and diversified for use as a practical steam laboratory by mechanical engineering students.

Coal Research Laboratory. This building houses a pilot plant for the low temperature production, from coal, of motor fuels, lubricants and high grade, smokeless, solid fuels as well as the base materials from which explosives, plastics and synthetic rubber may be manufactured. Oil shales and other carbonaceous materials may also be processed in this plant. The laboratory is operated by the Department of Mining and Metallurgical Engineering.

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* Currently used by the U. S. Army.

Dairy Products Building. The departments of Animal Husbandry, Dairying, Creamery License, and Poultry are located in this building. It also houses the Herdbook Room and the A.A.A. Aerial Survey.

Education Building. In addition to the University Elementary and High Schools, this building houses the office of the Dean of the College of Education, the Bureau of School Service, the Teachers Placement Bureau, and classrooms for college courses in education.

Engineering Quadrangle. This quadrangle, made up of several rather distinct units, houses the offices of the Dean and the Assistant Dean of the College of Engineering, the Engineering Library and the departments of mechanical, electrical, civil, mining, and metallurgical engineering.

Faculty Club. Formerly the Patterson Home, this house is now occupied by the University Faculty Club.

Frazee Hall. Frazee Hall houses the departments of University Extension, Philosophy, Sociology, and History.

Hamilton House. This is one of the University's cooperative houses for women students.

Health and Hygiene Building. Formerly the law building, this structure now houses the University Health Service, the Department of Hygiene, and the Stenographic Bureau.

Highway Materials Research Laboratory. This laboratory is jointly operated by the Department of Civil Engineering and the State Department of Highways.

Home Economics Building. The offices, classrooms, and laboratories of the Department of Home Economics are located in this building.

Hospital Barn. This building is used to house the experimental animals of the Department of Animal Pathology.

Insectary and Conservatory. This building is a greenhouse and laboratory used by the Department of Entomology and Botany of the Experiment Station.

Jewell Hall. This is an addition to Boyd Hall, and is the third unit of the residence halls for women.

Kastle Hall. This building houses the offices, classrooms, and laboratories of the Department of Chemistry.

***Kinkead Hall.** Kinkead Hall is the third unit of the residence halls for men.

Lafferty Hall. Lafferty Hall houses the offices, classrooms, and library of the College of Law and the offices of the Kentucky Law Journal.

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* Currently used by the U. S. Army.

Library. The University Library, including departmental collections, contains approximately 302,889 volumes. The building makes available 700 seats in the various reading rooms, seminar rooms, and the stacks. It also houses the Department of Library Science and the Bureau of Source Materials in Higher Education.

McVey Hall. In this building are located the offices and classrooms for the departments of English, Mathematics, and Journalism, the Campus Bookstore, the University Post Office, the Broadcasting Studios, and the offices and print shop of **The Kentuckian** and **The Kentucky Kernel.**

Maxwell Place. Maxwell Place is the home of the President of the University.

Memorial Hall. This building is the University auditorium. It seats about 1,100 persons and is equipped with a pipe organ.

Miller Hall. The Departments of Geology, German, and Romance Languages have office, classroom, and laboratory space in this building. It also houses the Geology Library.

Mining Laboratory. This building houses a complete pilot plant for the beneficiation of ores by both wet and dry methods. It also contains a chemical laboratory designed for analytical investigations of coals and ores. It is operated by the Department of Mining and Metallurgical Engineering.

Museum. The principal use of this building is for the Museum of Archaeology and Anthropology.

Neville Hall. All office, classroom, and laboratory space in Neville Hall is used by the Department of Psychology.

Norwood Hall. In this building are located the Department of Botany and the State Department of Mines and Minerals.

Nursery School. The nursery school is operated by the Department of Home Economics.

Observatory. This is the observatory of the Department of Mathematics and Astronomy. (Not shown on map.)

Patterson Hall. This building is a residence hall for women.

Pence Hall. The library, offices, classrooms, and laboratories of the Department of Physics are housed in this building.

Service Building. The Service Building houses the Department of Physical Education for Men and the offices, shops, and store rooms of the Division of Maintenance and Operations.

Small Animal Laboratory. This building is used as an experimental laboratory in agriculture.

Stock Judging Building. In addition to its use as a stock judging pavilion, this building furnishes classroom space for work in animal husbandry, poultry, and entomology.

Student Union Building. This building is the center for student activities. In addition to the lounges, ballroom, restaurants, recreation rooms, and assembly rooms, the building houses offices for student organizations, the Alumni Association, the Y.M.C.A. and the Y.W.C.A.

Tobacco Research Laboratory. In the laboratories and greenhouses contained in this building the College of Agriculture and Home Economics is carrying forward research in tobacco culture and curing.

Veterinary Building. This building is used in connection with the study of animal diseases.

White Hall. White Hall provides office, classroom, and laboratory space for the College of Commerce.

Wenner-Gren Laboratory. Built in 1940, this laboratory is designed for aeroplane motor testing. The laboratory is operated by the College of Engineering.

Additional buildings include the cooperative houses for women students, the Horticultural Greenhouses, the Meat Laboratory, residences, barns, and storage buildings.

PART II

EDUCATIONAL OPPORTUNITIES AT THE UNIVERSITY OF KENTUCKY

DEGREES AND CURRICULA

For instructional purposes the University is organized into a College of Arts and Sciences, a College of Agriculture and Home Economics, a College of Engineering, a College of Law, a College of Education, a College of Commerce, and a Graduate School. Instruction is given in each college or school through four quarters of approximately twelve weeks each, the summer quarter being divided into two terms. In general the opportunities afforded by the above divisions are indicated by the following degrees which are conferred upon students who complete the prescribed programs of study.

College of Arts and Sciences

Bachelor of Arts
Bachelor of Arts in Journalism
Bachelor of Science
Bachelor of Science in Industrial Chemistry
Bachelor of Science in Library Science (Prerequisite, a bachelor's degree)
Bachelor of Science in Medical Technology
Bachelor of Science in Music

College of Agriculture and Home Economics

Bachelor of Science in Agriculture
Bachelor of Science in Home Economics

College of Engineering

Bachelor of Science in Civil Engineering
Bachelor of Science in Electrical Engineering
Bachelor of Science in Mechanical Engineering
Bachelor of Science in Metallurgical Engineering
Bachelor of Science in Mining Engineering

College of Law

Bachelor of Laws

College of Education

Bachelor of Arts in Education

College of Commerce

Bachelor of Science in Commerce

Graduate School

Master of Arts
Master of Arts in Education
Master of Science
Master of Science in Agriculture
Master of Science in Civil Engineering
Master of Science in Education
Master of Science in Electrical Engineering
Master of Science in Home Economics
Master of Science in Mechanical Engineering
Master of Science in Metallurgical Engineering
Master of Science in Mining Engineering
Master of Science in Public Health
Civil Engineer
Electrical Engineer
Mechanical Engineer
Metallurgical Engineer
Mining Engineer
Doctor of Philosophy

The above outline of colleges and degrees gives only a general idea of the educational opportunities available at the University. Within the various colleges there are many possibilities for specialization and the pursuit of particular interests. These may be outlined as follows:

College of Arts and Sciences. Within this college it is possible to major in any one of twenty-six departments as follows: Anatomy and Physiology, Ancient Languages and Literatures, Anthropology and Archaeology, Art, Bacteriology, Botany, Chemistry, Economics, English Language and Literature, Geology, German Language and Literature, History, Hygiene and Public Health, Journalism, Library Science, Mathematics and Astronomy, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, Romance Languages and Literatures, Social Work, Sociology, and Zoology.

College of Agriculture and Home Economics. Students in agriculture have ten options: General agriculture, high school teaching, agricultural entomology, agronomy, animal husbandry, dairying, poultry, farm economics and rural sociology, markets and rural finance, and horticulture. There is also a short non-degree program in practical agriculture. Students in home economics have five options: General home economics, high school teaching, institution economics, clothing, textiles and related art, and child development and family living.

College of Engineering. In the College of Engineering the student may pursue any one of the following curricula: a general course in civil engineering, a civil engineering course with emphasis on

sanitary engineering, a civil engineering course with emphasis on architectural engineering, a course in electrical engineering, a course in mechanical engineering, a course in metallurgical engineering, and a course in mining engineering.

College of Law. In the College of Law the student may complete a five-year program leading to the degree of Bachelor of Laws or he may complete a six-year program leading either to the degrees of Bachelor of Science in Commerce and Bachelor of Laws, or to the degrees of Bachelor of Arts and Bachelor of Laws.

College of Education. In the College of Education the student may prepare for elementary teaching, or for high school teaching in one or two of a variety of fields. A curriculum is also provided for teacher-librarians.

College of Commerce. The programs of study in the College of Commerce include a general-business curriculum, a business-management curriculum, an industrial-administration curriculum, a marketing and advertising curriculum, a commerce-law curriculum, and a secretarial curriculum.

Graduate School. Graduate courses are available in practically all colleges and departments. The candidate for a master's degree may major in any department in which sufficient courses are available. The degree of Doctor of Philosophy is offered with major work in agricultural economics and rural sociology, chemistry, education, economics, English, history, mathematics, physics, political science, romance languages, and psychology.

DEGREES AND CURRICULA IN THE COLLEGE OF ARTS AND SCIENCES

PAUL PRENTICE BOYD, M. A., Ph. D., LL. D., Dean

INTRODUCTORY STATEMENT

Aim. The aim of the College of Arts and Sciences is the training of the individual student as thoroughly as possible in the four years in the directions of his interests and powers, in order that he may lead a happy and useful life and contribute his share of leadership in social, intellectual, economic, and political advancement.

The College strives to attain its purpose by imparting knowledge and by training the student in the proper methods of acquiring and using knowledge, to the end that he may be broadly informed and skillful in the solution of problems, which is the essence of thinking, and that he may develop habits of self-reliance, initiative, judgment and those inner resources that lead to self-mastery and happiness.

The distinctive character of the College is that it insists on an acquaintanceship with the main fields of intellectual interest and, in addition, as deep a knowledge as possible in the time allotted in some one special field. While all students are trained along lines useful in various vocations, the College emphasizes preparation **for** vocations rather than **in** them by the building of a well-rounded life, rich in interest, resourceful, capable of continuous growth and of adaption to times and circumstances.

Organization. The College of Arts and Sciences embraces twenty-six departments: Anatomy and Physiology, Ancient Languages and Literatures, Anthropology and Archaeology, Art, Bacteriology, Botany, Chemistry, English Language and Literature, Geology, German Language and Literature, History, Hygiene and Public Health, Journalism, Library Science, Mathematics and Astronomy, Military Science, Music, Philosophy, Physical Education, Physics, Political Science, Psychology, Romance Languages and Literatures, Social Work, Sociology, and Zoology. These twenty-six departments have been grouped into four divisions: Literature, Philosophy and the Arts; Social Studies; Physical Sciences; Biological Sciences.

Admission. Requirements for admission to the College of Arts and Sciences, as a freshman, or with advanced standing, or as a special student, are the same as those outlined on preceding pages

for the University. The College, however, recommends strongly that the student present for admission two units of mathematics.

Upper Division Advisers. The Dean of the college appoints a professor in the department in which the student is doing his major work to act as the student's adviser. The adviser must approve the student's schedule of classes prior to the placement of the student in the various courses.

Lower Division Advisers. Every student entering the college is assigned an academic adviser. The assignment is made on the basis of the student's interests and achievement. To minimize the possibility of the academic adviser's considering the new freshman as a major, heads of departments are not appointed as freshman advisers except where absolutely necessary. The dean of the college appoints the academic advisers annually.

If the student's high school record and placement test scores indicate that he will have considerable difficulty with his college work, the assistant dean acts as his adviser. The advisers for the year 1943-44 were: R. S. Allen, A. A. Capurso, C. M. Hackensmith, O. T. Koppius, R. G. Lunde, Roy Moreland, L. L. Quill, M. M. Ratliff, W. S. Taylor, W. C. Tucker, W. S. Ward, and R. H. Weaver. Each adviser had approximately twenty freshmen and ten sophomores who were among his advisees last year.

The adviser makes out the student's course of study on the basis of information supplied by the Dean's office and by the advisee. He must be consulted before any changes are made in the schedule of classes the student is taking. The adviser in general meets his advisees as a group once a week for two quarters, holds personal conferences with each advisee, and makes recommendations to the proper university official with reference to living conditions, class schedules, etc. For example, a freshman who is having special difficulty with a particular class may upon the recommendation of the adviser be put in a special class. A freshman may upon the recommendation of the adviser be permitted to carry above a normal academic load.

At mid-term each adviser is supplied with a statement of each advisee's progress in each class. He interviews the student, and near the end of the quarter sends a written report to the assistant dean's office on each advisee. This report covers such items as sources of difficulty, pattern of academic interests, suggested courses of action to aid the student, etc.

Probation Students. Students placed on academic probation by the Dean of the college are under the special supervision of the assistant dean. The parent is notified at the beginning of the probation period. At mid-quarter a report of the student's progress is sent home. During the quarter the student is interviewed

and every attempt is made to determine his difficulty. The student is placed in special help classes if it seems to be desirable. The attitude of the college toward probation students is that they need assistance and with the cooperation of the parents the college attempts to fulfill this need.

Freshman Tests; Tutorial Classes. Entering freshmen are given a series of psychological and placement tests. Assignments to class sections depend in many departments upon the results of these tests. Also those ranking in the lowest 25 per cent on the placement tests have special schedules arranged for them and are placed in special tutorial classes.

Courses. The College offers courses designed to meet the needs of various classes of students. They may be listed under the following heads:

1. General cultural courses with majors and concentration fields, leading to the degree of A. B. or B. S.
2. Professional courses leading to special degrees in industrial chemistry, in journalism, in library science, in music, and in medical technology.
3. Professional courses in which the general requirements for the A. B. and B. S. degrees are fulfilled.
4. Preprofessional courses meeting the requirements for admission to professional schools.
5. Combined courses, by means of which students may save a year or more in gaining both the A. B. or B. S. and a degree in agriculture, engineering, law, education, commerce, medicine, or dentistry.
6. Graduate courses leading to the master's and the doctor's degrees in the graduate school.

Degrees. The College offers courses leading to the following degrees: Bachelor of Arts, Bachelor of Science, Bachelor of Arts in Journalism, Bachelor of Science in Industrial Chemistry, Bachelor of Science in Library Science, Bachelor of Science in Music, and Bachelor of Science in Medical Technology. In all cases the student is responsible for the meeting of the requirements for graduation.

THE DEGREE OF BACHELOR OF ARTS

For the degree of Bachelor of Arts the student is required to gain a total of 192 quarter hours and 192 points,* that is, a standing of 1.0; and in the departments of Anatomy and Physiology, Ancient

* Unless otherwise specified a quarter hour represents one hour of recitation or two hours of laboratory a week for one quarter. Drawing, Shopwork, Physical Education, and other courses requiring no outside preparation are reckoned at three hours for one quarter hour.

Languages, Art, Botany, Economics, Geology, German, Journalism, Mathematics and Astronomy, Music, Philosophy, Physical Education, Physics, Political Science, Romance Languages, Sociology, and Zoology, pass a final comprehensive examination on his major subject. The detailed conditions are as follows.

LOWER DIVISION

Freshman and Sophomore Years

General Requirements

Freshman Orientation, first and second quarters, freshman year, 2 quarter hours.

English, 10 to 20 quarter hours (20 quarter hours required if only 3 units of entrance are presented).

General Hygiene, freshman or sophomore year, 2 quarter hours.

Physical Education, freshman and sophomore years, 6 quarter hours.

Military Science (men), freshman and sophomore years, 12 quarter hours.

Group Requirements

Foreign Languages, 4 to 28 quarter hours.

Two quarters in one language, if 3 or more units of entrance are presented; four quarters in one language, if only 2 units; five quarters in one language, or four quarters in one language and two in another, if only 1 or no unit of entrance. A student may take after any quarter of foreign language, a departmental examination which, if passed, will fulfill this requirement.

Social Studies, at least 8 quarter hours in one department (Economics, History, Political Science, or Sociology).

Mathematics, Philosophy, or Psychology, at least 8 quarter hours in one department.

Physical Sciences, at least 8 quarter hours in one department (Astronomy, Chemistry, Geology, or Physics).

Biological Sciences, at least 8 quarter hours in one department (Bacteriology, Botany, Physiology, or Zoology).

UPPER DIVISION

Junior and Senior Years

The student is required to gain, while registered in the Upper Division, at least 60 quarter hours in a Field of Concentration. These 60 quarter hours are to be elected subject to the approval of his adviser and the dean of the college, and must be in courses not

open to freshmen. The college recognizes two types of Fields of Concentration

1. Fields consisting of departmentally or generically related courses.
2. Fields consisting of topically related courses.

Generically Related Fields

The college recognizes four general fields of generically related subject matter

1. **Literature, Philosophy and the Arts**

   This field includes Ancient Languages and Literatures, Art, English Language and Literature, German Language and Literature, Journalism, Library Science, Music, Philosophy, and Romance Languages and Literatures.

2. **Social Studies**

   This field includes Anthropology, Archaeology, Commerce, Economics, Education, History, Law, Philosophy, Political Science, Psychology (social phases), Social Work, and Sociology.

3. **Physical Sciences**

   This field includes Chemistry, Engineering, Geology, Mathematics, Astronomy, Military Science, and Physics.

4. **Biological Sciences**

   This field includes Anatomy, Physiology, Agriculture (biological phases), Bacteriology, Botany, Chemistry (biological phases), Hygiene, Public Health, Physical Education, Psychology (biological phases), and Zoology.

Courses outside of the formal field of concentration may be included in the required 60 quarter hours on approval of the adviser and the dean.

If the student elects a generically related field he is required to gain at least 22 quarter hours in a department which he chooses as his major.

The dean and head of the major department will appoint an adviser for each student of the Upper Division. This adviser is to have general oversight of the student's work and especially of the content of the field of concentration.

During the last semester of the sophomore year, the student's program of concentration is to be worked out for the entire two years by the student and his adviser, and when approved by adviser and dean is filed in the dean's office and constitutes a part of the student's requirements for graduation. Alterations in this plan may later be made if they are approved by the adviser and the dean.

A minimum of 8 quarter hours is required as a prerequisite for a major in any department. As a general rule the prerequisites are to be acquired while the student is registered in the Lower Division.

In order to avoid working a hardship upon students who wish to secure a teacher's certificate, it is provided that, if necessary, 9 quarter hours in Education may be included in the 60 quarter hours of the concentration field, in fields other than Social Studies.

A student electing a combination course in Arts and Medicine, Dentistry or Law, is required to complete 30 quarter hours in his concentration field, before transferring to the professional school.

Topically Related Fields

The student may elect for his concentration field some topic and choose for the field courses which contribute to this central interest. Examples of central themes are "Public Opinion," "The Romantic Movement," "Biochemistry," and "Scientific Secretaryship." The student will take a minimum of sixty quarter hours in courses not open to freshmen closely connected with the central theme. If he chooses the central theme of "The Romantic Movement," he will take courses in English, foreign languages, Economics, History, Philosophy, sciences, and Art. If "Scientific Secretaryship," the courses will be in the College of Commerce, the Departments of Anatomy and Physiology, Bacteriology, Botany, Chemistry, English, Economics, etc.

Students interested in the Topical Field will be referred by the Dean to the Chairman of the committee in charge and this committee will aid the student in making out his course schedule for the particular topic.

To pursue a topical field, the student must have earned a minimum academic standing of 1.5 during the freshman and sophomore years, and must have the approval of the Committee on Topical Fields which will require as a rule completion of the lower division group requirements as prerequisites.

Tutorial Work and Comprehensive Examinations

Students majoring in the departments of Anatomy and Physiology, Ancient Languages, Art, Botany, Economics, Geology, German, Journalism, Mathematics and Astronomy, Music, Philosophy, Physical Education, Physics, Political Science, Romance Languages, Sociology, and Zoology will be required to schedule tutorial or seminar courses as specified by their major departments and to take final comprehensive examinations covering their major work. Passing the comprehensive examination is a prerequisite for graduation for major

students in these departments. If a student fails to graduate because of failure in this examination, he may be given another examination when his major department is satisfied that he has made sufficient additional preparation.

A. B. or B. S. with Department Honors

The degree of A. B. or B. S. with Honors in the student's major subject will be conferred upon the student who, in addition to having completed the requirements for the degree, shall have (1) attained high standing in his major subject; (2) passed with distinction a thorough, comprehensive examination in his major subject; (3) been recommended for the said degree by the faculty of the department in which his major work was done. Students majoring in those departments that require the final comprehensive examination are automatically candidates for department honors.

Independent Work Courses

A junior or senior, if his particular excellence in the department warrants it, may with the approval of his major professor and dean, register for an independent work course in his major subject. Such a course is characterized by special assignments for study, weekly or bi-weekly conferences, reports and quarter papers of some sustained effort. Credit for such courses may be granted to undergraduates to an amount of not more than 18 quarter hours. At the end of the quarter a written report of the work in such a course, or a paper representing part of the work must be read before the staff of the department. A copy of this paper must be filed in the office of the head of the department concerned.

Independent work courses are defined by their larger scope, wider content, advanced point of view, and by a more rigorous demand of reading, writing and thinking.

Credit for Beginning Foreign Languages

A passing grade in the first quarter's work of a beginning modern foreign language will not entitle the student to credit for that course until he has gained a passing grade in the second quarter's work.

Classification in Foreign Languages

Students who present foreign languages for entrance are classified in college languages according to the amount of such secondary school work. For example, a student who presents one unit of entrance in a foreign language is not allowed to carry for credit the beginning quarter's work.

Electives in Other Colleges

The student is permitted to elect and count toward graduation courses in the other colleges of the University not to exceed 45 quarter hours. Credits in the other colleges gained during the junior and senior years may, if not open to freshmen, be counted on major and field requirements. However, election of law courses by Arts and Sciences students is limited by the following regulations:

Students having the major part of their work in law must in all cases register in the College of Law.

Seniors registered in the College of Arts and Sciences, and by reason thereof carrying at least one-half of their work therein, may take as many as 12 quarter hours of law during 2 quarters selected from the following courses: Contracts, Torts, Agency, Crimes, Property I and II, Constitutional Law, Taxation, Municipal Corporations, Public Utilities, and such other law courses as the Dean of the College of Law may approve.

Students registered in this college who are not seniors may take work in the College of Law only on securing the consent of the Dean of the College of Law.

Students taking the combined six-year Arts-Law course must, before taking up law subjects, complete the first three years of Arts and Sciences work including all subjects required for the degree in this College.

Residence Requirements

A minimum of 45 of the last 54 quarter hours presented for the degree must be completed in residence at the University. The last 18 quarter hours of residence work must be completed while registered in the college through which the degree is granted.

Extension and Special Examination

A maximum of 48 quarter hours, taken by extension, special examination, or both, may be counted toward the baccalaureate degree. Not more than half of the quarter hours required for the major may be gained by extension, special examination, or both.

THE DEGREE OF BACHELOR OF SCIENCE

The degree of Bachelor of Science will, if preferred, be granted under the same conditions as govern the degree of Bachelor of Arts, provided that the student has gained at least 90 quarter hours in science.

THE DEGREE OF B. S. IN INDUSTRIAL CHEMISTRY

The degree of B. S. in Industrial Chemistry is awarded upon completion of a four years' prescribed curriculum. It aims to provide a solid foundation for continued work in chemistry, and enables the student to engage at once in technical work with excellent prospects for success.

German 2b must be completed and one year's work in French, so that a fair reading knowledge of both languages may be acquired. Students planning to take this course are advised to take in the high school one year of physics and solid geometry. Unless so taken these preliminary courses must be taken at the University.

Curriculum Leading to the Degree of B. S. in Industrial Chemistry

FRESHMAN YEAR	Qtr. Hrs.
First Quarter	
Orientation	1
Military Science 1a	2
Physical Education	1
English 1a	5
Mathematics 17 (College Algebra)	5
Chemistry 1a (General)	5
	19
Second Quarter	
Orientation	1
Military Science 1b	2
Physical Education	1
English 1b	5
Mathematics 3 (Trigonometry)	5
Chemistry 1b (General)	5
Engineering Drawing 1a	2
	21
Third Quarter	
Hygiene 1	2
Military Science 1c	2
Physical Education	1
German 1a	5
Mathematics 19 (Analytic Geometry)	5
Chemistry 20 (Qualitative Analysis)	5
	20

SOPHOMORE YEAR	Qtr. Hrs.
Fourth Quarter	
Military Science 6a	2
Physical Education 1	1
Chemistry 21a (Quantitative Analysis)	4
Mathematics 20a (Diff. Calculus)	5
German 1b	5
Physics 3a	6
	23
Fifth Quarter	
Military Science 6b	2
Physical Education	1
Chemistry 21b	4
Mathematics 20b (Int. Calculus)	5
German 2a	4
Physics 3b	6
	22
Sixth Quarter	
Military Science 6c	2
Physical Education	1
Chemistry 21c	5
Mathematics 25 or 105 (Dif. Equations)	4
German 2b	4
Physics 3c	6
	22

JUNIOR YEAR	Qtr. Hrs.
Seventh Quarter	
Chem. 130a (Organic)	5
Chem. 140a (Physical)	5
*Biological Science	4
**Elective	5
	19
Eighth Quarter	
Chem. 130b (Organic)	5
Chem. 140b (Physical)	5
*Biological Science	4
**Elective	5
	19
Ninth Quarter	
Chem. 130c (Organic)	5
Chem. 140c (Physical)	5
Commerce 1 (Principles of Economics)	5
English 6 (Public Speaking)	3
	18

SENIOR YEAR	Qtr. Hrs.
Tenth Quarter	
Chem. 133a (Qualitative Organic)	5
Chem. 160 (Comprehensive Survey of Chem. Mfg. Processes)	3
Chem. 141 (Intermediate Physical)	4
Chem. 181 (Chemical Literature)	1
***Chem. 188a (Seminar)	0
English 30 (Business Eng.)	3
**Elective	5
	21
Eleventh Quarter	
Chem. 121 (Semimicro Quantitative Anal.)	4
Chem. 161 (Industrial Chemical Calculations)	4
Chem. 110a (Advanced Inorganic)	3
Chem. 111 (Synthetic Inorganic)	2
***Chemistry 188b (Seminar)	1
**Elective	5
	19
Twelfth Quarter	
Chem. 120	5
Chem. 110b (Advanced Inorganic)	3
Chem. (elective)	2-5
Electives (Physics or Mathematics)	4
	14-17

Minimum quarter hours for degree, 237.

* The Biological Science requirement is to be elected by the student from selected courses in this field with the approval of the Department of Chemistry.

** The Lit., Phil., and Arts or Soc. Studies electives are to be chosen from courses designated by the Department of Chemistry. A student who is planning on graduate work must select 10 hours of this requirement in French.

*** Chemistry 188a-b (Undergraduate Seminar). Each senior is required to present a minimum of six reports to the student-faculty group before credit of one quarter hour will be given.

THE DEGREE OF A. B. IN JOURNALISM

The curriculum leading to the degree of A. B. in Journalism is a prescribed course having as its aim a liberal education and the training of men and women for successful careers in the journalistic profession.

Curriculum Leading to the Degree of A. B. in Journalism
General Sequence

FRESHMAN YEAR Course	Qtr. Hrs.	SOPHOMORE YEAR Course	Qtr. Hrs.
Journalism 2	3	Journalism 20a, 20b	10
English 1a, 1b	10	English 3a, 3b	10
Modern Foreign Language	10	Modern Foreign Language	8
Psychology	9	Biological or Physical Science	8
History 5a, 5b	10	Economics 1	5
Physical Education	3	Journalism 21 or Social Science	4
Military Science (Men)	6	Physical Education	3
Orientation A, B	2	Military Science (Men)	6
		Hygiene	2
	53		56

JUNIOR YEAR Course		SENIOR YEAR Course	
Journalism 104a, 104b	10	Journalism 106	4
Journalism 105	3	Journalism 107	3
Journalism 123a, 123b	6	Journalism 108	4
Electives	26	Journalism 127	3
		Journalism 90	1
		Electives	30
	45		45

Minimum quarter hours required for degree—199.

Curriculum Leading to the Degree of A. B. in Journalism
Community Sequence

FRESHMAN YEAR Course	Qtr. Hrs.	SOPHOMORE YEAR Course	Qtr. Hrs.
Journalism 2	3	Journalism 20a, 20b	10
English 1a, 1b	10	English 3a, 3b, Sociology 1, 2	10
Modern Foreign Language	10	Modern Foreign Language	8
Psychology	9	Biological or Physical Science	8
History 5a, 5b	10	Economics 1	5
Physical Education	3	Journalism 21 or Social Science	4
Military Science (Men)	6	Physical Education	3
Orientation A, B	2	Military Science (Men)	6
		Hygiene	2
	53		56

JUNIOR YEAR Course		SENIOR YEAR Course	
Journalism 102	4	Journalism 90	1
Journalism 103	4	Journalism 106	4
Journalism 104a, 104b	10	Journalism 107	3
Journalism 105	3	Journalism 108	4
Journalism 123a, 123b	6	Journalism 127	3
Sociology 101	4	Political Science 80	5
Sociology 105, 112, or 121	4	Psychology 5	4
Political Science 52	5	Sociology	4
Electives	5	Political Science	5
		Electives	12
	45		45

Minimum quarter hours required for degree—199.

Curriculum Leading to the Degree of A. B. in Journalism

Journalism-Advertising Sequence

FRESHMAN YEAR Course	Qtr. Hrs.
Journalism 2	3
English 1a, 1b	10
Modern Foreign Language	10
Psychology	9
History 5a, 5b or Political Science	10
Physical Education	3
Military Science (Men)	6
Orientation A, B	2
	53

SOPHOMORE YEAR Course	Qtr. Hrs.
Journalism 20a, 20b	10
English 3a, 3b	10
Modern Foreign Language	8
Physical or Biological Science	8
Art 30a, 30b, 30c, or Art 61a, 61b	6-8
Physical Education	3
Military Science (Men)	6
Hygiene	2
	53-55

JUNIOR YEAR Course	
Journalism 103	4
Journalism 104a, 104b	10
Journalism 105	3
Journalism 123a, 123b	6
Economics 1	5
Psychology 5	4
Art 29	3
Electives	10
	45

SENIOR YEAR Course	
Journalism 90	1
Journalism 106	4
Journalism 108	4
Journalism 115	4
Economics 140	4
Electives	28
	45

Minimum quarter hours required for degree—199.

THE DEGREE OF B. S. IN MEDICAL TECHNOLOGY

The degree of B. S. in Medical Technology is offered to those who complete the required curriculum outlined below. The aim is to prepare men and women for positions in hospital laboratories, physicians' and surgeons' clinics, and federal, state and municipal public health laboratories. This course fits the specially adapted student for either commercial or research laboratory work, meets all the requirements of the United States Civil Service Commission for the rank of Junior Bacteriologist, and prepares for entrance to Class A medical schools. The course is approved by the Board of Registry of the American Society of Clinical Pathologists and by the Council on Medical Education and Hospitals of the American Medical Association.

Curriculum Leading to the Degree of B. S. in Medical Technology

FRESHMAN YEAR

First Quarter	Qtr. Hrs.	Second Quarter	Qtr. Hrs.	Third Quarter	Qtr. Hrs.
Orientation	1	Orientation	1	Chem. 4	6
Chem. 1a	5	Chem. 1b	5	English 1b	5
English 1a	5	Zool. 1b	4	Zool. 1c	4
Bact. 2a	6	Bact. 2b	6	P. E.	1
P. E.	1	P. E.	1	Mil. Sc. 1c (Men)	2
Mil. Sc. 1a (Men)	2	Mil. Sc. 1b (Men)	2		
	Women 18 Men 20		Women 17 Men 19		Women 16 Men 18

SOPHOMORE YEAR

Fourth Quarter	Qtr. Hrs.	Fifth Quarter	Qtr. Hrs.	Sixth Quarter	Qtr. Hrs.
Chem. 8a	4	Chem. 8b	4	Zool. 7c	6
Bact. 56a	4	Bact. 56b	4	Bact. 57a	4
Zool. 1a	4	For. Lang. (Women)	5	For. Lang. (Women)	5
A. & P. 1a	4	or		or	
P. E.	1	Mil. Sc. 2b (Men)	2	Mil. Sc. 2c (Men)	2
Mil. Sc. 2a (Men)	2	A. & P. 1b	4	P. E.	1
		P. E.	1		
Women 17 Men	19	Women 18 Men	15	Women 16 Men	13

JUNIOR YEAR

Seventh Quarter		Eighth Quarter		Ninth Quarter	
Physics 1a	5	Physics 1b	5	Physics 1c	5
Bact. 103	6	Bact. 125a	5	Bact. 125b	3
Bact. 110a	3	Bact. 110b	3	Bact. 110c	3
Zool. 101a	4	Zool. 101b	4	Zool. 106	6
	18		17		17

SENIOR YEAR

Tenth Quarter		Eleventh Quarter		Twelfth Quarter	
Chem. 127a	5	Chem. 127b	5	Chem. 127c	5
For. Lang.,		For. Lang.,		Bact. 111	6
Math., Phil.,		Math., Phil.,		Bact. 120c	5
Psych. or		Psych. or		Bact. 150c	1
Social Sci.		Social Sci.			
†Elective	3 to 5	†Elective	3 to 5		
Bact. 120a	6	Bact. 120b	4		
Bact. 150a	1	Bact. 150b	1		
		Physics 120	3		
	15 to 17		16 to 18		17

Minimum quarter hours required for degree—204.

† Women must take at least 4 hours per quarter.

THE DEGREE OF B. S. IN MUSIC

The degree of B. S. in Music is awarded upon completion of a required course of study designed to prepare leaders in community musical enterprises, and supervisors of musical work in the schools.

Curriculum Leading to the Degree of B. S. in Music

The object of this curriculum in music is primarily to meet a Kentucky problem; that is, to develop music supervisors that can organize, teach, and direct orchestras, bands and choruses. Besides this work the student of this curriculum must major in either voice, piano or some symphonic orchestral instrument for the entire four years. Attention should be called, however, to the fact that this curriculum is valuable to those not contemplating teaching the subject as it furnishes an excellent opportunity to gain a very broad knowledge of music in general and a detailed knowledge of one particular instrument.

FRESHMAN YEAR	Qtr. Hrs.
Orientation A and B	2
English 1a (Composition)	5
Foreign Language	10
Foreign Lang. or Social Science	4-5
Hygiene 9 (Hygiene for Teachers)	3
Mil. Sci. (ROTC Band, 3a, b, c)	6
Music 33a-b (Elementary Theory)	12
Music 39a-b-c or 40a-b-c	....*
Music a-b-c (Applied)	9
Phy. Ed. (8, 19, 24 suggested)	3
Men	54-55
Women	48-49

SOPHOMORE YEAR	Qtr. Hrs.
Elective (Women)	6
English 1b (Composition)	5
English 3a-b (Eng. Literature)	10
Foreign Lang. or Social Science	4-5
Psychology 1 (Intro. to Psy.)	6
Mil. Sc. (ROTC Band, 4a, b, c)	6
Music 34a-b (Advanced Theory)	10
Music 39d-e-f or 40d-e-f	....*
Music d-e-f (Applied)	9
Physical Ed. (20, 27 suggested)	3
Total	52-53

JUNIOR YEAR	
Education 16 (Ed. Psychology)	5
Education 105 (Sec. Ed.)	4
Education C44 (Elem. Ed.)	4
Music 4a-b (Pub. School Music)	6
Music 7 (Strings)—8 (Brasses)	6
Music 9 (Woodwinds)	3
Music 26 (High School Methods)	3
Music 12a-b (Counterpoint)	6
Music 39g-h-i or 40g-h-i	....
Music 114a (Inst. and Cond.)	3
Total	49

SENIOR YEAR	
Education 101 (School Org.)	5
Education 177a-b-c (Pract. Tch.)	9
Music 13a-b (Form and Analysis)	6
Music 19a-b (History of Music)	8
Music 42 (Seminar)	1
**Music 115 (Choral Conducting)	3
Music 39j-k-l or 40j-k-l	....
Psychology 7 (Child)	4
Men	42
Women	48

Minimum for degree: 198 quarter hours.

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* 1 quarter hour allowed for orchestra and glee clubs when taken at the same time.

** Physical Education course numbers suggested NOT compulsory. *Electives* suggested, Music 110, 111a-b, or 115.

For special fees for applied music see p. 18.

COMBINED COURSES IN ARTS AND LAW, OR ARTS AND MEDICINE, OR ARTS AND DENTISTRY

A student may combine his courses in Arts and Sciences and Law or Medicine or Dentistry, gaining the A. B. or B. S. degree after three years in this college and one or more years in the professional school.

1. He must gain at least 147 quarter hours in Arts and Sciences subjects, with a standing of 1.0 or more, before transferring to the professional school.

2. He must have met the specified requirements of the College of Arts and Sciences (excepting hygiene, in Arts-Medicine) and have gained at least 30 quarter hours in his field of concentration before transferring to the professional school.

3. He must have been registered in the College of Arts and Sciences for at least one full year, immediately preceding the completion of his Arts and Sciences requirements, and must have gained at least 45 quarter hours in Arts and Sciences subjects in this college.

4. He must spend at least one year in a College of Law approved by the Association of American Law Schools, or in a "Class A" Medical School, or in a "Class A" College of Dentistry as rated by the Dental Educational Council of America.

5. He must in his law or medicine work secure sufficient quarter hours to bring his total in the Arts and the professional work up to 192 quarter hours, and must secure a standing of at least 1.0, or its equivalent, in the professional work. Professional courses duplicating Arts and Sciences courses, or duplicating courses elected in other colleges of the University by the student while registered in the College of Arts and Sciences, will not be counted in the total. In the combined Arts-Dentistry course, the arts degree will not be conferred until after the completion of the dentistry course.

PRE-MEDICAL COURSES

The College of Arts and Sciences offers a two years' preparatory course for the study of medicine. This course complies with the entrance requirements of the American Medical Association and the Association of American Medical Colleges which hold for all American medical schools, except those which require three years or a degree for entrance.

As stated above, the student may also pursue a combination Arts-Medicine course, spending three years at the University before transferring to the Medical School and obtaining his A. B. or B. S. after the first year in Medical School.

Students who complete a four years' course of study and thereby obtain their degrees will have time to meet the requirements for entrance to all medical schools. This gives an opportunity for a broader background in the natural and social sciences and in the arts, which will be of advantage both in Medical School and in later life. The student may elect any field of concentration and may major in any department of the field which he desires.

Since the requirements of medical schools vary considerably as to specified entrance subjects, it is essential that the student decide early as to the schools to which he wishes to apply for entrance and inform the adviser of pre-medical students. The adviser will give him full information concerning the additional entrance requirements that are specified by the various medical schools.

Certification as to fitness for entrance to Medical School is made by a standing committee of the faculty: O. T. Koppius, Charles Barkenbus, A. C. Brauer, Morris Scherago, W. D. Funkhouser, and R. S. Allen, Chairman.

No student is to be allowed to take, with the sanction of the University of Kentucky, the aptitude test of the Committee on Aptitude Tests of the Association of American Medical Colleges unless he has a standing of 1.4 or better.

Recommended Courses Preparatory to the Study of Medicine*

FRESHMAN YEAR

First Quarter	Qtr. Hrs.	Second Quarter	Qtr. Hrs.	Third Quarter	Qtr. Hrs.
Orientation A Required of all	1	Orientation B Required of all	1	Math. 3 Plane Trigonometry	5
Chem. 1a General Chem.	5	Chem. 1b General Chem.	5	Chem. 4 Qualitative Analysis	6
Zool. 1a General Zoology	4	Zool. 1b General Zoology	4	Zool. 1c General Zoology	4
English 1a English Comp.	5	English 1b English Comp.	5	Mil. Sci. 1c First Year Basic Course, Infantry	2
Mil. Sci. 1a First Year Basic Course, Infantry	2	Mil. Sci. 1b First Year Basic Course, Infantry	2	Phys. Ed. Gymnasium or Field Athletics	1
Phys. Ed. Gymnasium or Field Athletics	1	Phys. Ed. Gymnasium or Field Athletics	1		

* Students who plan to spend more than two years in the University may extend the required subjects into the third or fourth years and thus make room for Social Science and other arts courses in the Lower Division.

Two years of Foreign Language in college are recommended, or the equivalent in high school, although a few medical schools require none or only one year. If the student is a candidate for the A.B. or B.S., he will be required to take from 4 to 28 quarter hours of Foreign Language, according to his entrance units.

SOPHOMORE YEAR

Fourth Quarter	Qtr. Hrs.	Fifth Quarter	Qtr. Hrs.	Sixth Quarter	Qtr. Hrs.
German or French	4 or 5	German or French	4 or 5	German or French	4
†*Chem. 20a Organic Chem. or †Chem. 8a Quantitative Analysis	5 or 4	†*Chem. 20b Organic Chem. or †Chem. 8b Quantitative Analysis	5 or 4	*Chem. 20c Organic Chem. or A Group Requirement	5 or 4 or 5
Physics 1a General Physics	5	Physics 1b General Physics	5	Physics 1c General Physics	5
Mil. Sci. 6a Second Year Basic Course, Infantry	2	Mil. Sci. 6b Second Year Basic Course, Infantry	2	Mil. Sci. 6c Second Year Basic Course, Infantry	2
Phys. Ed. Gymnasium or Field Athletics	1	Phys. Ed. Gymnasium or Field Athletics	1	Phys. Ed. Gymnasium or Field Athletics	1

* Some medical schools require only an abbreviated course in Organic Chemistry.

† Choice depending on length of preparatory course desired.

Upper Division

The student in his junior and senior years will proceed to complete the group and field requirements and the additional specific requirements demanded by the medical school to which he will apply for admission. He should consult both his major professor and his pre-medical adviser.

PRE-DENTAL COURSE

Students who wish to take up the study of dentistry are advised to follow the two years' Pre-Medical Course. This course more than meets the pre-dental requirements which have been specified by the

Dental Education Council of America. With the two years' course, entrance may be gained to all Class A dental schools with the exception of a very few which require three years of preparatory work.

Suggested Courses for a Major in Anatomy and Physiology

JUNIOR YEAR

First Quarter	Qtr. Hrs.	Second Quarter	Qtr. Hrs.	Third Quarter	Qtr. Hrs.
Psych. 1 Intro. to Psychology	6	Soc. Sci., Hist., Pol. Sci., Sociology, or Ec. Hist.	4	Soc. Sci., Hist., Pol. Sci., Sociology, or Ec. Hist.	4
Chem. 127a Organic Chemistry	5	Psych. Elective	4	Chem. 127c Organic Chemistry	5
Zool. 101a Histology	4	Chem. 127b Organic Chemistry	5	Zoology 106 Embryology	6
Anat. & Phys. 105 Architecture of Human Skeleton	5	Anat. & Phys. 106 Intro. to Endocrinology	4		

SENIOR YEAR*

Fourth Quarter		Fifth Quarter		Sixth Quarter	
Anat. & Phys. 116a Seminar (Tutorial)	1	Anat. & Phys. 116b Seminar (Tutorial)	1	Anat. & Phys. 116c Seminar (Tutorial)	1
Anat. & Phys. 108a Adv. Phys.	4	Anat. & Phys. 108b Adv. Phys.	4	Anat. & Phys. 108c Adv. Phys.	4
Chem. 101a Physical Chem.	4	Chem. 101b Physical Chem.	4	Bact. 52, Prin. of Bacteriology	6
English 3a Hist. of Eng. Lit.	5	English 3b Hist. of Eng. Lit.	5	Hyg. 1, Personal and Community Health	2
Elective Modern Lang., Social subject, or Botany	4	Elective (Con't elective subj.)	4	Elective (Con't elective subj.)	4

* For the full schedule of the Senior Year, the student must obtain permission to carry the extra work.

PRE-LAW COURSES

Two years of college work (exclusive of certain specific courses) with a standing of 1.0 will be required for admission to the College of Law, which preliminary work will usually be done in the College of Arts and Sciences. Students expecting to enter the College of Law later are advised to lay special emphasis on English, history, economics, accounting, political science, and psychology. See page 17.

THE PREPARATION OF TEACHERS

Students of the College of Arts and Sciences may by electing courses in the College of Education qualify for teachers' certificates from the State Department of Education. For specific information concerning courses consult the statement of the College of Education.

SOCIAL WORK

The Department of Social Work offers three types of preparation: orientation courses for students in allied fields whose work brings them into contact with social welfare programs; a pre-professional major for those wishing to qualify for graduate training; and a graduate curriculum consisting of the first basic year of social work for those interested in social work as a career.

INDUSTRIAL PSYCHOLOGY

The College offers a two years' course beginning with the junior year designed to prepare students for personnel work in industry and governmental agencies. The curriculum consists of courses in the Departments of Psychology, Sociology, Political Science, Economics, and Hygiene as well as offering opportunities for practical experience through the cooperation of local offices and industries. This course leads to the A.B. degree with a major in psychology.

PREPARATION FOR WORK IN GEOLOGY

The demand for the professional geologist comes from the need for geological guidance in the exploitation of the nation's mineral wealth. Its relation to mining and to oil and gas exploration is such that geological services are considered indispensable by companies engaged in developing this mineral resource. Opportunities are also open with state and federal geological surveys, in museum work, and in college teaching. The Department of Geology is prepared to equip men and women for such work.

List of Courses for Professional Training in Geology

	Qtr. Hrs.
FRESHMAN YEAR	
Geology 30a, b, c—General Geology	15
SOPHOMORE YEAR	
Geology 10a, b, c—Field Geology	9
Geology 31—Lab. Work in Regional Historical Geology	3
JUNIOR YEAR	
Geology 107a, b, c—Advanced Field Geology	9
Geology 123a, b—Mineralogy	8
Geology 106a—Economic Geology	4
Geology 118—Field Work in Regional Geology (Summer)	3
SENIOR YEAR	
Geology 106b—Economic Geology	4
Geology 101a, b—Paleontology	8
Geology 124a, b, c—Regional Geology	9
Geology 107d, e, f—Adv. Field Geology	9
Geology 125—Methods of Subsurface Correlation	4
Geology 122—Petroleum Geology	4

ALLIED SCIENCES, ETC.

Chemistry—General and qualitative
Physics—General elementary
Zoology—General Zoology
Mathematics—College Algebra, Trigonometry, Analytics, and Calculus
Engineering—Mechanical Drawing and Plane Surveying
Foreign Language—Reading knowledge of French or German

The suggested courses do not constitute a prescribed curriculum. It is planned however, to give the necessary background for professional work. For a less professional major, courses in other fields may be substituted except for those prerequisite to required courses in Geology. For mineral resource work attention is called to courses in Mining and Metallurgy. For paleontological work take Zoology 7a, b, c. For Petroleum Geology attention is called to courses available in Petroleum Engineering. For later training in Geo-physical methods substitute Physics 3a, b, c, for Chemistry 4 and 8.

COURSES FOR NURSES

The college affords preliminary work for nurses. This covers anatomy and physiology, bacteriology, chemistry, hygiene and sanitation, and psychology. Nutrition and cooking are offered in the College of Agriculture and Home Economics. Students who complete this work ordinarily gain credit for it in civil hospitals to which they are admitted. No general statement can be made as to this, however. The student should take the question up with the hospital schools under consideration. For further information consult the Head of the Department of Hygiene and Public Health.

Graduates of nursing schools approved by the University will be admitted with a maximum of 45 quarter hours.

LIBRARY SCIENCE

The University provides professional education for library work through the Department of Library Science of the College of Arts and Sciences. A one-year curriculum of 45 quarter hours is offered. Students who complete this curriculum during the senior year of college receive the A. B. or B. S. degree. Students who complete the work following a Bachelor's degree receive the professional degree of Bachelor of Science in Library Science. The amount of residence required is three quarters beyond the bachelor's degree. It is also possible for students to fulfill the Southern Association requirements for teacher-librarians by electing specified library science courses.

The Department of Library Science is accredited by the Southern Association of Colleges and Secondary Schools and by the American Library Association.

THE RESERVE OFFICERS' TRAINING CORPS

The Department of Military Science conducts a two-year basic course required of all male freshmen and sophomores who are citizens of the United States, over fourteen years of age, and who conform to the physical requirements prescribed by the War Department.

The elective and selective advanced course of two years and one summer camp which leads to a commission in the Officers' Reserve Corps has been suspended for the duration of the war.

PUBLIC SERVICE COURSES

Government service is offering an ever widening field of opportunity for the college trained man and woman. The last years have seen a tremendous increase in the number of civil employees. The complexity of our public problems and the rising demand for an efficient public service have led to the demand for people qualified and trained for government positions.

The attention of students interested in this type of work is directed to the suggested courses of study listed under Political Science.

DEGREES AND CURRICULA IN THE COLLEGE OF AGRICULTURE AND HOME ECONOMICS

THOMAS POE COOPER, B.S., D.Sc., LL. D., Dean

INTRODUCTORY STATEMENT

Organization. Agriculture was one of the first subjects taught in the Agricultural and Mechanical College of Kentucky. The Department of Botany, Horticulture and Agriculture was organized in 1878 and existed as such until 1908 when it became the College of Agriculture. The Department of Domestic Economy was organized in 1906 and in 1918 it became the Department of Home Economics in the College of Agriculture. In 1941 the name of the College of Agriculture was changed to College of Agriculture and Home Economics. The first class in agriculture was graduated in 1898 and the first class in home economics was graduated in 1913.

The principal function of the College is Resident Teaching in agriculture and home economics and for this purpose it is organized into eight departments: Agricultural Entomology, Agronomy, (including Farm Engineering), Animal Industry, Animal Pathology, Farm Economics (including Rural Sociology), Home Economics, Horticulture (including Forestry), and Markets and Rural Finance. Associated with the College are the Agricultural Experiment Station and the Agricultural Extension Service.

Aims and Purposes. The College of Agriculture and Home Economics was established for a particular purpose that makes it different from almost any other type of college. Legislative acts establishing the College, the Experiment Station, and the Extension Service make the College primarily an institution to serve rural people. The College is successfully aiding rural people and has developed an educational procedure that fits students to assume responsibilities in various aspects of rural, as well as urban, life. The aim of the College is to educate young men and women for careers as useful citizens and leaders in all phases of agriculture and home economics. This may be on the farm, in the home, in extension work, in teaching, in nutrition, in research, in commercial work, or in any other work that requires knowledge of the place that agriculture and home economics have in the world today. The outside field of opportunity is as wide as the relation of agriculture and home economics to industry, commerce, and finance. In all of those fields of endeavor new places and new uses are being found for well educated, able men and women.

Faculty. To accomplish these aims and purposes the College of Agriculture and Home Economics has built up a scholarly, able, and forward-looking faculty. The men and women who compose the faculty are selected because they are good teachers, have a thorough knowledge of their chosen fields, and have the ability to guide and inspire others in their study of these fields. Some devote part of their time to the Experiment Station or to the Extension Service. Many have national and international reputations in their respective fields. Some have brought distinction to themselves and the College by their discoveries and investigations, others through books that they have written, and still others by their work on state and national problems of many kinds. The privilege of associating with and studying under men and women who know how to teach and who have the ability to contribute to the solution of current problems in agriculture and home economics is an important point to consider in the selection of a college.

Buildings and Equipment. Adequate, modern buildings and equipment are essential for good instruction in agriculture and home economics. In addition to the general University buildings the College of Agriculture and Home Economics has several buildings devoted specifically to the work of the various departments. The agriculture building houses the office of the dean, the department of horticulture with its student laboratories, class rooms for farm economics and marketing, and laboratories for the use of students in crops, soils, and agricultural entomology. The dairy building has modern, well-equipped laboratories for work in dairy manufacturing, incubation, and genetics. The stock judging pavilion has classrooms and an arena for livestock judging and other phases of work in animal industry. The agricultural engineering building has shops and laboratories for tractors, stationary engines, and machinery, as well as a commodious drawing room. The animal pathology building, when finished, will have classrooms and laboratories of the most modern type for the study of animal diseases. The tobacco laboratory is well equipped for the study of plant diseases. The experiment station building contains no classrooms, but offices of many of the members of the staff are located there.

The home economics building was open and ready for occupancy in September, 1940. As conditions permit it is being equipped with laboratory fixtures of the latest design. In addition to offices and classrooms the building now contains laboratories for foods, clothing, nutrition, dietetics, experimental cookery, costume design, and interior decoration. A home management house and a nursery school are located near the home economics building. The cafeterias of the University School and the Student Union are used as laboratories for students in institution economics.

On the farm are modern barns for all kinds of livestock. Representatives of several of the more important types and breeds

are kept for instructional purposes. These include Shorthorn, Hereford, Aberdeen Angus, Jersey, Holstein, and Brown Swiss cattle; Southdown, Cheviot, and Hampshire sheep; Duroc Jersey and Hampshire hogs; mules; farm horses; and several varieties of poultry. Near Lexington are many large livestock and horse farms and the owners very generously permit the use of their animals for instruction.

Admission. Requirements for admission to the College of Agriculture and Home Economics, as a freshman, or with advanced standing, or as a special student, are the same as those outlined on the preceding pages for admission to the University. However, a student who enters with less than two units in mathematics is required to make up the deficiency; a student in agriculture who enters with no units in physics is required to take a year of college physics.

REQUIREMENTS FOR GRADUATION IN AGRICULTURE

To receive the degree of Bachelor of Science in Agriculture, a student must complete 210 quarter hours and 210 points. These hours are classified as follows:

Prescribed subjects, non-agriculture	62 hours
Prescribed subjects, agriculture	47 hours
Electives required in agriculture	46 hours
Free electives	55 hours
Total	210 hours

The twelve-quarter plan of study enables a student to obtain a broad education and pursue some specialization in a chosen field of agriculture. Courses of instruction in technical agriculture are given by the departments of agricultural entomology, agronomy (including farm engineering), animal industry, animal pathology, farm economics (including rural sociology), horticulture (including forestry) and markets and rural finance. In addition students in agriculture receive instruction in English, economics, bacteriology, botany, chemistry, geology, physics and zoology. A liberal system of electives permits students to choose courses in the social and physical sciences, education, and other fields of interest.

To complete the requirements for a degree in twelve quarters a student must earn an average of 17½ hours per quarter. A schedule of 19 hours is the maximum load for a student whose standing the preceding quarter was between 1 and 2. A student who makes a standing of 2 or more in any quarter may carry up to 22 hours the following quarter. Special permission by the Dean is required for a schedule of more than 22 hours. A student whose record enables him to carry 21 hours per quarter can earn a degree in ten quarters.

Farm experience or practical experience in the option selected by the student is required for graduation. Transfer students are required to take a minimum of 52 quarter hours of agriculture in the University.

Certain courses are required of all students who are candidates for the degree in agriculture; others are elective. The courses required for graduation are listed in the order they would normally be taken by a student entering in the fall quarter and desiring a general course. Since all required courses cannot be offered in all quarters, some modification of order of courses will be necessary for students entering in the winter, spring or summer quarters. It is recognized that many freshmen may know when they enter or may decide during the first year what options they desire to select. The curriculum as outlined is sufficiently flexible to permit any change in order of courses that may be necessary to permit preparation for these options.

Curriculum Leading to the Degree of Bachelor of Science in Agriculture

FRESHMAN YEAR

	Qtr. Hrs.
Agronomy 1—Elementary Farm Crops	5
Animal Industry 1—Farm Livestock Production	5
Animal Industry 21—Farm Dairying	4
Animal Industry 41—Farm Poultry Production	4
Botany 1a, 1b—General Botany	8
English 1a, 1b—English Composition	10
Horticulture 1—General Horticulture	3
Military Science	
1a, 1b, 1c—First Year Basic	6
Orientation A—Freshman Orientation	1
Physical Education	3
Elective	3
	52

SOPHOMORE YEAR

Agronomy 10—Soils	4
Animal Industry 81—Principles of Animal Nutrition	4
Bacteriology 52—Principles of Bacteriology	6
Chemistry 1a, 1b—General Chemistry	10
Commerce 1—Principles of Economics	5
Farm Economics 1—Agricultural Economics	5
Farm Engineering 1—Mechanics of the Farmstead	4
Geology 3—Elementary Geology	4
Military Science	
6a, 6b, 6c—Second Year Basic	6
Electives	5
	53

JUNIOR AND SENIOR YEARS

Farm Economics 110—Farm Management	4
Markets and Rural Finance 100—Marketing	4
Zoology 25—General Animal Biology	5
Option Requirements—Agriculture	21
Electives (enough agriculture must be included to make the total number of hours in agriculture at least 93)	71
	105
Hours required for graduation	210

WHEN TO ENTER

A student may begin his college work at the opening of any quarter or at the middle of the summer quarter.

FACULTY COUNSELORS AND ADVISERS

Upon entering the College each freshman or sophomore chooses or is assigned to a faculty counselor. It is the function of the faculty member to serve as a friendly, personal counselor to the student, to help the student choose elective courses to be scheduled during the first six quarters, and to help the student select an option.

During or before the last quarter of the sophomore year, (this may be done as early as the first quarter) each student must select one of the ten options, which should be followed during the remainder of the College course. When the option is selected, each student must also choose a faculty adviser. If a departmental option is selected, the adviser must be in that department. A transfer student who has completed six or more quarters must select an option and an adviser when he first registers in the College.

OPTIONS

An option consists of a minimum of 21 quarter hours in courses not open to freshmen. These 21 quarter hours and the schedule for each quarter must be approved by the student's adviser. The curriculum as outlined is primarily for the student desiring a general course. In preparation for a definite option a student may postpone certain required courses or make substitutions for them if these changes are recommended by the counselor or adviser and are approved in accordance with the University rules.

GENERAL AGRICULTURE

This option is for students who want a general course in agriculture. Ninety-three hours of agriculture are required for graduation. Electives may be selected from any department in the University provided the necessary prerequisites are satisfied.

HIGH SCHOOL TEACHING

This option is designed primarily to prepare students to teach agriculture in public high schools under the provisions of the Federal Vocational Education Acts. The University of Kentucky has been designated as the institution in the state to educate teachers for this work. Students who select this option must have had farm experience. In addition to the required courses in the curriculum, students must take farm structural engineering, farm shop, electives in all departments of agriculture, and 21 hours in

education, as prescribed in the state plans for vocational education. Three of these courses in education (practice teaching, educational psychology, and evening school and part-time courses) make up a complete schedule for one quarter.

The following electives are suggested: agricultural entomology 1, 102; agronomy 11, 23, 104, 105, 115; animal industry 2, 3, 23, 61, 101, 103, 104, 105, 106, 121, 141; animal pathology 102; farm economics 101, 115; farm engineering 104, 105; forestry 1; horticulture 10, 103, 110, 120; markets and rural finance 101, 110, 140; rural sociology 101; English 6; journalism 10a.

AGRICULTURAL ENTOMOLOGY

Courses in the agricultural entomology option deal with beneficial and injurious insects of the farm and home, including insects of fruit and garden crops, farm crop insects, animal parasites, insects of the home and flower garden, and bees. Students preparing for agricultural entomology should elect courses in zoology, botany, and chemistry and should take the first course in agricultural entomology before the junior year.

AGRONOMY

Courses in agronomy comprise those in forage crops, cereals, tobacco, plant breeding, plant diseases, soil classification, soil properties, soil management and agronomy experimentation. Students selecting this option should elect certain courses in chemistry, botany, genetics, mathematics, physics, and geology, depending upon their individual field of interest.

ANIMAL HUSBANDRY

The animal husbandry option offers courses in animal breeding, feeding, selection, and management, as well as specialized courses in meats and the production of sheep, swine, beef, cattle, horses, and mules. Students selecting this option should complete livestock judging and genetics before the junior year. It is recommended that general chemistry be completed during the first four quarters and that it be followed by organic chemistry. It is also desirable that zoology 25, or general zoology, be completed as soon as possible. Further work in zoology, physiology, and animal pathology is recommended.

DAIRYING

Courses in dairying place special emphasis on technical subject matter as a supplement to practical experience in either dairy production or dairy manufacturing. In this option instruction is offered in breeding, selection, feeding, and management of dairy cattle. Specialized instruction is offered in dairy bacteriology and its relationship to processing market milk, butter, cheese, and ice

cream. Students choosing this option should complete the required courses in general chemistry and bacteriology as early as possible and should take organic chemistry.

POULTRY

The poultry option offers instruction in breeding, culling and selection, incubation and brooding, rearing of chicks, hatchery management, feeding, disease control, marketing poultry products, and game bird propagation. Students selecting this option should have basic training in chemistry, zoology, embryology, and parasitology.

FARM ECONOMICS AND RURAL SOCIOLOGY

Courses in this option deal with the economics of production in agriculture, including farm costs and accounting; farm management and the factors underlying profitable farming; land economics, land values and land appraisal; the human and community problems of farm life, population, rural leadership, social attitudes, and social change. Students selecting this option should have a broad training in social and physical sciences, and should elect such courses as history, political science, philosophy, psychology, mathematics, statistics, and accounting.

MARKETS AND RURAL FINANCE

The option in markets and rural finance provides training in the economics of agricultural markets, prices, and finance, and includes the relation of agriculture to government. Students who choose this option are advised to elect courses freely in the fields of political science, commerce, history, philosophy, and sociology.

HORTICULTURE

The option in horticulture provides training in vegetable growing, fruit growing, and ornamental horticulture. Students electing ornamental horticulture will take the curriculum as outlined in that field. Students desiring to take work in the production of vegetable and fruit crops should elect courses in soils, entomology, plant pathology, botany, and chemistry.

Curriculum in Ornamental Horticulture

FRESHMAN YEAR	Qtr. Hrs.
Agricultural Entomology 1—Agricultural Entomology	4
Art 61a, 61b—Elementary Drawing	8
Botany 1a, 1b, 1c—General Botany	12
Engineering Drawing 17a—Mechanical Drawing	2
English 1a, 1b—English Composition	10
Mathematics 3 or 17—Plane Trigonometry or College Algebra	5
Military Science 1a, 1b, 1c—First Year Basic	6
Orientation A—Freshman Orientation	1
Physical Education	3
	51

SOPHOMORE YEAR	Qtr. Hrs.
Agronomy 10—Soils	4
Agronomy 23—Plant Pathology	6
Art 63a—Advanced Drawing	4
Chemistry 1a, 1b—General Chemistry	10
Commerce 1—Principles of Economics	5
Geology 3—Elementary Geology	4
Horticulture 1—General Horticulture	3
Military Science 6a, 6b, 6c—Second Year Basic	6
Electives	12
	54

JUNIOR AND SENIOR YEARS	
Agricultural Entomology 103—Economic Entomology	4
Agronomy 115—Soil Management	4
Farm Engineering 105—Engineering Practices in Soil Management	4
Horticulture 120—Landscape Gardening	3
Horticulture 121—Advanced Landscape Gardening	3
Horticulture 123—Plant Propagation	3
Horticulture 124a, b—Special Problems in Ornamental Horticulture	6
Electives (enough agriculture must be included to make the total number of hours in agriculture at least 93)	75
	105
Hours required for graduation	210

PRE-AGRICULTURAL ENGINEERING

Students wishing to prepare for the field of agricultural engineering may enter the College and take courses which will satisfy the requirements of the first year in most colleges offering the agricultural engineering degree. The prospective student should, upon entering the College, confer with the professor of agricultural engineering regarding courses that will be accepted by the college at which he plans to obtain a degree.

PRE-FORESTRY WORK

Students planning to become foresters may enter the College and take courses which will satisfy the requirements of the first year in most forestry schools. These courses include general botany, English composition, mathematics, physics, journalism, drawing, surveying, and outline of forestry. Each student should plan his schedule to meet the requirements of the forestry school he has decided to enter.

PRE-VETERINARY WORK

Students planning to become veterinarians may enter the College and take the course required for admission to a college of veterinary medicine. The minimum requirement for entrance is one year of college work, some colleges requiring more. In general the requirements include inorganic chemistry, one year; English composition, one year; introductory zoology, one year; and social science, one year. Recommended courses include foreign language, advanced chemistry, history, political science, botany, mathematics, psychology, English literature, speech, physics, and animal husbandry.

PRE-THEOLOGICAL MAJOR FOR THE RURAL MINISTRY

Many leaders in the work of the rural town and country ministry are today suggesting that some of the men who plan to enter this field of service should consider attending a college of agriculture in which a strong curriculum in rural social science is available, as an undergraduate preparation for seminary training. A student planning to enter a theological seminary and enrolling in a regular curriculum of the College of Agriculture and Home Economics may select from the general University offering a suitable group of courses in philosophy, English literature, and ancient languages. The student planning to elect this major is advised to acquaint himself with the specific requirements of the theological seminary of his choice.

NON-DEGREE PROGRAM IN PRACTICAL AGRICULTURE

For high school graduates who want to study agriculture in college as preparation for farming, but whose time is limited, a four-quarter program is provided. In this program subjects may be elected to provide general or special information concerning any phase of agriculture. The following regulations govern this program:

1. Students must meet the University entrance requirements as either regular or special students.
2. Students may enter at the beginning of any quarter.
3. When students register for the first time, they must state that they plan to follow this program.
4. All subjects in agriculture are open to students in this program.
5. Students may transfer to the degree curriculum at any time. However, courses in the 100 series, or courses taken without the designated prerequisites may not be counted toward a degree unless validated by special examination.
6. Upon the completion of 4 quarters of residence (these need not be consecutive) and 70 quarter hours, the student will be awarded a certificate in agriculture.

SHORT COURSES

Short courses ranging in duration from one day to one week are held for those interested in special phases of agriculture. The short courses planned for 1944 include courses for home gardeners, dairy fieldmen, machinery repairmen, sheep shearers, and poultrymen.

FARM AND HOME CONVENTION

The annual Farm and Home Convention is held on the campus of the University of Kentucky during the last week in January. Thousands of farm men and women from all over the state find these programs to be interesting and inspirational and of great value to them in planning and carrying on their work. A special bulletin giving the program is issued in December.

GRADUATE WORK

All departments offer graduate work leading to the degree of Master of Science in Agriculture. The degree of Doctor of Philosophy may be earned in agricultural economics and rural sociology.

REQUIREMENTS FOR GRADUATION IN HOME ECONOMICS

To receive the degree of Bachelor of Science in Home Economics, a student must complete 205 quarter hours and 205 points. These hours are classified as follows:

Prescribed subjects, non-home economics	75 hours
Prescribed subjects, home economics	69 hours
Electives required in home economics	18 hours
Free electives	43 hours
Total	205 hours

Home economics in the University of Kentucky has for its purpose the education of students for home and family living to the end that worthy home membership may be a dynamic factor in social progress. The curriculum includes courses in art, physical sciences, and social sciences as a basis for a liberal education. Application of these to the problems of foods and nutrition; clothing, textiles, and related art; institution economics; child development; and home management, constitute the specific home economics courses. The program is sufficiently flexible to meet the requirements for both the bachelor of science and the master of science degrees in home economics with special emphasis on the following fields of interest:

1. General home economics as a preparation for effective home making.
2. Home economics education as preparation for teaching in high schools, colleges, and emergency schools and projects.
3. Home economics as preparation for careers in the commercial field.

4. Institution economics for hospital dietetics, management of food units in hotels, restaurants, schools, and other institutions.
5. Extension home economics in federal and state programs.

To complete the requirements for a degree in twelve quarters a student must earn 17 or more hours per quarter. A schedule of 19 hours is the maximum load for a student whose standing the preceding quarter was between 1 and 2. A student who makes a standing of 2 or more in any quarter may carry up to 21 hours the following quarter. Special permission of the Dean is required for a schedule of more than 21 hours. Transfer students are required to take a minimum of 25 quarter hours of home economics in the University.

Certain courses are required of all students who are candidates for the degree in home economics; others are elective. The courses required for graduation are listed in the order they would normally be scheduled by a student entering in the fall quarter and desiring a general course. Since all required courses cannot be offered in all quarters, some change in the order of courses will be necessary for students entering in the winter, spring, or summer quarters.

Curriculum Leading to the Degree of Bachelor of Science in Home Economics

FRESHMAN YEAR	Qtr. Hrs.
Art 30a, 30b, 30c—Introduction to Art	6
English 1a, 1b—English Composition	10
Chemistry 1a—General Chemistry	5
Home Economics 5, 6—Foods	9
Home Economics 25—Textiles	3
Home Economics 26—Costume Design	4
Home Economics 27—Clothing	5
Orientation A—Freshman Orientation	1
Physical Education	3
Psychology 1—Intro. to Psychology	6
	52

SOPHOMORE YEAR	
Anatomy and Physiology 3—Physiology	5
Chemistry 1b—General Chemistry	5
Chemistry 7—Organic Chemistry	6
Commerce 1—Principles of Economics	5
English 6—Essentials of Speech	3
or	
Journalism 10a—Survey of Journalism	4
Home Economics 51—Health of the Family	4
Home Economics 61—Housing	4
Home Economics 71—Survey of Home Economics	1
Physical Education	3
Physics 51, 52—Introduction to Physics	6
Psychology 7—Psychology of the Child	4
Electives	4 or 5
	51

JUNIOR AND SENIOR YEARS	Qtr. Hrs.
English 3a or 3b—Hist. of English Literature	5
Home Economics 11—Food and Nutrition	6
Home Economics 72—Professional Problems of Home Economics	1
Home Economics 102—Dietetics	6
Home Economics 127—Advanced Clothing	4
Home Economics 129—Interior Decoration	4
Home Economics 152—Child Care and Development	5
Home Economics 161—Consumer Problems	4
Home Economics 162a, b—Home Management and Family Relationships	9
Rural Sociology 101—Rural Sociology	3
or	
Sociology 1—Introductory Sociology	5
Electives (enough home economics must be included to make the total number of hours at least 87)	53 or 55
	102
Hours required for graduation	205

FACULTY COUNSELORS AND ADVISERS

When a freshman or sophomore first registers in the Department of Home Economics, she chooses or is assigned a faculty counselor. It is the function of the faculty member to serve as a friendly, personal counselor to the student, to help the student choose elective courses to be scheduled during the first six quarters, and to help the student select an option.

During or before the last quarter of the sophomore year each student must select one of the five options offered by the College, which should be followed during the remainder of the college course. When the option is selected, each student must also choose a faculty adviser. A transfer student who has completed six or more quarters must select an option and an adviser when she first registers in the College.

OPTIONS

Requirements for the five options follow. In preparation for a definite option a student may postpone certain required courses listed in the curriculum or make substitutions for them if these changes are recommended by the counselor or adviser and are approved in accordance with the University rules.

GENERAL HOME ECONOMICS

This option is for students who want a general course in home economics. Eighty-seven hours of home economics are required for graduation. Electives may be selected from any department in the University provided the necessary prerequisites are satisfied.

HIGH SCHOOL TEACHING

This option is designed primarily to prepare students to teach home economics in public high schools under the provisions of the Federal Vocational Education Acts. The University of Kentucky

has been designated as one of the institutions in the state to educate teachers for this work. In addition to the required courses in the curriculum students must take general bacteriology and 21 hours in education, as prescribed in the state plans for vocational education. The first course in education is the technique of teaching home economics. Following this course are three other courses (practice teaching, school organization, and problems in vocational education) which make up a complete schedule for one quarter. Students completing this option are entitled to a state certificate to teach home economics on a vocational basis in Kentucky.

INSTITUTION ECONOMICS AND DIETETICS

Eligibility for hospital training in dietetics requires a bachelor of science degree in home economics. In addition to the required courses in the general curriculum the following courses must be included: Institution marketing, institution foods, institution organization and administration, experimental cookery, advanced nutrition, and five hours in education. It is recommended that additional advanced courses be taken in institution economics and nutrition. The student is guided by the adviser in the choice of courses. For the management of food units in schools, colleges, restaurants, and hotels the following electives are recommended: Institution marketing, institution foods, institution organization and administration, institution management, public school nutrition, and experimental cookery. Students planning to elect the option in institution economics and dietetics should take general chemistry in the first two quarters and organic chemistry in the third quarter.

CLOTHING, TEXTILES, AND RELATED ART

The option prepares students for work in commercial fields dealing with clothing, textiles, and costume design. The following electives are recommended in sequence: Drawing, 2 quarters; modern Europe to the French Revolution, 2 quarters; advanced costume design; advanced clothing problems; and special problems in home economics.

CHILD DEVELOPMENT AND FAMILY LIVING

This option prepares students for future specialization in the field of child development and family living. The following electives are suggested: Advanced child development, family living, mental measurements, practice in testing, experimental child study, the family, and child welfare. Through affiliation with the Merrill-Palmer School, Detroit, Michigan, two senior students with special interest in child development may be selected each quarter to attend that school. This privilege gives increased opportunity to study certain aspects of child life.

OTHER PROGRAMS

Students interested in combining social work, journalism, or retailing with home economics should choose electives from appropriate departments.

GRADUATE WORK

The Department of Home Economics offers graduate work leading to the degree of Master of Sciences in Home Economics.

DEGREES AND CURRICULA IN THE COLLEGE OF ENGINEERING

JAMES HIRAM GRAHAM, C. E., Dean

INTRODUCTORY STATEMENT

The College of Engineering was organized in 1917 by the consolidation of the College of Civil Engineering which was established in 1886, the College of Mechanical and Electrical Engineering established in 1891, and the College of Mining Engineering established in 1901.

It is the purpose of the College of Engineering to train students in the fundamental sciences and to prepare them for professional careers in their chosen branches of engineering.

This college endeavors to keep before its students the latest developments in engineering. The physical plant has been rebuilt in the last few years and now comprises 70,000 sq. ft. of offices, class rooms, study halls, drafting rooms, library, and modern laboratories. Much new equipment has been provided, which places the College in a position to carry on extensive research work in the various branches of engineering.

Admission. Admission to the freshman class in the College of Engineering is limited to students rated in the upper three-fourths on the University placement tests.

In addition to meeting the general requirements for admission to the University, the high school credits presented by the applicant shall include one unit in Plane Geometry, one-half unit in Solid Geometry and one and one-half units in Algebra. If the student lacks only the half unit in Solid Geometry, he may be admitted, but this subject will be added to the requirements of the freshman year.

Courses of Study and Degrees. The College of Engineering offers instruction leading to the following baccalaureate degrees:

Bachelor of Science in Civil Engineering.
- Option 1—General Civil Engineering.
- Option 2—Civil Engineering with Special Emphasis on Sanitary Engineering.
- Option 3—Civil Engineering with Special Emphasis on Architectural Engineering.

Bachelor of Science in Electrical Engineering.
Bachelor of Science in Mechanical Engineering.

Bachelor of Science in Metallurgical Engineering.
Bachelor of Science in Mining Engineering.

Options and Electives. In some of the curricula certain options or electives are allowed. All electives must be approved by the Head of the Department in which the student is taking his major work.

Requirements for Graduation. To receive the Bachelor of Science degree in any one of the five branches of engineering a student must meet the following requirements:

(a) Complete a minimum of 210 quarter hours with a standing of 1.0, exclusive of the basic work in Military Science and Physical Education.

(b) Complete the curriculum of the department in which he is taking his major work.

Graduate Degrees. The College of Engineering offers graduate work leading to the following advanced degrees:

Master of Science in Civil Engineering.
Master of Science in Electrical Engineering.
Master of Science in Mechanical Engineering.
Master of Science in Metallurgical Engineering.
Master of Science in Mining Engineering.

The College of Engineering offers to its own graduates the following professional degrees:

C. E. (Civil Engineer).
E. E. (Electrical Engineer).
M. E. (Mechanical Engineer).
Met. E. (Metallurgical Engineer).
E. M. (Mining Engineer).

A student intending to pursue graduate work in another institution should inform himself regarding the requirements for entrance to that particular institution and plan his undergraduate work accordingly.

For further information regarding graduate work, see the graduate school section of this bulletin.

Study Hall. Freshmen in the College of Engineering are required to spend their vacant periods, not to exceed ten hours a week, in supervised study. During this time they will be under the general supervision of a faculty member.

Three-Year Curricula. In order to meet the urgent demand of governmental agencies and industries for trained engineers in our war effort, outlines which follow are arranged so that the requirements for any one of the engineering degrees may be completed in

three years of four quarters each. Students who wish to follow this program are advised to start at the beginning of the Summer Quarter and plan to attend college continuously for twelve quarters.

OUTLINE OF THE FIRST TWO QUARTERS OF ALL ENGINEERING CURRICULA

In order that all students in the College of Engineering may have an opportunity to take some fundamental training before deciding definitely what courses they desire to pursue, the first two quarters of all engineering curricula are made uniform.

FIRST QUARTER	Qtr. Hrs.	SECOND QUARTER	Qtr. Hrs.
Assem. 1a—Introduction to Engineering	0	Assem. 1b—Introduction to Engineering	0
Chem. 2a—General Chemistry	5	Chem. 2b—General Chemistry	5
English 1a—English Composition	5	English 1b—English Composition	5
Eng. Draw. 1a—Elementary Engineering Draw.	2	Eng. Draw. 1b—Elementary Engineering Draw. and Desc. Geom.	2
Math. 17—College Algebra	5	Math. 3—Plane Trigonometry	5
Military Science 1a	2	Military Science 1b	2
Physical Education	1	Physical Education	1
	20		20

Curricula Leading to the Degree of Bachelor of Science in Civil Engineering

For First Two Quarters, see above.

THIRD QUARTER	Qtr. Hrs.	FOURTH QUARTER	Qtr. Hrs.
Assembly 2—Engineering Problems	1	Assembly 3a—Class Society	0
Civ. Eng. 5—Masonry Construction	3	Civ. Eng. 12—Plane Surveying	4
Engin. Draw. 1c—Elementary Engineering Draw.	2	Civ. Eng. 18—Mapping and Topographic Drawing	3
Math. 19—Plane and Solid Analytic Geometry	5	Math. 20a—Differential Calculus	5
Commerce 1—Principles of Economics or Political Science 15—Problems of Citizenship	5	Physics 3a—General College Physics	6
Military Science 1c	2	Military Science 6a	2
Physical Education	1		
	19		20

FIFTH QUARTER		SIXTH QUARTER	
Assembly 3b—Class Society	0	Assembly 3c—Class Society	0
Applied Mech. 3—Statics	5	Applied Mech. 4—Dynamics	3
Math. 20b—Integral Calculus	5	Civ. Eng. 13—Advanced Surveying	4
Physics 3b—General College Physics	6	Civ. Eng. 16a—Route Surveying	4
Military Science 6b	2	Civ. Eng. 72—Graphic Statics	2
		Physics 3c—General College Physics	6
		Military Science 6c	2
	18		21

OPTION ONE

General Civil Engineering

SEVENTH QUARTER	Qtr. Hrs.
Assembly 4a—Class Society	0
Applied Mech. 100—Strength of Materials	5
Civ. Eng. 49—Railroad Const. and Maintenance	3
Civ. Eng. 170—Elements of Structural Design	4
Civ. Eng. 171a—Theory of Structures	5
Math. 11 and 12—Spherical Trigonometry and Least Squares	each 3
	23

EIGHTH QUARTER	Qtr. Hrs.
Assembly 4b—Class Society	0
Civ. Eng. 23—Seminar	1
Civ. Eng. 31—Highway Location, Const. and Maintenance	3
*Civ. Eng. 106—Foundations and Tunneling	2
*Civ. Eng. 107—Soil Mechanics	3
*Civ. Eng. 171b—Theory of Structures	3
Elec. Eng. 101—Fundamentals of Electrical Machinery	4
*Met. Eng. 26—Engineering Metallurgy	3
	19

NINTH QUARTER
(Summer)

FIRST HALF Surveying Camp	
Civ. Eng. 15—General Surveying	5
Civ. Eng. 16b—Route Surveying	4
Civ. Eng. 17—Hydrographic Surveying	1
SECOND HALF	
Assembly 4c—Class Society	0
Civ. Eng. 35—Highway Materials	2
Civ. Eng. 81—Testing Materials	2
Civ. Eng. 120—Hydraulics	3
Civ. Eng. 123—Hydraulics Laboratory	2
	19

TENTH QUARTER	
Assembly 5a—Class Society	0
Civ. Eng. 113—Geodesy, Precise Surveying and Leveling	4
Civ. Eng. 173a—Steel Structures	4
Engin. Adm. 102—Engineering Administration	4
Geology 12a—Elementary Geology for Engineers	4
Mech. Eng. 103—Elements of Heat-Power Engineering	3
	19

ELEVENTH QUARTER	
Assembly 5b—Class Society	0
Civ. Eng. 102—Reinforced Concrete	4
Civ. Eng. 104—Reinforced Concrete Design	1
*Civ. Eng. 173b—Steel Structures	3
*Civ. Eng. 181a—Independent Problems	1
Geology 12b—Elementary Geology for Engineers	3
San. Eng. 151—Water Supply and Waterworks	3
San. Eng. 152—Sewers and Sewage Disposal	3
	18

TWELFTH QUARTER	
Assembly 5c—Class Society	0
*Arch. Eng. 7—Building Construction	1
Civ. Eng. 32—Streets and Pavements	3
Civ. Eng. 36—Bituminous Materials	2
*Civ. Eng. 105—Masonry Structures	5
Civ. Eng. 122—Water Power Eng.	3
*Civ. Eng. 181b—Independent Problems	3
*San. Eng. 153—Design of Waterworks and Sewers	2
*San. Eng. 156—Water and Sewer Plant Operation	2
	21

* With the approval of the Head of the Department, other subjects may be substituted for these.

OPTION TWO

Sanitary Engineering

First Six Quarters Same as Option One

SEVENTH QUARTER	Qtr. Hrs.
Assembly 4a—Class Society	0
Applied Mech. 100—Strength of Materials	5
Bacteriology 52—Principles of Bacteriology	6
Chemistry 4—Qualitative Analysis	6
Civ. Eng. 81—Testing Materials	2
	19

EIGHTH QUARTER	Qtr. Hrs.
Assembly 4b—Class Society	0
Bacteriology 57a—Bacteriology of Water and Sewage	4
Bacteriology 104—Applied Bacteriology	3
Chemistry 8a—Quantitative Analysis	4
Civ. Eng. 170—Elements of Structural Design	4
Civ. Eng. 171a—Theory of Structures	5
	20

NINTH QUARTER
(Summer)

FIRST HALF Surveying Camp	
Civ. Eng. 15—General Surveying	5
Civ. Eng. 16b—Route Surveying	4
Civ. Eng. 17—Hydrographic Surveying	1
SECOND HALF	
Assembly 4c—Class Society	0
Civ. Eng. 120—Hydraulics	3
Civ. Eng. 123—Hydraulics Laboratory	2
Elec. Eng. 101—Fundamentals of Electrical Machinery	4
	19

TENTH QUARTER	
Assembly 5a—Class Society	0
Civ. Eng. 173a—Steel Structures	4
Engin. Admin. 102—Engineering Administration	4
*Geology 12a—Elementary Geology	4
*Mech. Eng. 103—Elements of Heat-Power Engineering	3
Zoology 1a—General Zoology	4
	19

ELEVENTH QUARTER	
Assembly 5b—Class Society	0
Civ. Eng. 102—Reinforced Concrete	4
*Civ. Eng. 104—Reinforced Concrete Design	1
Civ. Eng. 181a—Independent Problems	1
San. Eng. 151—Water Supply and Waterworks	3
San. Eng. 152—Sewers and Sewage Disposal	3
Zoology 1b—General Zoology	4
	16

TWELFTH QUARTER	
Assembly 5c—Class Society	0
Arch. Eng. 5—Building Equipment	3
*Commerce 107—Statistical Method	4
Hygiene 100a—Public Health	4
San. Eng. 156—Water and Sewer Plant Operation	2
*San. Eng. 158—Sanitary Engineering Design	4
San. Eng. 182—Sanitation	3
	20

* With the approval of the Head of the Department, other subjects may be substituted for these.

OPTION THREE

Architectural Engineering

First Six Quarters Same as Option One

SEVENTH QUARTER	Qtr. Hrs.
Assembly 4a—Class Society	0
Applied Mech. 100—Strength of Materials	5
Art 30a—Introduction to Art	2
*Art. 61a—Elementary Drawing	4
Civ. Eng. 170—Elements of Structural Design	4
Civ. Eng. 171a—Theory of Structures	5
	21

EIGHTH QUARTER	Qtr. Hrs.
Assembly 4b—Class Society	0
Arch. Eng. 1—Architectural Rendering	3
Art 30b—Introduction to Art	2
*Art 61b—Elementary Drawing	4
Civ. Eng. 23—Seminar	1
Civ. Eng. 81—Testing Materials	2
Civ. Eng. 107—Soil Mechanics	3
Civ. Eng. 173a—Steel Structures	4
*Elec. Eng. 11—Electrical Laboratory	1
	21

NINTH QUARTER (Summer)	
FIRST HALF Surveying Camp	
Civ. Eng. 15—General Surveying	5
Civ. Eng. 16b—Route Surveying	4
Civ. Eng. 17—Hydrographic Surveying	1
SECOND HALF	
Art 30C—Introduction to Art	2
Assembly 4c—Class Society	0
*Civ. Eng. 120—Hydraulics	3
*Civ. Eng. 123—Hydraulics Laboratory	2
Elec. Eng. 101—Fundamentals of Electrical Machinery	4
	21

TENTH QUARTER	
Assembly 5a—Class Society	0
Arch. Eng. 3—Sanitation, Acoustics and Fire Prevention	4
Arch. Eng. 4a—Architectural Design	4
*Geology 12a—Elementary Geology	4
Mech. Eng. 103—Elements of Heat-Power Engineering	3
Engin. Adm. 102—Engineering Administration	4
	19

ELEVENTH QUARTER	
Assembly 5a—Class Society	0
Arch. Eng. 4b—Architectural Design	4
Civ. Eng. 102—Reinforced Concrete	4
Civ. Eng. 104—Reinforced Concrete Design	1
Civ. Eng. 181a—Independent Problems	1
*Mech. Eng. 110—Heating and Ventilating Design	2
Mech. Eng. 116—Elementary Heating, Ventil. and Air Conditioning	4
	16

TWELFTH QUARTER	
Assembly 5c—Class Society	0
Arch. Eng. 5—Building Equipment	3
*Arch. Eng. 6—Independent Problems	6
*Arch. Eng. 7—Building Construction	1
Civ. Eng. 107—Soil Mechanics	3
*Elec. Eng. 136—Illumination Engineering	4
	17

* With the approval of the Head of the Department, other subjects may be substituted for these.

Curriculum Leading to the Degree of Bachelor of Science in Electrical Engineering

For First Two Quarters, see page 83.

THIRD QUARTER	Qtr. Hrs.
Assembly 2—Engineering Problems	1
Commerce 1—Principles of Economics or Political Science 15—Problems of Citizenship	5
Engin. Draw. 1c—Elementary Engineering Drawing	2
Math. 19—Plane and Solid Analytic Geometry	5
Met. Eng. 26—Engineering Metallurgy	3
Military Science 1c	2
Physical Education	1
	19

FOURTH QUARTER	Qtr. Hrs.
Assembly 3a—Class Society	0
Civ. Eng. 12—Plane Surveying	4
Engin. Draw. 18—Advanced Engineering Drawing	3
Math. 20a—Differential Calculus	5
Physics 3a—General College Physics	6
Military Science 6a	2
	20

FIFTH QUARTER	
Assembly 3b—Class Society	0
Applied Mech. 2—Mechanisms	3
Elec. Eng. 11—Electrical Laboratory	1
Math. 20b—Integral Calculus	5
Mech. Eng. 15a—Manufacturing Processes	3
Physics 3b—General College Physics	6
Military Science 6b	2
	20

SIXTH QUARTER	
Assembly 3c—Class Society	0
Elec. Eng. 21—Principles of Electrical Engineering	6
Math. C105a—Differential Equations	3
Mech. Eng. 15b—Manufacturing Processes	3
Physics 3c—General College Physics	6
Military Science 6c	2
	20

SEVENTH QUARTER	
Assembly 4a—Class Society	0
Applied Mech. 3—Statics	5
Elec. Eng. 110a—Electrical Laboratory	1
Elec. Eng. 115—D. C. Machinery	4
Elec. Eng. 114—A. C. Circuit Analysis	5
Mech. Eng. 104a—Eng. Thermodynamics	4
	19

EIGHTH QUARTER	
Assembly 4b—Class Society	0
Applied Mech. 100—Strength of Materials	5
Elec. Eng. 110b—Electrical Laboratory	1
Elec. Eng. 116—A. C. Machinery	5
Electives (Non-Technical)	3
Physics 114—Vacuum Tubes and Circuit Theory	4
	18

NINTH QUARTER	
Assembly 4c—Class Society	0
Elec. Eng. 107—Electrical Control	4
Elec. Eng. 110c—Electrical Laboratory	1
English 30—Business English	3
Mech. Eng. 112a—Mechanical Laboratory	2
Applied Mech. 4—Dynamics	3
Elec. Eng. 131a—Electrical Communication Engineering	5
	18

TENTH QUARTER	
Assembly 5a—Class Society	0
Elec. Eng. 111a—Advanced Electrical Laboratory	2
Elec. Eng. 117—Advanced A. C. Machinery	5
Civ. Eng. 81—Testing Materials	2
Electives	3
POWER OPTION	
Mech. Eng. 108—Internal Combustion Engines	5
COMMUNICATION OPTION	
Elec. Eng. 131b—Electrical Communication Eng.	4
	18 or 17

ELEVENTH QUARTER	Qtr. Hrs.
Assembly 5b—Class Society	0
Elec. Eng. 123—Electrical Equipment Problems	3
Elec. Eng. 151b—Seminar	1
Mech. Eng. 121—Machine Design	3
Electives (Non-Technical)	3
POWER OPTION	
*Elec. Eng. 108—Electronic Controls	4
*Elec. Eng. 137—Electric Power Transmission and Distribution	4
or	
COMMUNICATION OPTION	
*Elec. Eng. 132—Electrical Communication Engineering	7
	17 or 18

TWELFTH QUARTER	Qtr. Hrs.
Assembly 5c—Class Society	0
Civ. Eng. 120—Hydraulics	3
Civ. Eng. 123—Hydraulics Laboratory	2
Elec. Eng. 151c—Seminar	1
Engin. Admin. 102—Engineering Administration	4
POWER OPTION	
*Elec. Eng. 136—Illumination Engineering	4
*Elec. Eng. 124a-b Electrical Design	4
or	
COMMUNICATION OPTION	
*Elec. Eng. 133—Electrical Communication Engineering	7
*Electives (Non-Technical)	3
	17 or 18

* With the approval of the Head of the Department, other subjects may be substituted for these.

Curriculum Leading to the Degree of Bachelor of Science in Mechanical Engineering

For First Two Quarters, see page 83.

THIRD QUARTER	Qtr. Hrs.
Assembly 2—Engineering Problems	1
Engin. Draw. 1c—Elementary Engineering Drawing	2
Math. 19—Plane and Solid Analytic Geometry	5
Met. Eng. 35—Engineering Metallurgy	3
Political Science 15—Problems of Citizenship or Commerce 1—Principles of Economics	5
Military Science 1c	2
Physical Education	1
	19

FOURTH QUARTER	Qtr. Hrs.
Assembly 3a—Class Society	0
Civ. Eng. 12—Plane Surveying	4
Engin. Draw. 18—Advanced Engineering Drawing	3
Math. 20a—Differential Calculus	5
Physics 3a—General College Physics	6
Military Science 6a	2
	20

FIFTH QUARTER	
Assembly 3b—Class Society	0
Applied Mech. 2—Mechanisms	3
Engin. Draw. 12—Graphical Computation	3
Math. 20b—Integral Calculus	5
Physics 3b—General College Physics	6
Military Science 6b	2
	19

SIXTH QUARTER	
Assembly 3c—Class Society	0
Applied Mech. 3—Statics	5
Math. C105a—Differential Equations	3
Mech. Eng. 15a—Manufacturing Processes	3
Physics 3c—General College Physics	6
Military Science 6c	2
	19

SEVENTH QUARTER	Qtr. Hrs.
Assembly 4a—Class Society	0
Applied Mech. 4—Dynamics	3
Applied Mech. 104—Strength of Materials	5
Civ. Eng. 81—Testing Materials	2
Mech. Eng. 15b—Manufacturing Processes	3
Mech. Eng. 104a—Engin. Thermodynamics	4
Met. Eng. 36—Physical Metallurgy and Heat Treatment of Metals and Alloys	4
	21

EIGHTH QUARTER	Qtr. Hrs.
Assembly 4b—Class Society	0
Applied Mech. 106—Advanced Strength of Materials	5
Elec. Eng. 105—D. C. Circuits and Machinery	6
Mech. Eng. 15c—Manufacturing Processes	3
Mech. Eng. 104b—Engin. Thermodynamics	3
Mech. Eng. 112a—Mechanical Laboratory	2
	19

NINTH QUARTER	
Assembly 4c—Class Society	0
Elec. Eng. 106—A. C. Circuits and Machinery	6
Mech. Eng. 100a—Machine Design	4
Mech. Eng. 107—Fluid Mechanics	4
Mech. Eng. 111—Engineering Reports	3
Mech. Eng. 112b—Mechanical Laboratory	2
	19

TENTH QUARTER	
Assembly 5a—Class Society	0
English 30—Business English	3
Mech. Eng. 100b—Machine Design	4
Mech. Eng. 105—Steam Power Plant Equipment	4
Mech. Eng. 106a—Heating, Ventil., and Air Conditioning	5
Mech. Eng. 113a—Mechanical Laboratory	2
Mech. Eng. 122a—Seminar	1
	19

ELEVENTH QUARTER	
Assembly 5b—Class Society	0
Mech. Eng. 101—Mechanical Engineering Design	4
Mech. Eng. 106b—Heating, Ventil., and Air Conditioning	3
Mech. Eng. 108—Internal Combustion Engines	5
Mech. Eng. 109—Refrigeration	5
Mech. Eng. 113b—Mechanical Laboratory	2
Mech. Eng. 122b—Seminar	1
	20

TWELFTH QUARTER	
Assembly 5c—Class Society	0
Applied Mech. 107—Mechanical Vibrations	5
Engin. Adm. 102—Engineering Administration	4
Mech. Eng. 120—Mech. Engineering Problems	5
Mech. Eng. 122c—Seminar	1
Electives (Non-Technical)	5
	20

Curriculum Leading to the Degree of Bachelor of Science in Metallurgical Engineering

For First Two Quarters, see page 83.

THIRD QUARTER	Qtr. Hrs.
Assembly 2—Engineering Problems	1
Chemistry 4—Qualitative Analysis	6
Engin. Draw. 1c—Elementary Engineering Drawing	2
Math. 19—Plane and Solid Analytic Geometry	5
Met. Eng. 27—General Metallurgy	3
Military Science 1c	2
Physical Education	1
	20

FOURTH QUARTER	Qtr. Hrs.
Assembly 3a—Class Society	0
Chemistry 8a—Quantitative Analysis	4
Civ. Eng. 12—Plane Surveying	4
Math. 20a—Differential Calculus	5
Physics 3a—General College Physics	6
Military Science 6a	2
	21

FIFTH QUARTER	Qtr. Hrs.
Assembly 3b—Class Society	0
Chemistry 8b—Quantitative Analysis	4
Math. 20b—Integral Calculus	5
Physics 3b—General College Physics	6
Military Science 6b	2
	17

SIXTH QUARTER	Qtr. Hrs.
Assembly 3c—Class Society	0
Chemistry 131a—Physical Chemistry	5
Geology 123a—Mineralogy	4
Met. Eng. 29—Metallurgy of the Ferrous Metals	4
Physics 3c—General College Physics	6
Military Science 6c	2
	21

SEVENTH QUARTER	
Assembly 4a—Class Society	0
Chemistry 131b—Physical Chemistry	5
Engin. Draw. 115—Photography	4
Met. Eng. 128—Metallurgy of Non-Ferrous Metals	4
Political Science 15—Problems of Citizenship	5
Physics 117—Theory of Heat	3
	21

EIGHTH QUARTER	
Assembly 4b—Class Society	0
Applied Mech. 3—Statics	5
Chemistry 131c—Physical Chemistry	5
Engin. Adm. 102—Engineering Administration	4
Met. Eng. 140—The Science of Metals	4
Physics 123a—Principles of Thermodynamics	3
	21

NINTH QUARTER	
Assembly 4c—Class Society	0
Applied Mech. 100—Strength of Materials	5
Met. Eng. 60—Met. Laboratory and Shop Practice	5
Physics 119—Principles of X-Rays	4
Physics 123b—Principles of Thermodynamics	3
	17

TENTH QUARTER	
Assembly 5a—Class Society	0
Elec. Eng. 101—Fundamentals of Electrical Machinery	4
Met. Eng. 142a—Heat Treatment	3
Met. Eng. 143a—Physics of Metals	4
Met. Eng. 166a—Extractive Metallurgy	5
Met. Eng. 175a—Seminar	1
	17

ELEVENTH QUARTER	
Assembly 5b—Class Society	0
Elec. Eng. 102—Electrical Machinery	3
Met. Eng. 132a—Metallurgical Calculations	4
Met. Eng. 142b—Heat Treatment	3
Met. Eng. 143b—Physics of Metals	4
Met. Eng. 166b—Extractive Metallurgy	4
Met. Eng. 175b—Seminar	1
	19

TWELFTH QUARTER	
Assembly 5c—Class Society	0
Met. Eng. 121—Fuel and Metallurgical Laboratory	2
Met. Eng. 132b—Metallurgical Calculations	4
Met. Eng. 141—Alloy Steels	3
Met. Eng. 144—Non-Ferrous Metallography	3
Met. Eng. 150—Industrial Mineral Preparation and Uses	3
Met. Eng. 167—Extractive Metallurgy Plant Practice	2
Met. Eng. 175c—Seminar	1
	18

Curriculum Leading to the Degree of Bachelor of Science in Mining Engineering

For First Two Quarters, see page 83.

THIRD QUARTER	Qtr. Hrs.
Assembly 2—Engineering Problems	1
Chemistry 4—Qualitative Analysis	6
Engin. Draw. 1c—Elementary Engineering Drawing	2
Math. 19—Plane and Solid Analytic Geometry	5
Met. Eng. 26—Engineering Metallurgy	3
Military Science 1c	2
Physical Education	1
	20

FOURTH QUARTER	Qtr. Hrs.
Assembly 3a—Class Society	0
Chemistry 8a—Quantitative Analysis	4
Civ. Eng. 12—Plane Surveying	4
Math. 20a—Differential Calculus	5
Physics 3a—General College Physics	6
Military Science 6a	2
	21

FIFTH QUARTER	
Assembly 3b—Class Society	0
Chemistry 8b—Quantitative Analysis	4
Math. 20b—Integral Calculus	5
Physics 3b—General College Physics	6
Military Science 6b	2
	17

SIXTH QUARTER	
Assembly 3c—Class Society	0
Applied Mech. 3—Statics	5
Geology 12a—Elementary Geology for Engineers	4
Geology 123a—Mineralogy	4
Physics 3c—General College Physics	6
Military Science 6c	2
	21

SEVENTH QUARTER	
Assembly 4a—Class Society	0
Applied Mech. 100—Strength of Materials	5
Civ. Eng. 72—Graphic Statics	2
Geology 12b—Elementary Geology for Engineers	3
Geology 123b—Mineralogy	4
Political Science 15—Problems of Citizenship	5
	19

EIGHTH QUARTER	
Assembly 4b—Class Society	0
Civ. Eng. 102—Reinforced Concrete	4
Civ. Eng. 104—Reinforced Concrete Design	1
Civ. Eng. 171a—Theory of Structures	5
Engin. Adm. 102—Engineering Administration	4
Min. Eng. 126a—Development of Mines	5
	19

NINTH QUARTER

(Summer)

FIRST HALF

Surveying Camp

Min. Eng. 160—Mine Surveying and Field Practice in Mining Engineering	10

SECOND HALF

Assembly 4c—Class Society	0
Civ. Eng. 81—Testing Materials	2
Civ. Eng. 120—Hydraulics	3
Civ. Eng. 123—Hydraulics Laboratory	2
Min. Eng. 126b—Development of Mines	3
	20

TENTH QUARTER	
Assembly 5a—Class Society	0
Elec. Eng. 101—Fundamentals of Electrical Machinery	4
Mech. Eng. 103—Elements of Heat-Power Engineering	3
Met. Eng. 166a—Extractive Metallurgy	5
Min. Eng. 129a—Mine Ventilation and Drainage	4
Min. Eng. 175a—Seminar	1
	17

ELEVENTH QUARTER	Qtr. Hrs.
Assembly 5b—Class Society	0
Elec. Eng. 102—Electrical Machinery	3
Met. Eng. 166b—Extractive Metallurgy	4
Min. Eng. 127a—Mining Underground	4
Min. Eng. 128—Mining at the Surface	3
Min. Eng. 129b—Mine Ventilation and Drainage	3
Min. Eng. 175b—Seminar	1
	18

TWELFTH QUARTER	Qtr. Hrs
Assembly 5c—Class Society	0
Met. Eng. 121—Fuel and Metallurgical Laboratory	2
Met. Eng. 150—Industrial Mineral Preparation and Uses	3
Met. Eng. 167—Extractive Metallurgy Plant Practice	2
Min. Eng. 127b—Mining Underground	3
Min. Eng. 130—Mine Administration	5
Min. Eng. 175c—Seminar	1
	16

DEGREES AND CURRICULA IN THE COLLEGE OF LAW

ALVIN E. EVANS, M. A., Ph. D., J. D., Dean

The College of Law was organized in 1908 and the first class graduated in June, 1910. The school is co-educational and a number of women have entered and graduated from it. It has been for many years a member of the Association of American Law Schools and has, likewise, been approved by the American Bar Association. In order that a school may be approved by the American Bar Association it must require at least two years of college work for entrance. It must require three full years of attendance upon classes, have an adequate library, and a number of full-time teachers sufficient to insure personal acquaintance and influence with the whole student body.

ORDER OF THE COIF

In the spring of 1931, a chapter of the Order of the Coif was established at Kentucky. Out of the many law schools in the nation, 35 have been granted chapters. A chapter is granted upon a consideration of all the factors which tend to make a strong law school such as standing and ability of the faculty, the comprehensiveness of the library, the quality of teaching and research, standards of admission, strictness of grading, and other intangible items.

THE KENTUCKY LAW JOURNAL

The Kentucky Law Journal has become one of the leading legal periodicals published by American law schools. The articles and notes in it have been cited in many books and periodicals and are used by lawyers and courts. Copies of it are mailed to subscribers in all parts of the world. It contains leading articles by lawyers and scholars, notes and case comments by students, and book reviews. The staff is composed of those students who have made a high standing in the Law School. The members of the staff are required to prepare four case notes each year.

THE LIBRARY

The library has enjoyed a material growth in recent years. The volumes now number somewhat more than 30,000. It contains the existing statutes of all the states and territories of the United States, Canada, and England. It also contains all of the reports of American courts of final jurisdiction and such intermediate reports as are published: the English, Irish, and Canadian Federal and

Provincial Reports, Australian Commonwealth Reports, together with the Reports of the District of Columbia, the Hawaiian and the Philippine, Alaskan, Canal Zone, and Puerto Rican reports, and some fifteen hundred treatises, besides current digests and citators.

It takes the tax services, and 100 legal periodicals, 12 of which are foreign, and it has complete sets of legal periodical indexes and digests.

THE HAGGIN ENDOWMENT

The sum of $1,000 annually has been appropriated by the University from the Haggin endowment to encourage the preparation of annotations, with Kentucky decisions, of the Restatement of the Law. It is expected that some six or eight students will be employed at a reasonable compensation to assist in this work. The work of annotating is supervised by members of the staff.

THE FACULTY

The choice of the staff has been guided by two considerations: (1) ability to do good teaching, and (2) ability to guide others in the solution of legal problems and to contribute to the knowledge of the law. Thus, there are men who have become expert in the fields of procedure, property, contracts, equity and trusts, constitutional law and public law, criminal law and procedure, and in administrative law. All the members of the staff have done graduate work in one or more of the large law schools, and all give at least some time to research.

THE LAW BUILDING

In order to accommodate the growing student body and the increasing library, an adequate building has been constructed on the campus and is now occupied by the law school. It is built of red pressed brick, glass brick being used in part for two sides of the reading room. The building is modern in architecture, being constructed on modified classical lines. It contains nine offices, three classrooms, a court room, a stack room for reports, a grill room for treatises, a lounging room, and a study room. Various other rooms are provided, such as an office for the Kentucky Law Journal. The building occupies a beautiful location, being across the walk and to the west of the main library.

ADMISSIONS

Regular Students. The applicant for admission to the Law School must have, in addition to the standard high school course that will satisfy the general requirements for admission to the University, two years of college credit (ninety quarter hours). See statement, p. 17.

Pre-Law Work. In order to meet the two years of college credit required for entrance, no special course is prescribed except nine quarter hours in English. The credits obtained in the two years of college work that are required must be completed in residence and must be sufficient to entitle the holder to admission to the junior class in the College of Arts and Sciences of the University of Kentucky. The pre-law work may be taken at the University of Kentucky or at any standard university or college. Students who expect to study law are advised to lay special emphasis on courses in English, economics, and accounting. Those who would like special advice concerning their work are invited to communicate with the Dean.

CURRICULA LEADING TO THE DEGREES OF A. B. AND B. S. IN COMMERCE COMBINED WITH THE LL. B. CURRICULUM

Inasmuch as the requirements of the law school now call for a total of at least five years in college and law school before the degree of LL. B. can be obtained, the attention of the student is particularly called to the fact that with the addition of a single year, making six years in all, he can obtain the degree of B. S. in Commerce and also the degree of Bachelor of Laws. In a similar way the combined curricula in Arts and Sciences will lead to the degree of Bachelor of Arts and the degree of Bachelor of Laws. The first year's work in law is credited toward the B. S. degree in Commerce or the A. B. degree as well as toward the LL. B. degree, and the student may thus obtain his first degree after having been registered one year in the law school and having completed one year's work therein; and two years later, upon completing the two remaining years in law, he will be granted the degree of LL. B., thus obtaining both degrees in six years.

FIRST YEAR SUBJECTS

Property I	Property II
Pleading I	Pleading II
Contracts I	Contracts II
Torts I	Torts II
Domestic Relations	Agency
Crimes I	Crimes II
Legal Bibliography	Torts III

SECOND YEAR SUBJECTS

Property III	Public Utilities
Trial Procedure	Insurance
Constitutional Law I	Constitutional Law II
Equity I	Equity II
Restitution	Municipal Corporations
Negotiable Instruments	Evidence
	Wills

THIRD YEAR SUBJECTS

Corporations I	Property IV
Credit Transactions	Conflict of Laws
Administrative Law	Legislation
Practice Court	Creditors Rights
Taxation	Sales
Trusts I	Problems of Research
Problems of Research	Defense of Legislation and Military Law
Corporations II	Trusts II

SUMMER QUARTER—ACCELERATED PROGRAM FOR THE PERIOD OF THE WAR

For the period of the war, the University of Kentucky Law School, under authority granted by the Association of American Law Schools and the University Faculty, has adopted the following rule relative to the credit a student may receive upon leaving for military services: Any law student may receive full credit if he remains in school through 8 weeks of the quarter and half credit if he remains in school through 6 weeks of the quarter, provided: (1) he has a scholastic point standing of 1.0 in all his previous law work, if any; (2) he furnishes satisfactory evidence that he has entered the service within a reasonable time after he withdrew from school; and (3) his class grades for the quarter as determined by attendance, recitations and tests, if any, are satisfactory. For one term of the summer quarter the minimum attendance requirements shall be 4 and 3 weeks, respectively. With the adoption of the quarter system by the University in June, 1942, it became possible for law students to complete the three year course in two years, if they remain in residence during the summer quarters.

A limited number of courses in law are offered in the summer quarter of the University. The work in these courses is the same in kind and extent as that given in the same course in the fall, winter, and spring quarters, and credit obtained in the summer quarter is counted towards a degree.

The following subjects will be offered for the 1944 Summer Quarter:

First Term: Evidence I, Restitution, Legal Ethics.

Second Term: Evidence II, Public Utilities, Industrial Relations.

DEGREES AND CURRICULA IN THE COLLEGE OF EDUCATION

WILLIAM SEPTIMUS TAYLOR, M.S., Ph.D., Dean

INTRODUCTORY STATEMENT

The College of Education was established by the University to provide for the education of personnel of Kentucky's schools and other educational institutions. The curricula offered by the College have been planned to enable each student to equip himself for the educational work he contemplates doing.

Students in elementary education have observation and student teaching in the University Elementary School and in the schools of nearby communities. Students in secondary education have observation and student teaching in the University High School and in other secondary schools. Each student is given an opportunity to learn accepted and desirable methods and to develop skill in teaching.

Through the cooperation of the Fayette County Board of Education, students preparing to teach agriculture and home economics have an opportunity to observe and do their student teaching in the high schools near Lexington which offer agriculture and home economics on a vocational basis. Students in both agriculture and home economics teach under skilled supervisors in their respective fields.

The University offers a fifth year of teacher education through internships in public school systems in or near Lexington. These internships are open to graduate students who have strong scholarship records and who have had successful student teaching experience. By earning 18 credits in the summer quarter before the internship begins in September, 9 credits in each quarter during the internship, and 9 credits in the summer quarter following the internship, the student can meet the requirements for the degree of Master of Arts in Education.

TEACHERS' CERTIFICATES

The University of Kentucky offers curricula for all certificates issued by the State Department of Education on the basis of four years of college education. The College of Education offers programs to prepare teachers of elementary, junior high, and senior high schools; attendance officers, helping teachers, supervisors, ele-

mentary principles, high school principals, city superintendents, county superintendents, and critic teachers; and other administrative, supervisory, and instructional personnel of schools.

ADMISSION

To be admitted to the College of Education a freshman must rank in the upper three-fourths on the University placement tests. Students transferring to the College of Education from another college on the campus or from another institution must have a standing of at least 1.0 (an average of C on all previous college work.) This standing must be maintained if the student is to remain in the College of Education. Students in other colleges of the University who wish to enroll in professional educational courses must have a standing of 1.0.

If the student is deficient in any subject matter area or in any basic skill essential to success in teaching, he will be required to make up the deficiency through extra work.

A student is not permitted to do student teaching unless he is classified as a senior or graduate student and meets the departmental requirements for student teaching. Only candidates possessing healthy bodies, free from major physical defects, are allowed to enroll in education courses. A thorough physical examination by University physicians is required at some time in the quarter prior to the student's enrollment in student teaching. Candidates for student teaching are requested to file their applications the quarter before they plan to do their student teaching.

REQUIREMENTS FOR GRADUATION

The College of Education grants the Bachelor of Arts in Education degree to students who major in education and select their group work from agriculture, art, biological sciences, business education, English, foreign languages, home economics, library science, mathematics, music, physical education, physical sciences, or social sciences. Students who complete the curriculum for elementary teachers are also eligible for the degree of Bachelor of Arts in Education.

ELEMENTARY EDUCATION

A student who majors in elementary education must complete a total of 192 quarter hours, with a standing of 1.0 to be graduated.

	Qtr. Hrs.
1. General Requirements	
English	16
Oral and Written Composition History of English Literature	

	Qtr. Hrs.
Science	16
Heredity	
Electives	
Social Sciences	36
United States History	
Kentucky History	
Problems of Citizenship	
Principles of Sociology	
Principles of Geography	
Economic Problems	
Fine Arts	12
Public School Art	
Elective in Art	
Public School Music	
Psychology	10
Elementary Nutrition	4
Health and Physical Education	11
Orientation	2
2. Professional Preparation	50
Fundamentals of Elementary Education	
Children's Literature	
Teaching Arithmetic	
Tests and Measurements	
Teaching Science	
Teaching Reading	
Industrial Arts	
Student Teaching	
3. Electives	35

SECONDARY EDUCATION

A student who majors in secondary education must complete a total of 192 quarter hours, with a standing of 1.0, to be graduated.

1. General Requirements	Qtr. Hrs.
English	16
Psychology	8
Physical Education	3
Orientation	2
Military Science	12

	Qtr. Hrs.
2. Teaching Fields	
Two Majors (36+36)	72
or	
One major and two minors (36+24+24)	84
or	
An area of concentration	72
3. Professional Preparation*	
Education 35, Introduction to Education	4
Education 122, Tests and Measurements	5
Education 101, School Organization	5
Education 105, Fundamentals of Secondary Education	4
Student Teaching	9
4. Core Curriculum	40

At least 40 quarter hours must be submitted from the fields listed below. Candidates may present either three or four fields, with at least 8 quarter hours in each field. Fields selected under the core curriculum must be other than those presented as major and minor fields.

Fine Arts
Foreign Languages
Health, Physical Education, and Safety
Mathematics
Philosophy and Psychology
Sciences
Social Sciences
Vocational Subjects

* Physical education, music, and art majors should substitute Education 16, Educational Psychology, and Education C44, Fundamentals of Elementary Education, for Education 35 and Education 122. Business Education majors should substitute Education 104, Foundations of Business Education, and Education 158a and b, Teaching Secretarial Subjects and Accounting, for Education 101 and Education 105.

VOCATIONAL EDUCATION

Agriculture. The Federal Vocational Education Act, known as the Smith-Hughes Act, passed by Congress in 1917, makes provision for the education of teachers of vocational agriculture in schools below college level. The University of Kentucky has been designated as the state institution to educate white teachers for this work.

Students who complete the work for a bachelor's degree in agriculture and who present 21 quarter hours in education as prescribed in the state plan for vocational education will be entitled to a state certificate to teach agriculture on a vacational basis in the public schools of Kentucky.

Home Economics. The Federal Vocational Education Act of 1917 also provides for the education of teachers of vocational home economics in schools below college level. The University of Kentucky has been designated as the state institution to educate white teachers for this work.

Students who complete the work for a bachelor's degree in home economics and who present 21 quarter hours in education as prescribed in the state plan for vocational education will be entitled to a state certificate to teach home economics on a vocational basis in the public schools in Kentucky.

Industry. The Federal Vocational Education Act of 1917 also provides for the education of teachers for unit-trade and part-time programs in industrial education and for general continuation school classes. The University of Kentucky has been designated as the state institution responsible for the education of teachers for this work.

Distributive Occupations. The George-Deen Act of 1936 provides for the education of teachers of distributive occupations. The University of Kentucky has been designated as the state institution responsible for this service.

EDUCATIONAL ADMINISTRATION AND SUPERVISION

The College of Education provides courses for graduate students who plan to become educational administrators and supervisors. An individual curriculum is worked out for each student by a committee from the faculty.

Students who wish to qualify for certificates in Administration and Supervision issued by the State Department of Education are required to take Education 202, Local School Administration, and Education 225a, and b, Supervision of Instruction. Students who wish to qualify for the Attendance Officer's Certificate are required to take Education 198, The Administration of Pupil Personnel.

GRADUATE CURRICULA LEADING TO THE MASTER'S DEGREE

Each student's graduate curriculum must be a well-rounded program of courses related to the student's major interest and approved by his committee. In cases of deficient preparation the committee, with the approval of the Dean, may prescribe prerequisite undergraduate courses to be taken.

The following committees have been designated to guide graduate students in their work for the master's degree in education.

Curriculum Pursued	Committee
Administration	Seay, Meece, Duncan, Ligon
Agricultural Education	Hammonds, Woods, Armstrong
Business Education	Lawrence, Taylor
Critic Teaching	Ginger, Duncan, Taylor
Elementary Education	Duncan, Ginger, Haines, Seay
Higher Education	Adams, Ross, Taylor
Home Economics Education	Parker, Spickard, Sneed
Industrial Education	Hankins, Baker, Crumpton
Music Education	Capurso, Lampert, Lewis, Ross
Physical Education	Hackensmith, Taylor
Secondary Education	Ligon, Ross, Adams, Seay, Clifton

NOTE.—A graduate student in education presenting a study involving research in one of the following fields shall have, in addition to the committee named for his major, the adviser designated opposite the field:

Measurement and Statistical Procedure	Ross
Curriculum Studies	Adams
History of Education	Taylor
Visual Education	Clifton

In planning his program for the master's degree the student should keep the following general requirements in mind:

1. The student must complete a minimum of 36 quarter hours of graduate work and must write a thesis.
2. At least 18 quarter hours of graduate work must be in education.
3. At least 18 quarter hours of graduate work must be in courses numbering 200 or higher.
4. At least 36 weeks must be spent in residence at the University of Kentucky as a graduate student.
5. At least one-half of the credit and residence requirements must be met while the student is in full residence at the University of Kentucky.
6. The total number of credits presented in education, undergraduate and graduate, must be at least 45 quarter hours.
7. A standing of 2.0 (an average of B) must be made on all graduate work.

Students may, by permission of the Dean of the Graduate School and the Dean of the College of Education, elect to present additional credits in lieu of theses. For these students the following requirements apply:

1. A minimum of 54 quarter hours of graduate work must be completed.

2. At least 27 quarter hours of graduate work must be in education.
3. At least 27 quarter hours must be in courses numbered 200 or higher.
4. At least 48 weeks must be spent in residence at the University of Kentucky as a graduate student.
5. At least one-half of the credit and residence requirements must be met while the student is in full residence at the University of Kentucky.
6. The total number of credits presented in education, undergraduate and graduate, must be at least 45 quarter hours.
7. A standing of 2.0 (an average of B) must be made on all graduate work.

THE DOCTORATE DEGREE

For information concerning the degree of Doctor of Philosophy with education as a major, students should consult the Dean of the Graduate School and the Dean of the College of Education.

DEGREES AND CURRICULA IN THE COLLEGE OF COMMERCE

EDWARD WIEST, M. A., Ph. D., Dean

INTRODUCTORY STATEMENT

Organization. The College of Commerce of the University of Kentucky grew out of the Department of Economics and Sociology established in the College of Arts and Sciences in 1918. In the spring of 1925 the work of this department was divided and all courses in economics and business administration were placed in the College of Commerce. The College occupies White Hall.

Bureau of Business Research. In the spring of 1928 the Board of Trustees authorized the organization and maintenance of a Bureau of Business Research. The chief purposes of this Bureau are to provide definite contacts with practical economic problems in order to vitalize the subject matter dealt with in the classroom and to serve the interests of business and of the state upon invitation.

Aims and Purposes of the College. The College of Commerce aims to train young men and women for business and public-service careers, and also to provide instruction intended to give an understanding of the general aspects of economic relationships. Students interested primarily from the latter point of view are advised to take the more general courses. Students who intend to specialize in commerce should register in the College of Commerce and follow one of the prescribed curricula.

In the first two years of the several curricula setting forth the requirements for the degree of Bachelor of Science in Commerce, the student is called upon to take a number of basic liberal arts courses with a view to providing breadth of education and a foundation for the more specialized training that is allowed in the last two years.

A more definite understanding of the objectives of professional training will come from an examination of the various curricula and fields of specialization outlined below.

Admission. To be admitted to the freshman class of the College of Commerce students must meet the general admission requirements of the University and in addition must rank in the upper three-fourths on the University placement tests.

Students transferring to the College of Commerce from another college on the Campus or from another institution must have a scholastic standing of "C" or better.

Student Organization and Placement Activities. The Commerce Employment Association is a militant organization and operates under the supervision of a permanent secretary who is a member of the faculty. Its chief purpose is to find employment for graduates and better positions for alumni. It has been very successful. The College Chamber of Commerce is open to all Commerce students. Several meetings of the entire body are held during the year, and in addition departmental groups in the form of subject-matter clubs meet from time to time.

Beta Gamma Sigma, a national honorary scholarship fraternity, was organized at the University of Kentucky in the spring of 1928. Only students who have attained a high scholarship standing are eligible for membership.

The Chi Omega Sorority Prize. A prize of $25.00 is awarded annually to the sophomore girl making the best grade in economics for the entire year.

REQUIREMENTS FOR GRADUATION

The degree of Bachelor of Science in Commerce is conferred upon students who meet the requirements of any one of the curricula offered by the College of Commerce. The minimum number of quarter hours required for graduation is 192, except under the Industrial-Administration Curriculum which requires 216. The scholarship standing must be at least 1.0. Unless two units in the ancient or modern foreign languages are offered for entrance, one year of language in college is required for graduation under all curricula except the Industrial-Administration. Regardless of these minimum requirements all commerce students are urged to take some foreign language.

GENERAL-BUSINESS CURRICULUM

The aim of this curriculum is (1) to provide some breadth of education and the functional knowledges necessary to deal with specialized business courses, (2) to assure an understanding of the fundamental subject matter of economics and business administration, and (3) to provide a liberal amount of elective work so as to enable the student (a) to pursue a specialized business program, (b) to elect courses from several fields of business, or (c) to pursue courses in fields other than economics and commerce. The electives should be taken in accordance with a definite plan, and students should, therefore, seek advice of faculty members in formulating a satisfactory program.

FRESHMAN YEAR

	Qtr. Hrs.
English 1a and b, English Composition	10
Math. 17, College Algebra	5
Commerce 2, Economic History of Europe	4
Commerce 7a and b, Principles of Accounting	10
Commerce 9, Business Organization	4
Hygiene 1, Personal and Community Health	2
Mathematics 15, Mathematics of Finance	4
Military Science 1a, b and c, First Year Basic	6
Physical Education, Gymnasium Practice	3
	48

SOPHOMORE YEAR

Commerce 8 or 12, Economic Geography, or Commerce 3, Ec. Hist. of U. S.	4
Commerce 1, Principles of Economics	5
Psychology 1, Introduction to Psychology	6
Political Science 51, American Government	5
History 4b, Modern Europe Since the French Revolution	5
Biological or Physical Science	8–15
Commerce 10, Principles of Marketing	5
Military Science 6a, b and c, Second Year Basic	6
A course in Statistics	4or3
	48

JUNIOR YEAR

Commerce 117, Corporation Finance	4
English 30, Business English	3
Commerce 105, Money and Banking	4
Elective from Advertising, Salesmanship or Marketing	4
Elective from Social Science	4
Electives including one Commerce course	29
	48

SENIOR YEAR

Commerce 109a and b, Business Law	8
Commerce 104, Public Finance	4
Commerce 137, Problems in Management; or Commerce 138, Investigation of Business Problems	4
Electives including two Commerce courses	32
	48

Total quarter hours—192

BUSINESS-MANAGEMENT CURRICULUM

This curriculum is designed to lay the groundwork for managerial positions in business. The list of required courses, therefore, includes the primary subject matter of a number of businesses as well as the principles of management. Students looking toward managerial positions in industry are advised to take considerable work in physical science in addition to the courses specified, or else follow the Industrial-Administration Curriculum. It is assumed that academic training in management will be supplemented with practical training offered by the business concern.

FRESHMAN YEAR

	Qtr. Hrs.
Same as General-Business Curriculum	48

SOPHOMORE YEAR

Same as General-Business Curriculum	48

JUNIOR YEAR

	Qtr. Hrs.
Eng. 30, Business English	3
Com. 117, Corporation Finance	4
Com. 102, Labor Problems	4
Com. 118, Cost Accounting	4
Com. 105, Money and Banking	4
Com. 119, Retail Merchandising; or Com. 135, Adv. Marketing; or Com. 136, Sales Management	3– 4
Com. 131, Investments; or Com. 154, Urban Real Estate	4
Psy. 106, Industrial Psychology	4
Electives including 8 quarter hours in Commerce	17–18
	48

SENIOR YEAR

Com. 104, Public Finance	4
Com. 109a and b, Business Law	8
Com. 137, Problems in Management	4
Com. 143, Life Insurance; or Com. 144, Property and Casualty Insurance	4
Com. 145, Office Management	4
Com. 155, Industrial Relations	4
Electives including 8 quarter hours in Commerce	20
	48

Suggested Electives:

Com. 103, Transportation
Com. 130, Labor Legislation
Pol. Sci. 177a, Principles of Public Administration
Psy. 8, Individual Differences

Total quarter hours—192

INDUSTRIAL-ADMINISTRATION CURRICULUM

This curriculum is designed to prepare students for positions in production management. The list of required courses recognizes the necessity of providing an understanding of the primary subject matter of business administration, the principles of management, and in addition the basic principles and characteristics of the materials with which industry deals. Hence the curriculum includes courses concerned with engineering and the physical sciences in addition to those required in the Business-Management Curriculum.

FRESHMAN YEAR

	Qtr. Hrs.
Commerce 2, Economic History of Europe	4
English 1a and 1b, English Composition	10
Mathematics 17, College Algebra	5
Mathematics 3, Plane Trigonometry	5
Chemistry 1a and 1b, General Chemistry	10
Commerce 9, Business Organization	4
Mathematics 19, Plane and Solid Analytic Geometry	5
Hygiene 1, Personal and Community Health	2
Military Science 1a, b and c, First Year Basic	6
Phy. Ed. Gymnasium Practice	3
	54

SOPHOMORE YEAR

Commerce 1, Principles of Economics	5
Commerce 7a and b, Principles of Accounting	10
Commerce 8 or Commerce 12, Economic Geography	4
Political Science 51, American Government	5
Physics 1a, b and c, or 3a, b and c, General Physics	15–18
Chemistry 4, Qualitative Analysis	6
Engineering Drawing 17a and b, Mechanical Drawing	4
Military Science 6a, b and c, Second Year Basic	6
	55

JUNIOR YEAR

	Qtr. Hrs.
A course in Statistics	4
Psychology 1, Introduction to Psychology	6
History 4b, Modern Europe Since the French Revolution	5
Commerce 10, Marketing, or Commerce 11, Salesmanship	3–5
Commerce 103, Transportation	4
Commerce 117, Corporation Finance	4
Commerce 118, Cost Accounting	4
Psychology 106, Industrial Psychology	4
English 30, Business English	3
*Electives in Physics, Geology, Chemistry or theoretical courses in Engineering	17
	54

SENIOR YEAR

Commerce 105, Money and Banking	4
Commerce 109a and b, Business Law	8
Commerce 102, Labor Problems, or Commerce 130, Labor Legislation	4
Commerce 126, Economics of Public Utilities	4
Commerce 104, Public Finance	4
Commerce 137, Problems in Management	4
Commerce 155, Industrial Relations	4
Elective in Commerce	3
*Electives in Physics, Geology, Chemistry or theoretical courses in Engineering	18
	53

Total quarter hours—216

* Students will select courses under the joint guidance of the Head of the Department involved and the Dean of the College of Commerce.

MARKETING AND ADVERTISING CURRICULUM

The aim of this curriculum is to provide professional training in marketing, merchandising and advertising. In addition to courses in these fields offered by the College of Commerce, courses offered by the Departments of Psychology, Journalism and Art are either required or suggested as electives.

FRESHMAN YEAR

	Qtr. Hrs.
Same as General-Business Curriculum	48

SOPHOMORE YEAR

Same as General-Business Curriculum	48

JUNIOR YEAR

Com. 117, Corporation Finance	4
Jounalism 21, Etymology, or elective in English	4
English 30, Business English	3
Psychology 5, Psychology of Advertising and Selling	4
Com. 11, Salesmanship	3
Com. 105, Money and Banking	4
Com. 135, Advanced Marketing	3
Com. 119, Retail Merchandising	4
Com. 136, Sales Management	3
Electives including one course from the suggested list	16
	48

SENIOR YEAR

Com. 109a and b, Business Law	8
Com. 104, Public Finance	4
Com. 140, Advertising Campaigns	4
Com. 149, Market Analysis	4
Electives including one course from the suggested list	28
	48

Suggested Electives:
Journalism 115, Advertising Typography and Layout
Art 29, Advertising Art
Com. 137, Problems in Management
Com. 138, Investigation of Business Problems
Com. 143, Life Insurance
Com. 144, Property and Casualty Insurance
Com. 145, Office Management
Com. 153, Economics of Consumption
Com. 154, Urban Real Estate

Total quarter hours—192

COMMERCE-LAW CURRICULUM

Emphasis on economics and business administration in pre-law training provides basic principles for analyzing the social problems related to money, business and labor, as well as for understanding the internal problems of the business concern. This is important because much of the law is concerned with these problems.

The Commerce-Law curriculum is intended for students who wish to complete the requirements for the two degrees of Bachelor of Science in Commerce and Bachelor of Laws in six years. First-year law subjects are included in the senior year of this curriculum. During the fifth and sixth years the student completes the remaining law courses necessary to receive the degree of LL. B.

FRESHMAN YEAR

	Qtr. Hrs.
Same as General-Business Curriculum	48

SOPHOMORE YEAR

Com. 8 or 12, Econ. Geog., or Com. 3, Econ. History of U. S.	4
Com. 1, Principles of Econ.	5
Pol. Sci. 51, American Government	5
Biol. or Physical Science or Foreign Language	8–10
History 4b, Mod. Europe Since the French Revolution	5
Psychology 1, Introduction to Psychology	6
Pol. Science 80, State Government	5
Mil. Sci. 6a, b and c, Second Year Basic	6
Electives including a course in Statistics	6
	50

JUNIOR YEAR

Com. 10, Principles of Marketing	5
Com. 102, Labor Problems	4
Com. 117, Corporation Finance	4
Eng. 30, Business English	3
Com. 105, Money and Banking	4
Com. 104, Public Finance	4
Philosophy or Logic	4
Elective in Sociology or Commerce	4
Electives including 12 quarter hours in Commerce	19
	51

SENIOR YEAR

Property I and II	6
Pleading I and II	6
Contracts I and II	9
Torts I, II and III	9
Domestic Relations	3
Criminal Law and Procedure	6
Agency	3
Legal Bibliography	1
	43

Total quarter hours—192

SECRETARIAL CURRICULUM

The Secretarial Curriculum is designed to prepare the student for various types of office positions including secretarial, stenographic, filing, general clerical, machine operation, typewriting and office supervision. In addition to specialized training in office techniques and skills, it provides a liberal education which is desirable in the types of work enumerated above. The electives enable a student to pursue his special aptitudes and interests.

While the curriculum is designed primarily for the training of office workers, opportunity is provided also for the training of commerce teachers. Enough electives are available to include in the program education and other courses usually required for certification. It will be necessary, however, for the student to check certification requirements in the state in which he expects to teach. The Head of the Department of Business Education and the Dean of the College of Education will counsel with him on certification requirements in the various states. Attention is specifically called to a program for commerce teachers offered by the College of Education.

FRESHMAN YEAR

	Qtr. Hrs.
English 1a and 1b, English Composition	10
Commerce 2, Economic History of Europe	4
Commerce 13a and 13b, Secretarial Practice, Shorthand	8
Commerce 17a and 17b, Secretarial Practice, Typewriting	6
Foreign Language, or Mathematics 17, College Algebra	5
Commerce 9, Business Organization	4
Foreign Language, or Mathematics 15, Mathematics of Finance	4–5
Military Science 1a, 1b, and 1c, First Year Basic Course	6
Physical Education, Gym. Practice	3
	50

SOPHOMORE YEAR

Commerce 3, Economic History of U. S., or Commerce 8 or 12, Econ. Geography	4
Hygiene 1, Personal and Community Health	2
History 4b, Modern Europe Since the French Revolution	5
Commerce 1, Principles of Economics	5
Commerce 7a and 7b, Principles of Accounting	10
Commerce 14a and 14b, Advanced Secretarial Practice	8
Political Science 51, American Government	5
Military Science 6a, 6b, and 6c, Second Year Basic	6
Elective	2
	47

JUNIOR YEAR

Commerce 10, Principles of Marketing	5
Biological or Physical Science	8
Psychology 1, Introduction to Psychology	6
Commerce 117, Corporation Finance	4
Commerce 151, Secretarial Statistics	4
English 30, Business English	3
Commerce 105, Money and Banking	4
Philosophy 21, Introduction to Philosophy, or 51, Ethics	4
Commerce 18, Filing	2
Electives	8
	48

SENIOR YEAR

	Qtr. Hrs.
Commerce 6, Secretarial Accounting	3
Commerce 11, Salesmanship	3
Commerce 109a, Business Law	4
Commerce 104, Public Finance, or Commerce 109b, Business Law	4
Commerce 101, Secretarial Office Practice	2
Commerce 156, Business Reports	3
Commerce 19, Office Appliances	2
Commerce 145, Office Management	4
Electives	22
	47

Total quarter hours—192

SPECIALIZATION IN ACCOUNTING

To secure adequate preparation for accountancy the student should follow the General Business Curriculum and take as electives about all the advanced accounting courses offered. Contracts and other law courses are also suggested as electives. The advanced accounting courses are: 106a and b, Intermediate Accounting; 108, Accounting Theory; 113, Auditing; 118, Cost Accounting; 129, Credit and Statement Analysis; 132a and b, C. P. A. Problems; 133, Income Tax Procedure.

Students interested in preparing for public accounting practice should take all of the above courses. Those making a good scholastic record should be prepared to pass a certified public accountant examination. To qualify for the C. P. A. certificate, in addition to passing an examination, it will be necessary to comply with experience and residence requirements. Interested students should, therefore, investigate the requirements of the state in which they wish to practice.

SPECIALIZATION IN STATISTICS

Students planning to prepare for the profession of statistician should pursue the General Business Curriculum and elect advanced courses in mathematics and advanced work in statistics offered by the College of Commerce and by the Department of Mathematics in the College of Arts and Sciences. The advanced courses dealing with method and theory offered by the College of Commerce are: 142, Index Numbers; 150, Business Statistics; and 210, Research Statistics.

PREPARATION FOR PUBLIC SERVICE

In view of the increased demands from federal, state and local governments for experts in public finance, accounting, marketing, statistics and personnel management, students should consider the possibility of preparing for public service careers. In addition to some concentration in a field of economics or business administration preparation for government service should include certain courses in Political Science, especially Political Science 177a and b, Principles of Public Administration. Interest in personnel

management logically calls for the inclusion of certain courses in Psychology. Preparation for foreign service should include various courses in economics, political science, and history, dealing with international relations. Foreign languages are indispensable. Faculty advice should be sought in formulating a satisfactory program.

OTHER COMBINATIONS

In addition to fields of specialization and combinations of subject matter suggested above, students pursuing the General-Business and Secretarial Curricula can utilize their electives so as to combine a business-training program with agriculture, journalism, social welfare work, or any liberal arts group. Such a program should be planned in consultation with a member of the faculty.

DEGREES AND REQUIREMENTS IN THE GRADUATE SCHOOL

WILLIAM D. FUNKHOUSER, M. A., Ph. D., D. Sc., Dean

INTRODUCTORY STATEMENT

Graduate work is offered in all colleges in the University. Approximately one thousand courses are listed in the catalog under the various departments, which may be accepted for graduate credit.

The following advanced degrees are conferred by the University:

Master of Arts
Master of Science
Master of Science in Public Health
Master of Science in Agriculture
Master of Science in Home Economics
Master of Science in Civil Engineering
Master of Science in Electrical Engineering
Master of Science in Mechanical Engineering
Master of Science in Metallurgical Engineering
Master of Science in Mining Engineering
Civil Engineer
Electrical Engineer
Mechanical Engineer
Metallurgical Engineer
Mining Engineer
Master of Arts in Education
Master of Science in Education
Doctor of Philosophy

The degree of Doctor of Philosophy is offered with major work in the following departments: Agricultural Economics and Rural Sociology, Chemistry, Education, Economics, English, History, Mathematics, Physics, Political Science, Romance Languages, and Psychology. Minor work may be carried in any department offering graduate courses.

ADMISSION TO GRADUATE STANDING

A student may be admitted to the Graduate School upon evidence of having completed the requirements for graduation from a fully accredited institution of higher learning and an official

transcript of undergraduate courses, together with a written application. The status of the institution is to be ascertained from the Registrar of the University. Graduates from non-accredited institutions are encouraged to secure a bachelor's degree from an accredited institution.

It should be clearly understood that admission to the Graduate School does not necessarily admit a student to full graduate status. A student only attains full graduate status when he has fulfilled all the preliminary requirements of the degree which he seeks and of the department under whose direction he is pursuing graduate work.

Department prerequisites are determined jointly by the Dean of the Graduate School and the respective departments. In brief, it may be stated that such prerequisites usually consist of the equivalent of an undergraduate major. In some fields, the equivalent of an undergraduate minor is sufficient.

REGISTRATION

The first step in the procedure for admission to the Graduate School is the filing with the Registrar of an application and an official transcript showing (a) all undergraduate work covered, (b) graduate work taken, if any, and (c) degrees received.

If the record submitted to the Registrar entitles the applicant to admission, he should confer with the Dean of the Graduate School and his major professor concerning preliminary requirements that he may have to satisfy and as to the graduate courses that he should take.

Preliminary requirements may be added from time to time as found necessary and all such requirements, together with graduate courses, must be recorded in the Registrar's office and must be satisfied by the student before he is eligible for the degree for which he is registered.

All courses listed in the regular University catalog which have numbers above 100 may be counted as credit toward a graduate degree, provided that courses numbered from 100 to 199 may be counted only with the approval of the student's graduate committee. A grade of D in a course will not be given graduate credit.

General Requirements for a Master's Degree. All candidates for any master's degree must have completed the equivalent of an A. B. or B. S. degree in a fully accredited institution. Part-time residence during any quarter is computed on the basis of one week of residence for each quarter hour earned, but the amount of residence for part-time work is limited, except for graduate assistants, and part-time instructors, to not more than four weeks in any one quarter. To obtain full residence in any quarter the student must

carry a minimum of nine quarter hours. In one term of the summer quarter he must carry a minimum of six quarter hours. No credit for advanced degrees is allowed for correspondence or extension work and no transferred credit is accepted toward a master's degree.

FEES

Registration and laboratory fees for full-time work are the same as for undergraduate students in the college in which the major work is done. Part-time graduate students who are legal residents of the state pay $4.00 per quarter hour. Non-residents pay $6.25 per quarter hour.

Before the advanced degree is conferred, a fee of $15.00 must be paid at the Comptroller's Office of the University. This covers the graduation fee, diploma fee, fee for binding the thesis, and all other incidental costs.

REQUIREMENTS FOR THE DEGREES OF MASTER OF ARTS AND MASTER OF SCIENCE

Students, having completed the equivalent of an A. B. or B. S. degree from an accredited liberal arts college or a standard teachers college, may become candidates for the degree of Master of Arts or Master of Science.

The requirements for the degrees of Master of Arts and Master of Science are as follows:

Credits. The candidate shall complete 36 quarter hours of graduate work in course with a standing of 2.0, and no grade below C shall be counted.

Courses. The major field shall comprise, as to courses, approximately two-thirds of the work with electives (within the department or allied departments) of approximately one-third of the work. The two shall have graduate relationship. All of the work may be taken within one department if the student desires.

Residence. The minimum residence is one academic year of 36 weeks. This residence may be fulfilled by any combination of quarters or summer terms which totals the required number of weeks.

This does not mean that the work prescribed for each individual can always be completed in the minimum length of time. Inadequate preparation or assistance in departments very frequently makes a longer period necessary. Part-time work during a regular quarter is evaluated on the basis of the amount of work carried, but the amount of residence for part-time work is limited, except for graduate assistants and part-time instructors, to not more than four weeks in any one quarter.

Transfer of Credits. No transferred credits are accepted toward the Master of Arts or Master of Science degree. All work for these degrees must be done at the University of Kentucky. However, a student is not asked to repeat a course which he has satisfactorily completed at another institution.

Thesis. A thesis is required of every candidate. Two typewritten copies of the completed thesis must be presented not later than three weeks before the time set for the oral examination. One copy is presented to the Dean of the Graduate School to be bound and placed in the University Library and the other to the major professor to be retained by the department concerned.

Language Requirement. A reading knowledge of at least one modern foreign language is required. This language should be pertinent to the program of the student. The language requirement must be satisfied by an examination given by the foreign language department offering instruction in the language concerned. The passing of this examination shall satisfy one of the two language requirements for the doctorate.

Examinations. Examinations of regular class work are taken by all resident graduate students. A final oral examination is given the candidate not later than fifteen days before the close of the quarter. The Dean appoints an examining committee of at least three members for the purpose, selecting its members from the major and minor professors under whom the work was done. The Dean is ex officio a member of all such examining committees. The candidate is asked to defend his thesis and is examined on any subject matter related to his field.

REQUIREMENTS FOR THE DEGREES OF MASTER OF ARTS IN EDUCATION AND MASTER OF SCIENCE IN EDUCATION

The professional degree of Master of Arts in Education is open to students who have received the degree of A. B., or A. B. in Education, and the professional degree of Master of Science in Education is open to students who have received the degree of B. S., or B. S. in Education.

Two plans are provided for satisfying the requirements for either of these degrees, as follows:

1. Thirty-six quarter hours in graduate courses with an average standing of 2.0, exclusive of the thesis; one academic year (36 weeks) in residence, and an acceptable thesis. No grade below C may be counted.
2. At the option of the department (not of the student), the master's degree in education may be granted for the completion of 54 quarter hours in graduate courses with an

average standing of 2.0 or better, 48 weeks in residence, and no requirement of a thesis.

There is no language requirement for either of these professional degrees. No student may satisfy more than one-half the requirements for advanced degrees in the College of Education by part-time work.

REQUIREMENTS FOR THE DEGREES OF MASTER OF SCIENCE IN AGRICULTURE AND MASTER OF SCIENCE IN HOME ECONOMICS

A student holding a bachelor's degree from a standard agricultural college may obtain the degree of Master of Science in Agriculture or Master of Science in Home Economics by satisfying the following requirements:

1. The completion of 36 quarter hours of graduate work with an average standing of 2.0 or better, 36 weeks of residence, and a thesis, or
2. The completion of 54 quarter hours of graduate work with a standing of 2.0 or better, 48 weeks of residence, and no thesis requirement.
3. Under either plan no grade below C may be counted.
4. One-half the work must be in one department, the remainder in any other department or departments approved by the major professor.

There is no language requirement for either of these professional degrees.

REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN PUBLIC HEALTH

A student holding a bachelor's degree from an approved college or university or an M. D. degree from an approved medical school may obtain the degree of Master of Science in Public Health by satisfying the following requirements.

1. Thirty-six quarter hours in graduate courses with an average standing of 2.0.
2. No grade below C to be counted.
3. Thirty-six weeks of residence.
4. An acceptable thesis.
5. The passing of a final comprehensive examination.

There is no language requirement for this degree.

REQUIREMENTS FOR ADVANCED DEGREES IN ENGINEERING

Two classes of advanced degrees are offered in the College of Engineering, the Masters' Degrees and the Professional Degrees.

The Masters' Degrees in Engineering. The masters' degrees in engineering may be obtained by satisfying the following requirements:

Thirty-six quarter hours in graduate courses, with an average standing of 2.0, one academic year (36 weeks) in residence, and an acceptable thesis. No grade below C may be counted. There is no language requirement for these degrees.

The candidate must hold the corresponding bachelor's degree in engineering from this institution or from another engineering school of recognized standing. The degrees offered are Master of Science in Civil Engineering, Master of Science in Electrical Engineering, Master of Science in Mechanical Engineering, Master of Science in Metallurgical Engineering and Master of Science in Mining Engineering.

The Professional Degrees in Engineering. The professional degree of Civil Engineer (C. E.), Electrical Engineer (E. E.), Mechanical Engineer (M. E.), Metallurgical Engineer (Met. E.), or Mining Engineer (E. M.), will be granted only to a graduate of the University of Kentucky, College of Engineering, who presents satisfactory evidence of professional work of creditable quality in the engineering field of his choice, extending over a period of five years, and who submits a satisfactory thesis as further evidence of his professional attainments. A candidate holding a masters' degree in engineering shall be considered to have fulfilled two years of the five-year requirement for the corresponding professional degree.

An application for a professional degree must be made to the Dean of the Graduate School and have the approval of the Graduate Committee of the College of Engineering not less than one academic year before the degree may be granted.

The Graduate Committee will pass on the qualifications of each applicant. It may, at its discretion, require an oral examination. The applicant is expected to submit a record of his engineering experience, which should include a complete list of his professional engagements, showing in each case the length of time employed and the position held. He should give for references the names of at least three persons who are familiar with his engineering work. Preferably these persons should be connected with the organizations by which he has been employed.

A thesis is required of each candidate. It may be in the field of research, design, invention, or engineering processes and methods.

It must contain some original thought and be the product of the individual submitting it. Quotations and references with the proper credit may be used. In general, the thesis should be of such a nature that it will be of value to the engineering profession.

The candidate holding a bachelor's degree in one field of engineering may apply for the professional degree in another field of engineering if he has attained unusual prominence and success in that field.

Fees. Except for part-time work, the fees for a resident student who is a candidate for a master's degree in engineering are the same as for undergraduates. The fees for a professional degree are $15.00 for registration and $15.00 for graduation.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

The degree of Doctor of Philosophy is conferred upon a candidate who, after completing not less than three years of graduate work devoted to the study of a special field of knowledge, passes the required examinations in the subjects, presents a satisfactory dissertation, and is deemed worthy of recognition as a scholar of high attainments in his chosen province.

The Doctor's degree is intended to represent not a special amount of work covering a special time, but the attainment, through long study, of independent and comprehensive scholarship in a special field. Such scholarship should be shown by a thorough acquaintance with present knowledge in his special field of learning and a marked capacity for research.

REQUIREMENTS FOR APPLICANT

Admission. Admission to the Graduate School and acceptance of advanced credits from other institutions must first be approved by the Registrar.

In order to be accepted as an applicant for the degree of Doctor of Philosophy, the student must present evidence that he has completed an undergraduate course and has received his baccalaureate degree from a college of recognized standing.

The Graduate Committee reserves the right to decide in each case of applicancy for a degree whether the prerequisite training has been satisfactory and, if any of the years of advanced work have been passed in another institution, whether they may be properly regarded as having been spent under suitable guidance and favorable conditions. Private study is not considered as equivalent to university work. In any case the student must pass the qualifying examinations of the University of Kentucky and spend the last year of the residence requirement at this institution.

Classification. A student wishing to become an applicant for the Doctor's degree must first regularly register in the Graduate School of the University of Kentucky and must then classify with the Dean of the Graduate School who will appoint a special committee for that student. This special committee, the chairman of which shall be his major professor, will consist of members of the departments in which the applicant elects to do his major and minor work and this committee will supervise his work throughout his period of study.

Not every applicant for the Doctor's degree is a candidate. A student is not a candidate for the degree until he has passed the qualifying examinations, satisfied the language requirements, and made formal application to be so enrolled.

Courses of Study. Every applicant for the degree must select one major and at least one and not more than two minor subjects.

The major subject should be one on which he intends to concentrate his efforts; the minor subjects should be closely allied to the major field or be subjects which will be of value in the major work and should be approved by the major department.

The applicant's principal work must be in the major subject. Although no absolute regulations are laid down in respect to the time to be devoted to the major and minor subjects it may be stated in general that the major subject should represent two-thirds of the student's entire time.

Any regular graduate course may be assigned as part of the applicant's work by his special committee. Only courses numbered above 100 in the University catalog are considered as of graduate status. The number and extent of such courses is determined by the special committee.

REQUIREMENTS FOR CANDIDATES

Residence. A minimum of three collegiate years of resident graduate work, of which at least the last year must be spent at the University of Kentucky, is required for the doctorate. The full time of each of these years must be spent in study. Part-time students and those holding assistantships or engaging in other outside activities will of course be required to take a proportionately longer time.

While it is expected that a well-prepared student of good ability may secure the degree upon the completion of three years of study, it should be understood that this time requirement is a minimum and is wholly secondary to the matter of scholarship. Neither time spent in study, however long, nor the accumulation of facts, however great in amount, nor the completion of advanced courses, however numerous, can be substituted for independent thinking and original research.

Work done in other institutions of learning may be accepted toward the doctorate at the University of Kentucky, but no work is credited which has not been done in a college or university of recognized standing or in a research laboratory.

Language Requirements. The applicant must give evidence of having a good reading knowledge of, and of being able to translate at sight, at least two modern foreign languages. This proficiency is determined by examinations conducted by the respective language departments. Ordinarily French and German are expected to be offered, but other languages may be substituted on recommendation of the special committee if it is considered that such languages are of greater importance in the special field of work. The language requirements must be satisfied before the applicant can be admitted to the qualifying examination.

Qualifying Examination. Applicants for the degree of Doctor of Philosophy are required to pass a qualifying examination. This examination shall be taken during the third quarter of the second year of residence. The examination shall be both oral and written and shall cover both major and minor subjects. It shall be prepared and given to the applicant by a committee of five to be appointed by the Dean of the Graduate School. The language requirements must have been met before the qualifying examination is taken. **No applicant may proceed to his final examination until one year of work has been completed in residence after he has passed the qualifying examination.** If the applicant fails to pass the qualifying examination, no re-examination shall be allowed except upon the recommendation of the special committee and the approval of the Graduate Committee. If the applicant passes the qualifying examination he is then considered as a candidate for the degree and may make formal application for this rating.

Dissertation. Each candidate must present a dissertation covering his thesis work. This dissertation must give evidence of the candidate's ability to carry on independent investigation and must be satisfactory in style and composition. It must represent a definite contribution to the knowledge of his subject, must be the result of independent work, must include original research, and must in some way add to or otherwise modify what was previously known on the subject. Two bound typewritten copies of the thesis and an abstract of not less than 1,200 nor more than 3,000 words must be formally presented to the Dean of the Graduate School at least three weeks before the final examination.

Printing of Dissertation. One hundred printed copies of the dissertation must be presented to the University within one year from the time when the degree is conferred. Not later than one week before the conferring of the degree the candidate must deposit

with the Comptroller of the University the sum of $50.00, this amount to be returned if the printed copies are received within the time specified. The University does not obligate itself to publish the thesis, but if in the judgment of the Graduate Committee the thesis or an abstract of same should be published, the University reserves the privilege of so doing.

Or

The candidate may have the dissertation printed at his own expense, in which case he must present one hundred copies to the University before the degree is granted. If the candidate has the dissertation printed at his own expense, he will be expected to use good substantial paper and sightly typography. A page four by six inches with outside margin of at least one inch is recommended. The dissertation must have a cover and title page and the latter, in addition to the title and the name of the author, must bear the following inscription:

> "A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the University of Kentucky."

If the dissertation is published in a technical journal or other recognized educational publication, the reprints will be accepted if presented with special printed covers and proper title page.

Final Examination. After the acceptance of the dissertation by the special committee and the Dean of the Graduate School, the candidate shall be given final oral examination by a committee of five members which shall include the head of the major department or his delegate presiding, one additional professor selected by the major department, one professor selected by each of the minor departments and additional members (to make the total of five) selected by the Dean of the Graduate School. The President of the University and the Dean of the Graduate School are ex officio members of all examining committees.

The final examination shall not be held until at least one year has been spent in residence after the student has been accepted as a candidate for the degree.

The completion of three years of residence work confers no right upon the student to be so examined.

Recommendations. After the final examination has been passed, the name of the candidate will be presented to the University Faculty for recommendation to the Board of Trustees for the degree of Doctor of Philosophy in course.

FELLOWSHIPS AND SCHOLARSHIPS

The University of Kentucky offers the following graduate fellowships and scholarships for the encouragement of research and advanced study:

The Margaret Voorhies Haggin Trust Fellowships and Scholarships in memory of her father, George Voorhies.

Two fellowships with a stipend of $500.00 each.
Ten fellowships with a stipend of $400.00 each.
Fifteen scholarships with a stipend of $200.00 each.

The primary object of these appointments is to stimulate research and not to give pecuniary aid. Scholars and fellows are expected to devote their entire time to graduate work, and no teaching or other departmental work may be required of them. The award is paid in ten equal monthly installments and does not include a remission of tuition or other University fees. The appointments are made for one year only but may be renewed if it can be shown that the prosecution of research should continue.

These fellowships and scholarships are open to any student who holds a bachelor's degree from a college or university in good standing, provided the student has shown some special aptitude for the line of work he desires to pursue. No student should apply for the award who does not cherish a real and earnest desire to do research work.

Forms for making application may be secured from the Dean of the Graduate School and must be submitted not later than March 25.

GRADUATE ASSISTANTSHIPS IN THE RESIDENCE HALLS FOR WOMEN

There are available five graduate assistantships in the residence halls for women for which the compensation is room and board in the halls. These assistants aid the regular staff in the supervision of the halls and in the varied program which the halls maintain for residents. Information and application form may be obtained from the Director of Residence Halls for Women. Applications must be submitted not later than July 1.

GRADUATE STUDENTS NOT CANDIDATES FOR DEGREES

Graduate students who are not candidates for advanced degrees are not required to designate major or minor subjects but may elect their work with a view to the special purpose for which they are in attendance at the University.

Any course of study announced for advanced undergraduates and graduates is open for election by such students upon the same conditions that are imposed upon those who are candidates for degrees.

Should a graduate student who has not arranged for his work with a view of obtaining a degree, subsequently desire to become a candidate for a degree, the amount of credit he is to receive for work already done will be determined at the time he applies for admission to candidacy for the degree.

No work is given graduate credit unless the student was enrolled in the Graduate School at the time during which the work was taken.

DEPARTMENT OF UNIVERSITY EXTENSION

LOUIS CLIFTON, M. A., Director

It is believed that the University of Kentucky should be in close relationship with the homes of the state to the end that any citizen may feel free to call upon the University for any assistance which the institution can render. To that end, the Department of University Extension has been organized. Citizens anywhere in the state should feel free to call on the University through this department for any service which it might be practicable for it to perform off the campus.

The Department of University Extension operates through six bureaus as follows:

*1. A Bureau of Correspondence and Class Study.—Offering courses in Botany, Economics, Education, English, French, German, Greek, Latin, Hygiene, Mathematics, Mining, Philosophy, Political Science, Psychology, Sociology, and Spanish and courses in high school subjects.

2. A Bureau of Lectures.—Offering single lectures or a series of lectures; speakers for teachers' meetings, commencement addresses, memorial and dedication exercises, civic and women's clubs, etc.

*3. A Bureau of School Relations.—Providing assistance in debating and other forensics activities to the schools, and encouragement of vocal and instrumental music. This service is given chiefly through the Kentucky High School Forensic League and the Kentucky High School Music Festival.

4. A Bureau of General Information and Welfare.—Acting as a clearing house for inquiries of the people of the state in general matters.

5. A Bureau of Club and Community Service.—Furnishing club programs and package library materials as well as helps for organizations and individuals.

*6. A Bureau of Visual Aids.—Furnishing educational motion picture films and other visual aids service to schools and clubs.

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* Separate bulletins for each of these bureaus are available.

PART III
STATEMENT OF COURSES OFFERED AT THE UNIVERSITY

STATEMENT OF COURSES

Courses on the following pages have been arranged alphabetically by colleges and departments as follows:

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Courses numbered 1 to 99, inclusive, may be taken for credit only by undergraduate students. Courses numbered 100 to 199, inclusive, may be taken for credit by juniors, seniors, and graduate students, provided that a course so numbered may carry graduate credit only with the approval of the student's graduate committee. Courses numbered 200 or above are open only to graduate students. The first third of a year's course is indicated by the letter a; the second third by the letter b, and the last third by the letter c. Seminar courses and independent or individual work courses in which more than three quarters' work may be assigned, are indicated by letters a, b, c, d, etc.

In the statement of courses the number of the course is given first, followed by the descriptive title. The credit in quarter hours is indicated by a number in parentheses, thus (4); the first, or fall quarter is indicated by I, the second, or winter quarter by II, the third, or spring quarter by III, and the fourth, or summer quarter by IV. Thus, German 2a, Intermediate German (4) I, II, III, IV, is an undergraduate course giving four quarter hours and offered in all four quarters of the year.

COLLEGE OF ARTS AND SCIENCES
ANATOMY AND PHYSIOLOGY

Professor Allen, Assistant Professor Driver,[1] Mr. Brown,[1]
Mrs. Anderson, Miss Skaggs and Mrs. Cole.

The courses offered by the Department are prepared with the purpose of making them of educational value and at the same time, providing a preliminary training in the theoretical aspects for those students who plan to study for advanced degrees in Anatomy, Physiology, or related subjects.

Pre-medical students who intend to obtain their degrees from the College of Arts and Sciences before entering a medical school and who choose Anatomy and Physiology as their major will have met all the requirements and recommended courses of study for all medical schools.

Students of Anthropology, Art, Agriculture (Animal Husbandry, Animal Pathology, Genetics, Home Economics), Education, and Sociology will find advanced courses that will be of practical value to them.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Biological Sciences during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: A. & P. 1a, b; Zoology 1a, b, c; Physics 1a, b, c; Chemistry 1a, b. **Required:** A minimum of 21 quarter hours of advanced work in Anatomy and Physiology plus Seminar in A. & P. (116a, b, c) and passing a comprehensive examination in senior year.

1a **GENERAL PHYSIOLOGY. (4) I, II, III, IV** Allen and Skaggs
This is an elementary course consisting of lectures, demonstrations and recitations. It includes the study of the chemical composition and general structure of the human body; nature and properties of living protoplasm; the process of ossification or the formation and growth of bones; the skeleton; the structure and functions of the motor organs (muscles); the nervous system—structure and functions; and the special senses, namely, internal and cutaneous, smell, taste, hearing and vision. **Not open to freshmen.**

1b **GENERAL PHYSIOLOGY. (4) II, III, IV** Allen and Skaggs
The course is a continuation of 1a. The vascular system; respiration; gastro-intestinal tract; digestion and absorption of foods; organs of excretion; production and regulation of the body's heat; and the organs of speech. Not available for credit to students who have A. & P. 5. **Not open to freshmen.**

[1] Military leave.

3 PHYSIOLOGY. (5) I, III Allen and Cole
Required of Home Economics students; open to others. This is a study of the digestive system. The various organs of the system are considered separately with respect to location in body, structure and functions. Other systems of the body which are closely allied to the digestive system are also surveyed. Such are the circulatory, respiratory and excretory. The latter are studied only in so far as they are related to the principal subject of the course. Lectures and recitations, three hours a week; laboratory, four hours a week. **Prerequisites: Chemistry 1a and 1b or the equivalent; Chemistry 37.**

4 ELEMENTARY ANATOMY. (5) I Skaggs and Anderson
This course is arranged especially for students who are majoring in Physical Education; open to others. The muscles of a lower animal are dissected and carefully studied with respect to their relation with the bones of the animal's body. The results of the dissections are compared with the corresponding structures and arrangements found in the human body. This will be accomplished by means of charts and skeletons of the human being. Lectures, three hours a week; laboratory, four hours a week. **Prerequisite: Sophomore standing.**

5 PHYSIOLOGY. (5) II Allen, Cole and Anderson
A course for students who are majoring in Physical Education but can be taken by others. Emphasis will be placed upon the physiology of muscle, circulation, respiration, digestion and absorption, energy metabolism, and excretion. Other subjects of the science will also be considered but not in great detail. Lectures three hours a week; laboratory, four hours a week. Not available for credit to students who have had A. & P. 1b. **Prerequisite: A. & P. 4.**

6a GENERAL ANATOMY AND PHYSIOLOGY FOR NURSES. (4) I, III Allen and Cole
The subject is designed to meet the requirements of those who are in training, and includes a general survey of the following: physico-chemical phenomena of protoplasm; general structure of the body; osteology; myology; the nervous system and special senses. Lectures and recitations, three hours a week; laboratory, two hours a week. **Prerequisite or concurrent: General Chemistry.**

6b GENERAL ANATOMY AND PHYSIOLOGY FOR NURSES. (4) II, IV Allen and Cole
This is a continuation of 6a and will cover the following subject matter: the vascular system; the respiratory system; gastro-intestinal tract; digestion and absorption of foods; organs of excretion; heat production and the regulation of the body's temperature; and the reproductive system. Lectures and recitations, three hours a week; laboratory, two hours a week. **Prerequisite: 6a.**

Courses open only to Upper Division and Graduate Students

103a-d INDEPENDENT WORK IN ANATOMY. (4) I, II Allen
The pursuit of some advanced problems in anatomy under the direct supervision of the instructor. Discussion period, one hour a week; laboratory six hours a week. **Prerequisites: A. & P. 1a and 1b or the equivalent.**

104a-d INDEPENDENT WORK IN PHYSIOLOGY. (4) I, II Allen

A study of some advanced problem in physiology under the direct supervision of the instructor. Discussion period, one hour a week; laboratory, six hours a week. **Prerequisites: A. & P. 1a and 1b or equivalent; Chemistry 1a and 1b.**

105 ARCHITECTURE OF THE HUMAN SKELETON. (5) I, IV Allen

This course is designed for the student who anticipates further advanced study in Anatomy and Physiology, for students of anthropology, for students in art, and for those who are preparing for the study of medicine. The study begins with the development of the skeleton joints. This is followed by the process of ossification and the histology of bones. Each bone is studied in detail; organized demonstrations are given with architecture and function being stressed. Variations in the skeleton are considered. When possible, the bone is compared with that of the lower vertebrates. The physiology of the bone, joint and muscular relations is studied in detail. Lecture and recitation, two hours a week; laboratory, six hours a week. **Prerequisite: Junior standing.**

106 INTRODUCTION TO ENDOCRINOLOGY. (4) II, IV Allen

An introductory study of the glands of internal secretion or endocrine glands in which the general development, anatomical location and structure, and fundamental functions of the organs will be presented. The purpose of the course is to give a general knowledge that will be of value, not only to the student of Anatomy and Physiology and related subjects but also, to those of educational and sociological interest. Lectures and recitations, four hours a week. **Prerequisites: A. & P. 1a and 1b or the equivalent; Zoology 7b; Chemistry 1a and 1b; and the Instructor's consent.**

107 ADVANCED ANATOMY. (5) III, IV Allen, Skaggs and Cole

An introduction to the anatomy and physiology of the nervous system. The aim of the course is to provide an introductory laboratory course on the form, structure and functional arrangements of the nervous system for students of biology, physiology, psychology and those preparing for the study of medicine. The work of the course includes a careful study of the nervous systems of vertebrates. The simpler types of nervous system are compared with that of man. The development of the various reflexes is considered. The relation of the structure of the nervous system to psychological reactions is studied. Lectures and recitations, three hours a week; laboratory, four hours a week. **Prerequisites: A. & P. 1a and 1b or the equivalent.**

108a ADVANCED PHYSIOLOGY. (4) I Allen and Skaggs

The course is designed for students who anticipate further advanced study in physiology and also, for those who are preparing for the study of medicine. In this part of the course, the nervous system is to be considered in its entirety. It will include the structures and functions of the spinal cord, the medulla oblongata, the cerebellum, the cerebrum and the autonomic system. The course will close with an intensive study of the special sense organs. Lectures and recitations, two hours a week; laboratory, four hours a week. **Prerequisites: A. & P. 1a and 1b; Chemistry 1a and 1b; Physics 1a, 1b and 1c.**

108b ADVANCED PHYSIOLOGY. (4) II Allen and Skaggs

This is a continuation of 108a. The course is opened with the consideration of muscle-physiology which will include both skeletal and smooth muscle tissue. Graphic records which show the character of the contraction of each type of muscle are to be made. This will be followed by observing the various factors that alter the character of the contraction. Experiments are also performed to demonstrate that muscle is a thermogenic and an electrogenic organ. In addition to the muscle-study, the circulatory system and the respiratory system are to be thoroughly surveyed. In each case, much time is given to the consideration of the mechanics, nervous regulation and functional peculiarities. Lectures and recitations, two hours a week; laboratory, four hours a week. **Prerequisite: Same as for A. & P. 108a.**

108c ADVANCED PHYSIOLOGY. (4) III Allen and Brown

This division is a continuation of the preceding, 108a and 108b. It is concerned with a careful study of each of the following: The gastro-intestinal tract with its secretory organs; the processes of digestion, absorption, excretion and heat production; voice and the production of speech. Lectures and recitations, two hours a week; laboratory, four hours a week. **Prerequisite: Same as for A. & P. 108b.**

109 APPLICATION OF PHYSICAL PRINCIPLES TO THE HUMAN BODY. (4) II, IV Allen

This course is especially designed for students in Anatomy and Physiology or the natural sciences. Students of the physical sciences as well as others will, likewise, find the course to be of practical and cultural value. The course is opened by thoroughly acquainting the student with the various physical phenomena that are to be considered. This will be followed by applying the same to the physiological processes of the body, which will include stress and strain with respect to the bones of the skeleton, types of levers involved in joint action, permeability, calorimetry, mechanics of circulation and temperature regulation, mechanics of vision, mechanics of hearing, mechanics of speech or voice. Lectures and recitation, three hours a week; laboratory, two hours a week. **Prerequisites: A. & P. 1a and 1b; Physics 1a, 1b and 1c; Chemistry 1a and 1b.**

116a SEMINAR IN ANATOMY AND PHYSIOLOGY. (1) I Staff

All students who are majoring in the Department are required to take this course. At each meeting of the seminar, an assigned scientific article of physiological or anatomical subject matter will be reviewed thoroughly by a member of the seminar and then discussed by the seminar in general. In addition to the foregoing, each member of the seminar will be required to follow closely the current publications bearing upon the subjects of the class and present brief reports of such articles which are of interest. One two-hour discussion period a week. Open only to Seniors and Graduates. **Prerequisites: A. & P. 1a and 1b or the equivalent.**

116b SEMINAR IN ANATOMY AND PHYSIOLOGY. (1) II Staff

Continuation of 116a. One two-hour discussion period a week. Open only to Seniors and Graduates. **Prerequisites: A. & P. 1a and 1b or the equivalent.**

116c SEMINAR IN ANATOMY AND PHYSIOLOGY. (1) III Staff

Continuation of 116b. One two-hour discussion period a week. Open only to Seniors and Graduates.

Prerequisites: A. & P. 1a and 1b or the equivalent.

Courses open only to Graduate Students

201a **RESEARCH IN PHYSIOLOGY. (6) I, IV** Allen
The pursuit of an assigned problem in which the student will have the opportunity to demonstrate his or her originality. Conferences and laboratory, twelve hours a week. **Prerequisites: A. & P. 1a and 1b or the equivalent; Chemistry 130a, 130b, and 130c or the equivalent; Physical Chemistry desirable; Physics, one year.**

201b **RESEARCH IN PHYSIOLOGY. (6) II, IV.** Allen
Continuation of 201a. Conferences and laboratory, twelve hours a week. **Prerequisites: A. & P. 1a and 1b or the equivalent; Chemistry 130a, 130b, and 130c or the equivalent; Physical Chemistry desirable; Physics one year.**

ANCIENT LANGUAGES AND LITERATURES

Professor Jones and Assistant

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: 60 quarter hours advanced work in the field of Literature, Philosophy and the Arts during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: First two years of college Latin. **Required:** A minimum of 22 quarter hours of advanced work in A. L.; Tutorial Work; comprehensive examination in senior year.

Note.—No credit given when work done in high school is repeated. One year of high school language is considered the equivalent of one quarter of University work.

Latin

*1a **BEGINNING LATIN.** (3) I — Jones
First 35 lessons in Bennett's First Year Latin.

*1b **BEGINNING LATIN (Continuation).** (3) II — Jones
Lessons 36–72 in Bennett's First Year Latin.

*2 **CAESAR AND SELECTIONS.** (3) III — Jones
The equivalent of three books of Caesar. **Prerequisite: A. L. 1.**

*3 **CICERO AND SELECTIONS.** (3) I — Jones
The equivalent of three orations of Cicero. **Prerequisite: A. L. 2.**

*4a **VERGIL.** (3) II — Jones
(Books I, II of Æneid.) **Prerequisite: A. L. 2 or 3.**

*4b **VERGIL (Continuation).** (3) III — Jones
(Books IV, VI of Æneid)

*5 **LIVY.** (3) I — Jones
(Book I and Selections.) **Prerequisite: A. L. 3 or 4.**

*6a **HORACE.** (3) II — Jones
(First three books of Odes.) **Prerequisite: A. L. 4 or 5.**

*6b **HORACE (Continuation).** (3) III — Jones
(Book four of Odes: Satires: Epistles.)

7 **TACITUS.** (3) I — Jones
(Germania, Agricola, Selections.) **Prerequisite: A. L. 5 or 6a and b.**

8a **PLINY'S LETTERS.** (3) II — Jones
(First five books.) **Prerequisite: A. L. 5 or 6a and b.**

8b **PLINY'S LETTERS (Continuation).** (3) III — Jones
(Last five books; and one play of Terence.)

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* Open to Freshmen.

Courses open only to Upper Division and Graduate Students

16a TUTORIAL WORK IN ANCIENT LANGUAGES. (1) II Jones

16b TUTORIAL WORK IN ANCIENT LANGUAGES. (1) III Jones

109a LATIN LITERATURE. (3) I Jones
(Selections from various authors.) **Prerequisite A. L. 7 or 8a and b.**

109b LATIN LITERATURE. (3) II Jones
(Continuation of 109a.) **Prerequisite: A. L. 7 or 8a and b.**

109c LATIN LITERATURE (Continuation). (3) III Jones

110a LATIN LITERATURE. (3) I Jones
Prerequisite: A. L. 7 or 8a and b.

110b LATIN LITERATURE. (3) II Jones
(Continuation of 110a.) **Prerequisite: A. L. 7 or 8a and b.**

110c LATIN LITERATURE (Continued). (3) III Jones

Note.—The authors read in the preceding six courses are not specified because the classes are composed of students from colleges with different reading requirements.

114a INTERMEDIATE LATIN COMPOSITION. (1) I Jones
The course will begin with easy passages in connected discourses and will proceed to more difficult selection. **Prerequisite A. L. 5.**

114b INTERMEDIATE LATIN COMPOSITION. (1) II Jones
(Continuation of 114a.) **Prerequisite: A. L. 5.**

120 SURVEY OF GREEK CIVILIZATION. (3) I Jones
History, Public and Private Life, Archaeology. **Prerequisite: Junior standing.**

121 SURVEY OF ROMAN CIVILIZATION. (3) I Jones
(Continuation of 120.) **Prerequisite: Junior standing.**

150a TEACHER'S COURSE IN LATIN. (3) IV Jones
A hasty review of Bennett's Beginners' Book, and the reading of selections from the last three books of Caesar. Discussion of the principles of teaching Latin, stressing the connection between Latin and English, the merits of the different texts, etc. Given only in summer school. Based on first year's work. **Prerequisite: Junior standing.**

150b TEACHER'S COURSE IN LATIN. (Continuation). (3) IV Jones
This course will follow closely the recommendations of the Classical League Investigating Committee. A considerable amount of easy Latin will be read, taken from several authors. Discussion of Latin exhibits and other means of arousing interest in the work. Given only in summer school. Based on second year work. **Prerequisite: A. L. 2 or 150a.**

151a-d INDEPENDENT WORK IN ANCIENT LANGUAGES. (3) I, II, III, IV Jones
These courses are courses in individual work. The work assigned will depend upon the needs of the student. **Prerequisite: A. L. 5.**

Courses open only to Graduate Students

201a LATIN PASTORAL POETRY. (3) II Jones
This course is based mainly on Vergil's Eclogues and Georgics. The development of the author's talent will be noted and his models traced. In addition, one or two dramas will be read or selections from Lucretius. Given on demand. **Prerequisite: A. L. 109a or equivalent.**

201b LATIN ELEGIAC POETRY. (3) III Jones
Selections from Catullus, Tibullus, Propertius and Ovid will be read. The change in the subject matter of the Elegy will be noted. Scanning. Mythological references studied. Given on demand. **Prerequisite: A. L. 109a or equivalent.**

Greek

***51a BEGINNING GREEK. (3) I** Jones
First 30 lessons in Benner & Smyth's Beginning Greek.

***51b BEGINNING GREEK (Continuation). (3) II** Jones
Lessons 31–60 in Benner & Smyth's Beginning Greek.

Courses open only to Upper Division and Graduate Students

122a GREEK LITERATURE IN ENGLISH TRANSLATION. (3) II Jones
Epic and lyric poetry. **Prerequisite: Junior standing.**

122b GREEK LITERATURE IN ENGLISH TRANSLATION. (3) III Jones
Drama, oratory, philosophy. **Prerequisite: Junior standing.**

149 EASY SELECTED READING FROM GREEK AUTHORS. (3) III Jones
Prerequisite: A. L. 51.

152 ANABASIS. (3) I Jones
Given on demand. **Prerequisite: A. L. 51.**

153 HOMER. SELECTIONS. (3) I Jones
The Iliad, books I–VI. The Homeric question, life in the Homeric age, Mycenean antiquities, recent discoveries, will receive due attention. Scanning. Given on demand. **Prerequisite: A. L. 149.**

154 PLATO. SELECTIONS. (3) II Jones
The Apology and Crito, selections from the Phaedo. The relation of Plato to Socrates, Socrates as a moral teacher, his methods of investigation will be discussed. Given on demand. **Prerequisite: A. L. 149.**

155 HERODOTUS. SELECTIONS. (3) III Jones
Books VI–VII. This course will include a rapid survey of Greek history from the Ionic Revolt to the end of the Persian Wars. Given on demand. **Prerequisite: A. L. 149.**

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* Open to Freshmen.

ANTHROPOLOGY AND ARCHAEOLOGY

Professors Webb and Funkhouser and Assistant Professor Snow

Courses open to Lower Division Students

*1a **GENERAL ANTHROPOLOGY. (3) I** Snow
An introductory course with emphasis on Physical Anthropology. Measurements of the living and skeleton, origin, development and distribution of man, races and racial mixture. Heredity and growth.

*1b **GENERAL ANTHROPOLOGY. (3) II** Snow
The archaeology and ethnology of the Old World. The arts and industries, sociology, religious beliefs and languages of the peoples of Europe, Asia and Africa.

*1c **GENERAL ANTHROPOLOGY. (3) III** Snow
The archaeology and ethnology of the New World and Oceania. The cultures of the peoples of North and South America and the Pacific Islands.

Courses not open to Lower Division Students

101 **PRINCIPLES OF ANTHROPOLOGY. (3) III, IV** Funkhouser
Fundamental principles of anthropology; relationships of physical anthropology, anthropometry, ethnology, ethnography and archaeology; anthropology of the New World, North American prehistory; ancient human occupation in the Mississippi Valley; outline of man's prehistoric past in Kentucky; anthropological studies of Kentucky materials.

103a-d **INDEPENDENT WORK IN ANTHROPOLOGY AND ARCHAEOLOGY. (3)** Staff

105 **ETHNOLOGY. (3) I** Funkhouser
A lecture course on the Living Races of Man. The supposed origin and known migrations of the present ethnological groups; their relationships, geographical distribution, cultures and religion. Lectures, 3 hours.

106 **ETHNOLOGY OF EUROPE. (3) II** Funkhouser
A study of the origins and migrations of the ethnological groups of Europe. The influence of Hamitic, Ligurian, Iberian and Pelasgian stocks of prehistoric civilizations; the effect of the migration of the Indo-Iranian Division; the contribution of the Semites to early European cultures; the contrast between the Aryans and Nordics in racial characters with particular attention given to the Q-Kelts, P-Kelts, Slavs and Anglo-Saxons. Lectures, three hours.

107 **ETHNOLOGY OF THE NEW WORLD. (3) III** Funkhouser
A study of the origins and migrations of the ethnological groups of the new world.
(This is an expansion of A. & A. 105 and 106 into a third quarter's work.)

125 **PHYSICAL ANTHROPOLOGY. (3) I, II, III, IV** Snow
Detailed study of the origin and development of the races of man with emphasis on somatic and skeletal difference, measuring techniques, growth, race mixture and hereditary effects, development of human dentition, and osteopathology as observed in prehistoric man.

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* Open to Freshmen.

ART

Professor Rannells,[1] and Assistant Professors Fisk,[2] Callihan and Barnhart.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Literature, Philosophy and the Arts during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: Art 61a, 61b (drawing), 62 (design), 35, 36 (history of art). **Required:** a minimum of 34 quarter hours—16 in studio courses, 16 in history of art, plus the senior seminar and comprehensive examination in the senior year.

These requirements insure the necessary balance of theory and practice in the study of art. The department is housed in a modern building with special equipment. Studios for the practical work are designed to meet exacting professional standards. An excellent art library adjoins the class rooms. There are extensive collections of photographs, color reproductions and related art reference materials. An exhibition gallery provides for the study of original works of art.

*30a **INTRODUCTION TO ART. (2) I, II, IV** Callihan
Elementary principles, theory of color, essentials of design, forms of art. Given in illustrated lectures with assigned problems, notebooks and reports. Not open to students who have had Art 10a.

*30b **INTRODUCTION TO ART. (2) II, III** Callihan
The plastic arts; an introductory survey and interpretation of architecture and sculpture and design. Illustrated lectures, study of original works of art, library references, notebooks and reports.

*30c **INTRODUCTION TO ART. (2) I, III** Callihan
Painting and the decorative arts; a survey of masterpieces in painting and major styles in decoration. Illustrated lectures, study of original works of art, library references, notebooks and reports.

Drawing and Painting

*61a **ELEMENTARY DRAWING. (4) I, III, IV** Barnhart
Training of vision and development of skill through drawing from natural forms. Nine studio hours and weekly problems.

*61b **ELEMENTARY DRAWING. (4) II, IV** Barnhart
Continuation of 61a. Analytical study of form and space; introductory problems in composition. Nine studio hours and weekly problems. **Prerequisite: 61a.**

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* Courses open to Freshmen.
[1] On leave Fall Quarter 1943-44.
[2] On leave 1943-44.

63a **ADVANCED DRAWING.** (4) I, II, IV — Barnhart
Analysis of composition in black and white. Study of line and values. Twelve studio hours a week. **Prerequisite: 61b.**

65a **PAINTING.** (4) I, II, III, IV — Barnhart
Technical instruction in oil and water color. Introduction to the study of pictorial composition; still life, landscape, figure. Twelve studio hours a week. **Prerequisite: 63b or 63a, at option of instructor.**

65b **PAINTING.** (4) II, III, IV — Barnhart
Continuation of 65a. Twelve studio hours a week.

Courses open only to Upper Division and Graduate Students

116a **PRINT MAKING.** (4) I, II, III
Etching, lithography, woodcut, stencil (color). Technical instruction in executing original compositions in graphic mediums. Open only to advanced students upon approval of instructor.

116b **PRINT MAKING.** (4) I, II, III
Continuation of 116a.

116c **PRINT MAKING.** (4) I, II, III
Continuation of 116b.

165a **ADVANCED PAINTING.** (4) I, II, III — Barnhart
Preparation of grounds for panel pictures; gesso, chalk, half-chalk, oil grounds. Execution of pictures in tempera, oil and mixed techniques. Twelve studio hours a week. **Prerequisite: 65b.**

165b **ADVANCED PAINTING.** (4) I, II, III — Barnhart
Continuation of 165a. Composition problems in tempera, oil and mixed techniques.

165c **ADVANCED PAINTING.** (4) I, II, III — Barnhart
Continuation of 165b. Composition problems in tempera, oil and mixed techniques.

167a **MURAL PAINTING.** (4) I
Study of mural problems; permanent grounds and pigments related to treatment of the wall surface, embracing tempera and oil techniques. Study of painting techniques of the past; tempera, casein, encaustic, oil, etc. Open only to advanced students upon approval of instructor.

167b **MURAL PAINTING.** (4) II
Continuation of 167a. Problems in mural composition.

167c **MURAL PAINTING.** (4) III
Continuation of 167b. Problems in mural composition.

Design

62 BASIC DESIGN. (4) III, IV Barnhart
The relation of materials and processes to art concepts. Exploratory construction in wood, clay, metal, paper, etc. Nine studio hours and weekly problems. **Prerequisite: 61b or equivalent.**

64a INTERMEDIATE DESIGN. (4) I, II, III, IV Barnhart
Problems in creative construction adapted to the individual. Modeling, carving, making objects of use. Eight studio hours and weekly problems. **Prerequisites: 61b and 62.**

64b INTERMEDIATE DESIGN. (4) I, II, III, IV Barnhart
Continuation of 64a. Individual problems. Eight studio hours and weekly problems.

66a DESIGN IN DECORATION. (4) I, II, III Callihan
Problems in the use of color; projects in textile design, costume, interior decoration, etc., adapted to the individual. Given as research or studio work. **Prerequisites: 61b and 62.**

66b DESIGN IN DECORATION. (4) I, II, III Callihan
Continuation of 66a. Individual problems. Research or studio work.

29 ADVERTISING ART. (3) I Barnhart
Art principles in advertising. Six studio hours and weekly problems. **Prerequisites: 61a and 62, or junior standing in Journalism or Commerce.**

History of Art

35 ANCIENT ART. (4) II Rannells
The arts in the ancient cultures of the Mediterranean and west-Asian worlds, from old Egypt and Chaldea through Greek and Roman times to Byzantium in the sixth century A. D. Emphasis on Classic art. Illustrated lectures; conferences and reports.

36 MEDIEVAL ART. (4) III Rannells
The arts in relation to the Byzantine and Islamic cultures in the near East, and to the Latin and Germanic cultures in the West, during the early middle ages; and of Gothic art in France and northern Europe through the fifteenth century. Emphasis on Christian art. Illustrated lectures; conferences and reports.

46 THE DECORATIVE ARTS. (3) III Callihan
A survey of the decorative arts; a comparative study of the treatment of interiors, of furniture, textiles, ceramics, etc., with special reference to the major styles in decoration as developed in France and England during the eighteenth and early nineteenth centuries. An illustrated and documented course; lectures and reports.

Courses open only to Upper Division and Graduate Students

115a-f INDEPENDENT WORK. (4) I, II, III, IV Staff
Individual projects in painting or design; individual research in art history; studies in criticism. Each quarter's work is subject to review by the staff. Open only to advanced students upon approval of department head.

140 RENAISSANCE ART. (4) I Rannells
The arts of humanism in Renaissance Italy and in the North through the sixteenth century. Renaissance "form"; analyses of style; study of individual masters. Illustrated lectures, reports.

141 BAROQUE ART. (4) III Rannells
The arts of the Reformation and the Counter-Reformation in Europe through the seventeenth century. Baroque "space"; analyses of style; study of individual masters. Illustrated lectures; reports.

142 MODERN ART. (4) I Rannells
The arts in Europe and America through the eighteenth and nineteenth centuries. Consideration of social changes and scientific developments in relation to art; history and aesthetics; style revivals; individual artists. Illustrated lectures; reports.

143 CONTEMPORARY ART. (4) II Rannells
Studies in the arts of the twentieth century. Surveys and analyses. The relation of art to contemporary life. Space and time in modern art. The evolution of modern forms in architecture, sculpture, painting and design; developments in photography, the cinema, city planning, etc. Individual artists and their work. Lectures, conferences and reports. **Prerequisite: 142.**

147 ART IN AMERICA. (4) IV Rannells
American architecture, sculpture, painting, illustration, handicrafts, etc., from colonial times to the present. Illustrated lectures; critical reports. **Prerequisite: 142.**

151 CRITICISM OF ART. (4) III Rannells
Analyses, interpretations, evaluations. Specific arts, periods of arts and styles of art are examined in the light of historical modes of criticism. Problems in criticism of contemporary art. Discussions and reports. For advanced students. **Prerequisites: Advanced studio courses and 142, 143.**

160a-c SEMINAR IN ART. (1 each) I, II, III Staff
Current problems in art; correlation of theory and practice; reports. Required of all seniors majoring in art in preparation for the comprehensive examination.

Art in Education

10a PUBLIC SCHOOL ART. (3) I, III, IV Rannells
A study of essentials in art; definitions, initial concepts, principles, techniques; elementary skills through practice in design, drawing, lettering. Forms of art; analysis and interpretation on an elementary level. Bibliographies and teaching materials. For students in elementary education. Lectures, six studio hours and weekly problems. Not open to students who have had Art 30a.

10b PUBLIC SCHOOL ART. (3) I, II, III, IV Haines
Application of art essentials to class room activities in preparation for teaching art in the elementary grades. Units in art: design, color, drawing, lettering, etc. Units in collaboration with other studies: posters, charts, programs, etc. Exploration of materials, tools, processes. Bibliographies and teaching materials. For students in elementary education. Given in the University Training School. Lectures, six studio hours and weekly problems. **Prerequisite: 10a.**

157 ART IN SECONDARY SCHOOLS. (4) IV Rannells
Art for teachers in the secondary schools. Problems of definition and interpretation; evaluation of visual training; the correlation of art with other subjects. Sources for art; original works, facsimile reproductions, art literature, etc. Lectures, conferences, reports.

BACTERIOLOGY

Professors Scherago, Weaver and Maxwell; Assistant Professor Thornton; and Dr. Hamann, Mr. Harrison, Mr. Munoz, Miss Moran, Mr. Arnold, Mr. Roetter, Miss Gable, Miss Aulick, Miss Friedman, and Miss Bostetter

The Department of Bacteriology affords opportunity for students to gain the A.B. or B.S. degree with bacteriology as a major, and also provides a course in Medical Technology. (See p. 58.) The course in Medical Technology is a prescribed course throughout and leads to the degree of Bachelor of Science in Medical Technology. This course is designed to prepare men and women for positions in hospital laboratories, physicians' and surgeons' clinics, and federal, state, and municipal public health laboratories, and to fit the especially adapted student for either commercial or research laboratory work in bacteriology. It also meets all the requirements of the United States Civil Service Commission for the rank of Junior Bacteriologist.

The University of Kentucky, in affiliation with the Good Samaritan Hospital, is registered, through the Department of Bacteriology, as an approved school for the training of medical technologists by the Board of Registry of the American Society of Clinical Pathologists, and by the Council on Medical Education and Hospitals of the American Medical Association.

Graduates of this course who may desire to enter medical school will have all the requirements of the American Medical Association and the Association of American Medical Colleges for entrances to all Class A medical schools, provided they take two years of foreign language.

Course 52 or 102 may be taken to fulfill the requirement of students in the College of Agriculture and Home Economics, and by premedical students. Courses 2a and 2b are recommended for students desiring to major in bacteriology and for those taking bacteriology to fulfill the biological science group requirement.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Biological Sciences during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: Chemistry 1a, b; Bact. 2b or 52 and 104. **Required:** Three quarter hours in Seminar and a minimum of 20 additional quarter hours of advanced work in Bacteriology, including Bact. 125a and b.

*2a **ELEMENTARY MICROBIOLOGY. (6) I, II, IV** Weaver and Hamann
A study of the fundamental nature of bacteria and other micro-organisms, special attention being given to morphology. This course is recommended for Bacteriology majors and for those taking Bacteriology to fulfill a biological science requirement, and should be followed by 2b. **No prerequisites.** Lectures and recitations, three hours; laboratory, six hours a week.

*2b **ELEMENTARY MICROBIOLOGY. (6) II, III, IV** Weaver and Hamann
Continuation of Course 2a. A cultural study of bacteria. Microbial physiology. A discussion of the relationship of micro-organisms to soil fertility, foods, industrial fermentations, disease, etc. Lectures and recitations, three hours; laboratory six hours a week. **Prerequisite: Bacteriology 2a.**

*6a, b **BACTERIOLOGY AND PATHOLOGY FOR NURSES.**
(4), (4) II, III, IV Scherago and Thornton
A study of the characteristics and habits of micro-organisms and of their relation to medicine, surgery, and public health. The causes of disease, the nature of disease processes, the securing and preserving of specimens for the laboratory. Lecture, two hours a week; laboratory, four hours a week for each course.

52 **PRINCIPLES OF BACTERIOLOGY. (6) I, II, III** Scherago and others
An alternative course for students who do not have the prerequisites for 102. Lectures and recitations three hours, laboratory, six hours a week. **Prerequisite or concurrent: Chem. 1b.**

56a **BACTERIOLOGY OF FOODS. (For Sophomores.)**
(4) I, IV Weaver and Hamann
Relation of micro-organisms to food production and handling; food preservation. Microbiology of fermentation products, canned foods, eggs, tomato products, meat and meat products, fish and shellfish, etc. Standard methods of bacterial analysis as used in official food and public health laboratories. Food poisoning. Lectures and recitations, two hours; laboratory, four hours a week. **Prerequisites: Bacteriology 52 or 102; or 2b and Chem. 1b.**

56b **BACTERIOLOGY OF FOODS. (For Sophomores.)**
(4) II, IV Weaver and Hamann
Microbiology of milk and milk products. Standard methods of bacterial analysis as used in official food and public health laboratories. Lectures and recitations, two hours; laboratory, four hours a week. **Prerequisites: Bacteriology 52 or 102; or 2b and Chem. 1b.**

57a **BACTERIOLOGY OF WATER AND SEWAGE. (For Sophomores.)**
(4) III, IV Weaver and Hamann
Microflora of water; importance of colon-typhoid group in water; standard methods of water analysis and interpretation of results; water purification; bacteriology of sewage disposal; swimming pools, bacterial examination, purification, control, etc. Water purification plants, sewage disposal plants and swimming pools will be visited and studied. Lectures and recitations, two hours; laboratory, four hours a week. **Prerequisites: Bacteriology 102 or 52; or 2b and Chemistry 1b.**

57b **BACTERIOLOGY OF WATER AND SEWAGE. (2) III, IV**
A course in the bacteriological analysis of water and sewage to supplement Course 57a. Microscopical examination of water. Tests necessary for the operation of water works and sewage treatment plants. B.O.D. test, etc. Laboratory, four hours a week. **Prerequisite: Preceded or accompanied by Bacteriology 57a.**

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* Open to Freshmen.

Courses open only to Upper Division and Graduate Students

102 GENERAL BACTERIOLOGY. (6) I, II, III, IV Scherago and others
Observation and cultivation of bacteria and related micro-organisms; study of their morphology, classification, physiology, relation to certain fermentations, to food, to soil fertility and to disease. Lectures and recitations, three hours; laboratory, six hours a week. **Prerequisite: Chemistry 1b.**

103 PATHOGENIC BACTERIOLOGY. (6) I, IV Scherago and Thornton
A study of human and animal pathogenic micro-organisms, especially their morphological, cultural and pathogenic properties. Lectures and recitations, three hours; laboratory, six hours a week. **Prerequisites: Bacteriology 102 or 52; or 2b and Chemistry 1b.**

104 APPLIED BACTERIOLOGY. (3) I, II, III, IV Weaver and Thornton
A course in bacteriological analysis to supplement Courses 52 and 102. Laboratory six hours a week. **Prerequisites: Bacteriology 102 or 52; or 2b and Chemistry 1b.**

110a LABORATORY DIAGNOSIS. (3) I, IV Thornton or Hamann
Laboratory methods employed in diagnostic and public health laboratories. Designed primarily for medical technology students. Examination of sputum and urine. Laboratory, six hours a week. **Prerequisite: preceded or accompanied by Bacteriology 103.**

110b LABORATORY DIAGNOSIS. (3) II, IV Thornton or Hamann
Continuation of 110a. Examination of stomach and intestinal contents and blood. Laboratory, six hours a week. **Prerequisite: same as for 110a.**

110c LABORATORY DIAGNOSIS. (3) III, IV Thornton or Hamann
Continuation of 110b. Laboratory diagnosis of parasitism; laboratory methods used in diagnosis of gonorrhea, typhoid fever, diphtheria, syphilis, etc. Laboratory, six hours a week. **Prerequisite: preceded or accompanied by Bacteriology 125b.**

111 GENERAL PATHOLOGY. (6) III Maxwell, Scherago, Hamann
The effects of disease on the organs and tissues of the human body will be studied at autopsies and by the examination of fresh and museum specimens as well as histological sections. Degenerations, infiltrations, regenerations, inflammations, disturbances of the circulation, infectious granulomata, neoplasms, etc., will be studied. Lectures and recitations, three hours; laboratory six hours a week. **Prerequisites: Anatomy and Physiology 1a-b; Zoology 7c, 101b, and 106; Bacteriology 103, and consent of head of department.**

115a-f INDEPENDENT WORK. (4) I, II, III, IV Staff
Students will be assigned special problems in laboratory work and reference reading. Laboratory, eight hours a week. **Prerequisite: any bacteriology course above 102.**

†120a HOSPITAL LABORATORY PRACTICE. (6) I, II, III, IV Maxwell, Harrison, others
Students will be required to carry out, under supervision, the laboratory work in one of the hospitals in Lexington. Laboratory, eighteen hours a week. **Prerequisites: Bacteriology 110a, b and c; consent of head of department.**

†120b HOSPITAL LABORATORY PRACTICE. (4) I, II, III, IV Maxwell, Harrison, others
Continuation of 120a. Laboratory, twelve hours a week. **Prerequisites: same as for 120a.**

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† Credit for the third quarter of hospital practice will be allowed only after the student has passed the examination of the Board of Registry of the American Society of Clinical Pathologists.

†120c **HOSPITAL LABORATORY PRACTICE.**
(5) I, II, III, IV Maxwell, Harrison, others
Continuation of 120b. Laboratory, fifteen hours a week. **Prerequisites: same as for 120a.**

125a **IMMUNOLOGY AND SEROLOGY. (5) I, IV** Scherago and Thornton
The theories and mechanism of infection and immunity; the preparation, standardization and uses of vaccines, toxins, antibodies and other biological products related to the diagnosis, prevention and treatment of specific infectious diseases; agglutination; complement fixation, etc. Lectures and recitations, two hours a week; laboratory, six hours a week. **Prerequisite: Bacteriology 103.**

125b **IMMUNOLOGY AND SEROLOGY. (3) III, IV** Scherago and Thornton
Continuation of 125a. Antigenic analysis; serology of syphilis; hypersensitiveness. Lectures one hour a week; laboratory, four hours a week. **Prerequisite: Bacteriology 125a.**

150a-f **SEMINAR. (1) I, II, III** Staff
Review of current literature in bacteriology; presentation of papers on work in progress in the department or on assigned topics; reports on meetings of national bacteriological societies. Required of all seniors. Two hours a week.

Courses open only to Graduate Students

201a-f **RESEARCH IN BACTERIOLOGY.**
(5) I, II, III, IV Senior Staff
Laboratory, ten hours a week.

203a **PUBLIC HEALTH BACTERIOLOGY. (5) IV** Scherago and others
This course considers the public health aspects of bacteriology including the etiology, epidemiology, immunology, and laboratory diagnosis of infectious diseases; the bacteriology of air, water and sewage; food poisoning; the production, standardization and practical applications of biological products used in the diagnosis, treatment and prevention of infectious diseases; the standardization of disinfectants. Lectures and recitations, two hours; laboratory, six hours a week. **Prerequisites: open only to physicians and health officers or those with equivalent training.**

203b **PUBLIC HEALTH BACTERIOLOGY. (5) III, IV** Scherago and others
Continuation of Course 203a. Lectures and recitations, two hours; laboratory, six hours a week. **Prerequisite: Bacteriology 203a.**

206a **BACTERIOLOGY OF FOODS. (4) I, IV** Weaver and Hamann
Relation of micro-organisms to food production and handling; food preservation. Microbiology of fermentation products, canned foods, eggs, tomato products, meat and meat products, fish and shellfish, etc. Standard methods of bacterial analysis as used in official food and public health laboratories. Food poisoning. Lectures and recitations, two hours; laboratory, four hours a week. **Prerequisites: Bacteriology 2b or 52; Chemistry 21b.**

206b **BACTERIOLOGY OF FOODS. (4) II, IV** Weaver and Hamann
Microbiology of milk and milk products. Standard methods of bacterial analysis as used in official food and public health laboratories. Lectures and recitations, two hours; laboratory, four hours a week. **Prerequisites: Bacteriology 2b or 52 or 102; Chemistry 21b.**

† See note at bottom of page 148.

207 BACTERIOLOGY OF WATER AND SEWAGE.
(6) III, IV Weaver and Hamann
The microflora of water; importance of the colon-typhoid group of bacteria in water; methods of water analysis and interpretation of results; special media used in isolating and identifying the colon-typhoid group of bacteria; methods of water purification; microflora of sewage; methods of sewage analysis; methods of sewage disposal; bacteriological study of swimming pools, methods of analysis; effect of treatment on bacteriological content, regulations concerning swimming pools. Water purification plants, sewage disposal plants and swimming pools will be visited and studied. Lectures and recitations, two hours a week; laboratory, eight hours a week. **Prerequisites: Bacteriology 2b, or 52, or 102; Chemistry 21b.**

250a-f SEMINAR. (1) I, II, III Staff
Review of current literature in bacteriology; presentation of papers on work in progress in the department or on assigned topics; reports on meetings of national bacteriological societies. Required of all graduate students. Two hours a week.

BOTANY

Professors Riley and McFarland, and Associate Professor McInteer

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years**

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Biological Sciences during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: Botany 1a and 1b or 8a, 8b and 9. **Required:** A minimum of 30 quarter hours of advanced work in Botany and the passing of a comprehensive examination covering chiefly the fields of morphology, taxonomy and physiology.

***1a GENERAL BOTANY. (4) I, II, III** Riley, McFarland and Assistants
Plant cells and tissues; the structure and functions of the vegetative organs of the seed plant.

***1b GENERAL BOTANY. (4) II, III** Riley, McFarland and Assistants
The structure, reproduction and life cycles of typical representatives of the lower plants; reproduction and life cycles of the seed plant. **Prerequisite: Botany 1a.**

***1c GENERAL BOTANY. (4) III** Riley
An introduction to taxonomy, ecology and heredity in the higher plants. **Prerequisite: Botany 1b.**

6 PLANT MICROTECHNIC. (5) III Riley
The principal methods used in the preparation of permanent slides for the compound microscope. **Prerequisites: Botany 1b or 8a and 8b.**

***8a INTRODUCTION TO BOTANY. (4) I, II, III** Staff
A lecture-demonstration course dealing with cell structure, plant physiology, and the nature and functions of roots, stems, and leaves. Four 1-hour class periods per week.

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* Open to Freshmen.

*8b **INTRODUCTION TO BOTANY. (4) I, II, III** Staff
A continuation of 8a in which a survey of the plant groups is made by a detailed study of representative species as to structure and methods in reproduction. Four 1-hour class periods per week. No prerequisite.

9 **ELEMENTARY LABORATORY. (3) III** Staff
Laboratory work in General Botany to supplement Botany 8a and 8b Open only to students who have passed 8a and 8b.

15 **LOCAL FLORA (SYSTEMATIC BOTANY). (5) III** McFarland
A laboratory course dealing with the identification of unknown flowers and ferns. The use of manuals and methods of making an herbarium are taken up for study. The various systems of classification are taken up in detailed study, as well as the laws of nomenclature. **Prerequisite: Botany 1b.**

19 **DENDROLOGY. (3) I, III** McFarland
This is primarily a field course in which the student is taught the fundamental principles of identification of trees, as well as how to recognize the various trees by their leaf, bark and bud characters. Both summer and winter condition of trees will be studied. **Prerequisite: Botany 1b.**

Courses open only to Upper Division and Graduate Students

103a **PLANT PHYSIOLOGY. (4) II** McInteer
The principles which underlie the movement of materials in plants, covering absorption, translocation, and transpiration. **Prerequisite: 8 quarter hours in Botany.**

103b **PLANT PHYSIOLOGY. (4) III** McInteer
A continuation of 103a, covering the chemical processes and organic materials within the plant. **Prerequisite: 103a.**

104 **GENERAL CYTOLOGY. (4) I** Riley
Structure of plant and animal cells; cell division; gametogenesis. sporogenesis, fertilization and apomixis. **Prerequisites: Botany 1b, or 8a and 8b or Zoology 1a and 1b.**

106a-d **SPECIAL PROBLEM. (5) I, II, III** Staff
Independent work in some phase of advanced botany. **Prerequisite: 27 quarter hours of advanced courses in Botany.**

107 **MORPHOLOGY OF ALGAE. (4) I** McInteer
The economic value of algae and the structure and life histories of representative forms of the various groups. **Prerequisite: 8 quarter hours of Botany.**

115a-c **SEMINAR. (1) I, II, III** Staff
Assigned readings and reports on special topics. Required of all botany majors.

124 **ANATOMY OF VASCULAR PLANTS. (4) II** Riley
The nature and origin of primary and secondary tissues and their distribution in plant organs; the detailed structure of some plants of economic importance. **Prerequisites: Botany 1b, or 8a and 8b.**

125a **MORPHOLOGY OF THE FUNGI. (4) I** McFarland
A comprehensive study of the many typical forms of the Myxomycetes and Phycomycetes; their structure, methods of reproduction and classification are studied in detail. **Prerequisite: Botany 1b.**

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* Open to Freshmen.

125b **MORPHOLOGY OF THE FUNGI. (4) II** McFarland
A continuation of course 125a in which the student will study in detail the structure, reproduction and classification of the Ascomycetes. **Prerequisite: Botany 125a.**

125c **MORPHOLOGY OF THE FUNGI. (4) III** McFarland
A comprehensive study of the Basidiomycetes as to structure, reproduction and classification. During this term the student will study the Fungi Imperfecti and the principles involved in isolation of fungi and their culture and identification. **Prerequisite: Botany 125b.**

134 **CYTO-GENETICS. (4) III** Riley
The importance of chromosomes in evolution and speciation. **Prerequisites: Botany 1b, or 8a and 8b; Animal Industry 61 or 161, or Botany 1c.**

150a-b **ADVANCED SYSTEMATIC BOTANY. (5) I, II, III** McFarland
For those students who have completed Botany 15 or its equivalent and who wish to continue with identification. The student will be expected to identify many more and more difficult specimens than in Botany 15. A comprehensive survey of the different methods of classification will be required of each student. **Prerequisite: Botany 15 or its equivalent.**

Courses open only to Graduate Students

206a-b **RESEARCH IN MORPHOLOGY. (5)** Riley
Graduate students will be assigned to problems in morphology, morphogenesis, cytology, or cyto-genetics.

207a-b **RESEARCH IN MYCOLOGY. (5) I** McFarland
Those desiring to carry on investigations in mycology should have had Botany 125c or the equivalent. Suitable work will be suggested to students desiring to enter this field.

213a-c **RESEARCH IN SYSTEMATIC BOTANY. (5) I, II, III** McFarland
Any student who has shown ability and initiative in Botany 150a and b or its equivalent and who is working on an advanced degree may be assigned to this course. The student may elect to work on the flora of the county in which he lives or on some local region or he may be assigned to work up some order or family of plants. A student may elect this course in the preparation of his collection which is to be incorporated in his thesis. **Prerequisite: Botany 150b.**

Note.—Other courses such as ecology (114), and mycology (126a, b) will be given in alternate years or if there is sufficient demand.

CHEMISTRY

Professors Quill, Barkenbus, Bedford, and Stewart; Assistant Professor Mitchell; Dr. Astle, Dr. Grillot, Dr. Wender; and Assistants.

The Department of Chemistry provides an opportunity for students to gain a Bachelor's degree with Chemistry as a major and a Bachelor of Science in Industrial Chemistry degree. The curriculum in Industrial Chemistry is a prescribed course, the purpose of which is to train persons who desire to follow Chemistry as a profession in the chemical industries or to pursue advanced training

in graduate schools. For those persons who are desirous of combining training in Chemistry (a) with library techniques to become librarians in the scientific libraries, (b) with commerce subjects to become technical salesmen or secretaries for scientific or industrial laboratories, (c) with home economics subjects to obtain a background for work in the field of foods, textiles, etc., or (d) with other combinations, an opportunity to develop such programs is afforded under the Topical Field offered by the College of Arts and Sciences.

LOWER DIVISION REQUIREMENTS—**Freshmen and Sophomore years.**

For a major in chemistry the lower division requirements for the College of Arts and Sciences must be fulfilled.

Upper Division Requirements—Junior and Senior Years.

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of physical sciences during the junior and senior years, including the major work.

Requirements for a major. Prerequisites 1a, 1b, 20, 21a, 21b, 21c, Mathematics through the calculus. **Required:** 130a, 130b, 130c, 140a, 140b, 140c, 110a, 110b, 111, 133, 188a, 188b, and 16 quarter hours to be chosen from the field of physical science.

*1a **GENERAL CHEMISTRY.**
(5) I, II, III, IV Quill, Mitchell, Grillot, and Wender
Chemistry of the non-metallic elements, and the metals. Lecture 2 hours; recitations, 1 hour; laboratory, 4 hours.

*1b **GENERAL CHEMISTRY.**
(5) I, II, III Quill, Mitchell, Grillot and Wender
Continuation of 1a. Lecture, 2 hours; recitation, 1 hour; laboratory, 4 hours. **Prerequisite: Chemistry 1a.**

*2a **GENERAL CHEMISTRY FOR ENGINEERS.**
(5) I, II, III Quill, Mitchell, Grillot and Wender
Lecture, 2 hours; recitation, 1 hour; laboratory, 4 hours.

*2b **GENERAL CHEMISTRY FOR ENGINEERS.**
(5) I, II, III Quill, Mitchell, Grillot and Wender
Lecture, 2 hours; recitation, 1 hour; laboratory, 4 hours. **Prerequisite: Chemistry 2a.**

3a **CHEMISTRY FOR NURSES. (4) I, III** Wender
This course deals with those general principles of chemistry, inorganic, organic and physiological, which give the necessary foundation for practical work in nutrition, materia medica and other subjects more or less dependent on a basis of chemical training. Lecture, 1 hour; recitation, 1 hour; laboratory, 4 hours.

3b **CHEMISTRY FOR NURSES. (4) II, IV** Wender
Continuation of 3a. **Prerequisite: 3a**

*20 **QUALITATIVE ANALYSIS. (6) I, II, III, IV**
Lecture, 3 hours; laboratory, 6 hours. **Prerequisite: Chemistry 1b or 2b.**

21a **QUANTITATIVE ANALYSIS. (4) I, II, III, IV** Stewart
A laboratory course accompanied by lectures and classroom exercises. Gravimetric and volumetric methods of analysis are studied in detail. Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: Chemistry 20.**

* Open to Freshmen.

21b QUANTITATIVE ANALYSIS. (4) I, II, III, IV Stewart
A continuation of 21a Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: 21a.**

21c QUANTITATIVE ANALYSIS. (5) III Stewart
A continuation of 21b. Lecture, 1 hour; laboratory, 8 hours. **Prerequisite: 21b.**

30a ORGANIC CHEMISTRY. (5) I Barkenbus
Lecture, 3 hours; laboratory, 4 hours. **Prerequisite: Chemistry 1b.**

30b ORGANIC CHEMISTRY. (5) II, IV Barkenbus
Continuation of 30a. **Prerequisite: Chemistry 30a.**

30c ORGANIC CHEMISTRY. (5) III, IV Barkenbus
Continuation of 30b. **Prerequisite: Chemistry 30b.**

31 ORGANIC CHEMISTRY FOR PRE-MEDICAL STUDENTS. (8) II, IV
A special course designed only for students in the pre-medical curriculum. It will cover both aliphatic and cyclic compounds, and will be constructed to meet the minimum requirements for entrance to medical schools under the war program. This is a temporary course and will be given only two times a year. Lecture 4 hours; laboratory, 8 hours. **Prerequisites: Chemistry 1b or 2b.**

37 ORGANIC CHEMISTRY. (6) II, IV
An elementary course for non-professional students. Lecture, 4 hours; laboratory, 4 hours. **Prerequisite: Chemistry 1b or 2b.**

Courses Open Only to Upper Division and Graduate Students

110a ADVANCED INORGANIC CHEMISTRY. (3)
A systematic course in inorganic chemistry with especial emphasis upon the periodic classification, valence, recent developments in this field, the various types of inorganic compounds, their preparation and reactions. The chemistry of the less common elements will also be included. General prerequisites must include acceptable courses in quantitative analysis and organic chemistry. Three lectures and recitations per week.

110b ADVANCED INORGANIC CHEMISTRY. (3)
A continuation of Chemistry 110a. Prerequisite Chemistry 110a. Three lectures and recitations per week.

111 LABORATORY WORK IN INORGANIC CHEMISTRY. (2)
Laboratory experiments will be chosen to illustrate (a) **Inorganic Preparations:** Methods of preparation of pure samples of the different classes of inorganic compounds. (b) **Techniques:** The study of newer and more difficult techniques in the field of inorganic synthesis. The use of liquefied gases, low and high temperature apparatus, high pressure and high vacua apparatus, etc. (c) **Less Common Elements:** The preparation of pure compounds of the less familiar elements using in most cases ores or industrial concentrates as starting materials. Six hours of laboratory. **Prerequisite: Chem. 110a or concurrent registration in Chem. 110a.**

120 ADVANCED QUALITATIVE ANALYSIS. (5)
A more comprehensive course in inorganic qualitative analysis than Chemistry 20. The course will include the separation and detection of the less common elements, and will employ a more rigorous physico-chemical approach to the theory of separation. Three hours of lecture; six hours of laboratory. **Prerequisite: Chem. 140c.**

121 SEMIMICRO QUANTITATIVE ANALYSIS. (3)
A laboratory course devoted to the quantitative analysis of both organic and inorganic substances by the use of semimicro techniques. One hour of lecture; nine hours of laboratory. **Prerequisite: Chem. 20c.**

129a SELECTED PROBLEMS IN QUANTITATIVE ANALYSIS. (3) I, II, III, IV Stewart
Laboratory, 9 hours. Offered upon request. **Prerequisite: Chemistry 20c.**

129b SELECTED PROBLEMS IN QUANTITATIVE ANALYSIS. (2) I, II, III, IV Stewart
Laboratory, 6 hours; offered upon request. **Prerequisite: 129a.**

130a ORGANIC CHEMISTRY. (5) I Barkenbus
A systematic study of organic compounds. Lectures, 3 hours; laboratory, 4 hours. **Prerequisite: Chemistry 1b or 2b.**

130b ORGANIC CHEMISTRY. (5) II, IV Barkenbus
A continuation of 130a. Lectures, 3 hours; laboratory, 4 hours. **Prerequisite: Chemistry 130a or 30a.**

130c ORGANIC CHEMISTRY. (5) III, IV Barkenbus
A continuation of 130b. Lectures, 3 hours; laboratory, 4 hours. **Prerequisite: Chemistry 130b.**

133 QUALITATIVE ORGANIC ANALYSIS. (5) I, III, IV Barkenbus
A systematic study of the separation and identification of organic compounds. Lecture, 1 hour; laboratory, 12 hours. **Prerequisite: Chemistry 130c or 30c.**

136a SYNTHETIC ORGANIC CHEMISTRY. (2) I, II, III, IV Barkenbus
A critical comparison of preparation methods accompanied by laboratory work and reports. Elective. Laboratory, 6 hours. Offered upon request. **Prerequisite: Chemistry 130c or 30c.**

136b SYNTHETIC ORGANIC CHEMISTRY. (3) I, II, III, IV Barkenbus
Continuation of 136a, laboratory, 9 hours. Offered upon request. **Prerequisite: Chemistry 136a.**

140a PHYSICAL CHEMISTRY. (5) I Bedford
Lectures and recitations covering the gaseous, liquid and solid states of matter; phase rule; theory of solutions. Laboratory studies in physical chemistry measurements; thermo-chemistry; chemical equilibria and kinetics; application of law of mass action to electrolytes; electro-chemistry. Lectures and recitations, 4 hours; laboratory, 3 hours. **Prerequisites: Chemistry 20c, Math. 20b; Physics 3a or concurrent.**

140b PHYSICAL CHEMISTRY. (5) II Bedford
A continuation of 140a. Lectures and recitations, 3 hours; laboratory, 6 hours. **Prerequisite: Chemistry 140a.**

140c PHYSICAL CHEMISTRY. (5) III Bedford
A continuation of 140b. Lectures and recitations, 4 hours; laboratory, 3 hours. **Prerequisite: Chemistry 140b.**

141 **INTERMEDIATE PHYSICAL CHEMISTRY.** (4) I Bedford
Intermediate course. Lectures, 4 hours. Offered upon request. **Prerequisite: Chemistry 140c.**

142 **INTERMEDIATE PHYSICAL CHEMISTRY.** (2) I, II Bedford
Intermediate course. Laboratory, 6 hours. Offered upon request. **Prerequisite or concurrent: Chem. 141.**

143a **PHYSICAL CHEMISTRY.** (4) II Bedford
For students in Agriculture and the Biological Sciences. Lectures and recitations, 3 hours; laboratory, 3 hours. Given yearly. **Prerequisites: Chemistry 37, 20b; Physics 1c; Mathematics 17.**

143b **PHYSICAL CHEMISTRY.** (4) III Bedford
Continuation of 143a. **Prerequisite: 143a.**

150a **PHYSIOLOGICAL CHEMISTRY.** (4) I Barkenbus
A study of the chemistry of living processes. Lectures, 2 hours; laboratory, 6 hours. Offered upon request. **Prerequisites: Chemistry 20b, 130c.**

150b **PHYSIOLOGICAL CHEMISTRY.** (4) II Barkenbus
Continuation of Chemistry 150a. Lectures, 2 hours; laboratory, 6 hours. Offered upon request. **Prerequisite: Chemistry 150a.**

150c **PHYSIOLOGICAL CHEMISTRY.** (4) III Barkenbus
Continuation of Chemistry 150b. **Prerequisite: Chemistry 150b.**

160 **INDUSTRIAL CHEMISTRY.** (3) I
A survey of the chemistry of manufacturing processes. Lecture, 3 hours. **Prerequisite: Chemistry 140c.**

161 **INDUSTRIAL CHEMICAL CALCULATIONS.** (4) II Bedford
Lecture and recitations, 4 hours. Given yearly. **Prerequisite: Chemistry 140c.**

181 **CHEMICAL LITERATURE.** (1) II
Training in the use of Chemical Literature. One hour weekly. Given yearly.

183 **ELECTRO CHEMISTRY.** (3) II Bedford
Elementary electro-analysis, electroplating and preparation of some inorganic and organic substance by electrolysis. Laboratory, 9 hours. Offered upon request. **Prerequisites: Chemistry 143b or 140c, 20c, 130c.**

188a-b **UNDERGRADUATE SEMINAR.** (1) Staff
Reports and discussions on recent research and current chemical literature. Required of all seniors. To receive credit, each student must present a minimum of six reports to the student-faculty group. The reports may all be given in one quarter or distributed over two quarters, according to the given assignment. One meeting per week.

Courses open only to Graduate Students

210 **SELECTED TOPICS IN INORGANIC CHEMISTRY.** (3) III Quill
Some topics are: The chemistry of the rare earth elements; radiochemistry; the chemistry of the less common elements, etc.

219 **INORGANIC CHEMISTRY.** (3) I, II, III Quill
Laboratory course on selected topics or research in inorganic chemistry. Laboratory, 9 hours. **Prerequisites: Chemistry 110a-b, 111.** Offered upon request.

229a **QUANTITATIVE ANALYSIS.** (3) I, II, III, IV Stewart
Research. Laboratory, 9 hours. Offered upon request.

229b **QUANTITATIVE ANALYSIS.** (3) I, II, III, IV — Stewart
Continuation of 229a. Laboratory, 9 hours. Offered upon request. **Prerequisite: 229a.**

239a **ORGANIC CHEMISTRY.** (3) I, II, III, IV — Barkenbus
Laboratory, 9 hours. Offered upon request. **Prerequisite: Chemistry 136b.**

239b **ORGANIC CHEMISTRY.** (3) I, II, III, IV — Barkenbus
A continuation of 239a. Laboratory, 9 hours. Offered upon request. **Prerequisite: Chemistry 239a.**

239c **ORGANIC CHEMISTRY.** (3) I, II, III, IV — Barkenbus
A continuation of 239b. Laboratory, 9 hours. Offered upon request. **Prerequisite: Chem. 239b.**

239d **ORGANIC CHEMISTRY.** (3) I, II, III, IV — Barkenbus
A continuation of Chemistry 239c. Laboratory, 9 hours. Offered upon request. **Prerequisite: 239c.**

240a **PHYSICAL CHEMISTRY.** (3) I — Bedford
Lectures, 3 hours. Offered upon request. **Prerequisite: Chemistry 141.**

240b **PHYSICAL CHEMISTRY.** (3) II — Bedford
Continuation of 240a. Lectures, 3 hours. Offered upon request. **Prerequisite: Chemistry 240a.**

249a **PHYSICAL CHEMISTRY.** (3) I, II, III — Bedford
Laboratory course on selected topics, in advanced physical or electrochemistry. Laboratory, 9 hours. Offered upon request. **Prerequisite or concurrent: Chemistry 240a.**

249b **PHYSICAL CHEMISTRY.** (3) I, II, III — Bedford
Continuation of Chemistry 249a. Laboratory, 9 hours. Offered upon request. **Prerequisite or concurrent: Chemistry 240a, 249a.**

288a-f **GRADUATE SEMINAR.** (1) I, II, III — Staff
Reports and discussions on recent research and current literature. Required of all graduate students. Given yearly.

ECONOMICS

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Social Studies during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: Two courses in Economics, including Economics 1. **Required:** A minimum of 28 quarter hours of advanced work in Economics, including Course 9, if not taken as a prerequisite, and Economics 102 or 130, 104 or 124, and 105; the remainder of credits to be selected from the Arts and Sciences list of Economics courses numbered above 100. In addition tutorial courses 16a, b must be taken in the senior year to prepare for the required comprehensive examination.

List of Courses. The courses that may be used to satisfy the above requirements are listed and described under Commerce, p. 297, and include the following: 1—Principles of Economics; *2—Economic History of Europe; *3—Economic History of the United States; *7a—Principles of Accounting; *7b—Principles of Account-

* Open to Freshmen.

ing; *8—Economic Geography; *9—Business Organization; *12—Economic Geography of the Western Hemisphere; 15—Applied Economics; 16a—Tutorial Work in Economics; 16b—Tutorial Work in Economics; 102—Labor Problems; 103—Transportation; 104—Public Finance; 105—Money and Banking; 107—Statistical Methods; 110—Business Cycles; 114—War Economics; 115—Value and Distribution Theory; 121—Economic Geography of the Eastern Hemisphere; 124—State and Local Taxation; 125—Evolution of Economic Institutions; 126—Economics of Public Utilities; 127—International Economic Policies; 130—Labor Legislation; 134—Advanced Economic History of the United States; 142—Index Numbers; 147—American Business Leaders; 148—European Business Leaders; 152—Income and Wealth; 153—The Economics of Consumption; 155—Industrial Relations.

ENGLISH LANGUAGE AND LITERATURE

Professors Dantzler, Farquhar, Knight, Brady, and Gallaway; Associate Professor Fowler;[1] Assistant Professors Sutherland and Ward; Instructors Cutler, Irvine, South, and Eagon;[2] and Mrs. Clay, Miss Shropshire, and Mr. Herndon

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Literature, Philosophy and the Arts during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: English 1a, b, 3a, b. **Required:** A minimum of thirty quarter hours of advanced work in English, including English 100a, b.

English Language and Rhetoric

***1aD ENGLISH COMPOSITION. (5) I, II** Staff
This course is designed especially for students in the lowest two deciles.

***1bD ENGLISH COMPOSITION. (5) III** Staff
A continuation of English 1aD.

***1a ENGLISH COMPOSITION. (5) I, II, III, IV** Staff
Practice in writing correct and clear English. Accuracy of expression is desired rather than proficiency in style. A text book will be used, but the instruction will also be based upon the study of representative English masterpieces. Required of all freshmen.

***1b ENGLISH COMPOSITION. (5) I, II, III, IV** Staff
A continuation of English 1a.

2a ADVANCED COMPOSITION. (3) I Knight
An advanced course for those who wish to continue writing. Emphasis upon clear thinking and writing. Devoted exclusively to expository writing including such variants as satire and parody. **Prerequisites: English 1a, 1b.**

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* Open to Freshmen.
[1] On leave 1944-45.
[2] Resigned January 1, 1944.

2b THE SHORT STORY. (3) II Knight
Primarily a course in composition, not in the history of the short story form, although such matter is introduced. Short stories are read and analyzed; one long short story is written. **Prerequisites: English 1a, 1b.**

30 BUSINESS ENGLISH. (3) I, II, III
Primarily for sophomores in the College of Commerce; admission of others by consent of the instructor. A study of forms of business correspondence and practice in writing such. **Prerequisites: English 1a and 1b.**

Courses open only to Upper Division and Graduate Students

102 HISTORY OF THE ENGLISH LANGUAGE. (5) II Dantzler
A survey of the development of the language, based upon a text; other readings upon various phases of language development. **Prerequisites: English 1a, 1b; 3a, 3b.**

125 PRONUNCIATION OF MODERN ENGLISH. (5) III Dantzler
A study of present day pronunciation; dialectical peculiarities. Students will become proficient in using a phonetic alphabet. **Prerequisites: English 1a, 1b; 3a, 3b.**

English Literature

3a HISTORY OF ENGLISH LITERATURE. (5) I, II, III, IV Staff
This is not a chronological survey of English literature, but a study of representative authors beginning with Chaucer and extending to contemporary writers. The selections may vary from year to year. Required of English majors during the sophomore year. **Prerequisites: English 1a, 1b.**

3b HISTORY OF ENGLISH LITERATURE. (5) I, II, III, IV Staff
A continuation of English 3a. **Prerequisites: English 1a, 1b; 3a.**

Courses open only to Upper Division and Graduate Students

100a SENIOR REVIEW OF ENGLISH LITERATURE. (5) I Staff
An advanced course for senior majors in English; the approach will be historical; it is designed not only to give the student a knowledge of the continuity of English literature, but also to integrate ideas presented to him during his college career; it will serve as a basis for review, correlation and extension of the student's curriculum. Required of all English majors. **Prerequisites: English 1a, 1b; 3a, 3b.** Nine quarter hours in advanced courses in English.

100b SENIOR REVIEW OF ENGLISH LITERATURE. (5) II
A continuation of English 100a. Required of all English majors.

106a ENGLISH ROMANTIC POETRY. (5) I Brady
A careful study of growing signs of Romanticism in the early part of the 18th century. The French Revolution and its influence on the chief poets of the Romantic Movement; special emphasis on Wordsworth, Byron, Shelley, Keats, and other prominent poets of the first quarter of the 19th century. **Prerequisites: English 1a, 1b; 3a, 3b.**

106b ENGLISH ROMANTIC PROSE. (5) II Brady
This course is designed to continue the study of ideas developed in English 106a as revealed in Rousseau, Godwin, Coleridge, Hazlitt, Lamb, DeQuincey, the Gothic romance, and Scott. **Prerequisites: English 1a, 1b; 3a, 3b.**

107a VICTORIAN POETS. (5) II, IV Brady
An extensive study of the ideas of the chief poets of the Victorian era, with special emphasis on the works of Tennyson, Browning, Arnold, Swinburne, and Rossetti. **Prerequisite: English 1a, 1b; 3a, 3b.**

107b VICTORIAN PROSE. (5) III Brady
A study of Carlyle, Ruskin, Newman, Spencer, Arnold, Huxley, and related writers of the period in the field of prose. Special emphasis is placed on Carlyle's **Sartor Resartus,** Newman's **Idea of a University,** and **Apologia Pro Vita Sua. Prerequisites: English 1a, 1b; 3a, 3b.**

108a PRINCIPLES OF LITERARY CRITICISM. (5) I, IV Farquhar
The course attempts to show criticism as a growth and development in an historical survey and to give a corpus of opinion about literature. **Prerequisites: English 1a, 1b; 3a, 3b.**

108b PRINCIPLES OF LITERARY CRITICISM. (5) II Farquhar
A continuation of English 108a, which is not prerequsite although desirable. **Prerequisites: English 1a, 1b; 3a, 3b.**

109 PRE-SHAKESPEAREAN DRAMA. (5) III Farquhar
An historical course in English dramatic origins; a study of the works of Lyly, Kyd, Greene, Peele, Johnson, and Marlowe. **Prerequisites: English 1a, 1b; 3a, 3b.**

110a SHAKESPEARE—COMEDY. (5) I Farquhar
Shakespeare's comedies will be studied in detail. **Prerequisites: English 1a, 1b; 3a, 3b.**

110b SHAKESPEARE—TRAGEDY. (5) II Farquhar
A continuation of English 110a, which is not prerequisite, although desirable. **Prerequisites: English 1a, 1b; 3a, 3b.**

111 THE VICTORIAN NOVEL IN ENGLAND. (5) III, IV Knight
A study of the Victorian novel to and including Thomas Hardy. Eleven novels are read. **Prerequisites: English 1a, 1b; 3a, 3b.**

116 THE CONTEMPORARY DRAMA. (5) III Farquhar
A course designed to show the development and tendencies in Continental, British, and American dramatic literature, 1850 to 1918. **Prerequisites: English 1a, 1b; 3a, 3b.**

123a AMERICAN LITERATURE BEFORE 1830. (5) I Knight
A survey intended to show the development of American life, thought, and letters up to the Transcendental movement. Emphasis upon Edwards, Paine, Franklin, Irving, Cooper, Bryant. **Prerequisites: 1a, 1b; 3a, 3b.**

123b AMERICAN LITERATURE AFTER 1830. (5) II, IV Knight
A continuation of 123a, which is not prerequisite. Beginning with the Transcendentalists, it studies the triumphant years of American romanticism, with especial attention to Emerson, Thoreau, Hawthorne, Melville, Poe, and Whitman. **Prerequisites: English 1a, 1b; 3a, 3b.**

124 **THE RENAISSANCE. (5) I** Dantzler
A study of the literature of the Elizabethan period exclusive of the drama. Foreign sources of the English Renaissance. The sonnet from its origin to its development in Spenser. The pastoral from Theocritus to Spenser. Utopian literature from Plato to More. **Prerequisites: English 1a, 1b; 3a, 3b.**

127a **LITERATURE OF THE BIBLE. (5) II** Farquhar
A literary study of the Bible by books. The purpose of the course is to develop an appreciation of literature because of the demand that literature identify itself with the highest thought and feeling. **Prerequisites: English 1a, 1b; 3a, 3b.**

127b **LITERATURE OF THE BIBLE. (5) III** Farquhar
A continuation of English 127a, which is not prerequisite, although desirable. **Prerequisites: English 1a, 1b; 3a, 3b.**

130a **COMPARATIVE LITERATURE. (5) II** Brady
Extensive reading of literary masterpieces from Homer to the present day. A study of traditions of civilization as reflected in literary movements. The readings are assigned in English translations, but a reading knowledge of at least one foreign language is desirable. **Prerequisites: English 1a, 1b; 3a, 3b.**

130b **COMPARATIVE LITERATURE. (5) III, IV** Brady
A continuation of English 130a, which is not prerequisite, although desirable. **Prerequisites: English 1a, 1b; 3a, 3b.**

131a-d **INDEPENDENT WORK. (3) I, II, III, IV** Staff
A course for juniors and seniors of exceptional scholastic standing. Each student pursues a course independently. He writes a paper embodying the results of this study and submits to an examination by the staff of the Department. **Prerequisites: English 1a, 1b; 3a, 3b.**

133 **THE DEVELOPMENT OF AMERICAN REALISM. (5) III** Knight
The course traces the progress of American realism from Yankee and pioneer humorists through the local color school, the leading novelists of the eighties and nineties, their contemporaries in drama and poetry, to the writers of today. Especial attention is given to the social and economic conditions which motivated this literature. **Prerequisites: English 1a, 1b; 3a, 3b.**

147 **AGE OF JOHNSON. (5) I, IV** Gallaway
From the death of Pope to 1798. Johnson and his circle: Burke, Goldsmith, Gray, Walpole, Cowper. The pre-romantic movement. **Prerequisites: English 1a, 1b; 3a, 3b.**

152 **AGE OF POPE. (5) III** Gallaway
Addison and Steele, Swift, Pope, and Defoe. **Prerequisites: English 1a, 1b; 3a, 3b.**

153 **RESTORATION—EIGHTEENTH CENTURY DRAMA. (5) III** Gallaway
A study of the dramatic types that arose between the closing of the theatres in 1642 and the death of Sheridan. **Prerequisites: English 1a, 1b; 3a, 3b.**

155a **CONTEMPORARY AMERICAN POETRY. (5) I** Farquhar
An examination of the forces which have created modern poetry in England and America since 1900. The course is historical, tracing literary and esthetic movements displayed in matter and style.

155b CONTEMPORARY BRITISH POETRY. (5) II Farquhar
A continuation of English 155a. **Prerequisites: English 1a, 1b; 3a, 3b.**

170a BACKGROUNDS OF MODERN LITERATURE. (5) I, II Gallaway
A study of the relations between modern philosophic, psychological, and social thought, and literature. The European novel will be used as a focus for study. Naturalism, symbolism, impressionism, humanism, expressionism, stream of consciousness, and surrealism will be evaluated. Mann, Proust, Romains, Yeats, Huxley, Lawrence, Joyce, and others. **Prerequisites: English 1a, 1b; 3a, 3b.**

170b BACKGROUNDS OF MODERN LITERATURE. (5) II Gallaway
A continuation of English 170a. **Prerequisites: English 1a, 1b; 3a, 3b.**

Courses open only to Graduate Students

210 SEMINAR. (5) I, II, III, IV Brady
Bibliographical studies. This course is required of all candidates for the M.A. degree. It should be taken at the beginning of graduate work.

213a-d SEMINAR. (5) I, II, III, IV Gallaway
Studies in Eighteenth Century Literature. Johnson and his circle, Swift, the Romantic Revolt, or the foreign relations of English literature in the eighteenth century will be chosen for extensive investigations according to the needs of the students in the group.

216a SEMINAR (American Literature, 1890-1900) Knight
A study of the literature of the nineties, with emphasis upon the battle over realism, the loss of early national optimism, the resistance to naturalism, and the development of a genuine American literature.

Other seminars for graduate students, as Old English, Victorian Literature, Cultural Studies in Criticism, Contemporary American Literature will be offered from time to time as they may be requested.

Public Speaking

***6 THE ESSENTIALS OF SPEECH. (3) I, II, III** Sutherland
This course is designed to give the student platform experience in the fundamentals of effective public address. Emphasis will be placed upon correct enunciation, correction of speech defects and other requisite aspects of delivery of the various types of informal address. The material will be commensurate with the interests of freshmen. **For freshmen only.**

7a ELEMENTS OF PUBLIC SPEAKING. (5) I, IV Sutherland
This course is designed to give the student experience in effective extempore public speaking. Critical studies of contemporary educational, political, social, and economic institutions and problems are read to create a fund of knowledge as a basis for argument and discussion. **Prerequisites: English 1a, 1b.**

7b ELEMENTS OF PUBLIC SPEAKING. (5) II Sutherland
A continuation of English 7a, which is not prerequisite, although desirable. **Prerequisites: English 1a, 1b.**

10a PUBLIC SPEAKING. (3) I, II, III Sutherland
A course for students in the College of Engineering. The course is designed to give the student experience in effective extempore speaking. The reading in the course is much on the same level as in English 7a. **Prerequisites: English 1a, 1b.**

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* Open to Freshmen.

10b PUBLIC SPEAKING. (3) II, III Sutherland
A continuation of English 10a. Reading, informal discussion, and argument.

11a ARGUMENTATION AND DEBATE. (5) I Sutherland
This course is organized to familiarize the student with the classics of argumentative technique and to provide him with the opportunity to exercise his skill in making logical construction, logical defenses or refutations of social, political and economic phases of life. **Prerequisites: English 1a, 1b.**

11b ARGUMENTATION AND DEBATE. (5) II Sutherland
A continuation of English 11a, which is not prerequisite, although desirable.

12a DEBATE PRACTICE. (3) I, III Sutherland
The forming of a debating squad which will devote its time to preparation for the intercollegiate debates which take place in the spring. The representatives of the University in the intercollegiate debates will be chosen from this squad.

15a ORATORY. (3) I Sutherland
The work in this course is devoted to advanced extempore speaking and to the study of the art of formal address. **Prerequisites: English 7a, 7b, or 10a, 10b.**

15b ORATORY. (3) II Sutherland
A continuation of English 15a, which is not prerequisite, although desirable. **Prerequisites: English 7a, 7b, or 10a, 10b.**

20 SPEECH TRAINING. (5) III, IV Sutherland
This course is designed to meet the needs of high school teachers of speech. Problems of classroom and contest work in public speaking, debate, and oral interpretation will be discussed for the purposes of formal training procedure. Principally for teachers. **Prerequisites: English 1a, 1b.**

Dramatic Arts

32 VOICE DEVELOPMENT. (5) I Eagon
This course is designed especially for those students interested in speech and dramatics. It attempts to establish good habits of speech through analyzing each student's voice and articulations and to point out methods of correcting speech faults. Exercises for flexibility, range, relief from tension, and articulation. **Prerequisites: English 1a, 1b.**

33 EXPRESSIVE READING. (5) II Eagon
This is a course in reading which is the logical successor to Voice Development although it may be taken without previous training. Emphasis is placed on the development of flexibility, musical quality, audibility, and clarity in the reading of prose and poetry. The interpretation of logical content, attitude, emotional quality and imaginative quality of literature is studied. A section of the course is devoted to the study and practice of choral reading. Recommended to those who plan to teach English. **Prerequisites: English 1a, 1b.**

***34 HISTORY OF THE STAGE. (3) I** Eagon

This course is designed to give the student a knowledge of dramatic history in relation to the problems of staging. Emphasis is placed on those aspects of the development which are of specific interest to players and directors. The course of the drama is traced upon the background of the existing knowledge of the physical stage of each period studied. Laboratory work is offered to acquaint the student with the present day developments of historic devices and techniques of staging.

***35 STAGECRAFT. (3) II** Eagon

This is a course designed to teach the student the fundamentals of play production. It offers laboratory work which presents the technical problems of construction, painting of scenery, properties, and costuming. It is recommended to prepare the student to meet the problems presented in public school and community theatre staging.

***36 STAGING TECHNIQUES. (3) III** Eagon

This course is a continuation of Stagecraft which is not prerequisite, but desirable. Advanced problems of stage management, stage lighting and equipment, and specific types of modern staging are considered, and practical experience is given the student in the design and execution of the various techniques. The student is given instruction in model-building and experimental stage design.

***37 STAGE PRODUCTIONS IN SCHOOL AND COMMUNITY. (3) IV** Eagon

This course is designed to meet the particular needs of teachers and community theatre workers. It will consider the problems of staging under circumscribed conditions and will discuss minimum essentials of play production and means of constructing or supplying these needs. Individual student problems will be considered in discussing practice of staging.

38 ORAL INTERPRETATION. (5) III Eagon

An advanced course in study, appreciation and oral interpretation of selections chosen from the dramatic literature of the world. Training is given in vividness of expression in writing and in the rhythmic nature of oral expression. Each student will be required to prepare a program of interpretations as a quarter's project. Recommended to those who plan to teach English.

160 THEORY AND TECHNIQUE OF ACTING. (4) I Fowler

Theory of acting applied to individual problems and groups. Development of skill, effectiveness, and grace in the use of the body. Attention to establishing mood, reactions between characters, suspense, three voice modulations, pause, and other modes of emphasis, sustaining tone and emotion, projecting voice and characterization, procuring audience response, timing, and analysis of characterization. This course is designed to be helpful to public speakers, actors, teachers, and to those who wish to overcome self-consciousness and awkardness and to develop grace of movement, and coordination of mind and body. **Prerequisites: English 1a, 1b; 34a, 34b.**

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* Open to Freshmen.

161 THEORY AND TECHNIQUE OF THEATRE DIRECTING. (4) II Fowler

Practice in directing, theory of plotting and interpreting a play for directors. Study of movement, interpretation of lines, creation of atmosphere, use of stage areas, arrangement of furniture for actors, picturization, balance, use of levels, methods of achieving a climax, handling of groups, planning of mob scenes. Attention is given to the psychology of actors and audience reaction. Each student will have opportunities to direct plays under supervision. This course is designed for future workers in all types of theatres, especially for teachers who will have to direct plays as part of their regular work. **Prerequisites: English 1a, 1b; 34a, 34b.**

162 THEORY AND TECHNIQUE OF THEATRE PRODUCING. (4) III Fowler

Intensive study of the practical problems of play production. Application of modern esthetic principles and theories of the theatre. Practice and demonstration of non-professional theatre producing. Attention to coordination of the playwright, designer, technical director, electrician, stage manager, and the actor, etc. **Prerequisites: English 1a, 1b; 34a, 34b.**

172 WRITING THE ONE-ACT PLAY. (5) I Fowler

A course in the composition of original one-act plays, stressing the uses of native materials, the traditions and present-day life of the region with which the student is familiar. Attention on construction, technique, and dramatic composition of the well-made one-act play. Two acceptable one-act plays will be required of each student, and students will have the opportunity to see the best play in the class produced by an acting group on the Guignol stage. **Prerequisites: English 1a, 1b; 3a, 3b.**

174 WRITING THE FULL LENGTH PLAY. (5) III Fowler

A study of the dramatic composition, construction, writing techniques as applied to the long play and the experimental play. Attention on writing for the educational theatre, the professional theatre, the moving pictures, and the living newspaper. **Prerequisites: English 1a, 1b; 3a, 3b.**

GEOGRAPHY

The following courses in Geography are offered in the University and are collected here for the convenience of the student.

COMMERCE 8—ECONOMIC GEOGRAPHY and COMMERCE 12—ECONOMIC GEOGRAPHY OF WESTERN HEMISPHERE. (See Commerce, p. 297.)

GEOLOGY 24a—ELEMENTS OF GEOGRAPHY, GEOLOGY 24b—ELEMENTS OF GEOGRAPHY, and GEOLOGY 25a—REGIONAL PHYSICAL GEOGRAPHY. (See Geology, p. 167.)

FARM ECONOMICS 120—LAND ECONOMICS. (See Farm Economics, p. 240.)

HISTORY 184—THE GEOGRAPHIC BASIS OF AMERICAN HISTORY. (See History, p. 172.)

GEOLOGY

Professor McFarlan, Associate Professor Branson,[1] Assistant Professor and Curator Young, Assistant Professors Nelson[2] and Freeman, and Assistant in Paleontology Quirke

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours in the field of Physical and Biological Science, including the major work, in courses not open to freshmen.

Requirements for a Major. Required: Geology 10a, 10b, 10c, 30a, 30b, 30c, 31, 101a, 101b, 106a, 106b, 107a, 107b, 107c, 123a, 123b, 118a or 118b and 124a, 124b, 124c. **Field Work:** An early summer field trip, Geology 118a-d, is required of major students for graduation. This covers three weeks' work in selected regions. Local field work is offered throughout the year, and it is recommended that all major students take a summer course in field geology and geological methods. Such courses, varying from four to six weeks in length, are offered by a number of institutions.

Students majoring in Geology are required to pass a final comprehensive examination in the department.

***3 ELEMENTARY GEOLOGY FOR AGRICULTURAL STUDENTS. (4) III** Nelson
A course in general geology consisting chiefly of a study of geologic processes and a brief discussion of historical geology. Two recitations and lectures and two laboratory conferences a week.

10a FIELD GEOLOGY. (3) I Young
An introduction to field methods involving the identification and tracing of formations, areal mapping and structure contouring. **Prerequisites: Geology 30a, b, c.**

10b FIELD GEOLOGY. (3) II Young and Nelson
The first half is devoted to the completion of the work outlined under 10a and the second half to an introduction of the work of 10c.

10c Field Geology. (3) III Nelson
Topographic mapping. Six hours of field work a week. **Prerequisites: Geology 10a, b; Trigonometry, and C. E. 12.**

12a ELEMENTARY GEOLOGY FOR ENGINEERS. (4) I Branson
An introduction to the principles of geology. Two recitations and two laboratory conferences a week.

12b ELEMENTARY GEOLOGY FOR ENGINEERS. (3) II Branson
The practical application of geology to engineering work. A treatment of metallic and non-metallic mineral resources. Brief outline of historical geology. Two lectures, one laboratory. **Prerequisite: Geology 12a.**

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* Open to Freshmen.
[1] Military leave.
[2] On leave 1943-44.

*14a-d **ELEMENTARY FIELD GEOLOGY. (1) I, III**
Visits are made to localities in the vicinity of Lexington to study local geologic phenomena.

*20a-b **LABORATORY WORK IN ELEMENTARY GEOLOGY. (1)**

*23a **ELEMENTARY FIELD WORK IN REGIONAL GEOLOGY. (3) IV** McFarlan and Young
Two weeks in the field in selected areas. The course is offered as a part of the first summer term and is planned for the student with only an introductory course in geology. The party works in conjunction with that in Geology 118a. **Prerequisite: Elementary Geology.**

*23b **ELEMENTARY FIELD WORK IN REGIONAL GEOLOGY. (3) IV** McFarlan and Young
Same as 23a, but involving a different area. **Prerequisite: Elementary Geology.**

25a **REGIONAL PHYSICAL GEOGRAPHY. (4)** Young
A regional study of climatic and physiographic features of North America. An explanation of the nature and origin of these regions. Human aspects are emphasized. **Prerequisites: Geology 24a, 24b, (or 50a.)**

*30a **GENERAL GEOLOGY. (5) I** Branson
Geological processes—a study of the forces and processes responsible for the features of the earth. Three lectures and two laboratory conferences per week.

*30b **GENERAL GEOLOGY. (5) II** Branson
A continuation of 30a (first half) and Historical Geology (second half) involving a study of continental evolution and the development of plant and animal life.

*30c **GENERAL GEOLOGY. (5) III** McFarlan and Young
Historical Geology. A continuation of Geology 30b.

31 **LABORATORY WORK IN REGIONAL HISTORICAL GEOLOGY. (3) II** Young
A study of selected geological maps and specimens covering the principal geologic regions of the United States. Two laboratory conferences per week. **Prerequisites: Geology 30a, b, c.**

*50a **OUTLINES OF GEOLOGY. (4) I, II** McFarlan and Branson
A study of the more important and better-known geological features of the earth including mineral resources, earth history, and the fossil record. The work is preceded by eight weeks' introduction to geological principles. Three lectures per week.

*50b **OUTLINES OF GEOLOGY. (4) II, III** Branson
Continuation of 50a. **Prerequisite: Geology 50a.**

*51a **ELEMENTS OF GEOGRAPHY. METEOROLOGY.**
An introduction to the physical processes controlling weather. Four lectures and recitations per week. **No prerequisite.** Four quarter hours.

*51b **ELEMENTS OF GEOGRAPHY.**
Principles of climatology and a study of the major climatic regions of the world. Four lectures and recitations per week. **No prerequisite.** Four quarter hours.

*51c **ELEMENTS OF GEOGRAPHY.**
Landforms, soil, water and mineral resources and their relation to world populations. Four lectures and recitations per week. **No prerequisite.** Four quarter hours.

* Open to Freshmen.

Courses open only to Upper Division and Graduate Students

101a PALEONTOLOGY. (4) I McFarlan
A study of fossil invertebrates, their morphology, classification, and geological distribution. One lecture, three laboratory periods a week. **Prerequisites: Geology 30a, b, c, and General Zoology, or a Zoological background.**

101b PALEONTOLOGY. (4) II McFarlan
A continuation of 101a directed toward the study of geological faunas and the determination of their age. One lecture, three laboratory periods a week. **Prerequisite: Geology 101a.**

107a-i ADVANCED FIELD GEOLOGY. (3) I, II, III McFarlan
A field course in geologic mapping involving problems of local structure and stratigraphy. Six hours a week in the field. **Prerequisites: Geology 10a, b.**

105a-d INDEPENDENT WORK IN GEOLOGY. (4)
Directed work in independent investigations. Thesis required.

106a ECONOMIC GEOLOGY. (4) III Branson
Non-metallic mineral deposits. A study of the distribution, origin, mode of occurrence, methods of search for and uses of deposits of economic importance. Three lectures, one laboratory conference per week. **Prerequisites: Geology 30a, b, c, 31, 123a, 123b.**

118a-d FIELD WORK IN REGIONAL GEOLOGY. (3) IV McFarlan and Young
Three weeks in the field in selected areas in a study of regional geological features. The course is an effort to bring the student into contact with diverse geological phenomena and problems. It is offered as a part of the first summer term coming in between Commencement and the opening of the summer term. Required of major students at the end of their junior year. **Prerequisites: Geology 30a, b, c, 31.**

120a GEOLOGY OF KENTUCKY. (4) IV McFarlan
A study of the geological features of the state other than mineral resources. These include the major events in its geological history, the development of regional characters and an explanation of its scenic and natural wonders. **No prerequisite.**

120b GEOLOGY OF KENTUCKY. (4) IV McFarlan
The mineral resources of the state, their distribution, origin, and uses. Fossil record. **No prerequisite.**

122 PETROLEUM GEOLOGY. (4) III Branson
The origin and accumulation of petroleum and natural gas. A study of geological methods used in exploratory work and in the development of known fields. A study of the geology of principal producing fields. Three lectures and one laboratory period per week. **Prerequisites: Geology 30a, 30b, 30c, 31, and General Elementary Physics.**

123a MINERALOGY. (4) I Nelson
A study of geometrical crystallography and other physical properties useful in mineral identification. Two lectures and four hours' laboratory per week. **Prerequisites: Chemistry 1a-b.**

123b MINERALOGY. (4) II Nelson

The determination of approximately 150 minerals by physical properties, blowpipe analysis, and the petrographic microscope. Includes a study of the origin, occurrence, and associations of these minerals. One lecture, six hours' laboratory per week. **Prerequisite: Geology 123a.**

124a, b, c REGIONAL GEOLOGY. (3) I, II, III Staff

A study of the geological regions of the United States. This course will serve as tutorial work in preparation for the comprehensive examination.

125 METHODS OF SUBSURFACE CORRELATION. (4) II Freeman

Methods and practice in subsurface stratigraphic work in petroleum geology. **Prerequisites: Geology 123a-b.**

208 STRUCTURAL GEOLOGY. (4) Nelson

A study of the structural features of the earth's crust with an analysis of the mechanics involved in the production of such structures. Four lectures and recitations or three lectures and one laboratory. **Prerequisites: Physics 1a-b; Geology 30a, b, c, 31, 124a, b, c.**

210a STRATIGRAPHIC PALEONTOLOGY. (4) McFarlan

The succession of Paleozoic faunas and their use for stratigraphic correlations. One lecture, three laboratory periods per week. **Prerequisite: Geology 30a, b, c, 31, 101a, b.**

210b STRATIGRAPHIC PALEONTOLOGY. (4) Young

A continuation of 210a dealing with Mesozoic and Cenozoic faunas. One lecture, three laboratory periods per week.

212a PETROLOGY: OPTICAL MINERALOGY. (4) Nelson

A study of the optical properties of minerals in thin sections by means of the petrographic microscope. An introduction to the classification of the igneous rocks. One lecture and three laboratory periods per week. **Prerequisites: Geology, 123a-b; Physics 1a and 1b.**

212b SEDIMENTARY PETROLOGY. (4) Nelson

A study of sedimentary rocks based on microscopical analysis. One lecture and three laboratory periods per week. **Prerequisite: Geology 212a.**

217a-f SEMINAR. (1) I, II, III

GERMAN LANGUAGE AND LITERATURE

Professor Bigge,[1] and Associate Professors Hegeman and Whitaker.[2]

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the field of Concentration: Sixty quarter hours in the field of Literature, Philosophy, and the Arts, including the major work, in courses not open to freshmen.

Requirements for a Major. Prerequisites: Junior standing; 1a, 1b, 2a, 2b. **Required:** A minimum of 27 quarter hours of advanced work, independent of tutorial courses. Major students are required to enroll in tutorial courses, giving one hour each quarter in the junior and two in the senior year, and to pass a final comprehensive examination.

Note.—No credit given when work done in high school is repeated. One year of high school language is considered the equivalent of one quarter of university language study. No credit will be given for German 1a until German 1b has been completed. No student should enroll in two beginning languages at the same time.

*1a **ELEMENTARY GERMAN. (5) I, II, III, IV** Staff
The essentials of grammar and translation of easy prose with practice in reading and writing German. No credit is given for Course 1a until Course 1b is completed.

*1b **ELEMENTARY GERMAN. (5) I, II, III, IV** Staff
Continuation of German 1a, with more extended exercise in easy reading, writing and pronunciation. **Prerequisite: German 1a or one high school unit.**

2a **INTERMEDIATE GERMAN. (4) I, II, III, IV** Staff
Graded reader, followed by short stories from representative authors. Special sections are arranged in second year work for students of the physical and biological sciences. **Prerequisite: German 1b.**

2b **INTERMEDIATE GERMAN. (4) I, II, III, IV** Staff
Continuation of German 2a. Selected readings. **Prerequisite: German 2a.**

3a **SELECTED READINGS. (4) I, II, III, IV** Bigge
Prose and poetry from standard German authors with brief outline of German literature. **Prerequisite: German 2b.**

3b **SELECTED READINGS. (4) I, II, III, IV** Bigge
Continuation of German 3a. **Prerequisite: German 3a.**

6a **SCIENTIFIC GERMAN. (4) I, II, III, IV** Staff
This course is designed primarily for the students of the physical and biological sciences. Assignments are made in recent publications along the line of the student's special interest. This course should be preceded by the scientific sections of second-year work. **Prerequisite: 2b.**

6b **SCIENTIFIC GERMAN. (4) I, II, III, IV** Staff
Continuation of 6a. **Prerequisite: 6a.**

10a **GERMAN CONVERSATION AND COMPOSITION. (3) I, II, III** Staff
This course is designed for students who wish to write and speak simple German. It will be conducted mainly in German. The first quarter's

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* Open to Freshmen.
[1] On leave 1944-45.
[2] Military Leave.

work will be closely based upon a textbook, but in the second quarter opportunity will be given for the composition of original themes. **Prerequisite: German 1b or its equivalent.**

10b GERMAN CONVERSATION AND COMPOSITION. **(3) I, II, III** Staff
Continuation of 10a. **Prerequisite: German 1b or its equivalent.**

Courses open only to Upper Division and Graduate Students

101a NINETEENTH CENTURY LITERATURE. (4) I, II Staff
Studies in German literature of the 19th Century with special emphasis on selected authors. **Prerequisite: 3b.**

101b NINETEENTH CENTURY LITERATURE. (4) I, II Staff
Continuation of Course 101a. **Prerequisite: 3b.**

102a TWENTIETH CENTURY LITERATURE. (4) III, IV Bigge
Reading, discussions, and reports. **Prerequisite: 3b.**

102b TWENTIETH CENTURY LITERATURE. (4) III, IV Bigge
Continuation of Course 102a. **Prerequisite: 3b.**

103a LIFE AND WORKS OF GOETHE. (4) I, II, III Hegeman
This course follows the unfolding of Goethe's genius from his first lyrics through the second part of Faust. His principal literary works will be read and special attention devoted to autobiographical material, letters and diaries. **Prerequisite: 3b.**

103b LIFE AND WORKS OF GOETHE. (4) I, II, III Hegeman
Continuation of Course 103a. **Prerequisite: 3b.**

105a-d INDEPENDENT WORK IN GERMAN. (4) I, II, III, IV Staff
This course is designed for students who wish to do advanced work in German in their particular field of specialization. It is not limited to majors in the department.

110a GERMAN LITERATURE IN ENGLISH. (4) I, II, III, IV Staff
The aim of this course is to furnish students not having a reading knowledge of German with an understanding of the content and significance of German literature from the earliest records to the present. Election of this course will not count toward satisfying the University's language requirement, and it may not be elected by any student enrolled in another "100" or "200" course in this department.

110b GERMAN LITERATURE IN ENGLISH. (4) I, II, III, IV Staff
Continuation of Course 110a.

120a-b JUNIOR TUTORIAL WORK IN GERMAN. (1) I, II Staff

130a-b SENIOR TUTORIAL WORK IN GERMAN. (2) III, IV Staff

Courses open only to Graduate Students

201a MIDDLE HIGH GERMAN. (4) I, II, III Hegeman
This is essentially a literary course with only the necessary minimum of Middle High German grammar. Selections will be read from both the epic and lyric poetry of the period, and reports will be given on assigned topics.

201b MIDDLE HIGH GERMAN. (4) I, II, III Hegeman
Continuation of Course 201a.

203a GERMAN LITERATURE FROM LUTHER TO LESSING. (4) I, II, III Bigge
This course traces the principal trends in German life and thought from the Protestant Reformation through the Age of Enlightenment, as they are reflected in the work of the chief authors.

203b GERMAN LITERATURE FROM LUTHER TO LESSING. (4) I, II, III Bigge
Continuation of Course 203a.

HISTORY

Professors Tuthill, Clark, Knapp, and Dupre; Assistant Professors Hall and Lunde; and Instructor Hopkins[1]

The introductory courses—2a, 2b in British history and 4a, 4b in European history, and 5a, 5b in American history—will aid freshmen in subsequent courses in history, commerce, law, education, journalism and literature.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Social Studies, during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: History 2a, 2b, **or** 4a and 4b **and** 5a and 5b. Required: A minimum of 27 quarter hours of advanced courses in history, including the Senior Seminar.

*1a **THE ANCIENT WORLD. (3) I** — Dupre
The Near East and Pre-Grecian Period. Egypt, Babylonia, Assyria, Persia, and Palestine.

*1b **THE ANCIENT WORLD. (3) II** — Dupre
History of Greece. A continuation of Course 1a.

*1c **THE ANCIENT WORLD. (3) III** — Dupre
History of Rome and the Roman Empire. Continuation of 1a, 1b.

*2a **HISTORY OF THE BRITISH PEOPLE TO THE RESTORATION. (5) I, II, III, IV** — Hall
From the Roman period to the Stuart period. A general survey of the various epochs and phases of the English people at home and abroad.

*2b **HISTORY OF THE BRITISH PEOPLE SINCE THE RESTORATION. (5) I, II, III, IV** — Hall
From the Stuart period to the present. A continuation of 2a.

*4a **MODERN EUROPE TO THE FRENCH REVOLUTION. (5) I, II, III, IV** — Lunde and Dupre
A survey of the growth of Europe from the decline of the Roman Empire to the French Revolution.

*4b **MODERN EUROPE SINCE THE FRENCH REVOLUTION. (5) I, II, III, IV** — Lunde and Dupre
A survey of European developments from the French Revolution to the present. A continuation of course 4a.

*5a **HISTORY OF THE UNITED STATES through 1865. (5) I, II, III, IV** — Clark and Knapp
This course traces the nation's development through 1865. It is designed to meet the demands for a general understanding of American history. This course fulfills the requirements for the elementary teachers' certificate.

*5b **HISTORY OF THE UNITED STATES SINCE 1865. (5) I, II, III, IV** — Clark and Knapp
A continuation of Course 5a, from 1865 to the present.

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[1] Military leave.
* Open to Freshmen.

Not Open to Freshmen

40 HISTORY OF KENTUCKY. (3) I, II, III, IV Clark
A general survey of the chief periods of Kentucky's growth and development from 1750 to the present.

I. American History

Courses open only to Upper Division and Graduate Students

100a THE DIPLOMACY AND FOREIGN POLICY OF THE UNITED STATES TO 1898. (4) II Dupre and Hopkins
A survey designed to acquaint the student with the principles of American foreign policy and its historical evolution. **Prerequisite: Course 5a or equivalent.**

100b THE DIPLOMACY AND FOREIGN POLICY OF THE UNITED STATES SINCE 1898. (4) III Dupre
A continuation of course 100a. Foreign policy after the United States becomes a world power. **Prerequisite: Coure 5b or equivalent.**

105 COLONIAL AMERICA. (4) II Knapp
A study of the origins of the English colonies; their political, social, and economic development; extension of their frontiers, inter-colonial wars, and external relations with the Dutch, French and Spanish. Emphasis on imperial policies and imperial control and the colonial controversies.
Prerequisite: One year of American or European History.

106a COLONIAL LATIN AMERICA. (3) II Knapp
A survey of the origins and development of the Latin American Colonies and their struggle for independence.

106b LATIN AMERICAN REPUBLICS. (3) III Knapp
This course will involve a study of the political, economic, and social institutions, and problems of the Latin American Republics from attainment of independence to the present.

116a SENIOR SEMINAR. (2) Staff
A course for seniors designed to present the bibliography and literature in selected fields of history.

116b SENIOR SEMINAR. (2) Staff
A continuation of 116a.

140a-d INDEPENDENT WORK. (3) Staff
Under special conditions selected students may investigate special problems, with weekly reports to the instructor.

141 TUTORIAL READING. (1) Staff

147 RECENT HISTORY OF THE UNITED STATES. (4) I Knapp
An intensive study of the principal movements and episodes in the history of the people of the United States from the Spanish-American War to the present. Prerequisite: One year of American History.

151a THE AMERICAN FRONTIER. (4) I Clark
A course dealing specifically with American westward expansion. This course will consider the westward movement in respect to population, political, economic, social and cultural development; analyze the process of national adjustments; and weigh the contributions of each succeeding period. **Prerequisites: History 5a and 5b or equivalent.**

151b THE AMERICAN FRONTIER. (4) II Clark
A continuation of Course 151a. It will consider the Trans-Mississippi West. **Prerequisites as for 151a.**

180a HISTORY OF THE OLD SOUTH. (4) II Clark
A study of the colonial beginnings and expansion of southern life, economics, and society. The growth of slavery, staple agriculture, and sectional politics, will constitute the major interest. The course will consider the various points of sectional development which led to the break up of the Union. The South will be interpreted in both its relationship and contrast to national development. **Prerequisite: History 5a.**

180b HISTORY OF THE NEW SOUTH. (4) III Clark
The evolution of southern life and society, agrarian politics, relationships with other sections, industrial growth, and new leadership. **Prerequisite: History 180a.**

184 THE GEOGRAPHIC BASIS OF AMERICAN HISTORY. (3) III Knapp
A study of the relationship of geography to history and the influence of physiography upon the settlement and growth of various regions of the Americas.

Courses open only to Graduate Students

1. The "200" Group

These are content courses presented by the lecture and discussion method and as such are distinct from those numbered "300" and which are concerned with problems and the practice of research.

280 EUROPEAN HISTORIOGRAPHY. (3) I Dupre and Tuthill

281 AMERICAN HISTORIOGRAPHY. (3) Clark and Knapp

282 HISTORICAL CRITICISM. (3) Staff

2. The "300" Group

Seminars—Basically research in character. These are not content courses. They provide intensive training in historical research (collection and critical analysis of bibliography, note-taking and organization of materials, and the presentation of a properly documented thesis). It is desirable that the student take the Senior Seminar before enrolling in "300" courses. 3 hours credit, 2 class hours, and 1 conference hour.

300a-b SEMINAR IN AMERICAN FOREIGN POLICY. (4) I, II Dupre
Problems selected in critical periods in American foreign policy, particularly from the Spanish-American War. A seminar paper based upon research in source materials, to be presented and defended in the seminar group.

342 SEMINAR IN KENTUCKY HISTORY. (3) I Clark
The development of Kentucky as a Western commonwealth, with emphasis on economic and political phases from the 18th century to the present, with writing of papers based upon research among documents and other source materials.

II. England and the British Empire

Courses open only to Upper Division and Graduate Students

131a **ENGLISH CONSTITUTIONAL HISTORY TO 1603. (4) I** Hall
A study of the backgrounds of the English constitution; the Anglo-Saxon contribution; the Norman conquest and development of governmental and legal institutions during the 12th and 13th centuries; the rise of Parliament; the Tudor strong monarchy to its close in 1603. **Prerequisite: History 2a or equivalent.**

131b **ENGLISH CONSTITUTIONAL HISTORY SINCE 1603. (4) II** Hall
A continuation of Course 131a. The constitutional struggle between the Stuart kings and Parliament; triumph of constitutional monarchy; rise of the Cabinet; effect of the spread of democracy in recent times. **Prerequisite: History 2b or equivalent.**

134 **HISTORY OF CANADA. (4)** Hall
A brief survey of Canada under the French; increasing emphasis on the development of Canada under British control; evolution of the Dominion; relation with the United States and British Commonwealth of Nations. **Prerequisite: One year of College History.**

135a **THE BRITISH EMPIRE TO 1860. (4) I** Hall
Origin of the British Empire 1783 to 1860; development of British sea power: The early growth and development of Canada, Australia, New Zealand, South Africa and India. Lectures, class discussions, readings, reports.

135b **THE BRITISH EMPIRE SINCE 1860. (4) II** Hall
A continuation of 135a. Great Britain and the growth of the Dominions and the Commonwealth since 1860. Emphasis will be placed upon the Dominion of Canada and extension of the dominion idea to other parts of the Empire. **Prerequisite: 2a and 2b.**

138 **BRITISH SOCIAL HISTORY DURING THE TUDOR PERIOD. 1485-1603. (3) III** Hall
A study of British life, manners, and customs in town and country. Particular emphasis will be placed upon the age of Elizabeth, with political events subordinated to social changes. Lectures, discussions, and reports. **Prerequisite: History 2a.**

III. European History

Courses open only to Upper Division and Graduate Students

114 **THE RENAISSANCE IN THE SOUTH. (4) I** Tuthill
A study of the Italian Renaissance from 1300 to 1500. The states and cities of Italy and their scholars; general movements, political and other; rise of the modern spirit along the several lines of art and science, education, philosophy, commerce and exploration.

115 **THE RENAISSANCE IN THE NORTH. (4) II** Tuthill
A continuation of Course 114 with reference to the awakening of the new spirit in France, England, Germany; and the background of the Reformation period.

119a **THE FRENCH REVOLUTION AND NAPOLEON. (4) III** Tuthill
A study of the period 1789-1815 in Europe, treating of the appearance and manifestation of the spirit of revolt. Conditions in France

and adjoining nations, the evolution of France from 1778 to 1795 and subsequent changes under Napoleon. Open to juniors, seniors, and graduate students, with supplementary reading for the latter.

119b **EUROPE IN THE NINETEENTH CENTURY. (4) II** Tuthill
Starting with the fall of Napoleon, this course treats the successive political changes in 1823, 1830, 1848, and 1871, together with the outstanding commercial, cultural and scientific developments of European life after 1815; the expansion of Europe in Africa and Asia, and the reactions upon the great states of the world.

120 **EUROPE IN THE TWENTIETH CENTURY. (4) III** Tuthill
A study of recent and contemporary movements. The rise and conflict of the chief colonial empires; European interference and control in Asia and Africa; forces and elements leading up to the great war; socialism; public education; invention and discoveries.

121 **SOCIAL AND POLITICAL FACTORS IN CONTEMPORARY CIVILIZATION. (3) IV** Dupre
The crisis in world history due to the challenge to the capitalistic democracies by communism and fascism, and to the revolution in international relations precipitated by the Second World War; special emphasis upon tensions, conflicts, and solutions in the United States.

171 **EUROPE IN THE EIGHTEENTH CENTURY. (3) I** Lunde
A study of the development of the absolute monarchies from Louis XIV; the European rivalries at home and abroad; benevolent despotism, and the Age of the Enlightment. Considerable attention will be given to the social and cultural aspects of the period. **Prerequisite: History 4a or equivalent.**

176 **FRANCE SINCE 1870. (3) IV** Dupre
A study of the parties, politics, administration, diplomacy, economy, social movements, and general culture of France from 1870 to the present. A reading knowledge of French will be helpful to graduate students. Readings, reports, and discussions. **Prerequisite: History 4b or equivalent.**

177 **GERMANY SINCE 1870. (5) I, III** Dupre
German politics, culture, colonies, and international relations under Bismarck's Germany; the Empire, the Weimar Republic, and Nazi Germany under Hitler. Readings, reports, lectures and discussions. **Prerequisite: History 4b or equivalent.**

Courses open only to Graduate Students

320a-b **ORIGINS OF WORLD WAR I (4)**
Seminar Tuthill

331 **SEMINAR IN MODERN BRITISH HISTORY. (4)** Hall

350a-b **SEMINAR IN THE FRENCH REVOLUTION. (4) I, II** Dupre
Problems selected in the decade of revolution, 1789-1799. A seminar paper based upon research in the official **Moniteur,** in the public documents, and in the memoirs of the period, to be presented and defended in the seminar group. A reading knowledge of French is essential.

HYGIENE AND PUBLIC HEALTH

Professor Chambers; Associate Professors Griffin,[1] Heinz, and Hamilton; Assistant Professor Cawood; and Dr. Doyle, Dr. Thomas, and Dr. McChord.

The functions of the department are threefold; namely, medical service to the students, teaching, and research. In the performance of each of these functions primary emphasis is placed upon the prevention of disease and the promotion of health.

The medical service consists of complete physical examinations of all entering students, the maintenance of a Student Health Service on the campus, and calls by physicians of the staff to "boarding and rooming" students who are ill in their rooms.

The department offers courses in health open to students in the various colleges of the University. A full year of work is offered to graduate nurses in preparation for public health nursing. Also, courses leading to the degree of Master of Science in Public Health are offered especially for the preparation of medical officers of health.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours in the field of Biological Sciences and Social Studies (Sociology, Social Work, Psychology, Political Science), including the major work, in courses not open to freshmen.

Requirements for a Major. Prerequisites: 18 quarter hours in Biological Sciences. **Required:** Bacteriology 103 or its equivalent. A minimum of 22 quarter hours of advanced work in Hygiene and Public Health.

***1 PERSONAL AND COMMUNITY HEALTH.**
(2) I, II, III Heinz and Hamilton
Lectures and recitations. An introduction to the principles of personal and community health.

7 FIRST AID. (3) I, III Staff
Meets the standard Red Cross requirements in first aid and leads to a Red Cross certificate which will be awarded to each member of the class who completes the course and satisfactorily passes the final examination. Special consideration also given to the first aid problems of playground directors, coaches and athletes. Lectures, discussions, demonstrations and explanation of first aid methods and principles followed by actual practice work for each student.

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* Open to Freshmen.
[1] Military leave.

*9 **HYGIENE FOR TEACHERS.** (3) I, II, III, IV — Heinz
The purpose of the course is to acquaint the student of education and teachers in service with the general nature of health problems in the school. Required of all students who wish to qualify for the Elementary or Secondary School Certificate. Open only to prospective teachers.

51 **PERSONAL HEALTH PROBLEMS.** (3) I, II, III, IV — Heinz and Hamilton
A course involving the detailed study of certain practical health problems of the present day. Presentation of essential health knowledge with enough anatomy, physiology and other underlying sciences to clarify and support the health teaching. Not available for credit to students who have had Hygiene 1. The course may be used by Sophomores, Juniors and Seniors to meet the general hygiene requirement. Not open to Freshmen.

Courses open only to Upper Division and Graduate Students

100a **PUBLIC HEALTH.** (4) I, III, IV — Chambers and Heinz
A consideration of the cause, prevalence, transmission and control of preventable diseases.

100b **PUBLIC HEALTH.** (4) II, IV — Chambers and Heinz
A continuation of 100a. Environmental and organization approach to disease prevention.

104 **MATERNAL AND CHILD HEALTH.** (3) II, IV — Griffin
Problems in maternal and child health from the standpoint of the public health nurse.

110 **HEALTH EDUCATION.** (4) II, IV — Heinz
A course dealing primarily with principles of health education, health service and health protection. Intended to consider also the cooperative nature of school health work through study of problems in the solution of which contributions are made by parents, the school and the community.

111a-b **INDEPENDENT WORK IN HYGIENE AND PUBLIC HEALTH.** (4) I, II, III, IV — Heinz

115 **COMMUNICABLE DISEASES.** (4) II, IV — Hamilton
A study of communicable diseases with reference to causal agents, avenues of infection and methods of prevention with special emphasis on those diseases prevalent in Kentucky.

118 **VITAL STATISTICS.** (4) III, IV — Heinz
Statistics of population, deaths, births and morbidity; the collection and analysis of vital statistics.

120a **MENTAL HYGIENE.** (4) I, III — Ratliff
An introduction to mental hygiene including a consideration of the cause, treatment and prevention of mental disorders. Not open to students who have credit in Psychology 124.

120b **MENTAL HYGIENE OBSERVATION.** (4) II — Ratliff
A continuation of Hygiene 120a. Students are given the opportunity to apply to concrete cases the principles and concepts developed in 120a.

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* Open to Freshmen.

122 **SCHOOL AND COMMUNITY HEALTH. (3) I, III** Heinz
An appreciation of the cooperative nature of school health work through a study of problems in the solution of which contributions are made by home, school, community and organized health departments.

125a **COUNTY HEALTH PRACTICE FOR PUBLIC HEALTH NURSES. (3) IV** Cawood
Lectures and recitations on the purposes, development, practice and techniques of local health work.

125b-e **COUNTY HEALTH PRACTICE FOR PUBLIC HEALTH NURSES. (4) I, II, IV** Cawood
Nursing practice in the training area under the supervision of trained personnel. Sixteen weeks taken either concurrently or following the formal courses of instruction.

150a-b **PROBLEMS IN HEALTH EDUCATION. (3) III, IV** Heinz
An individual problems course for students and teachers in service, based upon a systematic attack upon the health problems of a school.

Other courses for Upper Division and Graduate Students, such as Public Health Nursing (124a, b), 200 courses for Health Officers (225a, b), and others are given from time to time.

JOURNALISM

Professor Plummer, Associate Professor Tucker, and Assistant Professors McLaughlin and Portmann

The department has a library containing the latest works on journalism, leading daily and weekly newspapers, periodicals, and other publications. It is supplied with standard equipment to print and to publish a modern community newspaper and to provide high-grade commercial job printing for the campus. In the equipment is a type laboratory for instruction in typography, make-up, and the mechanics of publishing and advertising.

Correlated with the work of this department are a committee on student publications, a campus bulletin, **The Kentucky Kernel** (student newspaper), **The Kentuckian** (student yearbook), **The Kentucky Press** (a monthly publication for the editors of the state press) and **The KHSPA News** (a publication for high school editors). These and other journalistic activities are used in laboratory work. Material written in the advanced classes is submitted for publication in local, state and national newspapers and in periodicals.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in Field of Concentration: Sixty quarter hours in courses not open to freshmen, including the major work, in either the field of Social Studies or that of Literature, Philosophy, and the Arts, during junior and senior years.

Requirements for a Major. Prerequisites: Journalism 2 and 20a, b. **Required:** Journalism 104a, b, 105, 106, 107, 108, 123a, b, 127, and 90.

The Degree of A.B. in Journalism. Three sequences leading to the degree of A.B. in Journalism are outlined on pages 57, 58.

Comprehensive Examinations. Majors and candidates for the degree in journalism are required to pass a final comprehensive examination at the end of the senior year.

*2. **INTRODUCTION TO JOURNALISM. (3) I, II, IV** Plummer
A course of lectures and readings designed to introduce pre-journalism students to the opportunities in journalism and advertising, the qualifications and training implicit in journalism as a profession, and the field of journalistic publication in all its branches.

10a **SURVEY OF JOURNALISM. (4) I, II, III, IV** McLaughlin
A general non-professional course covering newspaper organization and problems of interest to newspaper readers. Lectures and practice in the style of writing employed by the press. Not open to majors in journalism.

10b **SURVEY OF JOURNALISM. (4) I, II, III, IV** McLaughlin
A continuation of Journalism 10a. **Prerequisite: Journalism 10a.** Not open to majors in journalism.

20a **NEWS REPORTING. (5) I, III, IV** Plummer, Tucker and Portmann
Instruction and practice in news gathering, news evaluation, and news writing. Examination of the reporter's place in the newspaper organization and study of the news methods of leading American newspapers. Regular assignments for Kentucky newspapers. **Prerequisite: Journalism 2.**

20b **NEWS REPORTING. (5) II, IV** Plummer, Tucker, and Portmann
A continuation of Journalism 20a with emphasis on specialized reporting such as society, sports, crime, politics, weather, and science. **Prerequisite: Journalism 20a.**

21 **ETYMOLOGY. (4) I, II, III, IV** Plummer and Tucker
A study of words and their fundamental values with reference to development of a writing vocabulary.

Courses open only to Upper Division and Graduate Students:

102 **COMMUNITY JOURNALISM. (4) I, IV** Portmann
A study of the problems which confront the community weekly and the small city daily. **Prerequisite: Journalism 20b.**

103 **NEWSPAPER ADMINISTRATION. (4) II, IV** Portmann
A study of the business, circulation, advertising, and accounting divisions of the newspaper with special emphasis on the community newspapers. **Prerequisite: Journalism 20b.**

104a **COPYREADING AND TYPOGRAPHY. (5) I, II** Tucker and Portmann
Instruction and practice in newspaper desk work. Lectures and practice in copyreading and headline writing, exercises in news typography. No credit for 104a until 104b is completed. Lecture, 1 hour; copyreading laboratory, 4 hours; typography laboratory, 4 hours. **Prerequisite: Journalism 20b.**

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* Open to Freshmen.

104b MAKEUP AND TYPOGRAPHY. (5) II, III Tucker and Portmann
A continuation of Journalism 104a, Instruction and practice in newspaper desk work, copy editing and page makeup, coordination of editing and typography for makeup practice. Lecture, 1 hour; copy-reading laboratory, 4 hours; typography laboratory, 4 hours. **Prerequisite: Journalism 104a.**

105 LAW OF THE PRESS. (3) III Plummer
A study of the special laws of libel, copyright, and regulatory provisions that pertain to the press. **Prerequisite: Journalism 20b.**

106 INFLUENCE OF THE NEWSPAPER. (4) II Plummer
A course devoted to the examination of criticism of the modern press and an evaluation of the influence of the press in the twentieth century. Lectures and readings directed toward the evolution of principles for the guidance of members of the news, editorial, and business staffs of newspapers. **Prerequisites: Journalism 20b and senior standing.**

107 EDITORIAL WRITING. (3) III Tucker
A study of editorials, editorial columns, and editorial pages. Publication of copy encouraged. **Prerequisites: Journalism 20b and senior standing.**

108 HISTORY OF JOURNALISM. (4) I Portmann
A study of the rise and development of American journalism and newspapers. **Prerequisites: Journalism 20b and senior standing.**

110 SUPERVISION OF HIGH SCHOOL PUBLICATIONS. (4) III, IV Portmann
A study of the problems that confront the adviser of the high school newspaper or magazine. Open to advisers or prospective advisers with consent of the instructor.

111 VERBAL CRITICISM. (4) I, III, IV Tucker
A study of words and their synonyms with reference to developing accuracy in use of the English language in journalistic work.

112 CRITICAL WRITING FOR THE PRESS. (4) I, II, III, IV McLaughlin
The function of criticism in journalism. Reviewing of motion pictures, plays, concerts, and books for newspapers with emphasis upon student work in Kentucky newspapers.

115 ADVERTISING TYPOGRAPHY AND LAYOUT. (4) I, III, IV Portmann
A study of the principles of typographic families and illustrations and decorations that pertain to layout in modern advertising. Practical work with merchants included in the latter part of the course. Lecture, 2 hours; laboratory, 4 hours.

118 PUBLICITY. (4) III, IV Plummer
Lectures and practice dealing with the aims and methods of writing news and special articles on the work of schools, colleges, libraries, and social service organizations.

120 SEMINAR IN PUBLIC OPINION. (4) III Plummer
A detailed examination of techniques developed and used by the press in influencing public opinion. Specific cases studied. Latter part of course devoted to the preparation of newspaper campaigns dealing with current problems of society. **Prerequisites: Senior or graduate standing.**

123a FEATURE WRITING. (3) II Tucker
Instruction and practice in writing features. Lectures, readings, and reports directed toward discovering, gathering, organizing, writing, and marketing feature articles. **Prerequisite: Journalism 20b.**

123b FEATURE WRITING. (3) III Tucker
A continuation of Journalism 123a with emphasis on writing, illustrating, and marketing features for newspaper supplements, trade journals, and other periodicals.

125 MAGAZINE ARTICLE WRITING. (4) IV Plummer
Lectures, personal conferences, and practice in writing and submitting material for publication in magazines; study of the markets for this material; free-lance article writing.

127 REPORTING PUBLIC AFFAIRS. (3) III Plummer
Instruction and practice in reporting the news originating in courts and other public institutions and the news of politics, finance, and labor. Lecture, 2 hours; laboratory, 2 hours. **Prerequisites: Journalism 20b and senior standing.**

90 TUTORIAL WORK IN JOURNALISM. (1) III Staff
Open only to majors and candidates for the degree in journalism. **Prerequisite: Senior standing.**

LIBRARY SCIENCE

Professor Semmons[1]; Associate Professors Logsdon[2] and Martin; Assistant Professors Cass and Wofford; and Miss King,[3] Miss Galloway, and Miss Wallace

The department of Library Science affords opportunity for students in the College of Arts and Sciences to gain the A.B. degree with Library Science as major; and for students in the College of Education to gain the A.B. in Education or B.S. in Education degree with Library Science as a second major. The degree of B.S. in Library Science is offered to those who enter with the A.B. or B.S. degree. Students may fulfill the Southern Association requirements for teacher-librarians by electing specified courses from the professional curriculum.

Professional courses on the senior or graduate level are designed primarily for majors in the Department, but non-majors may be admitted on approval of the Head of the Department.

General courses available to non-majors include an orientation course in the use of the library for students in the lower division, and two semi-professional courses for prospective teachers. An independent work course is available to students who want to study some phase of library science related to their major, field of concentration or thesis.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in Field of Concentration: Sixty quarter hours of advanced work in the Field of Literature, Philosophy and the Arts, or acceptable equivalent, including the major work.

Requirements for a Major. Prerequisites: Senior standing. Prospective majors should consult with the Head of the Department regarding courses to be taken during the first three years of college.

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[1] On leave, 1943-44.
[2] Military leave.
[3] Acting Head of Department, 1944-45.

A broad academic program with emphasis on literature, language, and the social sciences is recommended. Previous experience in library work and facility in the use of the typewriter are considered assets. **Required courses:** The full professional curriculum of 45 quarter hours.

Courses recommended for teacher-librarians: High schools with enrollment of 100 or less, 9 quarter hours in courses 126 and 150b; High schools with enrollment of 100 to 200 students, 18 quarter hours in courses 126, 128, 129a, 133a and 150b.

Requirements for the Degree of Bachelor of Science In Library Science

Prerequisites: A Bachelor's degree from an approved college or university. Undergraduate preparation should emphasize academic rather than professional courses, with emphasis on literature, languages, and the social sciences. Previous experience in library work and facility in the use of the typewriter are considered assets. **Required courses:** The full professional curriculum of 45 quarter hours.

General Courses

*25 **USE OF THE LIBRARY. (3) I, II, III** King, Martin, and Logsdon
A practical survey of library book resources, tools and services; designed to aid the college student in his study, research and recreational reading.

Courses open only to Upper Division and Graduate Students

101a-d **INDEPENDENT WORK. (3) I, II, III, IV** Staff
This course is designed for upper division and graduate students desiring to study some phase of bibliography or library science related to their major, thesis, or dissertation.

105 **READING GUIDANCE. (3) I, II, III, IV** Wofford and Martin
A study of adolescent reading interests and problems; the nature and content of books available to young people of the secondary school level; the tools for book selection; and methods which may be used by teachers to stimulate and direct the reading of young people. **A non-technical course designed to meet the needs of teachers. By preparation of an extended individual project the student may raise the course credit to a total of four quarter hours [C105].**

107 **FUNCTION AND USE OF THE LIBRARY IN THE SCHOOL (3) I, II, III** Wofford and Martin
A course open to teachers and prospective teachers to familiarize them with the special functions and the use of the library in modern education. Designed to acquaint the teacher with the variety and extent of service of the school library; methods by which the library may be adapted to fit the teacher's needs; reference books and services. **By the development of an extended individual project which correlates the library with teaching, the student may earn a total of four quarter hours for the course [C107].**

* Open to Freshmen.

Professional Courses

126 **PLACE, FUNCTION, AND ADMINISTRATION OF THE LIBRARY.** (5) I, IV Wofford
A study of the place, function and administration of the library in the modern school, college, and community, and of the relationship of the library and librarian to the faculty, students, and public. Major topics discussed: School library planning and equipment; standards; personnel problems; relation of library to outside agencies; business management of the library including budgeting, accounting, attendance; methods of stimulating the use of books, and of handling service. **Supplemented by L.S. 144.**

128 **CHILDREN'S LITERATURE.** (3) III, IV Martin
A survey of children's books with a comparative study of representative types from pre-school to Junior High school age; illustrations and editions, book reviewing periodicals, aids in the selection of children's books and magazines. **Closely correlated with L.S. 132.**

129a **CATALOGING AND CLASSIFICATION.** (3) I, IV Logsdon
A study of the principles and forms of classification and cataloging as devices for organizing and arranging printed materials to facilitate library service. Practice work under supervision is required.

129b **CATALOGING AND CLASSIFICATION.** (4) II, IV Logsdon
Continuation of 129a which is prerequisite.

132 **LIBRARY WORK WITH CHILDREN.** (3) III, IV Martin
A study of the origin and present status of library work with children in school and public libraries. Units of the course include story-telling and other methods of developing the child's appreciation of literature; administration of library work with children; and elementary school library service. **Prerequisite: L.S. 126.**

133a **REFERENCE AND BIBLIOGRAPHY.** (3) I, IV Cass and Logsdon
A study of the essential reference works, particularly those most valuable in school and college libraries, including dictionaries, encyclopedias, atlases, yearbooks, periodical indexes and reference books on special subjects; of the more important subject and trade bibliographies; of government documents and vertical file material; and of the standards and methods by which such material is selected, organized and efficiently used.

133b **REFERENCE AND BIBLIOGRAPHY.** (4) II, IV Cass and Logsdon
Continuation of 133a which is prerequisite.

138 **INTERPRETATION OF LIBRARY SERVICES.** (3) III, IV Wofford
The course emphasizes various means of interpreting library service to readers. General topics covered are: formal and informal instructions in the use of the library, library publicity, and public relations of the library. Special attention is given to newer types of instructional devices available to libraries. **Prerequisites: L.S. 126, 133a, 150a.**

139 **FIELD WORK.** (3) III, IV Galloway and Logsdon
Comparable to practice teaching. Observation of service in libraries in the area, and supervised practical work in all departments of the libraries of the University School and nearby school systems. The course is supplemented by seminar discussions. Six hours per week. **Prerequisites: L.S. 126, 129a, b, 133a, b, 144, 150a, b.**

144 LIBRARY RECORDS AND METHODS. (3) II, IV Wofford
A course presenting the fundamental knowledge and techniques necessary to the development of efficient library procedures for the acquisition, preparation, care, circulation and use of books and of non-book materials, including periodicals, audio visual aids. The application of modern business methods to library procedures is emphasized.

150a BOOK SELECTION. (4) I, IV Martin and Wofford
Study of principles and standards in the choice of books and pamphlets. Includes practical problems in the selection of books; brief study of American publishers and publishing; critical examination of book reviewing periodicals, manuals, and lists. Practice in oral and written reviews, reading and evaluation of typical books on philosophy, religion, social and natural science, useful and fine arts, travel and history.

150b BOOK SELECTION. (4) II, IV Martin and Wofford
Continuation of the reading and evaluation of typical books in the fields of biography, fiction and literature (short stories, essays, poetry and drama). Attention is given to reading interests of young people and the values in books selected for them. Book selection aids for high school libraries are examined, and one unit each is devoted to magazines and to problems leading to and methods of dealing with remedial reading.

154 SEMINAR. (3) III Logsdon
A survey of the field of library science through a brief study of the modern library movements and its history; of library agencies and media; of outstanding personalities in the field; of standards for professional training and certification; of current economic, social and educational problems of special interest to the librarian. **Prerequisites: L.S. 126, 129a, b, 133a, b, 150a, b.**

MATHEMATICS AND ASTRONOMY

Dean Boyd; Professors Latimer, Downing and Cohen[1]; Associate Professors LeStourgeon, South, and John[1]; Assistant Professors Brown, and Pence; and Mrs. Fischer, Mrs. Crawley, Miss Cooper, Mrs. Lamb, and Mrs. Latimer

Mathematics

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Physical Sciences during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: Courses 2, 3, 17, 19, 20a, 20b. **Required:** A minimum of 27 quarter hours of advanced work in Mathematics, including one course in Algebra, one in Geometry, one in Analysis, and one in Applications. Major

[1] On leave, 1943-44.

students are required to enroll in tutorial courses during the junior and senior years and to pass a final comprehensive examination in Mathematics.

Requirements for Graduate Work. Graduate students must have had at least 18 quarter hours of mathematics beyond elementary calculus before counting work toward an advanced degree.

***D. ELEMENTARY MATHEMATICS. (O) I, II**
A study of the elementary mathematical principles and operations that are essential to the comprehension of college courses in science.

***2 SOLID GEOMETRY. (4) II, III** Staff
For those who have not had the subject in high school. It is a prerequisite for analytics.

***3 PLANE TRIGONOMETRY. (5) I, II, III, IV** Staff
The usual course in plane trigonometry. **Prerequisite: 1½ units High School Algebra, or 5a.**

***5a COLLEGE ALGEBRA. (4, 2) I, II** Staff
A course designed for those students who have had high school algebra but whose preparation is inadequate for a standard course in college algebra. **Prerequisites: Math. and Ast. D or its equivalent as determined by the Department of Mathematics and Astronomy from the University placement tests. The course will carry 2 quarter hours' credit for students who have presented 1½ or more units of Algebra for entrance.**

***5b COLLEGE ALGEBRA. (4, 3) II, III** Staff
A continuation of 5a. Completion of material in Math. and Ast. 17. **Prerequisite: Math. and Ast. 5a. The course will carry 3 quarter hours for students who have presented 1½ or more units of algebra for entrance.**

***15 MATHEMATICS OF FINANCE. (4) II** Staff
A study of simple interest, simple discount, compound interest, annuities. Applications to solutions of problems in amortization, sinking funds, valuations of bonds. Primarily for Commerce students. **Prerequisite: Math. and Ast. 5a, b or 17.**

***17 COLLEGE ALGEBRA. (5) I, II, III, IV** Staff
The standard course. A review of quadratic equations; includes simultaneous, quadratics, variations, permutations and combinations, and theory of equations. **Prerequisites: 1½ units high school algebra and an adequate preparation for a standard course in college algebra, as determined by the Department of Mathematics and Astronomy from the University placement tests, or 1 unit high school algebra and an adequate knowledge of the fundamental mathematical operations as determined by the department from the University placement tests.**

***19 PLANE AND SOLID ANALYTIC GEOMETRY. (5) II, III, IV** Staff
The standard elementary course. **Prerequisites: Math. and Ast. 5a, b or 17, 2, 3.**

20a DIFFERENTIAL CALCULUS. (5) I, II, IV Staff
The course covers elementary, differential calculus and an introduction to the integral. **Prerequisite: Math. and Ast. 19.**

20b INTEGRAL CALCULUS. (5) I, II, III, IV Staff
Completing the course in elementary calculus. **Prerequisites: Math. and Ast. 20a, 2.**

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* Open to Freshmen.

11 **SPHERICAL TRIGONOMETRY.** (3) III — Downing
Primarily for Civil Engineers. Three hours a week. **Prerequisite: Math. and Ast. 3.**

12 **LEAST SQUARES.** (3) III — Downing
Primarily for Civil Engineers. Three hours a week. **Prerequisite: Math. and Ast. 19.**

16a-f **TUTORIAL WORK IN MATHEMATICS.** (1) I, II, III — Senior Staff
Open only to A. & S. majors in mathematics.

*24 **ELEMENTARY THEORY OF STATISTICS.** (3) III — South
Formulas and methods for arithmetic mean, geometric mean, median, standard deviation, skewness and linear correlation coefficient will be derived, with emphasis upon the assumptions made and limitations in their use. Some elementary theory of probability will be introduced for use in the study of normal distributions, interpretation of standard deviation and probable error of an observation. **Prerequisite: 1½ units of high school algebra.**

25 **INTERMEDIATE CALCULUS.** (4) II, III — Downing
Purpose: To bridge the gap between the Integral Calculus and Advanced Calculus. Contents: To include such topics as Limits, Continuity, Curvature, Mean Value Theorem and Indeterminate Forms, Series Expansions of Functions, Hyperbolic Functions, Partial Differentiation, Properties of Definite Integrals, Reduction Formulas in Integration, and other advanced forms of Integrals.

Courses open only to Upper Division and Graduate Students

102 **VECTOR ANALYSIS.** (4) II — LeStourgeon
An elementary course in the algebra and calculus of vectors with numerous applications to geometry and physics. **Prerequisite: Math. and Ast. 20b.**

103 **THEORY OF EQUATIONS.** (4) I — Latimer
This course is based on Dickson's First Course in the Theory of Equations, which is used as a text. **Prerequisite: Math. and Ast. 20a.**

105a **DIFFERENTIAL EQUATIONS.**
(4) I, II, III — LeStourgeon and Pence
A first course in differential equations based on A. Cohen's text. **Prerequisite: Math. and Ast. 20b.**

107 **PROJECTIVE GEOMETRY.** (4) III — Brown and Boyd
A brief course in synthetic projective geometry. **Prerequisite: Math.** and Ast. 20a.

110a-f **INDEPENDENT WORK IN MATHEMATICS.**
(4) I, II, III — Senior Staff
Limited to upper division and graduate students of high standing. **Prerequisite: Math. and Ast. 20b.**

116 **ANALYTICAL MECHANICS.** (4) III — Downing
Topics included: Composition and resolution of forces; statics of a particle; moments; couples; center of gravity; friction; simple harmonic motion; constrained motion; work; energy; inertia; impulse. **Prerequisite: Math. and Ast. 20b.**

119 **MODERN GEOMETRY.** (4) II — Boyd
A course covering the subject substantially as presented in Altschiller-Court's text. **Prerequisite: Math. and Ast. 20a.**

* Open to Freshmen.

120 MATHEMATHICAL STATISTICS. (4) III Eaves
Topics considered: Averages, coefficients of dispersion and skewness, graphical representation, Bernoulli's Theorem, curve-fitting, theory of sampling, correlation, and regression lines. **Prerequisite: Math. and Ast. 20a.**

123 CURVE TRACING. (4) II Boyd
This course is designed to cover a survey of various methods and devices for sketching algebraic curves. Use is made of both non-homogeneous and homogeneous coordinates. The theory of algebraic curves is developed as it is needed.

124 ELEMENTARY THEORY OF STATISTICS. (3) III South
This course is designed for students in departments other than Mathematics. The content will be similar to that of Mathematics 24, except that extra work will be required for graduate credit. Credit will not be given for both Mathematics 24 and 124.

Courses open only to Graduate Students

203a-d THESIS. (4) I, II, III Senior Staff
Required in addition to other requirements for advanced degrees.

211 HIGHER ALGEBRA. (4) II Latimer
This course covers the material in Chapters 2-11 inclusive and Chapter XX in Bocher's "Introduction to Higher Algebra." **Prerequisite: Math. and Ast. 20a.**

220a-d MATHEMATICS SEMINAR. (3) II Cohen

Astronomy

***51a DESCRIPTIVE ASTRONOMY. (4) II** Fischer
An elementary, non-mathematical course.

***51b DESCRIPTIVE ASTRONOMY. (4) III** Fischer
Continuation of 51a.

Note.—Other courses such as Fourier's Series, Potential Function, Partial Differential Equations, Actuarial Mathematics, Axiomatics, Calculus of Finite Differences, Theory of Numbers, Real Variable, Algebraic Numbers, Tensor Analysis, Orthogonal Systems of Numbers, Practical Astronomy, Elementary Observations in Astronomy, Geometric Transformations, Integral Equations, Calculus of Variations, Differential Geometry, Complex Variable, Algebraic Curves, Modern Solid Geometry, Algebraic Invariants, Celestial Mechanics, Groups, Advanced Calculus, Advanced Analytics, Series Solid Analytics, and second courses in various subjects will be given from time to time.

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* Open to Freshmen.

MILITARY SCIENCE

Colonel Brewer; Lieutenant Colonels Griffin[1] and Eggers[2], Captains Stivers and Montgomery; Technical Sergeant Kinker; Staff Sergeant Baker, and Sergeant Bardwell

Reserve Officers' Training Corps

The University of Kentucky maintains a Unit of the Senior division of the Reserve Officers' Training Corps in conformity with the provisions of the National Defense Act of 1916, as amended.

Object. The object of the Reserve Officers' Training Corps is to provide systematic military training at civil educational institutions for the purpose of qualifying selected students of such institutions as reserve officers in the military forces of the United States. This object is attained by employing methods which fit men physically, mentally and morally for pursuits of peace as well as for duties as leaders in the defensive forces of the nation in an emergency.

Educational Aim. The course of study is designed to give to the student a training which will be as valuable to him in his industrial or professional career as it would be should the nation call upon him to act as a leader in its defense forces.

General Policy. The policy adopted by the War Department to carry out the provisions of the act of Congress of June 3, 1916, as amended, is to qualify students for positions of leadership in time of national emergency and to inculcate in them a respect for all lawful authority, and to teach the fundamentals of the military profession.

The primary purpose of all training is the development of character, leadership, and good citizenship; character through high standards of honor and integrity, leadership through the acquisition and use of knowledge, good citizenship through the idea of service as the real measurement of accomplishment and success.

Discipline of Body and Mind. The following characteristics of an officer and a gentleman will be insisted upon: Neatness in dress, the cultivation of the manners and habits of a gentleman, a dignified and military bearing, devotion to duty and consideration of others; the cultivation in the student body of **esprit de corps,** obedience to orders, acceptance of responsibility and avoidance of excuses.

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[1] Transferred March 1, 1944.
[2] Beginning March 1, 1944.

Uniform Equipment. Government uniforms and equipment are furnished the University for issue to students without cost to the individual. Each student is required to make a deposit of $10.00 with the Comptroller of the University to cover the cost of any lost or damaged articles. If no clothing is lost or damaged, the entire sum is refunded to the student when he completes the course or leaves school.

Course. The military Department offers a two years' basic course.

Basic Course. The basic course is required of all male freshmen and sophomores who are citizens of the United States, over fourteen years of age, and who conform to the physical requirements as prescribed by the War Department for units of the Reserve Officers' Training Corps.

The successful completion of the basic course is a prerequisite for graduation in every course in the University.

Advanced Course. The Advanced Course has been discontinued for the duration of the present emergency.

BRANCH IMMATERIAL

***1a FIRST YEAR BASIC COURSE, ROTC. (2) I, IV**
Montgomery and Kinker
Introductory course in Military Science, covering the following subjects: National Defense Act and Obligations of Citizenship; Military Courtesy, Customs and Discipline; Leadership, Drill and Command; Military History and Policy; Rifle Marksmanship. Five hours a week.

***1b FIRST YEAR BASIC COURSE, ROTC. (2) II**
Montgomery and Kinker
Continuation of introductory course in Military Science, covering the following subjects: Military Organization and Organization of Infantry; Military Sanitation and First Aid; Characteristics of Infantry Weapons; Technique of Rifle Fire. Five hours a week.

***1c FIRST YEAR BASIC COURSE, ROTC. (3) III**
Montgomery and Kinker
Continuation of introductory course in Military Science, covering the following subjects: Leadership, Drill and Command; Extended Order Drill; Manual of Arms; Ceremonies; Military Courtesy and Customs of the Service. Five hours a week.

6a SECOND YEAR BASIC COURSE, ROTC. (2) I, IV Stivers
Course in Military Science covering the following subjects: Map Reading; Tactical Training of the Individual Soldier; Automatic Rifle. Five hours a week. **Prerequisite: Military Science 1a, 1b, 1c.**

6b SECOND YEAR BASIC COURSE, ROTC. (2) II Stivers
Course in Military Science covering the following subjects: Combat Training; Technique of Rifle Fire. Five hours a week. **Prerequisites: Military Science 1a, 1b, 1c.**

6c SECOND YEAR BASIC COURSE, ROTC. (2) III Stivers
Course in Military Science covering the following subjects: Leadership; Drill and Command; Courtesies and Customs of the Service; Ceremonies. Five hours a week. **Prerequisites: Military Science 1a, 1b, 1c.**

* Open to Freshmen.

MUSIC

Professors Lampert[1] and Capurso, Assistant Professors Lewis and Horton, and Mrs. Cullis, Mr. Kuhlman, and Mr. Richardson

The aim of this department is to develop a high standard of professional and vocational leadership for the state of Kentucky as well as to provide opportunities for cultural experiences in music for the university student. Various music courses may be taken:

(1) As work to apply on the degree of Bachelor of Science in Music (see p. 59).
(2) As work to apply on the degree of Bachelor of Arts with a major in music.
(3) As elective for those majoring in other departments.

Not more than 27 quarter hours in **Applied Music** may be offered to count toward the A.B. or B.S. degree in other colleges

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in Field of Concentration: Sixty quarter hours of advanced work in the field of Literature, Philosophy, and the Arts during junior and senior years including the major work. All candidates for the A.B. Degree with a major in music are required to take part in **either orchestra or glee club,** (credit is given for one if both are taken) for the four years without credit. This also applies to music majors from other colleges.

Requirements for a Major. Prerequisites: Junior standing: Music 33a-b; Applied Music 18 quarter hours; Psychology 1.

Required: A minimum of 22 quarter hours of advanced work in music: 12a-b, 13a-b, 19a-b, 34a-b, and 114a or 115 (depending on instrumental or choral major). Other courses, such as Music 4a-b, 7, 8, 9, or 26 may be elected. Music 42 and a comprehensive examination are required of all music majors in the senior year.

All candidates for the B.S. in Music Degree are required to take part in **Either Orchestra or Glee Club** for each quarter without credit. Students participating in both orchestra and glee club may receive credit for one of the organizations.

University Bands

The University bands furnish an opportunity for improvement for those who have previously played the various band instruments. **The marching band** performs during the football and basketball season and furnishes music for the R. O. T. C. spring parades. The **concert band** appears for concerts on campus and in the community. A course in **band directing** is available to a limited number of the more proficient students.

[1] Special Assignment July 1, 1944.

University Vocal Ensembles

Glee Clubs. The University Women's and Men's Glee Clubs are open to all students interested in choral activity, subject to eligibility rulings, and admitted by permission of the director. These organizations appear at many university and community functions during the year including Sunday Afternoon Musicales, out-of-town appearances, and radio programs.

Choristers. This organization is composed of a selected group of students and performs both sacred and secular music.

Mixed Chorus. This organization is composed of the combined Men's and Women's Glee Clubs the second and third quarters of each year and provides University students an opportunity to study and perform major cantatas and oratorios, such as the Elijah, Messiah, St. Matthew's Passion, etc.

University Orchestras

The **University Philharmonic Orchestra** is a student organization assisted by members of the faculty and citizens of the community. The orchestra appears regularly in concerts. In the college community it is making itself a decisive factor in raising the musical tone of the student body. Admission by consultation with the director.

The **University Little Symphony Orchestra** is an organization composed of selected advanced instrumentalists interested in the study and performance of works primarily written for the little symphony.

Chamber Music

Chamber Music ensembles, such as string trios and quartets, brass sextets, and woodwind ensembles are organized each year to provide additional opportunities in music for those instrumental students who desire this type of activity.

Participation In Musical Organizations

No student is allowed to participate in orchestra, glee clubs, or other musical organizations unless he has met all eligibility requirements for extra-curricular activities.

Special Fees

Special fees for applied music, practice room, organ rental, and instrumental methods classes are listed on page 18.

4a PUBLIC SCHOOL MUSIC. (3) I, IV Lewis

A course in music methods and materials for use in **Primary Grades** stressing care of the child voice; rote-song singing, and repertoire; rhythmic development; listening experiences of standard musical literature; beginning phases of notation.

4b **PUBLIC SCHOOL MUSIC. (3) II, IV** Lewis
A course in music methods and materials for use in the **Intermediate Grades.** Continuation of 4a with the development of two and three-part singing; minor mode; chromatics, and rhythmic notation as found in typical music texts for fourth, fifth, and sixth grades.

7 **STRINGS—Methods, Materials, and Techniques. (3) I, IV** Lampert
This course includes a practical study in the elementary techniques of the violin, viola, violoncello, and string bass together with the study of teaching methods and materials as related to instrumental music in public schools. **Prerequisite: Junior standing.**

8 **BRASSES AND PERCUSSION—Methods, Materials, and Techniques. (3) II, IV** Capurso
This course includes a practical study in the elementary techniques of the cornet and trumpet, horns, trombone, baritone, tube, timpani, bass and snare drums, together with the study of teaching methods and materials as related to instrumental music in the public schools. **Prerequisite: Junior standing**

9 **WOODWINDS—Methods, Materials, and Techniques. (3) III, IV** Capurso
This course includes a practical study in the elementary techniques of the flute, oboe, clarinets, saxophones, and bassoon together with the study of teaching methods and materials as related to instrumental music in the public schools. **Prerequisite: Junior standing.**

12a **COUNTERPOINT. (3) I, IV** Horton and Richardson
A study of counterpoint as practiced in the 16th century. The analysis of 16th century contrapuntal works for melodic, harmonic, and rhythmic structure. The writing of motets and sections of the mass in 2, 3, and 4 parts. Sightsinging of contrapuntal compositions. Contrapuntal dictation in two and three voices. **Prerequisite: 33a-b.**

12b **COUNTERPOINT. (3) III, IV** Horton and Richardson
A study of contrapuntal styles from the madrigal through Bach. Analysis of the English madrigal, canon, invention, prelude, fugue, and free fantasy. Writing of madrigals in 2, 3, and 4 voices; 2 and 3 part inventions in Bach style; canons; preludes and fugues in 3 and 4 voices; and fantasia. Contrapuntal dictation in four voices. **Prerequisite: Music 12a.**

13a **FORM AND ANALYSIS. (3) II, IV** Capurso
A study of the design and harmonic structure of simple and complex forms of music through analyses of standard musical compositions. **Prerequisite: Music 33a-b.**

13b **FORM AND ANALYSIS. (3) III, IV** Capurso
A continuation of Music 13a. **Prerequisite: Music 13a.**

*15a-1 **APPLIED MUSIC (Piano). (3) I, II, III, IV** Richardson

*16a-1 **APPLIED MUSIC (Strings). (3) I, II, III, IV** Lampert
A study of the violin, viola, cello, and bass viol.

*17a-1 **APPLIED MUSIC (Voice). (3) I, II, III, IV** Kuhlman

*18a-1 **APPLIED MUSIC (Organ). (3) I, II, III, IV** Cullis

19a **HISTORY OF MUSIC. (4) I, IV** Capurso
A general study of the history of music development from the standpoint of form. Open only to music majors.

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* Courses a, b, c open to Freshmen; d, e, f, courses for Sophomores; g, h, i, courses for Juniors, and j, k, l, courses for Seniors.

19b HISTORY OF MUSIC. (4) II, IV — Capurso
A continuation of Music 19a. Open only to music majors.

20a SURVEY OF MUSIC LITERATURE. (3) II, IV — Capurso
This course is intended for **non-music majors** desiring to acquire an understanding of the literature of music. It consists of a presentation of the composers and works representing the polyphonic and classic periods. Opportunity is afforded for extensive listening to recorded music together with lecture presentation, demonstrations, and collateral reading.

20b SURVEY OF MUSIC LITERATURE. (3) III, IV — Capurso
Continuation of Music 20a. A study of the symphony, piano music, songs, opera from Beethoven to the present era. (Not open to music majors.)

***22a BAND.** (2) I — Capurso
For Freshmen enrolled in Military Science.

***22b BAND.** (2) II — Capurso
Continuation of 22a.

***22c BAND.** (2) III — Capurso
Continuation of 22b.

23a BAND. (2) I, IV — Capurso
For sophomores enrolled in Military Science.

23b BAND. (2) II, IV — Capurso
Continuation of Music 23a.

23c BAND. (2) III, IV — Capurso
Continuation of Music 23b.

26 HIGH SCHOOL METHODS. (3) III, IV — Lewis
Development of knowledge and skills in handling the music program in junior and senior high schools. This includes study of the adolescent in the junior high school; general music classes; music appreciation and theory classes; organization and training of special music groups as band, orchestra, and glee clubs; material for assemblies and integrated units.

28a CONCERT BAND. (2) I, IV — Capurso
For juniors.

28b CONCERT BAND. (2) II, IV — Capurso
Continuation of Music 28a.

28c CONCERT BAND. (2) III, IV — Capurso
Continuation of Music 28b.

29a CONCERT BAND. (2) I, IV — Capurso
For Seniors.

29b CONCERT BAND. (2) II, IV — Capurso
Continuation of Music 29a.

29c CONCERT BAND. (2) III, IV — Capurso
Continuation of Music 29b.

***31a-1 APPLIED MUSIC—Woodwind Instruments**
(3) I, II, III, IV — Capurso

***32a-1 APPLIED MUSIC—Brass and Percussion Instruments.**
(3) I, II, III, IV — Capurso

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* Courses a, b, c open to Freshmen; d, e, f, courses for Sophomores; g, h, i courses for Juniors, and j, k, l, courses for Seniors.

*33a **ELEMENTARY THEORY, SIGHTSINGING, AND DICTATION. (6) I, IV** Horton
The physical properties of sound; the major and minor triads and their relation to interval study, nonharmonic tones, tonality, scales, and simple modulation. Drill in rhythmic notation, dictation, and time signatures. Drill in sightsinging, melodic dictation, and harmonic dictation. Practical application of all material in Keyboard Laboratory. (6 recitations.)

*33b **ELEMENTARY THEORY, SIGHTSINGING, AND DICTATION. (6) II, IV** Horton
Dominant seventh and supertonic seventh chords, diminished and augmented triads and their relation to interval study, non-harmonic tones, tonality, scales, and modulation. Continued drill in rhythmic, melodic, and harmonic dictation. Advanced sightsinging. Partwriting of all triads, dominant and supertonic sevenths in both major and minor modes. Principles of fundamental bass. Transposition of a melodic line by clef. (6 recitations.) **Prerequisite: 33a.**

34a **ADVANCED THEORY, DICTATION, AND KEYBOARD HARMONY. (5) II, IV** Horton
Advanced melodic and harmonic dictation. Study of all triads and seventh chords through the medium of figured bass and the harmonization of German Chorales. Sightsinging in the tenor, alto, and mezzo-soprano clefs. Modulation to closely related keys in varying composition styles. Altered chords in major. Practical application of all work at the keyboard. (4 recitations and 2 laboratories.) **Prerequisite: 33a-b.**

34b **ADVANCED THEORY, DICTATION AND KEYBOARD HARMONY. (5) III, IV** Horton
Continuation of 34a. Continuation of harmonic dictation. Study of all altered and mixed chords in major and minor. Complete study of modulation. Study of partwriting through the medium of the German Chorale, chorale and variations and arrangements of spirituals and folksongs. Original compositions written for voices or instruments in a style to be chosen by the student. Exposition of the basic principles of modern harmony. Practical application of all work at the keyboard. (4 recitations, 2 laboratory periods.) **Prerequisite: Music 34a.**

*39a-1 **GLEE CLUB. (1) I, II, III, IV** Horton and Lewis
Any student in the University may be admitted to the glee club after consultation with the director. (No credit allowed for B.S. in music or Music Majors unless taken in conjunction with orchestra.)

*40a-1 **ORCHESTRA. (1) I, II, III, IV** Capurso
Students who have demonstrated the required ability are given an opportunity to study standard orchestral literature. Public performances are given at regular intervals. (No credit allowed for B.S. in Music or Music Majors unless taken in conjunction with Glee Club.)

42 **SEMINAR. (1) III, IV** Staff
A general study of any particular phase of music or music education; preparation for comprehensive examination, and graduation recital.

43a **SURVEY OF MUSICAL THEORY. (3) II, IV** Lewis
A course designed particularly for the layman in music covering the theoretical aspects of music, such as musical notation and terminology; harmonization of melodies; contrapuntal analysis; and sightsinging.

43b **SURVEY OF MUSICAL THEORY. (3) III, IV** Lewis
Continuation of 43a.

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* Courses a, b, c open to Freshmen; d, e, f, courses for Sophomores; g, h, i, courses for Juniors, and j, k, l courses for Seniors.

Courses open only to Upper Division and Graduate Students

110 RESEARCH PROBLEMS IN PEDAGOGY OF THEORY. (3) I, II, III, IV — Horton
An independent course in the teaching of counterpoint and theory to be selected by the instructor on the basis of prerequisite training and practical need. **Prerequisites: Music 33a, b; 34a-b or equivalent; and 12a-b.**

111a RESEARCH PROBLEMS IN MUSIC. (3) I, II, III, IV — Capurso
A research course in some phase of music other than history or pedagogy of music theory. The student will confer with the instructor whenever either or both of them deem it advisable.

111b RESEARCH PROBLEMS IN MUSIC. (3) I, II, III, IV — Capurso
Continuation of 111a. This course permits research in some phase of music which may, or may not, lead to the Master's Degree.

114a INSTRUMENTATION AND CONDUCTING. (3) II, IV — Capurso
This course includes a study of the individual instruments of the symphony orchestra and concert band; practice in arranging primarily for the string orchestra; the technique and practice of the fundamentals of orchestral conducting and score reading; and the problems of organizing and developing school bands and orchestras.

114b INSTRUMENTATION AND CONDUCTING. (3) III, IV — Capurso
A continuation of 114a which includes a further study of orchestral conducting and arranging for woodwind and brass ensembles and symphony orchestra. Recommended for instrumental majors.

115 CHORAL METHODS AND CONDUCTING. (3) III, IV — Lewis
This course is intended for music supervisors majoring in the choral field and will be a study of materials, techniques, and problems of presenting choral literature on the secondary level. Recommended as elective for choral supervisors.

Courses open only to Graduate Students

215a-d APPLIED MUSIC—Piano. (3) I, II, III, IV — Richardson

216a-d APPLIED MUSIC—Strings. (3) I, II, III, IV — Lampert
A study of the violin, viola, cello, and bass viol.

217a-d APPLIED MUSIC—Voice. (3) I, II, III, IV — Kuhlman

218a-d APPLIED MUSIC—Organ. (3) I, II, III, IV — Cullis

228a-d CONCERT BAND. (2) — Capurso

202 HISTORY OF MUSICAL THOUGHT. (3) II, III, IV — Lampert
This is an intensive study of music beginning with the Greek period and closing with the classical school of the eighteenth century. It considers the effects of the historical and social forces upon forms and styles.

203 CHORAL LITERATURE AND TECHNIQUE. (3) III, IV — Lewis
An opportunity to study the world's best choral literature and remedial work along the lines of choral presentation; interpretation as influenced by harmonic and melodic structure, vowel production, tone quality, tempi, traditions, program building, etc.

204 ADVANCED BAND TECHNIQUE. (3) II, III, IV Capurso
An advanced course in band techniques with concentration on band organization and materials, the technique of band conducting and general preparation of band instrumentations for balance, the study of transposition of band repertoire, and an intensive study in the field of band arranging.

208 SEMINAR IN MUSIC. (2) III, IV Capurso
One two-hour meeting is held each week for discussion of current developments in music found in recent books and periodicals.

PHILOSOPHY

Professor Kuiper and Assistant

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in Field of Concentration: Sixty quarter hours of advanced work, including the major courses, which may be elected in either (1) the field of Literature, Philosophy and the Arts, or (2) the field of Social Studies.

Requirements for a Major. Prerequisites: 8 quarter hours in Philosophy. **Required:** A minimum of 22 quarter hours in Philosophy; Philosophy 35a, b, c; and a comprehensive examination in the senior year.

21 INTRODUCTION TO PHILOSOPHY. (4) I, III, IV Kuiper
An elementary study of the principal types of philosophy, past and present.

31 LOGIC. (4) I, II, IV Kuiper
A study of the logical principles underlying valid thought.

35a-b-c TUTORIAL WORK IN PHILOSOPHY. (1) I, II, III Kuiper
Weekly conferences with major students; reports on assigned readings; readings in preparation for the comprehensive examination. Required of senior majors in Philosophy.

51 ETHICS. (4) II, III, IV Kuiper
A study of morality and right action, and an introduction to a general theory of value.

Courses open only to Upper Division and Graduate Students

101a HISTORY OF PHILOSOPHY. (4) I Kuiper
A survey of the philosophical thought of ancient Greece and Rome, and of medieval Christendom.

101b HISTORY OF PHILOSOPHY. (4) II Kuiper
A survey of modern European and American philosophy from the Renaissance to contemporary times.

102 CONTEMPORARY PHILOSOPHY. (4) III Kuiper
A study of contemporary philosophic tendencies, notably naturalism, empiricism, pragmatism, idealism, and neoscholasticism. Bertrand Russell, John Dewey, George Santayana, A. N. Whitehead and Henri Bergson are among the philosophers to be discussed.

106 REPRESENTATIVE MODERN PHILOSOPHERS. (4) IV Kuiper
A study in the original works of the chief figures in modern philosophy. Special attention will be given to Descartes, Spinoza, Locke, Hume and Kant.

109a-d INDEPENDENT WORK. (4) I, II, III, IV Kuiper
Open only to students who have distinguished themselves in Philosophy or in allied subjects.

110 MAKING OF THE MODERN MIND. (4) Kuiper
A survey of the intellectual and cultural background of the present age. This course considers the most revolutionary cultural, religious and scientific developments of the last three centuries and their effect upon the philosophic outlook of modern man.

115 INTERMEDIATE LOGIC. (4) Kuiper
A second course in logic, including the logic of classes, of relations, of propositions and of propositional functions; the theory of deductive systems; and a consideration of the rival schools of contemporary logical theory.

118 PLATO AND ARISTOTLE. (4) Kuiper
A study in English of the chief dialogues of Plato and of Aristotle's **Ethics, Politics,** and **Metaphysics.**

120 GREAT RELIGIONS OF THE WORLD. (4) IV Kuiper
A study of six religions in relation to the culture in which they arose: Shinto, Hinduism, Buddism, the religion of ancient Greece, Judaism, and Christianity.

Courses open only to Graduate Students

201a, b SEMINAR IN PHILOSOPHY. (2) Kuiper
One 2-hour meeting a week for discussion of current developments in Philosophy as found in books and periodicals. Readings and reports.

210a TYPES OF LOGICAL THEORY. (4) Kuiper
An intensive study of recent and contemporary contributions to logical theory: Whitehead and Russell, C. I. Lewis, R. Carnap, John Dewey and others.

210b TYPES OF LOGICAL THEORY. (4) Kuiper
Continuation of 210a.

220a RESEARCH IN PHILOSOPHY. (4) Kuiper
This course is primarily intended for advanced students who desire and are prepared to do research in logic and epistemology.

220b RESEARCH IN PHILOSOPHY. (4) Kuiper
Continuation of 220a.

PHYSICAL EDUCATION

Professors Potter[1] and Stout[2]; Associate Professor Hackensmith; Assistant Professors Huddleston[1] and Karsner[1]; Miss Warren,[3] Mr. Kurachek[1], Mr. Lancaster[1], Mr. Beazley, and Assistants

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in Field of Concentration: Sixty quarter hours of advanced work in the field of Biological Sciences, including the major work.

Requirements for a Major. Prerequisites: Zoology 1a, b, c; for Men, Physical Education 30, 31, 32, 33, 34, 35; for Women, Physical Education 30, 31, 32, 36, 37, 38. Required: Physical Education 123, 125 (for women, 115) 60 a, b, c, Anatomy and Physiology 4 and 5 and Hygiene 7. Minimum on Major 22 credits. Comprehensive examination senior year.

For teacher certification requirements, check with Dean of Arts and Sciences College and Head of Department of Physical Education.

Upon entrance every student is given a physical examination by the Department of Health and Hygiene. The findings of the Department of Health and Hygiene are furnished the Department of Physical Education and modification in the form of exercise is made accordingly. Individuals with physical handicaps are assigned to "Individual Physical Education" (P. E. 25a-f).

The program of study and activities of the Physical Education Department is threefold. The required or service physical education program consists of specific courses of instruction for men and women students which are designed to (1) teach the student an activity or activities which may serve as a recreational pursuit during leisure time, (2) provide the student with a means of regulated physical exercise, and (3) develop a sane and intelligent attitude toward physical activity and competitive sports. The second division of the department's program is its Intramural Sports program for men students and Women's Athletic Association program for women students. Through the Intramural and W. A. A. programs, numerous activities are sponsored which provide opportunity for all students to participate in sports activities on a competitive basis. The third division of the Department's functions is the Teacher Training Program which provides opportunity for students to prepare themselves to teach physical education, to coach athletic teams and to train for leadership in municipal or community recreation work.

[1] Military leave.
[2] On Leave, Winter and Spring Quarters, 1943-44.
[3] Resigned April 15, 1944.

Service Courses for Men

A uniform consisting of regulation sweat shirt, sweat trousers, white cotton undershirt, gym shorts, and rubber-soled gym shoes, is required for all men students. The cost of this ranges from $2.50 to $5.00, according to the quality of suit purchased. A locker fee of $1.50 per quarter is charged each student and includes clean towel service, soap, and locker rental. Each student must furnish a padlock for his locker.

Note.—The following courses may be elected to meet the physical education requirements for graduation.

*1 **SPORTS SKILLS AND PHYSICAL FITNESS.** (1) I, II, III, IV — Lancaster
All students required to take physical education must enroll in this course for their first quarter's work. Three hours per week.

*2 **TAP DANCING.** (1) I, II, III, IV — Staff
Fundamental steps designed for beginners. Three hours per week.

*3 **BOXING.** (1) I, II, III — Staff
Fundamentals of Boxing. For beginners. Three hours per week.

*4 **HANDBALL.** (1) I, II, III, IV — Staff
Fundamentals of Handball. For beginners. Three hours per week.

*5 **BASKETBALL.** (1) I, II, III — Staff
Fundamentals of Basketball. Three hours per week.

*6 **WRESTLING.** (1) I, II, III — Staff
Fundamentals of Wrestling. For beginners. Three hours per week.

*7 **GOLF.** (1) I, III, IV — Staff
Fundamentals of Golf. For beginners. Special charge of $3.00 to $5.00 for green fee. Three hours per week.

*9 **SOFTBALL.** (1) I, III, IV — Staff
Fundamentals of Softball. Three hours per week.

*11 **TENNIS.** (1) I, III, IV — Staff
Fundamentals of Tennis. For beginners. Three hours per week.

*12 **TOUCH FOOTBALL.** (1) I — Staff
Fundamentals of Touch Football. Three hours per week.

*13 **FENCING.** (1) I, II, III — Hackensmith
Fundamentals of Fencing. For beginners. Three hours per week.

*14 **VOLLEYBALL.** (1) I, II — Staff
Fundamentals of Volleyball. Three hours per week.

*15 **APPARATUS AND TUMBLING.** (1) I, II, III — Hackensmith
Fundamental activities on gymnasium apparatus and tumbling stunts. For beginners. Three hours per week.

*16 **SOCCER.** (1) I, II — Lancaster
Fundamentals and team play of Soccer Football. Three hours per week.

*18 **ARCHERY.** (1) I, III, IV — Lancaster
Fundamentals of Archery. Three hours per week.

* Open to Freshmen.

*19 **FOLK DANCING.** (1) I, III, IV — Staff
Participation in folk dances of various countries. Three hours per week.

*20 **BADMINTON.** (1) I, II, III, IV — Staff
Fundamentals of Badminton. For beginners. Three hours per week.

*21 **RECREATIONAL SPORTS.** (1) I, II, III, IV — Lancaster
Instruction and participation in Deck Tennis, Aerial Dart, Clock Golf, and other recreational sports. Three hours per week.

*25a-f **INDIVIDUAL PHYSICAL EDUCATION.** (1) I, II, III — Hackensmith
Students are assigned to this class on recommendation of the University physician. Special exercise programs, and game activities are taught to meet the indivdual needs. Three hours per week.

Service Courses for Women

A regulation uniform is required of all women students. The cost of the uniform ranges from $2.50 to $5.00, according to the quality of the suit purchased. A locker fee of $1.50 per quarter is charged each student and includes clean towel service, soap, and locker rental. Each student must furnish a padlock for her locker.

Note.—The following courses may be elected to meet the physical education requirements for graduation.

*1 **SPORTS SKILLS AND PHYSICAL FITNESS.** (1) I, II, III, IV — Warren
All students required to take physical education must enroll in this course for their first quarter's work. Three hours per week.

*2 **TAP DANCING.** (1) I, II, III, IV — Staff
Fundamental steps designed for beginners. Three hours per week.

*5 **BASKETBALL.** (1) I, II, III — Warren
Fundamentals of Basketball. Three hours per week.

*7 **GOLF.** (1) I, II, III — Staff
Fundamentals of Golf. For beginners. Special charge of $3.00 to $5.00 for green fee. Three hours per week.

*9 **SOFTBALL.** (1) I, III, IV — Warren
Fundamentals of Softball. Three hours per week.

*11 **TENNIS.** (1) I, III, IV — Warren
Fundamentals of Tennis. For beginners. Three hours per week.

*13 **FENCING.** (1) I, II, III — Warren
Fundamentals of Fencing. For beginners. Three hours per week.

*14 **VOLLEYBALL.** (1) I, II — Warren
Fundamentals of Volleyball. Three hours per week.

*15 **APPARATUS AND TUMBLING.** (1) I, II, III — Warren
Fundamental activities on gymnasium apparatus and tumbling stunts. For beginners. Three hours per week.

*17 **HOCKEY.** (1) I, III — Warren
Fundamentals of Hockey. Three hours per week.

*18 **ARCHERY.** (1) I, III, IV — Warren
Fundamentals of Archery. Three hours per week.

* Open to Freshmen.

*19 **FOLK DANCING.** (1) I, III, IV — Staff
Participation in Folk Dances of various countries. Three hours per week.

*20 **BADMINTON.** (1) I, II, III, IV — Warren
Fundamentals of Badminton. For beginners. Three hours per week.

*21 **RECREATIONAL SPORTS.** (1) I, II, III, IV — Warren
Instruction and participation in Deck Tennis, Aerial Darts, Clock Golf, and other recreational sports. Three hours per week.

*23 **BALLET.** (1) I, II, III, IV — Staff
Fundamentals of Ballet. Three hours per week.

*25a-f **INDIVIDUAL PHYSICAL EDUCATION.** (1) I, II, III — Stout
Students are assigned to this class on recommendation of the University physician. Special exercise programs are prescribed to meet the individual needs. Three hours per week.

*27 **MODERN DANCE.** (1) I, II, III, IV — Staff
Class work in technique, dance form and rhythmical activities with creation of patterns by class. Three hours per week.

*28 **HORSEBACK RIDING.** (1) I, II, III — Staff
Fundamentals of riding. Beginners, and elementary class. Special fee of $8.00 to $12.00. Three hours per week.

Professional and Teacher Training Courses

*30 **CALISTHENICS, APPARATUS AND TUMBLING.**
(3) I, II — Staff
Theory and practice of various systems of Calisthenics including the German and Swedish. Demonstration and practice of the fundamentals of tumbling, pyramid building, and exercises on the various pieces of gymnasium apparatus. Six hours per week.

*31 **SPORTS AND GAMES.** (3) II, III, IV — Lancaster
Instruction and practice in individual and team sports, low organized games, relays, contests, and mass athletics. Six hours per week.

*32 **RHYTHMICAL ACTIVITIES.** (3) I, II, III, IV — Staff
Fundamentals of rhythm and basic dance steps in social, tap, and folk dancing. Development of appreciation of the dance and skill in executing dances. Six hours per week.

*33 **FOOTBALL COACHING FUNDAMENTALS.**
(3) I, IV — Lancaster
Theory and Practice in coaching fundamentals involved in football. Men only. Six hours per week.

*34 **BASKETBALL COACHING FUNDAMENTALS.**
(3) II, IV — Staff
Theory and Practice in coaching fundamentals involved in basketball. Men only. Six hours per week.

*35 **TRACK AND BASEBALL COACHING FUNDAMENTALS.**
(3) III, IV — Staff
Theory and Practice in coaching fundamentals involved in track and baseball. Men only. Six hours per week.

*36 **FIELD SPORTS FOR WOMEN.** (3) I, III, IV — Warren
Theory and practice of techniques and teaching procedure of field sports for women including hockey, soccer, field ball, speed ball, etc. Women only. Six hours per week.

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* Open to Freshmen.

*37 **BASKETBALL AND VOLLEYBALL COACHING FUNDAMENTALS FOR WOMEN. (3) II, IV** Warren
Theory and practice of techniques and teaching procedures of basketball and volleyball for women. Special emphasis on coaching fundamentals of these sports. Women only. Six hours per week.

*38 **GOLF AND TENNIS. (3) I, III, IV** Warren
Theory and practice in methods and principles involved in the teaching of the fundamental skills and advanced coaching techniques in golf and tennis for women. Women only. Six hours per week.

42 **PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL. (5) I, II, III, IV** Warren
Required of all who wish to qualify for the Elementary School Teaching Certificate. Materials, practice and techniques in physical education activities suitable for elementary school children. Consideration of the significance of physical education in the elementary school and responsibilities of the class room teacher for leadership. Five hours per week.

55 **TECHNIQUE AND PROCEDURE OF THE DANCE. (3) II, III, IV** Staff
An analysis of techniques and teaching procedures of traditional dance steps and movements. A consideration of the relationship of musical and movement patterns. Projects to foster the developments of the student's analytical and critical faculties pertaining to the dance. Women only. Three hours per week.

Courses open only to Upper Division and Graduate Students

60a, b, c, **TUTORIAL WORK IN PHYSICAL EDUCATION. (1) I, II, III** Hackensmith
This is work to be given in connection with the comprehensive examination, required of major students. Two hours per week. Open to men and women students.

115 **HISTORY AND SURVEY OF THE DANCE. (4) II, III, IV** Staff
A study of the history and development of the various dance forms, including ballet dances, free dances, folk dances, national dances, eastern dances, American Indian dances, and a study of modern tendencies, and relation of dancing to physical education. Four hours per week.

120a, b **KINESIOLOGY. (3) I, II, III** Hackensmith
A study of the principle types of exercise with special consideration to the muscular and mechanical factors involved in bodily movement and function. A detailed study of the effects on bodily development and efficiency of muscular activity. A study of the prevention and treatment of certain physical defects and deformities through a knowledge of body mechanics. **Prerequisites: Anatomy and Physiology 4 and 5.** Three hours per week.

123 **HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION. (5) II, III**
Study of the historical development of Physical Education, and contributions of the individual and organizational movements. An interpretation of the biological, psychological and sociological principles of physical education. Five hours per week.

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* Open to Freshmen.

125 ADMINISTRATION AND ORGANIZATION OF RECREATION. (4) III, IV Staff
A study of policies and procedures involved in organization and administration of recreation for children, youth and adults. Four hours per week.

129 PHYSICAL EDUCATION IN THE SECONDARY SCHOOL. (4) I, IV Warren
Required of all physical education majors who wish to qualify for teacher certification as physical education teachers on the secondary school level. Study of theory, practice and methods of teaching physical education activities and program for secondary school pupils. Four hours per week.

131 ADVANCED BASKETBALL. (3) III, IV Rupp
Lectures and recitation on theory and practice of team play in basketball. Special emphasis is placed on systems of offense and defense as used by the leading coaches throughout the country. Three hours per week. **Prerequisite: For undergraduates, P. E. 34. Men only.**

142 ADVANCED FOOTBALL. (3) II, IV Kirwan
Lecture and recitation on the theory of football. Special emphasis is placed on generalship, signal systems, scouting and conditioning of players. Football is studied from the coach's viewpoint. **Prerequisite: For undergraduates, P. E. 33, Men only.** Three hours per week.

149 ADMINISTRATION OF PHYSICAL EDUCATION AND ATHLETICS. (4) I, IV Hackensmith
Policies and procedures of administration on the secondary school and collegiate levels. Special emphasis on construction and care of facilities, equipment, and supervision of personnel. Four hours per week.

151 ORGANIZATION OF INTRAMURAL SPORTS. (3) I, IV Hackensmith
A study of the history and development of intramural sports on the elementary, secondary, and college levels. Lecture, recitation and practice in accepted methods of organizing and administering intramural sports. Three hours per week.

Courses Open Only to Graduate Students

200 GRADUATE SEMINAR IN PHYSICAL EDUCATION. (3) I, IV Hackensmith
Graduate students majoring in physical education who are engaged in writing theses should register for this course. Three hours per week.

201 RESEARCH IN PHYSICAL EDUCATION. (4) I, II, III, IV Hackensmith
The theory and practice of the measurement of strength, size and maturity, power, motor educability, and agility. Tests of track and field events, general motor capacity and ability, endurance, and special abilities. A study of the requirements of a good physical efficiency test and the use of scoring tables. Four hours per week.

201b RESEARCH IN PHYSICAL EDUCATION. (4) I, II, III, IV — Hackensmith
The use of tests in classification and achievement. Paper and pencil tests, rating scales, measurement in health field, scoring and using the medical examination, cardiovascular tests, body mechanics, problems in grading physical education activities, and methods of test construction. Four hours per week.

202 PROBLEMS COURSE IN CONTEMPORARY MOVEMENTS IN PHYSICAL EDUCATION. (4) II, IV — Hackensmith
A detailed study and analysis of various foreign systems and procedures in physical education and athletic activities, including Germany, Denmark, Sweden, England, Italy, Russia, Japan, Olympic Games, and present athletic and physical education trends in the United States. Open to men and women students. Four hours per week.

203 CURRENT STUDIES IN THE ADMINISTRATION OF PHYSICAL EDUCATION. (3) II, IV — Hackensmith
For Administrative Officers, Directors of Physical Education, and Leisure Time Activities. A study of representative programs of physical education and standards for evaluating programs. Open to men and women students. Three hours per week.

204 CURRENT STUDIES IN THE ADMINISTRATION OF ATHLETICS. (3) III, IV — Staff
For Athletic Directors, Supervisors, and Athletic Coaches. A study of representative athletic administration procedures for colleges, public school systems, and municipal athletic leagues. Open to men and women students. Three hours per week.

PHYSICS

Professors Webb, Koppius, and Pardue[1]; Associate Professors Hahn[2], Warburton, and Crawley; Assistant Professors Todd[2], Ramsay[1], and Schroeder; Instructor Pauls, and Instrument Maker Schneider.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in Field of Concentration: Sixty quarter hours of advanced work in the field of Physical Sciences, including the major work.

Requirements for a Major. Prerequisites: Physics 3a-b-c; Mathematics 17, 3, 19. **Required:** Mathematics 20a, 20b; Physics 125c, and a minimum of 22 quarter hours of advanced work in Physics; a comprehensive examination in the senior year.

*1a **GENERAL ELEMENTARY PHYSICS.** (5) I — Crawley and others
An elementary course covering Mechanics of Solids, Liquids and Gases. Lectures and recitations, four hours; laboratory, two hours.

*1b **GENERAL ELEMENTARY PHYSICS.** (5) II — Crawley and others
Continuation of Physics 1a, covering Magnetism and Electricity. Lectures and recitations, four hours; laboratory, two hours. **Prerequisite: Physics 1a.**

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* Open to Freshmen.
[1] On leave for the emergency.
[2] Military leave.

*1c **GENERAL ELEMENTARY PHYSICS. (5) III** Crawley and others
Continuation of Physics 1b, covering Heat, Sound and Light. Lectures and recitations, four hours; laboratory, two hours. **Prerequisite: Physics 1b.**

3a **GENERAL COLLEGE PHYSICS. (6) I, II, IV** Staff
An advanced general course covering Mechanics of Solids, Liquids and Gases. Lectures and recitations, four hours; laboratory, four hours. **Prerequisites: College Algebra and Trigonometry, Mathematics 19; College Chemistry; or equivalent; concurrent: Mathematics 20a.**

3b **GENERAL COLLEGE PHYSICS. (6) I, II, III, IV** Staff
An advanced general course, covering Electricity and Magnetism. Lectures and recitations, four hours; laboratory, four hours. **Prerequisite: Physics 3a.**

3c **GENERAL COLLEGE PHYSICS. (6) II, III, IV** Staff
An advanced general course, covering Heat, Sound and Light. Lectures and recitations, four hours; laboratory, four hours. **Prerequisite: Physics 3b.**

*15a, b, c **TUTORIAL WORK IN PHYSICS. (2 each)** Staff
A conference course for prospective major students in Physics. Conference and laboratory work, three hours.

*51 **INTRODUCTION TO PHYSICS. (3) I, IV** Webb and Schroeder
A lecture demonstration course covering the subjects of Mechanics of Solids, Liquids and Gases.

*52 **INTRODUCTION TO PHYSICS. (3) II** Webb and Schroeder
A lecture demonstration course covering the subjects of Electricity and Magnetism.

*53 **INTRODUCTION TO PHYSICS. (3) III** Webb and Schroeder
A lecture demonstration course covering the subjects of Heat, Sound and Light.

Courses open only to Upper Division and Graduate Students

104 **THEORETICAL MECHANICS. (6) I** Pardue
This course begins with a careful statement of the fundamental laws of mechanics and the conditions under which they hold. Defined quantities are introduced logically. The work is usually based on some standard text but will be supplemented by lectures. The student is expected to solve a representative list of problems. Lectures and recitations, six hours. **Prerequisites: Physics 3c, Mathematics 20b.**

108 **THEORY OF LIGHT. (5)** Koppius and Ramsay
This course is designed to provide a foundation for the study of the nature of light and optical phenomena. Six topics are treated: wave motion, Maxwell's definition of physical optics, geometrical optics, interference, diffraction, and optical instruments. **Prerequisites: Physics 3c, Mathematics 20b.**

111 **ELECTRICITY AND MAGNETISM. (5)** Warburton
A study of the fundamental theory of electricity and magnetism, dealing with electrons. The physical concepts of electrical quantities are emphasized and systems of units defined. The course covers electrostatic forces and energy, conductors and dielectrics, electrolysis, thermoelectricity, magnetic forces and energy of currents, magnetization of iron, transient and alternating currents, and Maxwell's waves. **Prerequisites: Physics 3c, Mathematics 20b.**

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* Open to Freshmen.

113 FUNDAMENTALS OF RADIO. (4) IV Hahn
A course in radio primarily for high school teachers. The fundamental principles of vacuum tube characteristics, amplifiers, oscillators, transmitters and receivers; laboratory work in constructing and operating simple radio equipment of a type suitable for radio club projects. **Prerequisite: Physics 1c or equivalent.**

114 VACUUM TUBES AND CIRCUIT THEORY. (4) Hahn and Pardue
The theory of vacuum tubes and the measurement of their characteristics; amplifiers and oscillators; piezoelectric phenomena; radiation and propagation of high frequency electric waves; measurement of circuit constants, etc. **Prerequisites: Physics 3c, Mathematics 20b.**

117 THEORY OF HEAT. (3) I Koppius
A lecture and problem course dealing with the fundamental principles of heat phenomena. Topics included are: high and low temperatures; elementary kinetic theory; specific heat relations, both classical and modern; expansion; conduction; radiation; temperature dependence of physical quantities such as viscosity, surface tension, elasticity; etc. **Prerequisites: Physics 3c, Mathematics 20b.**

119 PRINCIPLES OF X-RAYS. (4) I Hahn and Crawley
A basic course dealing with the design and operation of x-ray equipment, the methods of crystal analysis and wave length measurements, x-ray spectroscopy; the mathematical development of the formulae of absorption, scattering, polarization and refraction. Compton effect and related phenomena; review of related articles in scientific periodicals. **Prerequisites: Physics 3c, Mathematics 20b.**

120 X-RAY TECHNIQUE. (3) II Crawley and Hamilton
An introductory course in x-ray technique. The first half of the course deals with the design and operation of x-ray equipment, the physical basis of voltage, current, time and distance factors, intensifying screens, darkroom procedure, etc. The second half is devoted to practice in the radiography of the extremities, chest, head, teeth, etc. **Prerequisite: Physics 1c.**

122 X-RAY ANALYSIS OF CRYSTALS. (4) Hahn
A lecture course presenting the various methods of analyzing the crystalline structure of matter by the use of x-rays. For students of chemistry, geology and physics. **Prerequisite: Physics 119.**

123a PRINCIPLES OF THERMODYNAMICS. (3) II Koppius
A lecture and problem course covering the first and second laws of thermodynamics. Derivation of thermodynamic relations and their application to processes in physics and allied sciences. Some of the topics considered are: Equation of state for ideal and real gases, specific heat relations, continuity and changes of state, vapor and osmotic pressure, thermodynamic functions and thermodynamic equilibrium. **Prerequisite: Physics 117 or equivalent.**

123b PRINCIPLES OF THERMODYNAMICS. (3) III Koppius
A continuation of Physics 123a. The phase rule and phase equilibria, equilibrium in liquid systems, ionic equilibrium, electromotive force and free energy, the solid state, surface phenomena, radiation, Nernst's heat postulate. **Prerequisite: 123a.**

125a-d Independent Work in Physics. (4) Staff

131 EXPERIMENTAL PHYSICS: ELECTRICITY. (3) Warburton
The course provides advanced laboratory practice in electrical measurements. It includes calibration and use of the quadrant electrometer, the d'Arsonval galvanometer and the Type K Potentiometer; studies of dielectrics and the magnetization of iron; measurements of capacitance, resistance and inductance; charge and mass of electron; and absolute determinations of electrical quantities. **Prerequisite: Physics 111, or equivalent.**

137 EXPERIMENTAL PHYSICS: HEAT. (3) Koppius
An advanced laboratory course in modern methods of measuring thermal quantities. Opportunity is provided for using the gas thermometer, resistance thermometer, thermopiles and various types of radiation pyrometers. Construction and calibration of thermocouples. Determination of coefficients of expansion, vapor pressure and densities, viscosity, surface tension, freezing and boiling points, specific and latent heats, ratio of specific heats, heats of combustion, thermal conductivities, radiation constants, etc. **Prerequisite: Physics 117, or equivalent.**

138 EXPERIMENTAL PHYSICS: LIGHT. (3) Koppius and Ramsay
This course is an advanced laboratory study of lenses, mirrors, prisms, gratings, light sources, filters, apertures, and combinations of these elements in optical systems. The experiments include measurements with such instruments as the photometer, the spectrometer, the interferometer, and the polarimeter, etc. **Prerequisite: Physics 108, or equivalent.**

151 INTRODUCTION TO ATOMIC PHYSICS. (5) Todd
Corpuscular nature of matter, electricity and radiant energy, molecular, atomic and nuclear structure emissions; theoretical viewpoints upon above problems with special emphasis on their compatibility. **Prerequisites: Physics 3c, Mathematics 20b.**

Courses open only to Graduate Students

Courses from the following list will be given as a demand for them justifies: Spectroscopy, Theory of Measurements, Physical Optics, Kinetic Theory of Matter, Dynamics of a Particle, Electromagnetic Theory of Light, Transient Electric and Vacuum Tube Phenomena, Quantum Theory, Theoretical Physics, Thermodynamics, X-Rays and their Application to Physical Problems, Relativity, Electrodynamics, Magnetism.

For the description of these graduate courses, see the Graduate School Bulletin.

220a SEMINAR. (1) Staff
A weekly meeting of the staff and advanced students for the presentation and discussion of recent developments in physics as reported in the current literature and of work in progress in the department. Credit is given only to those who satisfactorily present papers.

220b SEMINAR. (1) Staff
A continuation of 220a.

226a-b RESEARCH IN PHYSICS. (4) Staff

227a-b RESEARCH IN PHYSICS. (6) Staff

POLITICAL SCIENCE

Professors Vandenbosch[1] and Manning[2]; Associate Professors Shannon[3] and Trimble[3]; Assistant Professors Reeves[3] and Edelmann[2]; Temporary Professor Sherwood, and Miss McChesney[4] and Miss Gardner.

The courses and facilities of the Department of Political Science are designed to serve a number of purposes. Among these purposes are: (1) To provide orientation and training in the problems of citizenship for undergraduate students. (2) Provide further special background for students majoring in journalism or preparing for admission to professional courses such as law. (3) To train social science teachers for the primary and secondary schools. (4) To provide special training for students preparing for governmental or quasi-governmental work conducted by non-governmental agencies. (5) To provide research training in the problems of government.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in Field of Concentration: Sixty quarter hours of advanced work in the field of Social Studies, during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: Political Science 15, 51. **Required:** At least one course in each of four fields of Political Science, including one course each in Constitutional Development and Political Theory; Political Science 190; minimum of 24 quarter hours of advanced work in Political Science; a comprehensive examination in the senior year.

*15 **PROBLEMS OF CITIZENSHIP.** (5) I, II, III, IV — Staff
Public opinion, the newspaper, advertising, the modern economic system, labor problems, unemployment, agriculture, conservation and the race problem.

*51 **AMERICAN GOVERNMENT.** (5) I, II, III, IV — Staff
A survey course in the structure and operation of the Federal Government.

52 **MUNICIPAL GOVERNMENT.** (5) I — Reeves
An introductory course in the study of the structure and functions of modern city governments.

80 **STATE GOVERNMENT.** (5) II — Reeves
A study of the forms and functions of government in operation in the states of the United States.

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[1] On leave Fall and Winter Quarters, 1943-44.
[2] Military leave.
[3] On leave 1943-44.
[4] Resigned January 1, 1944.
* Open to Freshmen.

Courses open only to Upper Division and Graduate Students

180a-d INDEPENDENT WORK. (5) I, II, III, IV
Honors course for seniors who are majors or minors in the department Consent of the department required for admission.

190 SEMINAR IN POLITICAL SCIENCE. (5) III Staff
Open to major students.

I. Political Parties and Public Opinion

170 POLITICAL PARTIES. (5) I, IV Shannon
An analysis of public opinion and pressure groups; a survey of the history, organization methods and functions of political parties in the United States; with first-hand studies of the individual's participation in government.

173 PUBLIC OPINION. (5) II, IV Shannon
The concept of public opinion; public opinion as an agency of political control; influence of the press, propaganda technique and control; competition of pressure groups for political influence.

RELATED COURSES IN OTHER DEPARTMENTS
Psychology 104, Social Psychology.

II. Public Administration†

****172 KENTUCKY GOVERNMENT AND CONSTITUTION. (5) IV**
An intensive study of government and administration in Kentucky. The course is intended primarily for teachers of civics in the secondary schools, and for teachers of government in colleges.

177a PRINCIPLES OF PUBLIC ADMINISTRATION. (5) I Reeves
A functional study of governmental administration, with emphasis on the theory and practice of administration, the evolution of administrative organization, and staff functions of government, including personnel and financial administration.

177b PRINCIPLES OF PUBLIC ADMINISTRATION. (5) III Reeves
A continuation of Political Science 177a, with emphasis on the line functions of government, including the protection of life and property, judicial administration, law enforcement, public health, welfare, education, conservation, and business regulation.

** Given from time to time.
† Other courses such as Regulation of Utilities and Public Welfare Administration given from time to time.

RELATED COURSES IN OTHER DEPARTMENTS

Economics 102. Labor Problems
Economics 104. Public Finance
Economics 124. State and Local Taxation
Economics 130. Labor Legislation
Law 153. Taxation
Law 167. Administrative Law
Sociology 107. Community Welfare Work

III. Theory

171a **EARLY POLITICAL THEORY. (5) I** Shannon
The political theories of Plato, Aristotle, Roman Political Thought. Thomas Acquinas, Dante. Christian Political Thought.

171b **MODERN POLITICAL THEORY. (5) II** Shannon
Detailed study of Machiavelli, Hobbes, Locke, Rousseau, Millard and the theories of the American and French Revolutions, the English Utilitarians, Democratic Political Theory, Socialism, Communism.

RELATED COURSES IN OTHER DEPARTMENTS

Philosophy 101a and 101b. History of Philosophy
Philosophy 110. Making of the Modern Mind

IV. Comparative Government

155a **COMPARATIVE GOVERNMENT—PARLIAMENTARY DEMOCRACIES. (5) II, IV** Trimble
A study of the governments of England, Ireland and the British self-governing dominions.

155b **COMPARATIVE GOVERNMENT—CONTEMPORARY DICTATORSHIPS. (5) III, IV** Trimble
A study of the government of Europe including France and Switzerland and the dictatorships of Italy, Germany and Russia.

†168 **THE GOVERNMENTS AND POLITICS OF EASTERN ASIA. (5) II** Vandenbosch
An introductory study of the political institutions of China, Japan, the Philippines, and Dutch East Indies and India. Constitutional principles, governmental organization, the party systems, current political issues and contemporary problems of international relations.

V. Public Law

159a **AMERICAN CONSTITUTIONAL DEVELOPMENT. (5) I, IV** Trimble
Chronological survey of the making of the constitution and its interpretation through principal statutes and judicial decisions; some emphasis upon the economic and social interests which influenced this growth.

† Not given for duration of war.

159b AMERICAN CONSTITUTIONAL DEVELOPMENT. Trimble
(5) II, IV
From the adoption of the Civil War Amendments to the present time. Congressional policies embodied in social-economic legislation; doctrines developed by the Supreme Court. Analysis and criticism of chief cases on "due process," congressional powers and changes in the federal system.

176 LEGISLATION. (5) III Reeves
A functional study of legislative bodies and the process of legislation. Emphasis is placed on the organization of legislative assemblies, the operation of the committee system, the actual process of enactment, including the drafting of bills, and the external controls over legislation.

RELATED COURSES IN OTHER DEPARTMENTS

History 131a-131b. English Constitutional History
Law 149. Municipal Corporations
Law 161a-161b. Constitutional Law I and II

VI. International Law and Diplomacy

****101 LATIN AMERICAN RELATIONS. (5) III**
The relations between the United States and the Latin American countries, the Monroe Doctrine, Pan-Americanism, Pan-Hispanism, Latin America and the League of Nations.

150 INTERNATIONAL LAW. (5) II
Sources and sanctions of international law, recognition, intervention, jurisdiction, nationality, protection of citizens abroad, diplomatic intercourse of states, the making, termination and interpretation of treaties, the treatment of aliens and international claims.

****160 AMERICAN FOREIGN RELATIONS. (5) II** Vandenbosch
An examination of the chief principles and problems of American Foreign policies; the part of the House, the Senate, the Courts and the President in the initiation, conduct and control of foreign policies; the organization of the Department of State, the selection of personnel, the status and duties of foreign service officers.

165 WORLD POLITICS. (5) I Staff
A study of diplomatic history before and after the war with particular stress on the importance of alliances, imperialism, militarism, and secret diplomacy. The latter part of the course deals with the development of international conferences, the League of Nations, and the recent foreign policy of the important nations.

RELATED COURSES IN OTHER DEPARTMENTS

Economics 127. International Economic Policies
History 100a and 100b. The Diplomacy and Foreign Policy of the United States
History 120. Europe in the Twentieth Century
Law 164. Conflict of Laws

** Offered from time to time.

Courses open only to Graduate Students

****202 NATIONAL AND REGIONAL PLANNING. (5) III, IV** Shannon
A survey of conditions leading to efforts at planning. A study of the theories and principles of planning; a detailed investigation of the regional life of selected areas.

204 INTERNATIONAL RELATIONS AND ORGANIZATION. (5) II
Social and economic factors leading to the establishment of international administrative organs, the Mandates System, the International Labor Organization, the League of Nations.

‡205 PACIFIC SETTLEMENT, WAR AND NEUTRALITY. (5) III, IV
Methods of Pacific Settlement. Neutrality. Conflicts between belligerent and neutral rights; Methods short of war. Nonbelligerency; Insurgency; Belligerency. Recent developments and trends.

206 SPECIAL PROBLEMS IN PUBLIC ADMINISTRATION. (5) II, IV Shannon
A research course in selected problems of public administration. The problems will be selected in accordance with the needs and desires of students registered for the course.

211 THE CONSTITUTION AND CIVIL RIGHTS. (5) I, IV Trimble
The American Conception of civil rights as expounded by the Constitutional Fathers and as interpreted by the courts. The social, economic and political aspects and implications of these rights. Special attention will be given to the decisions of the United States Supreme Court.

‡213 FEDERAL CENTRALIZATION. (5) I Trimble
A study of the shifting of power and control from the states to the federal government as a result of the economic and social development of the country and the resulting alteration of our constitutional system. Special attention will be given to the development of such provisions of the constitution as the commerce clause, the taxing clause and of grants-in-aid and the more important measures of the New Deal.

‡215 ADMINISTRATION OF JUSTICE. (5)
A study of the history, jurisdiction, organization and functioning of the federal judiciary in the political and economic order. Factors in decision-making, personnel of the courts, relation of the courts to other departments of the government.

‡217 CONTEMPORARY AMERICAN DIPLOMATIC PROBLEMS. (5) IV
The following topics would be included in the scope of the course, the specific subjects varying from time to time: the Monroe Doctrine, Pan-Americanism, the Open Door, arbitration limitations of armament, non-recognition doctrine, problems of the Philippines, American-Canadian relations, American-Mexican relations and such other current issues along this line as may arise from time to time.

****271 SEMINAR IN CONTEMPORARY POLITICAL THEORY. (5) IV** Shannon
An intensive study of the nature of the contemporary ideologies of socialism, communism, syndicalism, pluralism, anarchism, fascism, political and social democracy.

** Offered from time to time.
‡ Not given for duration of war.

Suggested Courses for Preparing for Public Service

For persons interested in preparing for the various branches of government service, the following courses of study are suggested:

Consular and Diplomatic Service. Comparative Government, International Law, American Constitutional Development, American Foreign Relations, Economic Geography, Transportation, Public Finance, Statistics, International Economic Policies, Diplomacy and the Foreign Policy of the United States, American History, Modern European History, Contracts, Conflict of Laws.

Financial Administration. Municipal Government, Public Administration, Regulation of Public Utilities, Accounting, Statistics, Public Finance, Money and Banking, Business Law, Auditing, Corporation Finance, Cost Accounting, State and Local Taxation, Income Tax Procedure, Business Law, Personnel Management.

Public Management. Municipal Government, State Government, Public Administration, Personnel Management, Public Welfare Administration, Statistics, Accounting, Public Finance, State and Local Taxation, Legislation, Social Systems, American Constitutional Development, Highway Location, Construction and Maintenance, Streets and Pavements, Water Supply and Waterworks, Sewers and Sewage Disposal.

Public Recording. State Governments, Municipal Government, Accounting, Statistics, Public Finance, Money and Banking, State and Local Taxation, Public Administration, Contracts, Auditing, Cost Accounting.

Public Welfare Administration. Social Psychology, Social Systems, Ethics, Criminology, Individual Development, Psychology of the Child, Human Measurements, Abnormal Psychology, Social Dependence, Social Pathology, Community Welfare Work, Community Organization, State Government, Municipal Government, Statistics, Public Finance, Administration of Justice, Public Administration, Population Problems.

Public Works Administration. Highway Location, Construction and Maintenance, Streets and Pavements, Highway Materials, Water Supply and Waterworks, Sewers and Sewage Disposal, Design of Waterworks and Sewers, Contracts, State and Local Taxation, Public Finance, Accounting, Public Administration.

Public Safety Administration. Criminology, Abnormal Psychology, Personnel Management, Administration of Justice, American Constitutional Development, Constitutional Law, Public Administration, Social Pathology, State Government, Accounting, Community Organization.

PSYCHOLOGY

Professors White and Dimmick; Associate Professors Asher[1] and Beaumont; Assistant Professors Newbury, Ratliff, and Croft[2]; Graduate Assistants Jessie Irvine, Margaret Montondo, Susanna Reynolds, and Marjorie Pfeffer; and Student Assistant Richard Centers.

For information regarding the Industrial Psychological, Child Guidance, Mental Hygiene, and Educational Testing Services, see "Special Services of the University," p. 309.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements for a Major. Prerequisites: A minimum of 10 quarter hours in Psychology, including Psychology 1 and 8, or their equivalent. **Required:** The student may choose as his field of concentration either the Biological or the Social Science group of subjects. In either case 22 of the 60 quarter hours in the field must be courses in Psychology not open to freshmen.

These courses are to be coordinated toward definite objectives with the approval of the Department.

Pre-Educational students are advised to take Individual Differences, Child Psychology, Psychology of Learning, Practice in Testing: Intelligence Tests, Practice in Testing: Personality Tests, and Mental Hygiene.

Pre-Medical students are advised to take Individual Differences, Practice in Testing: Personality Tests, Experimental Psychology: The Senses, Animal Behavior, Mental Hygiene, and Abnormal Psychology.

Pre-Law students are advised to take Applied Psychology, Social Psychology and Abnormal Psychology.

Students of Industrial Personnel are advised to take Individual Differences, Practice in Testing: Intelligence Tests, Practice in Testing: Personality Tests, Practice in Testing: Trade Tests, Industrial Psychology, Employment Psychology, Psychology of Learning, and Mental Hygiene.

Students interested in Social Work are advised to take Individual Differences, Practice in Testing: Intelligence Tests, Mental Hygiene, and Abnormal Psychology.

Students interested in going into Mental Hygiene work are advised to take Individual Differences, Mental Hygiene, Abnormal Psychology, Psychology of Learning, Employment Psychology, Practice in Testing: Intelligence Tests, and Practice in Testing: Personality Tests.

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[1] On leave Fall Quarter, 1943-44.
[2] Military leave.

Students interested in Commerce are advised to take Individual Differences, Psychology of Advertising, and Selling, Practice in Testing: Trade Tests, Industrial Psychology, and Employment Psychology.

*1 **INTRODUCTION TO PSYCHOLOGY.** (6) I, II, III, IV Staff
An introduction to the study of the fundamental problems of human behavior. Recitations, demonstrations, and lectures. This course or its equivalent is the prerequisite to all other courses in the department.

*2 **APPLIED PSYCHOLOGY.** (4) I, II, III, IV Beaumont and White
The applications of psychological principles to business, industry, and public life. Special emphasis is placed on motivation, efficiency, and influencing the behavior of others. **Prerequisite: Psychology 1 or equivalent.**

5 **PSYCHOLOGY OF ADVERTISING AND SELLING.** (4) IV Asher
General principles of psychology applied to these fields as a fundamental basis for preparing advertisements and plans for selling. The bearing of research methods and the social significance of advertising. Given in cooperation with student publications, newspapers and local concerns which afford opportunities for some practice. **Prerequisite: Psychology 1.**

*6 **PERSONALITY.** (4) I, II, III Dimmick and Newbury
An introductory course in the field of personality with special emphasis upon the biological and social factors involved in personality development. Four hours of lecture a week. **Prerequisite: Psychology 1 or equivalent.**

7 **PSYCHOLOGY OF THE CHILD.** (4) I, II, III, IV Asher and White
The development of behavior from birth to maturity. The problems of conduct arising during infancy, childhood and adolescence in relation to child care and training. **Prerequisite: Psychology 1.**

8 **INDIVIDUAL DIFFERENCES.** (4) I, II, III Newbury and Asher
An introduction to the study of individual differences in behavior in relation to measurement in psychology. The relation of such factors as race, sex, heredity, physical constitution, environment, and training to differences in behavior will be considered. This course is a prerequisite to Psychology 101, 102, 103, and 105. Four hours of lecture a week. **Prerequisite: Psychology 1 or equivalent.**

Courses open only to Upper Division and Graduate Students

101 **PRACTICE IN TESTING: INTELLIGENCE TESTS.** (3) I Dimmick
This course provides advanced laboratory practice in the measurement of intelligence by individual techniques. Six hours a week. **Prerequisite: Psychology 8 or equivalent.**

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* Open to Freshmen.

102 PRACTICE IN TESTING: PERSONALITY TESTS. (3) II Dimmick
The purpose of this course is to give the student practical training and experience in the use of a selected list of personality tests and closely related techniques, commonly used in evaluating the non-intellectual aspects of personality. Six hours a week. **Prerequisite: Psychology 8 or equivalent.**

103 PRACTICE IN TESTING: APTITUDE AND TRADE TESTS. (3) III Dimmick
This course provides laboratory practice in the use, scoring, and interpretation of industrial tests used in the fields of vocational and educational guidance and selection. Six hours a week. **Prerequisite: Psychology 8 or equivalent.**

104 SOCIAL PSYCHOLOGY. (4) IV White
Description and explanation of social phenomena in terms of the original and acquired reaction systems of the individual. So-called types are characterized in respect to the social problems they present. Topics given special consideration: Crowds, mob behavior, propaganda, and nationalism. **Prerequisite: Psychology 1.**

105 EMPLOYMENT PSYCHOLOGY. (4) II Beaumont
Emphasis is placed on the characteristics of an effective interview, the significance of certain items in the application blank, the use of objective tests in selection and the relation of adjustment, interests, special abilities, and experience to job fitness. Opportunities are provided for practice in interviewing and evaluating essential information in employment work. Three hours of lecture, two hours of laboratory a week. **Prerequisite: Psychology 8 or equivalent.**

106 INDUSTRIAL PSYCHOLOGY. (4) I, III Beaumont
Applications of psychology to industrial personnel problems: training and upgrading of employees, merit ratings, factors involved in industrial fatigue, surveys of attitudes, improvement of morale, reduction of turnover and absenteeism, safety promotion, providing incentives, welfare provisions, etc. Opportunities are provided for observation of successful methods in use in industrial situations. Three hours of lecture, two hours of laboratory a week. **Prerequisite: Psychology 1 or equivalent.**

109 EXPERIMENTAL PSYCHOLOGY: THE SENSES. (3) I White
The nature of the adequate stimuli, the sensory responses, and the techniques of measuring thresholds are the chief topics. Some consideration is given to spacial and form responses. One hour lecture, four hours laboratory. **Prerequisite: Psychology 1.**

110 EXPERIMENTAL PSYCHOLOGY: THE PERCEPTUAL PROCESS. (3) II White
Attention, association, thinking, feeling, and problem solving are investigated experimentally. The primary purpose of the experiments is to acquaint the student with the laboratory techniques involved in study of the above concepts. One hour lecture, four hours laboratory. **Prerequisite: Psychology 1.**

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* Open to Freshmen.

113 PSYCHOLOGY OF LEARNING. (3) III White

An experimental study of the learning process with an analysis of types of learning. The lectures are centered around the topics of the nervous mechanism in learning and the conditioned response. In the laboratory, the conditions which affect learning are studied. Examples of such conditions are: the effect of drugs, the relation to learning of length, amount and complexity of the material, and of the mode of attack. One hour lecture and four hours laboratory a week. **Prerequisite: Psychology 1.**

114 ABNORMAL PSYCHOLOGY. (4) II, IV Dimmick

An intensive course on disturbed conduct and thinking studied from both the theoretical and the practical points of view. The major psychoses and neuroses are given special consideration. Some opportunity for clinical observation is provided. **Prerequisite: Psychology 1.**

115 GENETIC PSYCHOLOGY. (4) II, IV Newbury

Influence of hereditary factors in the development of human behavior, with a critical survey of the problem and the evidence in connection with certain psychological traits such as musical and other special abilities, intelligence, insanity, and interests. **Prerequisite: Psychology 1.**

116 ANIMAL BEHAVIOR. (5) II Newbury

Three hours of lecture, four hours of laboratory a week. A survey of the field of animal behavior with special reference to experimental technique. Opportunity for research experience in an animal laboratory. Topics include: problems of heredity and environment, activity, instinct, motivation, learning, sensory discrimination and personality in subhuman species. Relationships to human problems indicated. **Prerequisite: Psychology 1.**

120a-d INDEPENDENT WORK IN PSYCHOLOGY. (3) I, II Staff

Designed for advanced students and graduates who undertake minor research problems to be conducted in regular consultation with the instructor. A minimum of six hours time per week is required. **Prerequisite: Major in the Department with a standing of two in psychology courses.**

121 STUDENT PERSONNEL. (4) III, IV

The methods of dealing with student personnel problems in college and high school, including the problems of selection, classification, sectioning of classes, grading, personal adjustment, motivation, guidance and vocational placement. The functions of a personnel officer in schools and colleges.

124 MENTAL HYGIENE. (4) II Ratliff

The objective of the course is to give a general orientation to the subject of mental hygiene, its historical development, its scope and relation to various sciences. The individual and cultural determinants of behavior will be discussed. Not available for credit to students who have had Hygiene 120a. The courses are taught at the same time, and the student may take the course either as Hygiene or Psychology. **Prerequisite: Psychology 1.**

125 EXPERIMENTAL CHILD STUDY. (4) II Asher
An advanced course in the psychology of the normal child. The scientific background of experimental and observational method. Opportunities are provided to work with children in the University Nursery, Pre-School and Elementary School. **Prerequisite: Psychology 7.**

126 MENTAL HYGIENE OBSERVATION. (4) III Ratliff
A continuation of Psychology 124. Students are given the opportunity to apply to concrete cases the principles and concepts developed in 124. **Prerequisites: Psychology 124 or Hygiene 120a. This course is offered also as Hygiene 120b, but cannot be carried in both departments.**

Courses open only to Graduate Students

201a SEMINAR IN PSYCHOLOGY. (1) I The Staff
One two-hour discussion each week of some current systematic concepts and of research under way by graduate students and members of the staff.

201b-d SEMINAR IN PSYCHOLOGY. (1) II, III The Staff
Continuation of 201a. These numbers are provided for registration in succeeding quarters.

203a PROBLEMS IN PSYCHOLOGY. (3) I The Staff
Shorter research problems are registered under this number. A minimum of six hours per week is required in consultation with the instructor.

203b-d PROBLEMS IN PSYCHOLOGY. (3) II, III The Staff
Continuation of research. These numbers are provided for registration in subsequent quarters.

210a RESEARCH IN PSYCHOLOGY. (5) I The Staff
Research or thesis work may be registered under this number. A minimum of nine hours per week is required on research conducted in consultation with the instructor.

210b-d RESEARCH IN PSYCHOLOGY. (5) II, III The Staff
Continuation of research. These numbers are provided for registration in succeeding quarters.

211 MENTAL WORK AND FATIGUE. (4) I White
A laboratory course. Four hours devoted to experiments and one hour discussion each week. **Prerequisites: An advanced course in Experimental Psychology and Elementary Statistics or their equivalent.**

212 THE EMOTIONS. (5) II White
A laboratory course. Four hours devoted to experiments and one hour discussion each week. **Prerequisites: An advanced course in Experimental Psychology and Elementary Statistics or their equivalent.**

213 THE OBSERVATION PROCESS. (5) II White
A laboratory course. Four hours devoted to experiments and one hour discussion each week. **Prerequisites: An advanced course in Experimental Psychology and Elementary Statistics or their equivalent.**

215 PSYCHOMETRICS. (5) III Asher
An advanced course which considers the treatment and interpretation of human measurements. The course deals with the computation and interpretation of simple, partial and multiple correlations, regressions, equations, and reliability of measures. **Prerequisite: Mathematics 24 or its equivalent.**

217 PSYCHOLOGY OF LANGUAGE. (4) III White
An experimental course dealing with both written and spoken language. The development and physical basis of language, together with its function in thought processes. The main emphasis will be placed on the experimental phases of the subject. Two hours lecture and two hours laboratory each week.

219 CLINICAL PSYCHOLOGY. (5) III Dimmick
Two hours clinic and two hours lecture. A survey of clinical work on the diagnosis and adjustment of problem children and adults. The course gives practical training and experience with representative cases.

220 HISTORY OF PSYCHOLOGY. (3) I
An historical presentation of the origin and development of psychological thought in Ancient Greece, rational, modern, empirical, and the beginning of experimental psychology, with the discussion of the various approaches to the science.

221 SYSTEMATIC PSYCHOLOGY. (3) II
The evaluation of the fundamental concepts and current schools of Psychology.

ROMANCE LANGUAGES AND LITERATURES

Professor Ryland[1] and Assistant Professors Haselden, Holmes, Horsfield, Schick, Server, and Hernandez[1].

UPPER DIVISION REQUIREMENTS.—**Junior and Senior Years.**

Requirements in Field of Concentration: Sixty quarter hours of advanced work in the field of Literature, Philosophy and the Arts, during the junior and senior years including the major work.

[1] Military leave.

Requirements for a Major. Prerequisites: Junior standing; in French: R. L. 1a-b, 2a-b, 4a-b, or 5a-b, 3a-b or 8a-b; in Spanish: R. L. 1a-b or 4a-b, 5a-b, 7a-b, 10a-b. **Required:** A minimum of 22 quarter hours of advanced work in Romance Languages; R. L. 80a-b-c. Comprehensive examination in the senior year.

*1a **ELEMENTARY FRENCH. (5) I, II, III** Staff
This course consists of a thorough drill in pronunciation, using phonetics, elementary grammar including the study of nouns, adjectives, personal pronouns, the regular verbs and a few irregular ones, the writing of simple sentences from English into French, and the reading of easy French including translations and easy conversation.

*1b **ELEMENTARY FRENCH. (5) II, III** Staff
A continuation of 1a. Second half of course includes other parts of the sentence, more difficult sentences, ease in reading and a knowledge of France, its institutions and people. **Prerequisite: 1a or one year of high school French.**

2a **INTERMEDIATE FRENCH. (4) I, II, III** Staff
Supplementary reading. A good pronunciation, a thorough knowledege of grammar and verbs, reading and conversation are the aims of this course. Rapid reading of ordinary French and the ability to express oneself in French are stressed. **Prerequisites: 1a-b or two years of high school French.**

2b **INTERMEDIATE FRENCH. (4) II, III** Staff
Continuation of 2a. **Prerequisites: 2a or three years of high school French.**

3a **FRENCH CONVERSATION AND COMPOSITION. (3) II** Ryland
This course is designed to give students a fair amount of fluency in the use of the spoken language. The grammar will be developed by the writing of exercises out of class. Vocabulary will be built by the use of images rather than by translation, i.e. the direct method. **Prerequisites: 2a-b.**

3b **FRENCH CONVERSATION AND COMPOSITION. (3) III** Ryland
Continuation of 3a. **Prerequisites: 2a-b.**

6a **FRENCH NOVEL AND DRAMA. (4) I, II** Horsfield
Reading of standard texts in prose, fiction, and drama. Verb drill, dictation, composition, conversation drill, based on some text read and memorized. Reports on assigned reading outside of classroom. **Prequisites: 2a-b.**

6b **FRENCH NOVEL AND DRAMA. (4) II, III** Horsfield
Continuation of 6a **Prerequisites: R. L. 2a-b.**

8a **FRENCH PHONETICS. (4) I, II** Schick
A scientific study of French sounds based on the International System of Phonetic Symbols. **Prerequisites: R. L. 2a-b.**

8b **FRENCH PHONETICS. (4) II, III** Schick
Continuation of 8a. **Prerequisites: R. L. 2a-b.**

16a **CIVILIZATION OF FRANCE, SPAIN, SPANISH AMERICA AND ITALY. (1) I, II** Staff
Lectures and correlated readings. Required of Romance Languages majors.

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* Open to Freshmen.

16b CIVILIZATION OF FRANCE, SPAIN, SPANISH AMERICA AND ITALY. (1) II, III Staff
Continuation of 16a.

Courses open only to Upper Division and Graduate Students

80a TUTORIAL SEMINAR. (1) I, II, III Schick and Server
To prepare seniors for the Comprehensive Examination. Required of all Majors in Romance Languages during the senior year.

80b TUTORIAL SEMINAR. (1) I, II, III Schick and Server
Continuation of 80a.

80c TUTORIAL SEMINAR. (1) I, II, III Schick and Server
Continuation of 80b.

103a ADVANCED PHONETICS. (4) I, II Schick
This course is especially planned for teachers of phonetics both in high school and college. **Prerequisites: R. L. 8a-b and four years of French.**

103b ADVANCED PHONETICS. (4) II, III Schick
Continuation of 103a. **Prerequisite: 103a.**

109a FRENCH LITERATURE OF THE XIX CENTURY. (4) I, II Schick
During the year some of the standard works are studied. Written reports in French on assigned topics. Outside reading of 1500 to 2000 pages to be assigned when the class has been started.

109b FRENCH LITERATURE OF THE XIX CENTURY. (4) II, III Schick
Continuation of 109a.

110a FRENCH LITERATURE OF THE XVII CENTURY. (4) I, II Schick
A course in the Classic Drama of the XVII Century. During the year the student is expected to read in class chiefly in French, plays from works of Corneille, Racine, and Moliere. Work will be assigned to be done outside of the classroom. Reports to be written in French.

110b FRENCH LITERATURE OF THE XVII CENTURY. (4) II, III Schick
Continuation of 110a.

113a ADVANCED FRENCH GRAMMAR. (4) I, II Schick

113b ADVANCED FRENCH GRAMMAR. (4) II, III Schick

114a to f INDEPENDENT WORK. (4) I, II, III

115a FRENCH LITERATURE OF THE XVIII CENTURY. (4) I, II Holmes

115b FRENCH LITERATURE OF THE XVIII CENTURY. (4) II, III Holmes

116a FRENCH LITERATURE OF THE XX CENTURY. (4) I, II Horsfield

116b FRENCH LITERATURE OF THE XX CENTURY. (4) I, II Horsfield

Spanish

***5a ELEMENTARY SPANISH. (5) I, II, III** Staff
Fundamentals of the Spanish Language, reading in a simple reader. The purpose of this course is the learning of the essentials of Spanish Grammar and the acquisition of a practical vocabulary.

***5b ELEMENTARY SPANISH. (5) I, II, III** Staff
Continuation of 5a. **Prerequisites: 5a or one year of high school Spanish.**

7a INTERMEDIATE SPANISH. (4) I, II Staff
Review of grammatical principles, composition work, reading Spanish prose and literature. The reading texts are changed every quarter. **Prerequisites: 5a-b or two years of high school Spanish.**

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* Open to Freshmen.

7b INTERMEDIATE SPANISH. (4) II, III Staff
Continuation of 7a. **Prerequisites: 7a or three years of high school Spanish.**

9a SPANISH NOVEL AND DRAMA. (4) I, II Server
Prerequisites: 7a-b.

9b SPANISH NOVEL AND DRAMA. (4) II, III Server
Continuation of 9a. **Prerequisite: 9a.**

10a SPANISH CONVERSATION AND COMPOSITION. (4) I, II Server
This course is designed to give the students a fair amount of fluency in the use of the spoken language. The grammar will be developed by the writing of exercises out of class. Vocabulary will be built by the use of images rather than by translation, i.e. the direct method. The course will be conducted entirely in Spanish. **Prerequisites: 7a-b.**

10b SPANISH CONVERSATION AND COMPOSITION. (4) Server
Prerequisite: 10a.

10c SPANISH CONVERSATION AND COMPOSITION. (4) Server

Courses open only to Upper Division and Graduate Students

104a SPANISH LITERATURE OF THE XVII CENTURY. (4) I, II Server
Spanish Novel and Drama of the XVII Century, Syntax and Composition.

104b SPANISH LITERATURE OF THE XVII CENTURY. (4) II, III Server
Continuation of 104a.

106a SPANISH LITERATURE OF THE XX CENTURY. (3) IV Holmes
Beginning with the later works of the Generation of 1898, the novel, short story, drama, essay, poetry, criticism of the period. Lectures, recitations, readings, reports. **Prerequisite: Three years of college Spanish.**

106b SPANISH LITERATURE OF THE XX CENTURY. (3) IV Holmes
Continuation of 106a. **Prerequisite: 106a.**

112a SPANISH LITERATURE OF THE XIX CENTURY. (4) I, II Server
This course enables the student to become familiar with some of the works of the greatest novelists and dramatists of the first half of the XIX Century.

112b SPANISH LITERATURE OF THE XIX CENTURY. (4) II, III Server
Continuation of 112a. A study of the second half of the XIX Century.

Italian

***4a ELEMENTARY ITALIAN. (5) I, II** Schick
A study of the grammar and composition of Italian.

***4b ELEMENTARY ITALIAN. (5) II, III** Schick
Prerequisite: 4a or one year of high school Italian.

15a INTERMEDIATE ITALIAN. (4) I, II Schick
Prerequisite: 4a-b.

15b INTERMEDIATE ITALIAN. (4) II, III Schick
Continuation of 15a. **Prerequisite: 15a.**

* Open to Freshmen.

SOCIOLOGY

Professors Wilson[1] and Best, Associate Professor Sanders, and Part-Time Assistant Professor Holmes.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Social Studies during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: Sociology 1, and one of the following: 2, 7, 18. **Required:** Minimum of 22 quarter hours of advanced work in Sociology, including at least 8 quarter hours in Theory and Methodology, 8 quarter hours in one of the other sub-divisions below, and Sociology 20a, b, c. Comprehensive examination in senior year.

I. Introductory and General Sociology

*1 **INTRODUCTORY SOCIOLOGY.** (5) I, II, III, IV — Best and Holmes
A survey of the basic elements of culture, collective behavior, communities, social institutions, and social change. Basic concepts required for the analysis of sociological data are systematically considered. Not open to seniors.

*2 **MODERN SOCIAL PROBLEMS.** (5) II, IV — Best
An introductory course involving an examination of selected social problems of the present day. Some topics dealt with are: family disorganization, poverty, crime, racial issues, handicapped classes, housing conditions, population movements, social implications of industrial development, etc. Not open to seniors.

*7 **SOCIAL INSTITUTIONS.** (4) I — Wilson
A comparative analysis of the familial, economic, aesthetic, religious, and other basic institutions of human society.

20a, b, c **TUTORIAL WORK IN SOCIOLOGY.** (1) I, II, III — Staff
Conferences, assigned readings, reports, etc. For senior majors.

RELATED COURSES IN OTHER DEPARTMENTS

Anthropology *1a, b, c. General Anthropology (9)
Philosophy 21. Introduction to Philosophy (4)
Zoology 108a, b. Principles of Zoology (6)
Political Science *51. American Government (5)
Psychology *1. General Psychology (6)
Economics *1. Principles of Economics (5)
Geology 24a. Elements of Geography (4)
Lower division history courses

Courses open only to Upper Division and Graduate Students

II. Theory and Methodology

105 **SOCIAL THEORY: PLATO TO COMTE.** (4) I — Sanders
The social theories of representative social thinkers, together with a brief study of their lives and the time in which they lived. Extensive reading of their works.

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* Open to Freshmen.
[1] Resigned July 1, 1944.

114a-b **INDEPENDENT WORK IN SOCIOLOGY.** (1) I, II, III, IV Staff
Study of some special topic by duly authorized students.

122a **SOCIOLOGICAL THEORY AND METHODOLOGY.** (4) I Wilson
A study of the leading developments in sociological theory and methodology from Comte to the present time.

122b **SOCIOLOGICAL THEORY AND METHODOLOGY.** (4) II Wilson
A continuation of Sociology 122a.

124 **TECHNIQUES OF SOCIAL INVESTIGATION.** (4) III
A study of the practical applications of sociology in organizing, conducting, and interpreting social surveys and other forms of concrete research. Some background in statistics desirable for the student.

Courses open only to Graduate Students

201a-b **SOCIOLOGY SEMINAR.** (2) II, III Wilson
Consideration mainly of methods of research and of current sociological literature.

225 **SYSTEMATIC SOCIOLOGY.** (4) I Wilson
An intensive study of certain selected sociological theorists such as Weber, Durkheim, Simmel, Pareto, and others.

RELATED COURSES IN OTHER DEPARTMENTS

Philosophy 31. Logic (4) (And all upper division philosophy courses through 118.)
Political Science 171a. Early Political Theory (5)
Political Science 171b. Modern Political Theory (5)
Mathematics 24. Elementary Theory of Statistics (3)
Mathematics 124. Elementary Theory of Statistics (3)
Social Work 122. Field of Social Work (2)
Journalism 123a, b. Feature Writing (6)

III. Social Organization and Process

18 **COMPARATIVE SOCIOLOGY.** (4) III Sanders
A study of the dynamics of culture as shown in a primitive, a peasant, and a modern culture system.

27 **RELIGION AND CULTURE.** (4) III
A functional approach to the understanding of religion as a form of social behavior. Cultural sources of religious ideas and practices are traced, and special attention is given to the church as a social institution, ceremonials as symbols, secularization and other trends. Open to sophomores who have had Sociology 1, and to all upper division students.

Courses open only to Upper Division and Graduate Students

109 **THE FAMILY.** (4) I, III Sanders
A study of the family, both in its historical aspects and in connection with modern life.

112 **THE COMMUNITY.** (4) II Sanders
Major structural and functional aspects of modern American community types are viewed in terms of developmental processes, human ecology, and current problems of control and planning.

121 POPULATION PROBLEMS. (4) I
A study of movements and trends in population, with respect to race, age, birth-rates, etc.

125 AMERICAN REGIONALISM. (4) I
Regional similarities and differences in American society and culture are delineated, and derived problems are subjected to a sociological analysis.

126 OCCUPATIONAL ORGANIZATION. (4) II Wilson
A sociological analysis of the division of labor in contemporary society, including detailed consideration of professionalism through a study of the social organization of several selected professions.

127 DIFFERENTIATION AND STRATIFICATION. (4) III Wilson
A systematic treatment of the factors underlying differentiation and stratification, with particular attention to problems of caste and class.

Courses open only to Graduate Students

209 SEMINAR IN THE FAMILY. (2) IV Sanders
A seminar for advanced students interested in family research, family counselling, or dealing with family relationships in some other professional capacity.

224 MINORITY GROUPS. (4) III Wilson
A sociological scheme of analysis is applied to the special problems of adjustment arising from ethnic group relations and culture contacts

RELATED COURSES IN OTHER FIELDS

Anthropology 105. Ethnology (3)
Anthropology 106. Ethnology of Europe (3)
Anthropology 107. Ethnology of the New World (3)
Economics 9. Business Organization (4)
Economics 125. Evolution of Economic Institutions (4)
Economics 153. The Economics of Consumption (3)
English 130a, b. Comparative Literature (10)
History 40. History of Kentucky (3)
History 151a, b. The American Frontier (8)
History 180a. History of the Old South (4)
History 138. British Social History during the Tudor Period (3)
History 121. Social and Political Factors in Contemporary Civilization (3)
Journalism 102. Community Journalism (4)
Political Science 52. Municipal Government (5)
Political Science 80. State Government (5)
Political Science 155a, b. Comparative Government (10)
Political Science 168. Government and Politics of Eastern Asia (5)
Romance Language 16a, b. Civilization of France, Spain, Spanish America and Italy (2)
Education 101. School Organization (5)
Education 117a, b. History of Education (8)
Education 114. Educational Sociology (4)
Education 35. Introduction to Education (4)
Ancient Language 120. Survey of Greek Civilization (3)
Ancient Language 121. Survey of Roman Civilization (3)
Home Economics 154. Family Living (4)

IV. Social Disorganization and Reorganization

6 AMERICAN IMMIGRANTS AND RACES. (2) II Best
A study of ethnic groups in the United States, and of national policies for dealing with related problems, including special attention to the Negro problem.

Courses open only to Upper Division and Graduate Students

101 POVERTY AND DEPENDENCY. (4) I Best
A study of poverty and social dependence and of measures for their alleviation and reduction, with special attention to present private and public activities in this direction, including social insurance.

102 SOCIAL PATHOLOGY. (4) II Sanders
A systematic examination of the various types of social disorganization, with particular emphasis upon the sociological explanation of underlying factors.

103 CRIMINOLOGY. (4) II, IV Best
A study of general conditions as to crime and delinquency, of measures of punishment and reform of offenders, of criminal procedure and its possible reform, and of measures for the prevention of crime.

130 UTOPIAN AND EXPERIMENTAL SYSTEMS. (4) I Best
A survey of leading Utopian social systems, experimental communities and societies from the point of view of structure and function.

Courses open only to Graduate Students

223 SOCIAL TREATMENT OF DELINQUENCY. (4) III Best
Methods for dealing with delinquents are analyzed and evaluated in historical perspective.

226 SOCIAL LEGISLATION. (4) IV Best
Leading developments in the field of social legislation are traced, and current measures and proposals are evaluated.

RELATED COURSES IN OTHER DEPARTMENTS

Psychology 114. Abnormal Psychology (4)
Psychology 124. Mental Hygiene (4)
Psychology 126. Mental Hygiene Observation (4)
History 166. Division and Reunion (4)
Hygiene 100a, b. Public Health (8)
Physical Education 125. Administration and Organization of Recreation (4)
Economics 102. Labor Problems (4)
Economics 114. War Economics (4)
Economics 130. Labor Legislation (4)
Economics 155. Industrial Relations (4)
Education 175a-i. Modern Educational Problems (4 each)
Home Economics 61. Housing (4)
Philosophy 51. Ethics (4)

V. Personality and the Group

9 INDIVIDUAL DEVELOPMENT AND THE GROUP.
(4) I, II, III, IV — Newbury and Asher
(Same course as Psychology 8, Individual Differences)
A study of socialization from a differential point of view.

21 THE CHILD IN SOCIETY. (4) I, II, III, IV — Asher and White
(Same course as Psychology 7, Psychology of the Child)
The development of behavior from birth to maturity. The problems of conduct arising during infancy, childhood and adolescence in relation to child care and training.

25 COLLECTIVE BEHAVIOR. (4) II — Sanders
A sociological interpretation of group life and of certain aspects of social life, including the building up or shaping of public opinion or social control.

Courses open only to Upper Division and Graduate Students

104 SOCIAL PSYCHOLOGY. (4) II, IV — White
(Same course as Psychology 104, Social Psychology)
Description and explanation of social phenomena in terms of the original and acquired reaction systems of the individual. Topics given special attention: crowd and mob behavior, propaganda, and nationalism.

111 PSYCHO-SOCIAL RELATIONS IN INDUSTRY. (4) I, III — Beaumont
(Same course as Psychology 106, Industrial Psychology)
A psycho-social approach to problems arising from the division of labor in modern industrial society.

RELATED COURSES IN OTHER DEPARTMENTS

Psychology 102. Practice Testing: Personality Tests (3)
Psychology 125. Experimental Child Study (4)
Political Science 170. Political Parties (5)
Political Science 173. Public Opinion (5)
Journalism 120. Seminar in Public Opinion (4)
Commerce 140. Advertising Campaigns (4)

VI. Rural Sociology

(See course offerings under Rural Sociology in the College of Agriculture.)

ZOOLOGY

Professors Funkhouser, Allen, and Brauer; and Dr. Lincicome[1], Miss Wootton, and Mr. Silvers.

UPPER DIVISION REQUIREMENTS—**Junior and Senior Years.**

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Biological Sciences, during the junior and senior years, including the major.

Requirements for a Major. Prerequisites: Junior standing; Zoology 1a, 1b, 1c. **Required:** Zoology 7a, b, c, or 157a, b, c; Zoology 106; Zoology 108a, b; Zoology 114a, b, c; a minimum of twenty-two quarter hours work above 1a, b, c, passing a comprehensive examination before graduation.

*1a **GENERAL ZOOLOGY. (4) I** Funkhouser and others
A general course in zoology consisting of lectures, recitations and laboratory work. The first quarter is devoted primarily to the study of the invertebrates.

*1b **GENERAL ZOOLOGY. (4) II** Funkhouser and others
A continuation of Course 1a, but open to students beginning the course. The second quarter is devoted primarily to a study of the higher invertebrates.

*1c **GENERAL ZOOLOGY. (4) III** Funkhouser and others
A continuation of course 1a and 1b, but open to students beginning the course. The third quarter is devoted to the vertebrates.

7a **COMPARATIVE ANATOMY. (3) I** Allen and Lincicome
Lower invertebrates. An intensive study of the anatomy of representatives of all the important phyla, classes, orders and a few families with gross studies of many genera. Life histories of important forms. **Prerequisite: Zoology 1a, b, c.**

7b **COMPARATIVE ANATOMY. (3) II** Allen and Lincicome
Higher invertebrates. Comparative organology and physiology. Continuation of 7a.

7c **COMPARATIVE ANATOMY. (6) III** Allen and Lincicome
Systematic consideration of classes, orders, and some families of the vertebrates. Detailed dissection of a few selected types.

11 **NATURE STUDY. (4) IV** Allen
A course in general nature study intended primarily for teachers who desire preparation in the use of natural history material in the elementary schools. Intimate studies of local plants and animals based largely on field work.

25 **GENERAL ANIMAL BIOLOGY. (5) III, IV** Lincicome
A general course designed for agriculture students consisting of a synoptic survey of the animal kingdom stressing the principles of organization of the animal body together with the fundamentals of physiology, development, heredity and evolution. Recitation 3 hours and laboratory 4 hours.

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[1] Military leave.
* Open to Freshmen.

Courses open only to Upper Division and Graduate Students

101a HISTOLOGY. (4) I, IV Brauer
Histology of the tissues. A course in the technique of the preparation of animal tissues for microscopic study. Practice in imbedding, staining, sectioning, mounting and identification of tissues. **Prerequisites: Zoology 1a, b, c.**

101b HISTOLOGY. (4) II, IV Brauer
Histology of the organs. A continuation of Course 101a in which the studies are based on the organs and special attention given to pathology. **Prerequisite: Zoology 101a.**

102 ORNITHOLOGY. (4) III, IV Funkhouser and Allen
A study of the life histories, anatomy and physiology of birds with particular reference to the habits, songs, nests, migration and economic importance of our native birds.

103a GENERAL ENTOMOLOGY. (4) I Allen
A beginning course in the study of insects. Gross anatomy, morphology and life-histories of representatives of the most important orders.

103b GENERAL ENTOMOLOGY. (4) II Allen
A continuation of Course 103a. Taxonomy and entomotaxy are given special attention during the second quarter.

105 PARASITOLOGY. (5) I, IV Lincicome
Designed especially for pre-medical, medical technology, pre-veterinarian and agricultural students. Protozoan, helminth and arthropod parasites of man and domestic animals with particular emphasis on life histories, epidemiology, methods of control, methods for the diagnosis of parasitic diseases of both man and other vertebrate hosts, techniques for the examination of hosts for their parasites and the preparation of parasites for critical study. **Prerequisites: Zoology 1a, b, c, 101a (7a desirable).**

106 EMBRYOLOGY. (6) III, IV Brauer
A general course in ontogeny. Studies in maturation, fertilization, cleavage, organogenesis and anomolies of development with laboratory work based on the chick and the pig. **Prerequisites: Zoology 1a, b, c, 101a.**

108a PRINCIPLES OF ZOOLOGY. (3) I, IV Funkhouser
(Evolution.) An advanced lecture course open only to juniors, seniors and graduate students on the fundamental principles of biology. The first quarter is devoted primarily to the study of organic evolution. Three times a week.

108b PRINCIPLES OF ZOOLOGY. (3) II, IV Funkhouser
(Heredity.) A continuation of Course 108a. The second quarter is devoted to the study of heredity, eugenics and animal instincts. Three times a week.

110a-f INDEPENDENT WORK. (4) I, II, III Staff
Special problems for individual students who are capable of pursuing independent investigations. **For Zoology Majors.**

114a-b ZOOLOGICAL SEMINAR. (1) I, II, III Staff
Presentation of results of research; reports on technical papers in current literature; book reviews; news notes; discussions of recent developments in zoology; reports on meetings of scientific societies. Juniors majoring in Zoology are advised, and Seniors required, to attend in order to receive tutorial instruction preparatory to the final comprehensive examination. For students majoring in biological subjects.

115b **ADVANCED PARASITOLOGY. (4) II** Lincicome
(Helminthology.) The etiology, pathology, epidemiology, diagnosis, prophylaxis and control of cestode, trematode and roundworm diseases of man are studied critically. The analysis of life cycles and of the diagnosis of helminth parasites of man. 3 lectures, 2 laboratory periods.

157a **INVERTEBRATE ANATOMY. (3) I** Allen and Lincicome
An advanced course on the comparative anatomy of invertebrate animals with special attention paid to phylogeny, organology and taxonomy. **Prerequisites: Zoology 1a, b, c.**

157b **INVERTEBRATE ANATOMY. (3) II** Allen and Lincicome
A continuation of Course 157a devoted to the higher invertebrates.

157c **VERTEBRATE ANATOMY. (6) III** Allen and Lincicome
A continuation of Course 157b.

160 **ONTOGENY. (3) II** Brauer
Lectures on theories and philosophies of organismic development. Reports on the literature. **Prerequisites: Zoology 1a, b, c, and at least one course numbered above 100.**

Courses open only to Graduate Students

210a, b, c **PROBLEMS IN ZOOLOGY. (4) I, II, III** Staff
Students qualified to undertake graduate work will be assigned to appropriate research problems to be pursued independently. Conferences, laboratory, field, and library work. Eight hours per week. Written reports.

Ichthyology and Animal Ecology and Field Biology are offered in alternate years. They will not be offered in 1944-45.

Advanced Parasitology 115a, 115b, and 115c are offered in a cycle of three years.

COLLEGE OF AGRICULTURE AND HOME ECONOMICS

ORIENTATION

Agriculture and Home Economics

Dean Cooper, Assistant Dean Horlacher, and Staff

A FRESHMAN ORIENTATION. (1) I Horlacher
The purpose of the freshman assembly is to aid freshmen in becoming acquainted with the College and the University and in solving problems which confront them as students. Required of freshmen during their first quarter in the college. Lecture, one hour.

101 SENIOR ASSEMBLY. (0) III Cooper and Horlacher
The purpose of the senior assembly is to present to graduating seniors various aspects of their relationships to work which may be undertaken after graduation. Required of seniors during their last quarter in residence.

AGRICULTURAL ENTOMOLOGY

Professor W. A. Price and Associate Professor Townsend

1 AGRICULTURAL ENTOMOLOGY. (4) I, II, III, IV Townsend
A general consideration of the fundamentals of insect structure, biology, and classification, with frequent discussions of current topics relating to both beneficial and destructive insects. Lectures, 3 hours; laboratory, 2 hours.

2 APICULTURE. (4) III Price and Townsend
The anatomy of the bee; the colony; location and equipment of the apiary; production of comb and extracted honey; diseases and enemies of bees. Much of the laboratory work has to do with manipulation of beekeeping equipment and with the bees themselves. Lectures, 3 hours; laboratory, 2 hours.

3 INSECTS OF THE HOME AND FLOWER GARDEN. (3) II Townsend
Life histories, habits and control of the more common insects which are injurious and troublesome in the home and flower garden. Lectures, 2 hours; laboratory, 2 hours.

102 ECONOMIC ENTOMOLOGY. (4) IV Townsend
Especially planned for those intending to take up vocational agricultural teaching and county agent work. The life history, control, and means of identification of the common and important economic insects of Kentucky are considered. The making and care of school collections, cages, etc., are described. Lectures, 3 hours; laboratory, 2 hours. **Prerequisite: A. E. 1.**

103 ECONOMIC ENTOMOLOGY: FRUIT AND GARDEN INSECTS. (4) I Townsend
Life histories, habits, distribution, and control of insects injurious to fruit and garden crops, with special attention to those species found in Kentucky. The various diseases, parasites, and predators of these injurious species are also given attention. Lectures, 3 hours; laboratory, 2 hours. **Prerequisite: A. E. 1.**

104 ECONOMIC ENTOMOLOGY: FARM CROP INSECTS AND ANIMAL PARASITES. (4) III Townsend
Life histories, habits, distribution, and control of insects injurious to common farm crops including those of stored grain and forage; also insect parasites of the common farm animals. The various diseases, parasites, and predators of these injurious species are given attention. Lectures, 3 hours; laboratory, 2 hours. **Prerequisite: A. E. 1.**

105a-d SYSTEMATIC AND TECHNICAL AGRICULTURAL ENTOMOLOGY (3) I, II, III, IV Townsend
Insect physiology, anatomy, ecology, and taxonomy, entomological literature and technique; studies of special groups of insects. Time to be arranged. **Prerequisites: A. E. 1, and any of the following: 102, 103, 104.**

201a-d ENTOMOLOGICAL PROBLEMS. (3) I, II, III, IV Price
Investigations of chosen insect problems, including original work. Discussion and assignment of current insect subjects. Time to be arranged. **Prerequisites: A. E. 1, 103, 104, 105a-d.**

AGRICULTURAL EXTENSION

Professor Bryant

101 METHODS IN AGRICULTURAL EXTENSION. (1) III Bryant
Methods used in extension work in agriculture and home economics; organization, administration and financing; cooperating agencies; proper relationships; organizing the working forces; and methods of making effective programs of work. Lecture, 1 hour.

AGRONOMY

Professors Kinney, Fergus, Karraker, Kelley, and Valleau; Associate Professor Ligon; and Assistant Professor Young

Courses in Crops

1 ELEMENTARY FARM CROPS. (5) I, III Fergus and Ligon
A survey course considering geographical distribution, science of production, and uses of important field crops. Lectures and recitations, 4 hours; laboratory, 2 hours.

2 MARKET GRAIN GRADING AND GRAIN JUDGING. (3) I Fergus
Studies of federal classes and grades of market grains. Attention is is also given to show standards. Laboratory, 6 hours. **Prerequisite: Agr. 1.**

104 ADVANCED CROPS: FORAGE CROPS. (4) I, IV (Alternate Years) Fergus
A comprehensive study of forage crops with special emphasis upon their production in Kentucky. Lectures and recitations, 4 hours. **Prerequisite: Agr. 1; Bot. 1b.**

105 ADVANCED CROPS: TOBACCO AND CEREALS. (4) II Kinney
Tobacco and the important cereal crops are studied in considerable detail as regards distribution, soil, climatic adaptation, and technique of production. Lectures and recitations, 4 hours. **Prerequisites: Agr. 1; Botany 1b.**

106 FIELD CROP IMPROVEMENT. (3) II Kinney
A study of the principles involved and the technique used in breeding crop plants. Lectures and recitations, 3 hours. **Prerequisites: Agr. 1; A. I. 61.**

107 TOBACCO. (2) II Kinney
A course designed for students particularly interested in the more practical phases of tobacco production and grading. Laboratory periods are devoted entirely to practice in grading various types of tobacco leaf. Offered in alternate years. Lecture, 1 hour; laboratory, 2 hours.

200a-c AGRONOMY SEMINAR. (1) I, II, III Agronomy Staff

204a-b SPECIAL PROBLEMS IN PRODUCTION OF FORAGE CROPS. (3) III, IV Fergus
Intensive studies of research relative to particular problems in forage crop production. **Prerequisite: Approval of instructor.**

205a-b SPECIAL PROBLEMS IN PRODUCTION OF TOBACCO OR CEREALS. (3) I, II Kinney

Courses in Soils

10 SOILS. (4) I, III Ligon
A general study of the origin, classification, properties, and management of soils. It is desirable that students take Agronomy 11 concurrently. Lectures and recitations, 4 hours. **Prerequisite: Chem. 1b.**

11 SOILS LABORATORY. (3) I, III Ligon
Laboratory and field exercises on important soil properties and processes, designed to accompany Agronomy 10. Two three-hour laboratory periods. **Prerequisite or parallel: Agr. 10.**

110 SOIL BIOLOGY. (4) II Ligon
A study of soil organisms and biological soil processes in relation to soil productivity. Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: Agr. 10; Bact. 52 desirable.**

112a-b SPECIAL PROBLEMS IN SOILS. (3) I, II, III, IV Karraker
Study of some special phases of soils not covered in other courses. Only three credits may be taken in a term. **Prerequisites: Agr. 10 and approval of instructor.**

113 METHODS AND RESULTS IN AGRONOMY EXPERIMENTATION. (4) II Ligon
A study of the essentials of reliable field experimentation, including sources of error; a study of field results with emphasis on interpretation. Lectures and discussions, 4 hours. **Prerequisite: Agr. 10.**

115 SOIL MANAGEMENT. (4) II Ligon
Deals with erosion, soil moisture, tillage operations, soil organic matter and nitrogen, including animal and green manures, lime and fertilizers. Lectures, 4 hours. **Prerequisite: Agr. 10.**

119 GENESIS, NATURE, AND CLASSIFICATION OF SOILS. (3) III Karraker
The origin and nature of soils are considered with particular reference to soil classification. Lectures and recitations, 3 hours. **Prerequisite: Agr. 10 and approval of instructor.**

200a-c AGRONOMY SEMINAR. (1) I, II, III Agronomy Staff

212a-d **RESEARCH IN SOILS.** (3) I, II, III, IV Karraker and Ligon
Each course offered each quarter, but only three hours may be taken in a quarter. **Prerequisite: Approval of instructors.**

Courses in Plant Pathology

23 **PLANT PATHOLOGY.** (6) I Valleau
A general survey of the causes, effects of, and methods of control of plant diseases. Recitations, 3 hours; laboratory, 6 hours. **Prerequisites: Bot. 1a, 1b.**

200a-c **AGRONOMY SEMINAR.** (1) I, II, III Agronomy Staff

223a-b **LITERATURE OF PLANT PATHOLOGY.** (4) I, II Valleau
A survey of the literature of plant pathology. **Prerequisite: Agr. 23.**

Courses in Farm Engineering

1 **MECHANICS OF THE FARMSTEAD.** (4) I, II, IV Kelley and Young
A study of the fundamentals of engineering as applied to agriculture. The course includes: mechanics of materials, transmission of power, farm implements, farm sanitation, equipment, and farm electrical and heating problems. Lectures and recitations, 3 hours; laboratory, 2 hours.

2 **FARM MOTORS.** (4) III Kelley and Young
A study of the fundamental principles governing the selection, construction, operation, and repair of motors, tractors, and tractor equipment for farm use. Lectures and recitations, 3 hours; laboratory, 2 hours.

3 **FARM STRUCTURAL ENGINEERING.** (3) I, II Young
A combination drawing and shop course in the construction, care and repair of farm buildings and equipment; drawing, use of lumber; and farm woodworking. Lecture, 1 hour; laboratory, 4 hours.

4a **FARM SHOP.** (3) II, III, IV Young
Principles and practices in farm tool sharpening, soldering, painting and concrete work; selection, use and care of tools; shop exercises and projects in repair and construction of farm equipment. Lecture, 1 hour; laboratory, 4 hours.

4b **FARM SHOP.** (3) I, III, IV Young
Principles and practice in farm metal work including cold metal work, forging, gas and electric welding, pipe fitting and machinery repair; selection, use and care of tools; shop exercises and projects in repair and construction of farm equipment. Lecture, 1 hour; laboratory, 4 hours.

101a-d **SPECIAL PROBLEMS.** (4) I, II, III, IV Kelley and Young
This course is designed to permit advanced students to make an intensive study of some phase of agricultural engineering in which they are particularly interested. **Prerequisite: F. E. 1 and approval of instructor.**

102 **DAIRY ENGINEERING.** (4) II Kelley
A study of the engineering principles involved in the construction, installation, operation, and management of machinery and equipment used in the handling and manufacturing of dairy products. Lectures and recitations, 3 hours; laboratory, 2 hours. **Prerequisite: F. E. 1.**

104 RURAL ELECTRIFICATION. (3) II Kelley
This course is designed to give students information on how to obtain electric service and on the problems involved in the selection, operation, and care of electrical equipment in the home and on the farm. Lecture and recitations, 3 hours.

105 ENGINEERING PRACTICES IN SOIL MANAGEMENT. (4) III, IV Kelley
Surveying, mapping, and determinating areas of farm land; designing farm drainage systems; problems in controlling erosion with terraces and other mechanical structures. Lectures, 2 hours; laboratory, 4 hours.

ANIMAL INDUSTRY

Professors Garrigus, Horlacher, Wilford, and Ely; Associate Professors Insko, Morrison, and Steele; Assistant Professors Barkman and Pifer; and Instructor McConnell.

Courses in Animal Husbandry

1 FARM LIVESTOCK PRODUCTION. (5) II, IV Pifer
Importance and use of livestock products; types, market classes and grades of beef cattle, sheep, swine, horses and mules; the origin, development and characteristics of the more important breeds. Lectures, 3 hours; laboratory, 4 hours.

2 LIVESTOCK JUDGING. (4) III Pifer
Judging beef cattle, sheep, swine, draft horses and mules. Practice in writing reasons and giving reasons orally. Laboratory, 8 hours. **Prerequisite: A. I. 1.**

3 LIVESTOCK MANAGEMENT. (1) III Pifer and Garrigus
Strictly practical livestock management problems are handled in this course, including preparation of animals for show and sale ring. Laboratory, 2 hours. **Prerequisite: A. I, 1.**

4 ADVANCED LIVESTOCK MANAGEMENT. (1) I Pifer
Intensive training in approved livestock management practices. Primarily for those who intend to manage livestock farms. Laboratory, 2 hours. **Prerequisites: A. I. 1, 3.**

5 LIGHT HORSE HUSBANDRY. (4) III Garrigus
A brief study of the breeds of light horses; selection, feeding and management; fundamental instruction in equitation. Not open to freshmen. Lectures, 2 hours; laboratory, 4 hours.

100 ANIMAL BREEDING. (5) II Steele
Breeding plans, inbreeding, linebreeding, outcrossing; disease resistance; inheritance of lethal characters; genetics of sex; heredity in cattle, sheep, swine, horses and laboratory animals. Given alternate years. Lectures, 5 hours. **Prerequisite: A. I. 61.**

101 FARM BUTCHERING AND CURING MEATS. (5) I, II Wilford
Slaughtering and blocking of beeves, veals, hogs, and lambs; judging on foot and on the hook; wholesale and retail cuts; meat curing, with special emphasis on pork. Lectures, 2 hours; laboratory, 6 hours. **Prerequisite: A. I. 1.**

102 **ADVANCED LIVESTOCK JUDGING.** (4) I — Pifer
Primarily for judging team candidates. Open only to those who have made good standings in the prerequisite courses. Lecture and laboratory. **Prerequisites: A. I. 1, 2.**

103 **WORK STOCK PRODUCTION.** (3) II — Horlacher
History and importance of the horse and mule industry; selection, breeding, feeding and management of horses and mules. Lectures, 2 hours; laboratory, 2 hours. **Prerequisites: A. I. 1, 81.**

104 **SHEEP PRODUCTION.** (4) III — Horlacher
History and importance of the sheep industry; selection, breeding, feeding and management of sheep; production and handling of wool. Lectures, 3 hours; laboratory, 2 hours. **Prerequisites: A. I. 1, 81.**

105 **BEEF PRODUCTION.** (4) III — Garrigus
History and importance of the beef cattle industry; selection, breeding, feeding and management of beef cattle. Lectures, 3 hours; laboratory, 2 hours. **Prerequisites: A. I. 1, 81.**

106 **PORK PRODUCTION.** (4) I — Wilford
History and importance of the swine industry; selection, breeding, feeding and management of swine. Lectures, 3 hours; laboratory, 2 hours. **Prerequisites: A. I. 1, 81.**

109a-d **SPECIAL PROBLEMS IN ANIMAL HUSBANDRY.** (3) I, II, III, IV — Animal Husbandry Staff
Approval of instructor required.

200a-c **ANIMAL INDUSTRY SEMINAR.** (1) I, II, III — Staff

201a-d **RESEARCH IN MEATS.** (3) I, II, III, IV — Wilford
Problems involving original investigation.

203a-d **RESEARCH IN HORSE HUSBANDRY.** (3) I, II, III, IV — Horlacher
Problems involving original investigation.

204a-d **RESEARCH IN SHEEP HUSBANDRY.** (3) I, II, III, IV — Horlacher
Problems involving original investigation.

205a-d **RESEARCH IN BEEF CATTLE HUSBANDRY.** (3) I, II, III, IV — Garrigus
Problems involving original investigation.

206a-d **RESEARCH IN SWINE HUSBANDRY.** (3) I, II, III, IV — Wilford
Problems involving original investigation.

Courses in Dairying

21 **FARM DAIRYING.** (4) I, IV — Ely and Morrison
The place of dairying in agriculture; factors affecting the secretion, composition, physical and chemical properties of milk and cream; the food value of dairy products; common dairy calculations; clean milk production; common farm dairy processes, such as separation, churning and storage of dairy products. Lectures, 3 hours; laboratory, 2 hours.

22 **JUDGING DAIRY PRODUCTS.** (2) I — Barkman
A study of the accepted standards of judging market milk, butter, ice cream, cheese, and starters; practice in scoring these products in accordance with standard methods. Lecture, 1 hour; laboratory, 2 hours.

23 JUDGING DAIRY CATTLE. (3) III, IV Ely
Selection of sires, cows and heifers with due consideration for breed and dairy type; application of the principles involved in the problem of herd improvement. Laboratory, 6 hours. **Prerequisite: A. I. 21.**

120 DAIRY CATTLE BREEDING. (4) III, IV (Alternate) Ely
The application of genetics to present day problems of breed and herd improvement; the progeny testing of sires; type classification; selective registration; the rise and fall in popularity of prominent families and strains within the leading dairy breeds. Lectures, 3 hours; laboratory 2 hours. **Prerequisite: A. I. 61.**

121 DAIRY CATTLE FEEDING AND MANAGEMENT. (4) I, IV (Alternate) Ely
The application of the principles of nutrition to dairy cattle feeding; current methods contributing to maximum efficiency in the production of quality dairy products on the farm. Lectures, 3 hours; laboratory, 2 hours. **Prerequisite: A. I. 81.**

122 ADVANCED DAIRY CATTLE JUDGING. (2) I Ely
Primarily for judging team candidates. Open only to those who have made good standings in the prerequisite courses. Lectures and laboratory. **Prerequisites: A. I. 21, 23.**

123 DAIRY BACTERIOLOGY. (5) II Morrison
The application of bacteriological principles to the production and processing of milk and other dairy products, involving mode of entrance of micro-organisms into dairy products, effects of their growth and methods for their control. Lectures, 2 hours; laboratory, 6 hours. **Prerequisite: Bact. 52 or 102.**

124 BUTTER. (3) I Barkman
A study of the various problems and processes involved in the manufacture and storage of butter. Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: A. I. 21.**

125 ICE CREAM. (3) II Barkman
A study of the problems and processes involved in the manufacture and handling of ice cream. Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: A. I. 21.**

126 MARKET MILK. (3) III Morrison
A study of the problems connected with the production and handling of market milk. Lectures, 2 hours; laboratory, 3 hours. **Prerequisite: A. I. 21.**

127 CHEESE. (3) II Barkman and Morrison
A study of problems and processes involved in manufacture and ripening of cheddar and other common cheeses. Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: A. I. 21.**

128 TECHNICAL CONTROL OF DAIRY PRODUCTS. (3) III Morrison
Various chemical and bacteriological tests used in the control of production or processing of dairy products. Laboratory and recitation, 6 hours. **Prerequisites: A. I. 21, 123.**

129a-d SPECIAL PROBLEMS IN DAIRYING. (3) I, II, III, IV Dairy Staff
Approval of instructor required.

221a-d RESEARCH IN DAIRYING. (3) I, II, III, IV Ely and Morrison
Special problems involving original investigation on the part of the student in either dairy production or dairy manufacturing.
See also A. I. 200, Animal Industry Seminar.

Courses in Poultry Husbandry

41 FARM POULTRY PRODUCTION. (4) III, IV McConnell
Principles of poultry husbandry; breeds and poultry improvement; selection and culling; incubation and brooding; feeding, housing and disease control; marketing poultry products. Lectures, 3 hours; laboratory and demonstrations. 2 hours.

43 HATCHERY MANAGEMENT. (4) II McConnell
Principles involved in operating incubators and brooders; hatchery operation and management; factors influencing the avian embryo; practice in the operation of commercial incubators. Lectures, 2 hours; laboratory, 4 hours. **Prerequisite: A. I. 41 and approval of instructor.**

140 POULTRY BREEDING. (4) II Steele
Genetic principles involved in poultry breeding; disease resistance; inheritance of egg production and related characters; development of breeding programs. To be given in alternate years. Lectures, 4 hours. **Prerequisites: A. I. 41, 61.**

141 ADVANCED POULTRY PRODUCTION. (5) I, IV McConnell
Studies of control measures in poultry diseases; nutrition; marketing; flock management and replacement. Lectures, 3 hours; laboratory and demonstrations 4 hours. **Prerequisite: A. I. 41.**

149a-d SPECIAL PROBLEMS IN POULTRY.
(3) I, II, III, IV McConnell
Approval of instructor required.

241a-d RESEARCH IN POULTRY. (3) I, II, III, IV McConnell
Problems involving original investigation.

See also A. I. 200, Animal Industry Seminar.

Courses in Genetics

61 GENETICS. (4) I, III, IV Steele
The elementary principles of heredity and their relationship to plant and animal breeding. Attention is directed briefly to human heredity. Lectures, 4 hours. Not open to freshmen.

161 GENETICS. (4) III, IV Steele
Lectures of A. I. 61 and assigned readings. Primarily for graduate students.

162 ADVANCED GENETICS. (4) II Steele
Concerned chiefly with the physical basis of heredity, mutations and chromosomal aberrations, linkage, genetics and development, and reports on current literature. Lectures, 4 hours. **Prerequisites: A. I. 61 or 161.**

169a-d SPECIAL PROBLEMS IN GENETICS. (3) I, II, III, IV Steele
Approval of instructor required.

261a-d RESEARCH IN GENETICS. (3) I, II, III, IV Steele
Problems involving original investigation.

See also A. I. 100, Animal Breeding; A. I. 120, Dairy Cattle Breeding; A. I. 140, Poultry Breeding; A. I. 200, Animal Industry Seminar.

Course in Animal Nutrition

81 PRINCIPLES OF ANIMAL NUTRITION. (4) III, IV Wilford
Fundamental principles involved in the digestion, absorption and assimilation of feeds by domestic animals; uses of the different nutrients; feeds, rations and their nutritive ratios; practical feeding of livestock. Lectures, 4 hours. **Prerequisite: Chem. 1a.**

ANIMAL PATHOLOGY

Professors Dimock and Hull

101 ANATOMY AND PHYSIOLOGY OF DOMESTIC ANIMALS. (4) I Hull
Correlation of structure and function of the organs and systems of the animal body; a study of anatomy and physiology as related to work offered in courses in livestock judging, animal nutrition, butchering, animal breeding, infectious diseases and animal hygiene. Lectures, 3 hours; demonstration lecture, 1 hour. **Prerequisite: Junior standing.**

102 INFECTIOUS DISEASES OF DOMESTIC ANIMALS. (4) II Dimock
Distribution, general nature, manner of dissemination, methods of control, prevention and eradication of infectious and parasitic diseases of animals. Lectures, 3 hours; demonstration lecture, 1 hour. **Prerequisite: A. P. 101, or approval of instructor.**

103 ANIMAL HYGIENE. (4) III Dimock and Hull
A consideration of both general and specific measures designed to promote health and prevent disease. Animal Hygiene includes feed and water, housing and ventilation, yards and pastures, sanitation, and environment. All are part of the many problems to be considered in a program of animal health. **Prerequisites: A. P. 101 and 102, or approval of instructor.**

104a-c SPECIAL PROBLEMS IN ANIMAL PATHOLOGY. (3) I, II, III Dimock and Hull
Prerequisites: A. P. 101, 102, and 103 or approval of instructor.

201a-c INVESTIGATIONS IN ANIMAL DISEASES. (3) I, II, III Dimock
Prerequisite: A. P. 101, 102, 103 or equivalent. This course is open only to persons who have a degree in veterinary medicine.

FARM ECONOMICS

Professors Nicholls and Beers and Associate Professor Bradford

1 AGRICULTURAL ECONOMICS. (5) I, II, III, IV Bradford
The principles of economics as applied to agriculture. A study of the agricultural industry from historic, geographic and economic approaches. **Prerequisite: Ec. 1.**

101 PRODUCTION ECONOMICS. (3) I
Economic analysis appropriate to the examination of problems of agricultural production; enterprise relationships; interregional competition. **Prerequisites: F. E. 1 and approval of instructor.**

110 FARM MANAGEMENT. (4) I, II, III, IV Bradford
A study of the organization of farms and of the factors contributing to high net earnings. Problem assignments assist students to apply the principles of production economics to farming. **Prerequisite: F. E. 1.**

111 ADVANCED FARM MANAGEMENT. (3) I Nicholls
A fuller study of the principles of farm management considered in course 110. Current and recent literature of farm organization and management will be studied and some consideration given to farm management as observed in European countries when such has a bearing on management principles in this country. **Prerequisite: F. E. 110 and approval of instructor.**

112a-c SPECIAL PROBLEMS IN FARM MANAGEMENT. (3) I, II, III Nicholls
Students are assigned some special problem such as the cost of producing some class of farm products, or profitable farm organization in a specified community. **Prerequisite: F. E. 110 and approval of instructor.**

113 TYPES AND SYSTEMS OF FARMING. (3) III Nicholls
A critical study of the business organization and management of successful Kentucky farms. Several field trips will be made to farms whose operators have achieved outstanding financial success while at the same time maintaining or increasing productivity of their farms. **Prerequisite: F. E. 110 and approval of instructor.**

114a-c FARM MANAGEMENT FOR A CHANGING AGRICULTURE. (1) IV Bradford
Application of recent developments in agriculture to the management of individual farms; extent and methods of making adjustments in farm organization; use and influence of mechanization, credit and governmental programs.

115 FARM ACCOUNTING. (3) II Bradford
An application of some of the fundamental principles of accounting to the study of the organization and operation of farms. Lectures, 2 hours; laboratory, 2 hours.

120 LAND ECONOMICS. (3) I
A study of land resources in relation to present and prospective needs; examination of the economic characteristic of land and of the bases for classifying land; land income, land values and tenure in relation to land use and conservation. **Prerequisite: F. E. 1 or approval of instructor.**

121 LAND-USE PLANNING. (3) II
A study of the national needs and national policies which led to the land-use pattern; social and economic implications of the present destruction and loss of soil resources; contribution and limitations of land-use planning toward the development of socially desirable programs for the use of natural resources. **Prerequisite: F. E. 120 or approval of instructor.**

122 LAND VALUE AND APPRAISAL. (3) II
The capitalization process, and other devices for valuing farm land; appraisal procedures of the Federal Land Banks and of other credit institutions. **Prerequisite: F. E. 120 or approval of instructor.**

123a-c CURRENT LAND PROBLEMS. (1) IV
A study of the requirements for and the supply of agricultural land in the United States.

200a-c AGRICULTURAL ECONOMICS SEMINAR. (0) I, II, III Staff
Discussions and papers on methods, problems, current literature and research in the field of agricultural economics. Required of all graduate students in the department.

201a-c RESEARCH IN FARM ECONOMICS
(3) I, II, III, IV Nicholls and Staff
Assignment of an advanced problem in the field of farm economics. Stress is placed on the plan, technique, and scientific method used by the student in developing his research.

202a-b ECONOMICS OF PRODUCTION AS APPLIED TO AGRICULTURE. (3) II, III
This course places emphasis upon the fundamental considerations essential to the study of production organization in the economy of modern agriculture. Theoretical analysis will be applied to such questions as the combination of the agents of production, scale and intensity of production, comparative advantage and interregional analysis, and to an evaluation of national agricultural policies and programs. **Prerequisite: Approval of instructor.**

203 COST, PRICE, AND PRODUCTION RELATIONSHIPS IN AGRICULTURE. (3) III
Consideration is given to the different concepts of cost which are encountered in the agricultural research field; considerable attention is paid the applicability of the traditional cost-price rationale in the agricultural industry. **Prerequisite: Approval of instructor.**

Courses in Rural Sociology

101 RURAL SOCIOLOGY. (3) I, IV Beers
Introductory study of rural people and their communities; the distribution, mobility and vitality of rural population; characteristics of the rural community, rural groups and institutions; orientation to rural, community problems. Lectures, recitations, individual reports, 3 hours. **Prerequisite: Soc. 1 or Economics 1.**

102 RURAL LEADERSHIP AND SOCIAL CHANGE. (3) II Beers
Rural culture and tradition; social processes in rural life, rural-urban relationships; survey of modern and contemporary changes within the rural community vitally affecting farm life; special emphasis upon attitudes, personality and the relation of leadership to change; leadership problems and methods in agriculture and rural life. Lectures, recitations, student projects, 3 hours. **Prerequisite: R. S. 101 or approval of instructor.**

103a-c SPECIAL PROBLEMS IN RURAL LIFE. (3) I, II, III Beers
Supervised individual study in selected sub-fields of rural sociology. Population, standards of living, neighborhood and community change, and rural institutions are among the available fields for investigation. **Prerequisite: Approval of instructor.**

104a-c RURAL LIFE. (1) IV Beers
The responses of rural people and their social organization to current trends in southern states and in the nation.

201a-c RESEARCH IN RURAL SOCIOLOGY. (3) I, II, III Beers
Individual graduate research with correlated study of rural social research types and methods. **Prerequisite: Introductory course in statistics.**

202 SEMINAR IN RURAL ORGANIZATION. (3) I Beers
Organizational behavior of farmers: social analysis of farmers' organizations and other rural interest groups, national, state, local; comparative study of group types; trends affecting the social structure of rural communities; agricultural planning and social planning in rural communities. **Prerequisite: Approval of instructor.**

203 SEMINAR IN RURAL SOCIAL ATTITUDES. (3) II Beers
The nature and genesis of rural attitudes and their relation to rural social control; analysis of contemporary rural attitudes and opinion. **Prerequisite: Approval of instructor.**

HORTICULTURE

Professors Olney and Elliott, Associate Professors Waltman and Emmert, and Instructor Wiggin

1 GENERAL HORTICULTURE. (3) II, III Olney
A study of the principles and practices basic to the production of fruit, flowers and vegetable crops. Lectures, 3 hours.

2 PRINCIPLES OF SPRAY PRACTICE. (2) I Waltman
A study of the principles and practice of spraying for the control of pests of horticultural crops. Lecture, 1 hour; laboratory, 2 hours.

10 VEGETABLE GARDENING. (2) III Olney
A study of the culture of vegetables for the home garden. Lectures, 2 hours.

20 ELEMENTARY LANDSCAPE GARDENING. (2) II Elliott
The principles of landscape as applied to the planting of home grounds, both rural and urban. Lectures, 2 hours.

22 ELEMENTARY FLORICULTURE. (2) III Elliott
The fundamentals of growing flowers and decorative plants, both outside and inside, as house plants. Lectures, 2 hours.

103 POMOLOGY: POME FRUITS. (3) I Waltman
A course dealing with the theory and practice of commercial pome fruit, with major emphasis on apple growing. Lectures, 2 hours; laboratory, 2 hours. **Prerequisite: Hort. 1.**

104 POMOLOGY: STONE FRUITS. (3) I Waltman
A detailed study of commercial peach, plum and cherry growing, with special emphasis on peach production. Lectures, 2 hours; laboratory, 2 hours. **Prerequisite: Hort. 1.**

105 POMOLOGY: SMALL FRUITS. (3) I Waltman
A detailed study of the care and management of commercial plantings of strawberries, raspberries, and other bush fruits. Lectures, 2 hours; laboratory, 2 hours, first half; lectures, 3 hours a week, last half. **Prerequisite: Hort. 1.**

106a-c SPECIAL PROBLEMS IN POMOLOGY. (3) I, II, III Waltman
This course is designed to meet the need for advanced work. **Prerequisites: Hort. 1, 103, 104, 105, and approval of instructor.**

110 THE PRINCIPLES OF VEGETABLE GARDENING. (3) III Emmert
A study of the fundamental principles underlying commercial production of vegetables. Lectures, 2 hours; laboratory 2 hours. **Prerequisites: Hort. 1, 10.**

111 **GROWING VEGETABLE PLANTS UNDER GLASS. (3) I** Emmert
Production of vegetable plants grown for transplanting; types of hotbeds, cold frames and simple greenhouse structures. Lectures, 2 hours; laboratory, 2 hours. **Prerequisite: Hort. 110.**

112a-c **SPECIAL PROBLEMS IN VEGETABLE CROPS. (3) I, II, III** Emmert
This course is designed to meet the need for advanced work. **Prerequisites: Hort. 1, 110, and approval of instructor.**

120 **LANDSCAPE GARDENING. (3) III** Elliott
Adaptation of the principles of landscape as applied to present conditions; coordination of buildings with surroundings; selection and use of material and their requirements. Lectures, 2 hours; laboratory, 2 hours.

121 **ADVANCED LANDSCAPE GARDENING. (3) II** Elliott
A continuation of Horticulture 120, with special emphasis on design and use of materials. Lectures, 2 hours; laboratory, 2 hours. **Prerequisite: Hort. 120.**

122 **FLORICULTURE. (2) III** Elliott
A detailed study of certain specific groups of flowers such as roses, bulbs and iris. Lectures, 2 hours.

123 **PLANT PROPAGATION. (3) II** Elliott
A study of the methods of propagating horticultural plants. Lectures, 2 hours; laboratory, 2 hours. **Prerequisites: Hort. 1; Bot. 1a, 1b.**

124a-c **SPECIAL PROBLEMS IN ORNAMENTAL HORTICULTURE. (3) I, II, III** Elliott
This course is designed to meet the need for advanced work. Approval of the instructor required. **Prerequisites: Hort. 1, 120, 121; Bot. 1a, 1b.**

125 **PLANTS AND PLANTING MATERIALS. (2) III** Elliott
A study of woody and herbaceous plants, their identification, suitability for landscape uses and the effects produced. Lecture, 1 hour; laboratory, 2 hours. **Prerequisite: Hort. 120.**

200a-c **SEMINAR. (1) I, II, III** Olney and Staff

201a-c **RESEARCH IN HORTICULTURE. (3) I, II, III** Olney and Staff
Prerequisite: Approval of instructors.

Courses in Forestry

1 **OUTLINE OF FORESTRY. (5) II** Wiggin
A general introduction to forestry, dealing with the concept of forestry, what it is, how it is developing, what is being done and why it is an essential enterprise. Fundamental problems of forest and woodland development in Kentucky are analyzed. Lectures, 4 hours; laboratory, 2 hours.

101a **FARM WOODLANDS. (4) II** Wiggin
History of forests and woodlands in the United States and Kentucky; silvics; important trees of Kentucky; structure and physiology of trees; ecology of woodlands; volume of woodland products. Lectures, 3 hours; laboratory, 2 hours.

101b **FARM WOODLANDS. (4) II** Wiggin
Principles of forest mensuration; increment and yield of growing timber; care and improvement of the farm wood lot; natural and artificial reproduction; protection; utilization and marketing. Lectures, 3 hours; laboratory, 2 hours. **Prerequisite or concurrent Forestry 101a.**

MARKETS AND RURAL FINANCE

Professors H. B. Price and McVey, Associate Professor Card, and Assistant Professors Clark and Brown

100 MARKETING. (4) I, II, IV Brown
Principles and methods of marketing farm products; methods of marketing at country points and in central markets; classes and functions of middlemen; marketing specific commodities; market prices; marketing costs; and cooperative marketing. Lectures, 4 hours. **Prerequisite: F. E. 1.**

101 COOPERATIVE MARKETING. (3) II Clark
Principles, methods and problems involved in the cooperative marketing of farm products; legal, organization, and management problems which cooperatives encounter for different classes of farm products. Lectures, 3 hours. **Prerequisite: M. & R. F. 100.**

102 MARKETING TOBACCO. (2) I Clark
Principles, methods and problems in marketing tobacco including systems of marketing, organization of auction markets, functional problems of warehouse operations, efficiency in the pricing of tobacco, monopolistic aspects of competition, and international movement of tobacco and tobacco products. **Prerequisite: M. & R. F. 100.**

103 MARKETING LIVESTOCK. (2) II Price
Analysis of local, auction and terminal market organization including marketing agencies, market institutions, marketing services, public regulation, direct marketing, and cooperative organization. **Prerequisite: M. & R. F. 100.**

104 MARKETING DAIRY PRODUCTS. (2) III Price
Economic aspects of markets for the principal dairy products including factors affecting the efficiency of dairy marketing organizations, price policies, quotation systems, cooperation and marketing agreements. **Prerequisite: M. & R. F. 100.**

110 AGRICULTURAL PRICES. (3) I Card
A study of factors influencing prices of farm products, price trends, cycles, supply-price relationships, the effects of inflation and deflation upon agriculture, price legislation, and the current outlook for individual farm products. **Prerequisite: F. E. 1.**

111 MARKET PRICES. (3) II
A study of price making forces in agricultural markets over relatively short periods of time; interregional and intermarket price relationships; effects of grading, price quoting, method of sale, extent of competition, speculation, and marketing agreements. **Prerequisites: F. E. 1, M. & R. F. 100.**

120 FARM FINANCE. (3) I Clark
Principles of financing the production and marketing of farm products; credit needs of agriculture, including short-time intermediate and farm mortgage-credit requirements; organization and operation of the federal farm loan system, and other agencies which furnish credit for agriculture. Lectures, 3 hours. **Prerequisite: F. E. 1.**

130 AGRICULTURAL STATISTICS. (3) III Card
Methods of collection and use of agricultural statistics with special reference to crop and livestock estimates and the census; tabular and graphic presentation of data; analysis of time series; graphic correlation and sampling as applied to agricultural surveys. **Prerequisite: Math. 24 or 124.**

140 AGRICULTURAL POLICY. (5) III Price
General development of the principles underlying agricultural policy, including analysis of the place of agriculture in the general economy, goals or objectives of agricultural policy; causes and development of the present agricultural problem; appraisal of current or proposed programs, and legislation for remedial action. **Prerequisite: F. E. 1.**

141a-c CURRENT PROBLEMS IN AGRICULTURAL ECONOMICS. (1) IV Price
This course emphasizes recent developments in agricultural marketing, production and credit. Especial consideration of federal production adjustment programs, organization of agricultural credit, marketing agreements and cooperation. **Prerequisite: F. E. 1.**

200a-c SEMINAR. (1) I, II, III Price and Staff
Analysis of current problems in the field of marketing and rural finance.

202a-c SPECIAL PROBLEMS IN MARKETING AND RURAL FINANCE. (3) I, II, III Price and Staff
Open to graduate students who have the necessary training and ability to do research on individual problems. The course consists of individual work on some selected problem related to agricultural marketing or agricultural finance. **Prerequisite: Approval of head of department.**

204 RESEARCH IN MARKETING. (3) II Price
Laying out the research project. Analysis of data. **Prerequisite: M. & R. F. 100.**

210 THEORY OF AGRICULTURAL PRICES. (3) II
The application of economic theory to the field of agricultural prices. Variability and flexibility in the price structure in terms of price behavior and with respect to some important factors in influencing long time, cyclical and seasonal changes in agricultural prices. Attention will be given to the effects of changes in industrial production and consumer incomes, foreign demand, mechanization of agriculture, production cycles, middlemen's margins, etc. **Prerequisite: M. & R. F. 110.**

211 RESEARCH METHODS IN AGRICULTURAL PRICES. (3) I Card
This course is primarily a critical and historical study of the application of various methods of analysis to specific types of price problems, including the assembling of data, the theory and practice of sampling, supply-price relationships and methods of testing the results of analysis. Students entering the course should have a broad preparation in general economics, agricultural economics and statistics. **Prerequisite: M. & R. F. 130.**

240 EFFECTS OF POLITICAL, ECONOMIC AND CULTURAL FORCES ON RURAL LIFE IN AMERICA. (3) III McVey
A course for graduate students in the heritages and political and economic forces that have affected the life and the property of the people engaged in agriculture. The period covered is from colonial times to the present. Lectures, readings, and assigned topics, three hours a week.

HOME ECONOMICS

Professor Erikson; Assistant Professors Barkley, Deephouse[1], Grundmeier, Latzke, Seeds, Mumford and Wilmore; and Instructors Helton, Beiter and Taylor[1]

Courses in Foods and Nutrition

2 NUTRITION AND PUBLIC HEALTH. (3) III Erikson
Nutrition as it affects social and family problems in the field of public health. Consideration is given to the food budget on different economic levels. Lectures, 3 hours. Not open for credit to students registered in home economics.

3 DIETETICS FOR NURSES. (6) I, II, III
Normal nutrition and the modification of the normal diet in the treatment of disease. The laboratory includes practice in food preparation and the planning and preparation of diets for various pathological conditions. Lectures, 3 hours; laboratory, 6 hours. **Prerequisite: A. & P. 6.**

5 FOODS. (5) I, III, IV Barkley
An introduction to the study of food. The course includes a study of methods of preparation and principles involved. Lectures and laboratory, 9 hours.

6 FOODS. (4) II, III, IV Barkley
This course includes the classification and composition of foods and the selection, purchase and preparation of food in connection with meal planning and service. Lecture and laboratory, 9 hours. **Prerequisite: H. E. 5.**

11 FOOD AND NUTRITION. (6) I, II, III Erikson
The properties and nutritive values of food and its conversion into the matter and energy of the body. Lectures, 3 hours; laboratory, 6 hours. **Prerequisites: Chemistry 37, A. & P. 3.**

101 PRINCIPLES OF NUTRITION. (4) III, IV Grundmeier
Nutrition functions of food and nutritive requirements of the body are presented for those who wish to know the value to mental and physical efficiency of good food selection. Lectures, 4 hours. Not open for credit to students registered in home economics.

102 DIETETICS. (6) I, II, III, IV Grundmeier
Daily food requirements at different age levels, emphasis being given to satisfying the divergent needs of families and other groups. Practice is given in normal dietaries. Lectures, 3 hours; laboratory, 6 hours. **Prerequisites: H. E. 6, 11.**

103a-b PUBLIC SCHOOL NUTRITION. (2) I, II, IV Grundmeier
Study of the nutrition class movement with emphasis on causes and effects of malnutrition, methods of judging nutrition and height and weight standards. Development of health program in public schools. Lectures, 2 hours. **Prerequisite or parallel: H. E. 102.**

103c-d PUBLIC SCHOOL NUTRITION. (1) I, II, IV Grundmeier
Opportunities are given to make and collect illustrative material for courses in applied nutrition. Observations of nutrition classes, school cafeterias and other nutrition projects are made. Laboratory, 2 hours. **Prerequisite or parallel: 103a or 103b.**

[1] Resigned August 31, 1943.

105a-c EXPERIMENTAL COOKERY. (4) I, II — Grundmeier
Study of factors that affect the results obtained in cooking and food preparation processes. Experimental work is carried out under controlled conditions and special emphasis is placed on physical, chemical and mechanical conditions. Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: Chem. 37, H. E. 5 or approval of instructor.**

106a-d FIELD WORK IN NUTRITION. (1) I, II, III, IV — Grundmeier
Nutrition problems at different age levels with emphasis on the child in the public school, correlated with surveys and experimental studies to show the relation between diet selection and its physical and mental effects. Lecture and laboratory. **Prerequisite: H. E. 103a or b, or approval of instructor.**

107 WORKSHOP IN NUTRITION. (5) IV — Erikson
This workshop gives opportunity to workers in the field of nutrition to obtain help in presenting the program of "Nutrition for War." The nutrition problem is analyzed in its relation to agricultural and socio-economic problems. The latest findings in technical information on nutrition are presented. Opportunity is given to collect visual aid material for teaching nutrition.

108a-d SEMINAR IN NUTRITION. (2) I, II — Erikson
Investigations of recent research in nutrition. Lectures, 2 hours. **Prerequisite: Senior or graduate standing.**

111 ADVANCED NUTRITION. (6) II, IV — Erikson
Metabolic processes of the body in normal and diseased conditions, correlating the metabolic changes due to disease with diet therapy. The laboratory includes sugar tolerance tests; protein and mineral balance experiments; biological tests for vitamins. It also includes practice in the planning, calculation and preparation of therapeutic diets. Lectures, 3 hours; laboratory, 6 hours. **Prerequisite: H. E. 102.**

114 FOOD PRESERVATION. (3) IV — Helton
The principles of preserving food by drying, canning, pickling, salting and quick freezing. Practice in the canning of fruits, vegetables and meats; the pickling of fruits and vegetables and making of jellies and preserves. **Prerequisites: Bact. 52 and H. E. 5.**

200a-d SEMINAR IN NUTRITION. (3) I — Erikson

206a-d ADVANCED FIELD WORK IN NUTRITION.
(1) I, II, III, IV — Grundmeier
This course is a continuation of H. E. 106a-d with investigations of recent research in the field. Lecture and laboratory. **Prerequisites: H. E. 103, 106a, or approval of instructor.**

Courses in Clothing, Textiles and Related Art

25 TEXTILES. (3) I, III, IV (Alternate) — Latzke
A study of fundamental weaves, yarns, fibers, and finishes with reference to the selection of appropriate fabrics from both economic and artistic viewpoints. Lectures, 2 hours; laboratory, 2 hours.

26 COSTUME DESIGN. (4) I, II, III, IV (Alternate) — Seeds
Appropriate costuming for the individual. Analysis of physical and mental makeup followed by study of costume color, line and texture for the individual and her costume needs. Original costumes are planned. Lectures, 2 hours; laboratory, 4 hours. **Prerequisite: Art 30a.**

27 **CLOTHING.** (5) I, II, III, IV (Alternate) Latzke
Fundamental principles of clothing construction applied to the making of garments. Study and use of commercial patterns; adaptation and alteration of commercial patterns to achieve individual designs. Lecture, 2 hours; laboratory, 6 hours. **Prerequisites: H. E. 25, 26.**

125 **ADVANCED TEXTILES.** (3) I, IV (Alternate) Latzke
Individual term problems. Lectures, 3 hours. **Prerequisites: H. E. 25, Econ. 1.**

126 **ADVANCED COSTUME DESIGN.** (4) II, IV (Alternate) Seeds
A survey of costume throughout the ages. Planning of modern costumes. Lectures, 2 hours; laboratory, 4 hours. **Prerequisite: H. E. 26.**

127 **ADVANCED CLOTHING.** (4) I, II, IV Seeds and Latzke
Individuality in costume is emphasized. Costumes are designed, draped and constructed without the use of commercial patterns. Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: H. E. 27.**

129 **INTERIOR DECORATION.** (4) I, III, IV (Alternate) Seeds
A study of color, line and texture as they are used to create effective interiors suited to modern living. Lectures, 2 hours; laboratory, 4 hours. **Prerequisites: H. E. 25, Art 30b.**

137 **ADVANCED CLOTHING PROBLEMS.**
(4) II, III, IV Seeds and Latzke
Designed to suit the needs of the individual student. Some suggested problems are children's clothing; tailoring; remodeling; clothing economics; clothing for the family. Lectures, 2 hours; laboratory, 4 hours. **Prerequisite: H. E. 127.**

237a-d **SEMINAR IN TEXTILES AND CLOTHING.**
(3) I, II, III, IV Seeds and Latzke
Investigations of special textile and clothing problems. Lectures, 3 hours.

Courses in Institution Management

41 **INSTITUTION MARKETING.** (4) I, II, IV Helton
The economics of food and supplies for institutions. Field trips are made to wholesale houses, distributing centers, food factories. Lectures, 3 hours; laboratory, 2 hours. **Prerequisite: Econ. 1.**

42 **INSTITUTION FOODS.** (6) I, II, III, IV Helton
Large quantity food preparation and service. Emphasis is placed on standard methods and cost accounting. Lectures, 3 hours; laboratory, 6 hours. **Prerequisite: H. E. 6.**

141 **INSTITUTION ORGANIZATION AND ADMINISTRATION.**
(4) II, IV Helton
Principles of institution organization, types of institution service, modern industrial tendencies, advertising, personnel and financial control. Lectures, 3 hours; laboratory, 2 hours. **Prerequisites: H. E. 41 and 42.**

142a-c **INSTITUTION MANAGEMENT.** (4) III, IV Helton
Application of scientific principles of institution management. Practice is given in office management and in the different units of service. Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: H. E. 141.**

143 **INSTITUTION EQUIPMENT.** (4) IV Helton
Selection, arrangement, cost and care of institution equipment. Problems of lighting, heating, ventilation, refrigeration for institution food preparation and service units. Lectures, 3 hours; laboratory, 2 hours. **Prerequisites: H. E. 42 and 141.**

Courses in Child Development

51 HEALTH OF THE FAMILY. (4) I, III Erikson

Study of the factors that influence health, the agencies and forces to be utilized for health improvement; application of modern science to health; prevention of specific diseases; practice in the technique of home nursing. Lectures, 4 hours.

152 CHILD CARE AND DEVELOPMENT.

(5) I, II, III, IV Mumford and Beiter

Study of the care and training of the child from pre-natal life through the pre-school period; standards for normal development—physical, social, emotional and mental; includes observations of pre-school children and participation in nursery school activities. Meetings with parents are required. Lectures, 3 hours; laboratory, 4 hours. **Prerequisites: A. & P. 3; Psych. 7.**

153 ADVANCED CHILD DEVELOPMENT. (4) I, II, III, IV Beiter

Detailed study of special features of child development during the first nine years. Observation in the nursery school and at the University school with special reference to body management, posture, expressive movements, language and speech, conduct in novel situations, emotional expression, conduct in relation to companions, and conduct in problem solving situations. Lectures, 2 hours; laboratory, 4 hours. **Prerequisite: H. E. 152.**

154 FAMILY LIVING. (4) II, IV Mumford

The inter-locking relationships of community and family living. Emphasis is given to the influence of home conditions on the members of the family, and the results of such influence on attitudes and behaviors that affect community living. Lectures, 4 hours. **Prerequisites: H. E. 61, 152, Econ. 1, Soc. 1 or R. S. 101.**

155 THE CHILD AND HIS CLOTHING. (3) IV Mumford

A study of the appreciation of the needs in children's clothing, the physiological and psychological functions, as well as the selection, cost and care of children's clothing. Lectures and laboratory.

156 PLAY AND PLAY MATERIALS. (3) IV Beiter

A study of the appreciation of the importance of the right kind of play materials in the development of pre-school children; of materials to use, costs, labor and time; construction of toys. Lectures and laboratory.

Courses in Home Management

61 HOUSING. (4) I, III, IV Wilmore

The first part of the course deals with the social and economic problems of housing American families. The second half deals with the problems of house buying and house planning from the standpoint of the consumer. Lectures, 4 hours.

161 CONSUMER PROBLEMS. (4) II, III, IV Wilmore

A study of consumer buying and its social and economic aspects. An analysis of the common problems of the manufacturer, the merchant and the consumer in order to understand better the needs and responsibilities of each group. Lectures, 4 hours. **Prerequisite: Econ. 1.**

162a HOME MANAGEMENT AND FAMILY RELATIONSHIPS. **(4) I, II, III, IV** Wilmore
The philosophy and principles of home management. A study of the management of resources available to the family for optimal development. Includes the mechanics of time, energy and money management. Emphasis is placed on personal development, social and family relationships. Lectures, 4 hours. **Prerequisites: Econ. 1, H. E. 61.**

162b HOME MANAGEMENT AND FAMILY RELATIONSHIPS. **(5) I, II, III, IV** Wilmore
A residence period in the University home management house is required of all seniors in home economics. The course consists of laboratory work affording experience in the application of principles presented in other courses. **Prerequisite: H. E. 162a; prerequisite or parallel: H. E. 102.**

262 ADVANCED HOME MANAGEMENT AND FAMILY RELATIONSHIPS. (3) II Wilmore
A course affording opportunity for special study of social and economic problems affecting family life. Lectures, 3 hours. **Prerequisites: H. E. 162a-b.**

General Courses

71 SURVEY OF HOME ECONOMICS. (1) III Grundmeier
Lectures on opportunities within the field of home economics. Lectures, 2 hours.

72 PROFESSIONAL PROBLEMS OF HOME ECONOMICS. **(1) I** Erikson
Lectures, 2 hours.

170a-d SPECIAL PROBLEMS. (2) I, II, III, IV Staff
Intensive work on specific phases in any of the fields of home economics, namely: food preparation, meal planning and service, nutrition, clothing, textiles, costume design, housing, child development, institution economics, consumer problems, home management, dietetics, interior decoration.

270a-d SPECIAL PROBLEMS. (2) I, II, III, IV Staff
All fields.

COLLEGE OF ENGINEERING

CIVIL, ARCHITECTURAL AND SANITARY ENGINEERING

Professors Terrell, Carrel and Cheek; Associate Professors Farris and Shaver; and Assistant Professor Chambers

Architectural Engineering

1 ARCHITECTURAL RENDERING. (3) III — Farris
Pictorial delineation of architectural subjects in the medium of pencil, ink and water color. Drawing, 9 hours a week.

3 SANITATION, ACOUSTICS, FIRE PREVENTION. (4) I — Farris
Theory and practice as applied to architectural design. Lectures and recitations, 4 hours a week. **Prerequisite: Junior classification.**

4a ARCHITECTURAL DESIGN. (4) I — Farris
Principles of aesthetic design and functional planning of buildings. Drawing room, 12 hours a week. **Prerequisite: Junior classification.**

4b ARCHITECTURAL DESIGN. (4) II — Farris
Continuation of Arch. Eng. 4a. Drawing room, 12 hours a week. **Prerequisite: Arch. Eng. 4a.**

5 BUILDING EQUIPMENT. (3) III — Farris
Theory and practice of modern building equipment. Lectures and recitations, 3 hours a week. **Prerequisite: Mech. Eng. 103.**

6 INDEPENDENT PROBLEMS. (6) III — Farris
Development of complete working drawings and specifications of a building, to be selected by the student with the approval of the instructor. Class work, 3 hours; drawing room, 9 hours a week. **Prerequisite: Arch. Eng. 4a.**

7 BUILDING CONSTRUCTION. (1) III — Farris
Theory and practice of modern building construction. Materials and their use. Contractor's operation, inspection, and methods of procedure. Lectures and recitations, 2 hours a week. **Prerequisite: Senior classification.**

Civil Engineering

5 MASONRY CONSTRUCTION. (3) II — Chambers
Properties of stone, brick, cement, and their uses in engineering structures.

***12 PLANE SURVEYING. (4) I, III** — Shaver
Theory and use of the transit, level and compass in land surveys, leveling, municipal and topographic surveys. General use and care of surveying instruments, note keeping, field problems and computations. Class work, 3 hours a week; field work, 3 hours a week. **Prerequisite: Math. 3.**

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* Open to Freshmen.

13 ADVANCED SURVEYING. (4) I Shaver
Triangulation and base line measurements, precise and trigonometric leveling, hydrographic surveys, map projection and plotting topographic mapping by the stadia method. Class work, 3 hours a week; field work, 3 hours a week. **Prerequisite: Civ. Eng. 12.**

15 GENERAL SURVEYING. (5) IV Terrell and Shaver
Given at the summer surveying camp located at Camp Robinson, Noble, Breathitt County, Kentucky. Land surveys, plane and elementary topographic surveying. Determination of azimuth, time, latitude and longitude, triangulations and base lines, including field and office practice. Lectures, recitations and field practice, 44 hours a week for three weeks. **Prerequisite: Civ. Eng. 16a.**

16a ROUTE SURVEYING. (4) I Shaver
Curves, line, grade, earthwork, theory of location as it applies to railways and highways. Earthwork, overhaul, mass diagram and estimate of cost. Lectures and recitations, 4 hours a week. **Prerequisite: Civ. Eng. 12.**

16b ROUTE SURVEYING. (4) IV Terrell and Shaver
Given at summer surveying camp located at Camp Robinson, Noble Breathitt County, Kentucky. Complete location survey of railway or highway, including preliminary survey, topography, projected line and final location, plan, profile, grade lines, cross-sections, earthwork, estimate of quantities and cost. Lectures, recitations and field work, 44 hours a week for three weeks. **Prerequisite: Civ. Eng. 16a.**

17 HYDROGRAPHIC SURVEYING. (1) IV Terrell and Shaver
Given at the summer surveying camp located at Camp Robinson, Noble, Breathitt County, Kentucky. Stream gauging, sounding, and measuring the flow in Kentucky River, location surveys for bridges and power dams. Surveys for impounded water supplies, location of small dams. Notes taken to be used by the students for future work. Lectures, recitations and field work, 44 hours a week for one week. **Prerequisite: Civ. Eng. 16a.**

18 MAPPING AND TOPOGRAPHIC DRAWING. (3) III Terrell and Shaver
Construction of maps from field notes, reproductions and changing scale of maps, topographic symbols, contours, projected location, profile, line and grade. Drafting room, 9 hours a week. **Prerequisite: Civ. Eng. 12.**

19 AIR NAVIGATION. (3) III. Shaver
Principles of navigation as applied to aircraft. A study of charts, altimeters, compasses, drift sights, air speed indicators and navigation aids. Solution of problems in piloting and dead reckoning. Lectures and recitations, 3 hours a week.

23 SEMINAR. (1) III Terrell
A study of current engineering literature as related to civil engineering; assigned reading and reports. Round table conference, 2 hours a week. **Prerequisite: Junior classification.**

31 HIGHWAY LOCATION, CONSTRUCTION AND MAINTENANCE. (3) III Chambers
Principles of location, topographic conditions, economic considerations, benefits and costs. Materials and types of roads, and general maintenance. Lectures and recitations, 3 hours a week.

32 STREETS AND PAVEMENTS. (3) III Chambers
Drainage, subgrade, foundations, surfacing materials; resistance to friction, safety appliances, construction, maintenance and traffic census. Lectures and recitations, 3 hours a week. **Prerequisite: Civ. Eng. 31.**

35 HIGHWAY MATERIALS. (2) IV Chambers
Methods of testing stone, gravel, sand, brick, culvert pipe, cement, concrete and other highway materials. Laboratory, 4 hours a week. **Prerequisite or concurrent: Civ. Eng. 31.**

36 BITUMINOUS MATERIALS. (2) III Chambers
Testing of asphalts, road oils, coal tars, flux oils and dust layers. Laboratory, 4 hours a week. **Prerequisite or concurrent: Civ. Eng. 32.**

49 RAILWAY CONSTRUCTION AND MAINTENANCE. (3) II Shaver
Theory of construction, road bed, track, sub-drainage, structures, yards, terminals, revisions, cost of operation and maintenance of way. Lectures and recitations, 3 hours a week. **Prerequisite: Civ. Eng. 16a.**

72 GRAPHIC STATICS. (2) I, II Carrel
Principles and methods of finding stresses by graphic solution as applied to roof and bridge trusses. Drawing room, 6 hours a week. **Prerequisite: Phys. 3a.**

81 TESTING MATERIALS. (2) I, II, III, IV Chambers
Experimental investigations and tests of woods, metals, cement, concrete and other construction materials to verify the laws governing their behavior under given conditions. Laboratory, 4 hours a week. **Prerequisite or concurrent: Applied Mech. 100.**

102 REINFORCED CONCRETE. (4) II Terrell
A study of concrete mixtures. Theory and design of beams, slabs, columns, bridges and buildings. Lectures and recitations, 4 hours a week. **Prerequisite: Applied Mech. 100.**

104 REINFORCED CONCRETE DESIGN. (1) II Terrell
Designs of columns, beams, buildings, bridges, retaining walls, dams and arches. Special problems assigned to each student. Drawing room, 2 hours a week. **Concurrent: Civ. Eng. 102.**

105 MASONRY STRUCTURES. (5) III Terrell
Theory and design of retaining walls, dams, arches, plane and reinforced structures, rigid frames. Lectures and recitations, 4 hours; drawing room, 2 hours a week. **Prerequisite: Civ. Eng. 171a.**

106 FOUNDATIONS AND TUNNELING. (2) III Graham and Terrell
A study of foundation material and its relation to the structure. Principles of tunneling as related to transportation and structures. Lectures and recitations, 2 hours a week. **Prerequisite: Applied Mech. 100.**

107 SOIL MECHANICS. (3) III Shaver
A study of soil and its utilization in foundations for structures and subgrade for highways. Stabilization and improvement of bearing values. Lectures and recitations, 2 hours a week; laboratory, 3 hours a week. **Prerequisite: Applied Mech. 100.**

113 GEODESY, PRECISE SURVEYING AND LEVELING. (4) I Terrell
Method of making and adjusting observations in triangulation systems, and precise traverses. Observation and calculation for determining time, azimuth, latitude and longitude. Lectures and recitations, 3 hours a week; field work, 3 hours a week. **Prerequisites: Math. 11, 12; Civ. Eng. 13.**

120 HYDRAULICS. (3) I, II, III, IV Cheek
Principles of hydraulics and hydrodynamic pressure. Flow of water through orifices, nozzles, pipes and open channels, over weirs, against stationary and moving vanes. Loss from friction and other sources. Lectures and recitations, 3 hours a week. **Prerequisite: Phys. 3a. Prerequisite or concurrent: Math. 20b.**

122 WATER POWER ENGINEERING. (3) III Carrel
Investigations, design and operation of water power projects. Lectures and recitations, 3 hours a week. **Prerequisite: Civ. Eng. 120.**

123 HYDRAULICS LABORATORY. (2) I, II, III, IV Cheek
Experimental investigation of flow of water in pipes, channels, over weirs, measure of friction and hydrostatic pressure, hydraulic machinery. Laboratory, 4 hours a week. **Prerequisite or concurrent: Civ. Eng. 120.**

170 ELEMENTS OF STRUCTURAL DESIGN. (4) I, II, III Carrel
Drafting room practice, problems in the design of timber, steel and masonry structures. Lecture, 1 hour; drafting room, 9 hours a week. **Prerequisite or concurrent: Civ. Eng. 171a.**

171a THEORY OF STRUCTURES. (5) I, II, III Carrel
Laws of statics, wind impact, live and dead load, reactions, shear moments and influence lines. Methods of design including beams, girders, columns and various types of trusses. Lectures and recitations, 5 hours a week. **Prerequisite or concurrent: Applied Mech. 100.**

171b THEORY OF STRUCTURES. (3) III Carrel
Continuation of Civ. Eng. 171a. Lectures and recitations, 3 hours a week. **Prerequisite: Civ. Eng. 171a.**

173a STEEL STRUCTURES. (4) I, II, III Carrel
Design and detail of steel buildings and highway bridges. Lecture, 1 hour; drawing room, 9 hours a week. **Prerequisite: Civ. Eng. 171a.**

173b STEEL STRUCTURES. (3) II Carrel
Design and detail of steel railway bridges. Drawing room, 9 hours a week. **Prerequisite: Civ. Eng. 173a.**

181a INDEPENDENT PROBLEMS. (1) II Terrell and others
A complete solution with the necessary details, plans and specifications of a problem, selected by the student with the approval of the instructor, in one of the following fields: (a) Reinforced concrete design, (b) concrete research, (c) structural steel, (d) hydraulics, (e) sanitary engineering, (f) highway and railway engineering, (g) geodetic surveying. Conference, laboratory or drawing room, 3 hours a week. **Prerequisite: Student must show that he is qualified to undertake the proposed problem.**

181b INDEPENDENT PROBLEMS. (3) III Terrell and others
Continuation of Civ. Eng. 181a. Conference, laboratory or drawing room, 7 hours a week. **Prerequisite: Civ. Eng. 181a.**

Sanitary Engineering

24 SANITARY ENGINEERING FOR SANITARY INSPECTORS. (5) IV Cheek
Elementary principles of sanitary engineering, including municipal and rural sanitation, water supply, sewage disposal, collection and disposal of waste, dairy inspection and insect control. Total time 45 hours of lectures, recitations and field trips, 36 hours of laboratory followed by four weeks of supervised field work in approved county health offices with a weekly seminar in the Fayette County Health Office.

151 WATER SUPPLY AND WATERWORKS. (3) II Cheek
Sources of supply; rainfall, surface water, rivers, lakes and ground water. Theory of filtration, purification, equipment and distribution. Problems in design and construction. Lectures and recitations, 3 hours a week. **Prerequisite: Civ. Eng. 120.**

152 SEWERS AND SEWAGE DISPOSAL. (3) II Cheek
Sanitary and storm sewer system; theory of design; method of disposal. Lectures and recitations, 3 hours a week. **Prerequisite: Civ. Eng. 120.**

153 DESIGN OF WATERWORKS AND SEWERS. (2) III Cheek
Design of water supply system, storm and sanitary sewers and disposal plants. Specifications and estimates of cost. Lecture, 1 hour; drawing room, 6 hours a week. **Prerequisite or concurrent: San. Eng. 151, 152.**

156 WATER AND SEWER PLANT OPERATION. (2) III Cheek
Standard methods of control for producing best results in the treatment of water and sewage. Practice, with miniature plants. Laboratory, 4 hours a week. **Prerequisite or concurrent: San. Eng. 151, 152.**

157 SANITARY ENGINEERING FOR HEALTH OFFICERS. (2) IV Cheek
General principles of sanitary engineering, including municipal and rural sanitation, water supply, collection of waste, sewers and sewage disposal, insect control, milk sanitation, principles of heating, lighting and ventilation. Lectures, recitations, and field trips, 8 hours a week for eight weeks.

158 SANITARY ENGINEERING DESIGN. (4) III Cheek
For students majoring in Sanitary Engineering. Complete design and layout of a water plant, distribution system, storm and sanitary sewer and sewage disposal plant. Drawing room, 12 hours a week. **Prerequisite or concurrent: San. Eng. 151, 152.**

182 SANITATION. (3) III Cheek
Presented from an engineering viewpoint. Municipal and rural sanitation, treatment and protection of water supplies, disposal of refuse and sewage, control of insects, food supply, plumbing and ventilation. Lectures and recitations, 3 hours a week. **Prerequisite: Bact. 57.**

Courses open only to Graduate Students

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics and Mathematics. These courses

are offered to graduates and to such practicing engineers as may be qualified to pursue them. For major work, a candidate must hold a bachelor's degree in Civil Engineering.

202a CONSTRUCTION. (10) I Terrell
Advanced work in plain and reinforced concrete, theory, design and experimental work. Class work, 5 hours; laboratory, 10 hours a week.

202b CONSTRUCTION. (10) II Terrell
Continuation of 202a.

232a HIGHWAY ENGINEERING. (10) I Chambers
Advanced course designed for graduate civil engineers who wish to enter the field of highway engineering. Road laws, organization of highway departments, traffic cost, contracts and specifications, laboratory investigations on all kinds of surfacing materials. Structures, their design and maintenance. Class work, 5 hours; laboratory, 10 hours a week.

232b HIGHWAY ENGINEERING. (10) II Chambers
Continuation of 232a.

242a RAILROAD ENGINEERING. (10) II Shaver
Advanced course in location, construction, maintenance, economical selection of lines, grade reduction, cost of operation, valuation, structures and their maintenance. Class work, 5 hours; laboratory, 10 hours a week.

242b RAILROAD ENGINEERING. (10) III Shaver
Continuation of 242a.

252a SANITARY ENGINEERING. (10) II Cheek
Advanced course in sewer design, construction and maintenance. Design, maintenance and operation of sewage disposal plants. Water supply and waterworks design, construction and maintenance. (Courses in water analysis and bacteriology should be taken in connection with this course.) Class work, 5 hours; laboratory, 10 hours a week.

252b SANITARY ENGINEERING. (10) III Cheek
Continuation of 252a.

262a GEODETIC SURVEYING. (10) III Terrell
Advanced course in geodetic calculations, development and use of formulas used by the United States Coast and Geodetic Survey. Modern methods of field practice. Class work, 5 hours; laboratory, 10 hours a week.

262b GEODETIC SURVEYING. (10) IV Terrell
Continuation of 262a.

272a STRUCTURAL ENGINEERING. (10) II Carrel
Advanced course in structural design, mill building, railroad and highway bridges. The use of influence diagrams and detail drawings. Class work, 5 hours; laboratory, 10 hours a week.

272b STRUCTURAL ENGINEERING. (10) III Carrel
Continuation of 272a.

ELECTRICAL ENGINEERING

Professor Bureau and Associate Professors Barnett, Doll[1], and Romanowitz

11 ELECTRICAL LABORATORY. (1) IV Barnett
(For Electrical and Architectural Engineers.) A study of the methods and materials used in connecting electrical apparatus and in the wiring of buildings. Adequacy, serviceability, safety and costs are emphasized. Laboratory, 2 hours.

21 PRINCIPLES OF ELECTRICAL ENGINEERING. (6) III Staff
(For Electrical Engineers.) A first course in electrical engineering. A study of the application of the fundamental laws of electric, magnetic, and dielectic circuits. Classroom, 5 hours; laboratory, 2 hours. **Prerequisites: Phys. 3b; Math. 20a.**

101 FUNDAMENTALS OF ELECTRICAL MACHINERY. (4) I, III Bureau
(For Civil, Metallurgical and Mining Engineers.) A study of the more common types of D.C. and A.C. electrical equipment and machinery. Classroom, 3 hours; laboratory, 3 hours. **Prerequisite: Phys. 3b.**

102 ELECTRICAL MACHINERY. (3) II Bureau
(For Metallurgical and Mining Engineers.) A study of electric power and its control as applied to mining machinery and metallurgical processes. Classroom, 3 hours. **Prerequisite: Elec. Eng. 101.**

105 DIRECT CURRENT CIRCUITS AND MACHINERY. (6) III, IV Barnett
(For Mechanical Engineers and Industrial Chemists.) Subjects studied are batteries, D.C. generators, motors, control apparatus, power transmission, etc. Classroom, 4 hours; laboratory, 6 hours. **Prerequisite: Phys. 3b.**

106 ALTERNATING CURRENT CIRCUITS AND MACHINERY. (6) I, IV Barnett
(For Mechanical Engineers and Industrial Chemists.) The fundamental theory of A.C. circuits and apparatus. It includes a study of single phase and polyphase generators, motors, transformers, converters, etc. Classroom, 4 hours; laboratory, 6 hours a week. **Prerequisites: Elec. Eng. 105; Math. 20b.**

107 ELECTRICAL CONTROL. (4) IV Bureau
A study of the field of electrical engineering which is concerned with the control of electric equipment. It involves a study of the individual types of contactors, relays, etc., as well as the various circuits with which they are tied together into units for automatic functioning. Classroom, 3 hours; laboratory, 2 hours. **Prerequisites: Elec. Eng. 116, 106 or 101.**

108 ELECTRONIC CONTROLS. (4) II Romanowitz
A study of the application of thermionic and light sensitive tubes to industry in non-communication uses such as the controlling of manufacturing processes and motive equipment, safe-guarding life and property, etc. Classroom, 3 hours; laboratory, 3 hours. **Prerequisites: Phys. 114, Elec. Eng. 116, 106 or 101.**

110a ELECTRICAL LABORATORY. (1) II Barnett
(For Electrical Engineers.) An experimental study of electrical circuits and machinery. Laboratory, 2 hours. **Concurrent: Elec. Eng. 115.**

[1] On leave 1943-44.

110b ELECTRICAL LABORATORY. (1) III Barnett
Continuation of Elec. Eng. 110a. Laboratory, 2 hours. **Concurrent: Elec. Eng. 116.**

110c ELECTRICAL LABORATORY. (1) IV Barnett
Continuation of Elec. Eng. 110b. Laboratory, 2 hours.

111a ADVANCED ELECTRICAL LABORATORY. (2) I Bureau
(For Electrical Engineers.) Advanced laboratory study of electrical machinery with special reference to A.C. apparatus. Laboratory 2 2-hour periods. **Concurrent: Elec. Eng. 117.**

111b ADVANCED ELECTRICAL LABORATORY. (1) II Bureau
Continuation of Elec. Eng. 111a. Laboratory, 3 hours.

111c ADVANCED ELECTRICAL LABORATORY. (1) III Bureau
Continuation of Elec. Eng. 111b. Laboratory, 3 hours.

114 ALTERNATING CURRENT CIRCUITS ANALYSIS. (5) II Bureau
A mathematical study of electric circuits under the influence of steady state non-sinusoidal as well as sinusoidal voltages. Vector algebra, Fourier series and symmetrical components as well as graphical methods are used. Classroom, 5 hours. **Prerequisite: Elec. Eng. 21.**

115 DIRECT CURRENT MACHINERY. (4) II Staff
(For Electrical Engineers.) A study of D.C. machinery operation and behavior. Classroom, 3 hours; calculating room and laboratory, 3 hours. **Prerequisites: Elec. Eng. 21, Math. 20b.**

116 ALTERNATING CURRENT MACHINERY. (5) III Staff
(For Electrical Engineers.) A study of A.C. machinery operation and behavior. Classroom, 4 hours; calculating room and laboratory, 3 hours. **Prerequisite: Elec. Eng. 114, 115.**

117 ADVANCED ALTERNATING CURRENT MACHINERY. (5) IV Staff
(For Electrical Engineers.) Advanced analytical study of A.C. machinery characteristics. Classroom, 5 hours. **Prerequisite: Elec. Eng. 116.**

123 ELECTRICAL EQUIPMENT PROBLEMS. (3) I Barnett
(For Electrical Engineers.) Individual problems related to engineering practice are assigned. The solutions involve economic as well as engineering considerations. A formal written report is required for each assignment. 9 hours. **Prerequisites: Elec. Eng. 116; Math. 105a.**

124a ELECTRICAL DESIGN. (2) II Bureau, Barnett
D.C. machinery design. 6 hours. **Prerequisite: Elec. Eng. 115.**

124b ELECTRICAL DESIGN. (2) III Bureau, Barnett
A.C. machinery design. 6 hours. **Prerequisite: Elec. Eng. 116.**

131a ELECTRICAL COMMUNICATION ENGINEERING. (5) I Romanowitz and Bureau
A study of the fundamentals of wire communication. Special emphasis is placed upon a thorough treatment of the theory of networks, transmission lines, wave filters, etc. Classroom, 4 hours; laboratory, 3 hours. **Prerequisites: Phys. 114, Elec. Eng. 114, Elec. Eng. 116, Math. 105a.**

131b ELECTRICAL COMMUNICATION ENGINEERING. (4) II
Continuation of Elec. Eng. 131a with special emphasis on the application of electron tubes to telephony, telegraphy and radio. Classroom, 3 hours; laboratory, 3 hours. **Prerequisite: Elec. Eng. 131a.**

131c ELECTRICAL COMMUNICATION ENGINEERING. (4) III
Telephone engineering. Study of modern telephone practice in line and switchboard design and operation. Classroom, 4 hours. **Prerequisite: Elec. Eng. 131b.**

132 ELECTRICAL COMMUNICATION ENGINEERING (ADVANCED RADIO). (7) II Romanowitz
A continuation of Electrical Engineering 131b. It includes a detailed study of cathode ray tubes and circuits, trigger and pulse-shaping circuits, radio receivers and transmitters, amplitude and frequency modulation and demodulation, receiver testing. Lectures and recitations, 5 hours; laboratory, 6 hours a week. **Prerequisites: Elec. Eng. 131a, 131b, Phys. 114 and Math. 105a.**

133 ELECTRICAL COMMUNICATION ENGINEERING (ULTRA-HIGH FREQUENCY). (7) III Romanowitz
A course in ultra-high frequency techniques involving a study of negative and positive grid oscillators, the magnetron velocity modulation tubes, high frequency transmission lines, radiation, propagation, guided waves. Lectures and recitation, 5 hours; laboratory, 6 hours a week. **Prerequisite: Elec. Eng. 132.**

136 ILLUMINATION ENGINEERING. (4) III Bureau
A study of light sources and photometry; fundamental principles of illumination as applied to home, public building and commercial lighting; outdoor lighting. Classroom, 3 hours; laboratory, 2 hours. **Prerequisites: Phys. 3b, Math. 20b.**

137 ELECTRIC POWER TRANSMISSION AND DISTRIBUTION. (4) II Barnett
A study of the materials and equipment used and the problems involved in the design, building and operation of electrical transmission lines and distribution systems. Classroom, 4 hours. **Prerequisite: Elec. Eng. 116, 106 or 101.**

151a ELECTRICAL ENGINEERING SEMINAR. (1) II Staff
Weekly meeting with staff for reports and discussion on research and modern trends and practices in Electrical Engineering. 2 hours. **Prerequisite: Senior Standing.**

151b ELECTRICAL ENGINEERING SEMINAR. (1) III Staff
Continuation of Elec. Eng. 151a. 2 hours.

151c ELECTRICAL ENGINEERING SEMINAR. (1) IV Staff
Continuation of Elec. Eng. 151b. 2 hours.

152a, b and c INDEPENDENT PROBLEMS. (Each 2) II, III, IV Staff
(For Electrical Engineers.) A problem, approved by the Head of the Department, forms the background for study and research. Only students, the character of whose previous work justifies it, will be allowed to register for this work.

152d-e-f INDEPENDENT PROBLEMS. (Each 3) II, III, IV Staff
(For Electrical Engineers.) A problem, approved by the Head of the Department, forms the background for study and research. Only students, the character of whose previous work justifies it, will be allowed to register for this work.

Courses open only to Graduate Students

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics and Mathematics. For major work, a candidate must hold a bachelor's degree in Electrical Engineering or its equivalent.

205 ADVANCED INDUCTION MOTOR THEORY. (6) Bureau
A study of the theory underlying the characteristics of single phase and polyphase induction motors. Recitation, 4 hours; laboratory, 6 hours a week.

206 ELECTRIC POWER TRANSMISSION. (6) Barnett
The theory underlying the calculation and operation of long distance transmission circuits. Special attention to relay control. Recitation, 4 hours; laboratory, 6 hours a week.

207 ELECTRIC POWER DISTRIBUTION. (6) Barnett
A study of the theory underlying the operation and control of various types of distribution circuits. Recitations, 4 hours; laboratory, 6 hours a week.

208 ELECTRIC TRACTION. (6) Bureau
An advanced study of electric power application to railways, cranes, elevators, etc. Recitations, 4 hours; drawing room, 6 hours a week.

209 TELEPHONE ENGINEERING. (4) Romanowitz
An advanced study of the theory and operation of modern telephone exchanges. Layouts and designs are made to meet different assumed conditions. Recitations, 4 hours a week.

210 SYMMETRICAL COMPONENTS. (6) Bureau
A study of the symmetrical component method of analyzing unbalanced conditions on transmission lines and its use in solving relay applications. Recitations, 4 hours; laboratory and design, 6 hours a week.

ENGINEERING—GENERAL

Dean Graham; Professors Bureau, Cheek, Crouse, Hawkins, Jett, Meyer and Nollau; Associate Professors Backer[1], Barnett, Beebe, Farris, Horine, May[2], Shaver and Walton; and Assistant Professor Chambers

Applied Mechanics

2 MECHANISMS. (3) IV Jett
Movement of machine parts such as crank and link motions, cams, gears, straight line and quick return motions. Lectures and recitations, 3 hours a week. **Prerequisites: Phys. 3a, Math. 17 and Math. 3; Eng. Draw. 18.**

3 STATICS. (5) I, II, III, IV Hawkins and Backer
A study of forces, vectors, couples, moments of areas and masses, center of gravity, and their application to engineering structures in two and three dimensions. Lectures and recitations, 5 hours a week. **Prerequisite: Phys. 3a. Math. 20a. Prerequisite or concurrent: Math. 20b.**

[1] Resigned March 15, 1944.
[2] On leave 1943-44.

4 DYNAMICS. (3) I, II, III, IV Hawkins and Backer
Motion of a particle, dynamics of moving bodies, impulse and momentum, work and energy. Lectures and recitation, 3 hours a week. **Prerequisite or concurrent: Math. 20b, Appl. Mech. 3.**

5 ELEMENTS OF THE SLIDE RULE. (1) II May
Lectures 2 hours per week relative to the theory of the slide rule and exercises in the computation of numerical problems by means of the slide rule. **Prerequisites: Math. 17, Math. 3.**

100 STRENGTH OF MATERIALS. (5) I, II, III, IV Hawkins and Backer
(For Civil, Electrical, Metallurgical and Mining Engineers.) A general course in the application of the principles of mechanics to the solution of problems in stress and strain due to direct forces, shear, bending, torsion, eccentric loads and combined stresses; in beams, columns, thin cylinders, springs, etc. Lectures and recitations, 5 hours a week. **Prerequisite: Appl. Mech. 3. Prerequisite or concurrent: Math. 20b.**

104 STRENGTH OF MATERIALS. (5) II, IV Hawkins and Backer
(For Mechanical Engineers.) Theory of stress and strain in engineering materials, due to direct forces, bending, torsion, eccentric loads and combined stresses. Deflection of beams. Lectures and recitations, 5 hours a week. **Prerequisite: Appl. Mech. 3. Prerequisite or concurrent: Math. 20b.**

NOTE.—Credit will not be allowed for both Applied Mechanics 100 and 104.

106 ADVANCED STRENGTH OF MATERIALS. (5) III, IV Hawkins and Backer
Unsymmetrical bending of beams, bending and deflection of thin plates, stress of analysis of thick walled cylinders, and rotating discs. Theory of elastic energy and curved beams, stress concentration and fatigue. Lectures and recitations, 5 hours a week. **Prerequisites: Math. 20b and either Appl. Mech. 100 or 104. Prerequisite or concurrent: Math. 105a.**

107 MECHANICAL VIBRATIONS. (5) I, III Hawkins
Vibrations of systems of one and several degrees of freedom, balancing of rotating machines, critical speeds, torsional and lateral vibrations of shafts. Lectures and recitations, 5 hours a week. **Prerequisite: Math. 105a, Appl. Mech. 4 and either Appl. Mech. 100 or 104.**

Engineering Administration

102 ENGINEERING ADMINISTRATION. (4) I, II, IV Farris
A study of the methods, procedures, and principles involved in engineering analyses, contracts, specifications, estimates and valuations and administration of engineering projects. Lectures and recitations, 4 hours a week. **Prerequisite: Com. 1 or Pol. Sci. 15.**

Engineering Drawing

***1a ELEMENTARY ENGINEERING DRAWING (2) I, IV** Nollau and Horine
Freehand lettering, exercises in the use and care of drawing instruments, principles of orthographic and axonometric projection, technical sketching, tracing and reproduction of drawing. Three 2-hour periods a week.

* Open to Freshmen.

***1b ELEMENTARY ENGINEERING DRAWING AND DESCRIPTIVE GEOMETRY. (2) I, II** Nollau and Horine
A study of the essential principles of descriptive geometry and the solution of practical problems pertaining to the various branches of engineering. Three 2-hour periods a week. **Prerequisite: Eng. Draw. 1a.**

***1c ELEMENTARY ENGINEERING DRAWING (2) II, III** Nollau and Horine
Continuation of Engineering Drawing 1b. Three 2-hour periods a week. **Prerequisite: Eng. Draw. 1b.**

***2 MECHANICAL DRAWING. (2) II** Nollau and Horine
(For students in Industrial Chemistry.) Freehand lettering, exercises in the use of instruments, orthographic and axonometric projection, graphs, tracing and reproduction of drawings as well as drafting as applied to industrial engineering. Three 2-hour periods a week.

12 GRAPHICAL COMPUTATIONS. (3) IV Jett
Graphic solution of problems in mechanism, construction and use of alignment charts, practice in the use of planimeter and mechanical integrator. Drafting room, 9 hours a week. **Prerequisite or concurrent: Phys. 3a, Applied Mech. 2. Prerequisite: Eng. Draw. 18.**

***17a MECHANICAL DRAWING. (2) I, II, IV** Nollau
Special course for non-engineering students, comprising freehand lettering, use and care of drawing instruments, elementary principles of orthographic and axonometric projection, tracing and reproduction of drawing. Three 2-hour periods a week.

***17b MECHANICAL DRAWING. (2) I, II, IV** Nollau
Continuation of Drawing 17a. Special problems to meet the need of individual students. Three 2-hour periods a week.

18 ADVANCED ENGINEERING DRAWING. (3) I, III Nollau
Comprises working drawings of parts of machines, both detail and assembly; technical sketching of simple machines and working drawings from technical sketches; tracing in pencil and ink. 9 hours a week. **Prerequisites: Eng. Drawing 1c.**

115 PHOTOGRAPHY. (4) II, III Nollau
(Required for Metallurgical Engineers.) (Elective for other senior Engineers.) Fundamental principles of photography. Lectures on the optics and chemistry of photography together with practical demonstrations. Negative making, printing, etc. Lecture, 1 hour; recitation, 1 hour; laboratory, 2 hours a week. **Prerequisites: Chem. 1a, Phys. 3a.**

Student Assemblies

***1a INTRODUCTION TO ENGINEERING. (0) I, IV** Horine and others
Scientific lectures and demonstrations covering all branches of engineering and the allied sciences. Study of the curricula of the College of Engineering to aid the student in choosing the branch of engineering which he wishes to follow. 1 hour a week.

***1b INTRODUCTION TO ENGINEERING. (0) I** Horine and others
A continuation of Assembly 1a. 1 hour a week.

* Open to Freshmen.

*2 **ENGINEERING PROBLEMS.**
(1) II Beebe, Barnett, May and Shaver
Analysis and solution of basic engineering problems as applied to the particular branch of engineering in which the student is registered, including the use of the slide rule. 2 hours a week.

3a **CLASS SOCIETY.** (Sophomore.)
(0) III Bureau, Chambers, Crouse and Jett
The class societies are affiliated as student branches of the four founder national engineering societies. Lectures on engineering projects of local and national interest. 1 hour a week.

3b **CLASS SOCIETY.** (Sophomore.)
(0) IV Bureau, Chambers, Crouse and Jett
1 hour a week.

3c **CLASS SOCIETY.** (Sophomore.)
(0) I Bureau, Chambers, Crouse and Jett
1 hour a week.

4a **CLASS SOCIETY.** (Junior.)
(0) II Bureau, Chambers, Crouse and Jett
1 hour a week. Content same as 3a.

4b **CLASS SOCIETY.** (Junior.)
(0) III Bureau, Chambers, Crouse and Jett
1 hour a week.

4c **CLASS SOCIETY.** (Junior.)
(0) IV Bureau, Chambers, Crouse and Jett
1 hour a week.

5a **CLASS SOCIETY.** (Senior.)
(0) I Bureau, Chambers, Crouse and Jett
1 hour a week. Content same as 3a.

5b **CLASS SOCIETY.** (Senior.)
(0) II Bureau, Chambers, Crouse and Jett
1 hour a week.

5c **CLASS SOCIETY.** (Senior.)
(0) III Bureau, Chambers, Crouse and Jett
1 hour a week.

MECHANICAL ENGINEERING

Professors West, Meyer, and Jett and Associate Professors May[1] and Walton

15a **MANUFACTURING PROCESSES.** (3) I, IV Meyer
Covering modern precision machine shop methods, work layout, machine tool operation, inspection, measurement of finished work and machine assembly, as well as the technique of pattern making, welding and foundry practice. 2 4-hour periods a week.

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* Open to Freshmen.
[1] On leave 1943-44.

15b MANUFACTURING PROCESSES. (3) I, II Meyer
Continuation of Mech. Eng. 15a. 2 4-hour periods a week.

15c MANUFACTURING PROCESSES. (3) III Meyer
Continuation of Mech. Eng. 15b. 2 4-hour periods a week.

100a MACHINE DESIGN. (4) I, IV Jett and Walton
(For Mechanical Engineers.) Design of machine and structural elements. Lecture, 1 hour; drawing room, 11 hours a week. **Prerequisites: Eng. Draw. 12, Mech. Eng. 15a. Prerequisite or concurrent Applied Mech. 100 or 104.**

100b MACHINE DESIGN. (4) I, II Jett and Walton
(For Mechanical Engineers.) Continuation of Mech. Eng. 100a. Individual work on the design and construction of complete machines or structures. Lecture, 1 hour; drawing room, 11 hours a week.

101 MECHANICAL ENGINEERING DESIGN. (4) I, II West and May
Individual work in the selection of equipment and in the laying out and specifying of power plant, heating, ventilating, air conditioning, plumbing, electric, industrial and elevator equipment for buildings. Drawing room, 12 hours a week. **Prerequisites: Mech. Eng. 104b, Appl. Mech. 100 or 104. Prerequisite or concurrent: Mech. Eng. 105, 106b, 107, 109.**

103 ELEMENTS OF HEAT-POWER ENGINEERING. (3) I May
(For Civil and Mining Engineers.) Brief general course in heat-power engineering, including elementary principles of thermodynamics and power plant equipment. Recitations, 2 hours a week. **Prerequisite: Phys. 3a.**

104a ENGINEERING THERMODYNAMICS. (4) I, II Walton
Covering the fundamental principles of thermodynamics. Carnot cycle, entropy and enthralpy. A study of the thermodynamic equations for gases and vapors, steam power plant cycles, reciprocating engines and turbines, reheating and regenerative cycles. Recitations, 4 hours a week. **Prerequisite: Phys. 3a. Prerequisite or concurrent: Math. 20b.**

104b ENGINEERING THERMODYNAMICS. (3) I, III Walton
Continuation of Mech. Eng. 104a. Recitation, 3 hours a week.

105 STEAM POWER PLANT EQUIPMENT. (4) I, IV West
Study of the characteristics and use of steam power plant equipment, including steam generators, fuel handling and burning equipment, coal and ash handling, draft producers, dust collectors, smoke abatement, prime movers, generators, air preheaters, economizers, feed water heating and treatment, pumps, continuous blow down and combustion control. Recitations, 4 hours a week. **Prerequisite: Mech. Eng. 104b.**

106a HEATING, VENTILATING AND AIR CONDITIONING. (5) I, II May
Fundamental heating and ventilating calculations with a study of the characteristics of various types of heating and ventilating equipment. Recitations, 5 hours a week. **Prerequisite: Mech. Eng. 104b.**

106b HEATING, VENTILATING AND AIR CONDITIONING. May
(3) II, IV
A continuation of Mech. Eng. 106a. Special emphasis on the physics and thermodynamics of air conditioning, and the design, selection, laying out and specifying of air conditioning equipment. Recitations, 3 hours a week.

107 FLUID MECHANICS. (4) IV West and Walton
Covering the statics, kinematics, dynamics and thermodynamics of fluids, both liquids and gases, including the derivation and use of all fundamental formula for flow through orifices, nozzles, pipes, fittings, etc., together with the study of dams, weirs, metering devices, turbines, pumps, the aerodynamics of bodies moving through air and the hydrodynamics of bodies moving through water. Recitations, 4 hours per week. **Prerequisite: Mech. Eng. 104a.**

108 INTERNAL COMBUSTION ENGINES. (5) II Meyer
A study of internal combustion engine cycles and the characteristics and performance of actual engines, valve gears and materials of construction. Recitations, 5 hours a week. **Prerequisite: Mech. Eng. 104b.**

109 REFRIGERATION. (5) I, II May
A study of the thermodynamics of refrigeration cycles, and the characteristics of refrigeration equipment. Recitations, 5 hours a week. **Prerequisite: Mech. Eng. 104b.**

110 HEATING AND VENTILATING DESIGN. (2) II May
Brief course for Architectural Engineers, covering the selection and layout of heating and ventilating equipment. Drawing room, 6 hours a week. **Prerequisite or concurrent: Mech. Eng. 116.**

111 ENGINEERING REPORTS. (3) I, IV West
A study of the purpose, form and use of engineering reports, together with the construction of charts and tables for the presentation of data therein and the drafting of the salient conclusions therefrom. Also the study of financial reports, contract forms and specifications. Recitations, 3 hours a week. **Prerequisite: Mech. Eng. 112a.**

112a MECHANICAL LABORATORY. (2) I, III Walton
Practice in the operation, use, calibration and care of mechanical and industrial test and research instruments and apparatus, followed by a study of the methods used for the determination of certain fundamental coefficients and constants; also a study of the records and results from operating and test instruments in actual commercial use. Lecture, 1 hour; laboratory, 3 hours a week. **Prerequisite: Mech. Eng. 104a.**

112b MECHANICAL LABORATORY. (2) II, IV Walton
Continuation of Mech. Eng. 112a. Lecture, 1 hour; laboratory, 3 hours a week.

113a MECHANICAL LABORATORY. (2) I, IV West
Performance tests on heating, ventilating and power plant equipment. Lecture, 1 hour; laboratory, 3 hours a week. **Prerequisite or concurrent: Mech. Eng. 105, 106a, 107.**

113b MECHANICAL LABORATORY. (2) I, II West
Continuation of Mech. Eng. 113a. Lecture, 1 hour; laboratory, 3 hours a week.

116 ELEMENTARY HEATING, VENTILATING AND AIR CONDITIONING. (4) II May
A course involving heating and ventilating calculations with descriptions of various types of equipment. Latter part of quarter devoted to a discussion of the basic principles of air conditioning. Recitations, 4 hours a week. **Prerequisites: Phys. 3a, Junior Classification.**

120 MECHANICAL ENGINEERING PROBLEMS. (5) II, III West and others
This comprises the complete design and possibly the construction of a machine or an apparatus, or the complete design and specifications for a power plant, heating, ventilating and air conditioning system or industrial shop, including the management and direction of underclass assistants who will be assigned for such work when and as required; together with the estimating of the costs and time required to perform the work. Lectures and laboratory, 15 hours a week. **Prerequisite: Senior Classification.**

121 MACHINE DESIGN. (3) I, IV Jett
(For Electrical Engineers.) Similar to Mech. Eng. 100a with special attention to the mechanical features of electrical machines. Lecture, 1 hour; drafting, 8 hours a week. **Prerequisites: Eng. Draw. 18; Mech. Eng. 15a. Prerequisite or concurrent: Applied Mech. 100 or 104.**

122a MECHANICAL ENGINEERING SEMINAR. (1) I, IV West, May, and others
Studies of current engineering literature and problems; presentation of papers and discussions. All presentation to be electrically recorded and reproduced and at least one record of each student to be placed on file. 2 hours a week. **Prerequisite: Senior Classification.**

122b MECHANICAL ENGINEERING SEMINAR. (1) I, II West, May, and others
Continuation of Mech. Eng. 122a. 2 hours a week.

122c MECHANICAL ENGINEERING SEMINAR. (1) II, III West, May, and others
Continuation of Mech. Eng. 122b. 2 hours a week.

Courses open only to Graduate Students

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics, and Mathematics. For major work, a candidate must hold a bachelor's degree in Mechanical Engineering or its equivalent.

201a AUTOMOTIVE ENGINEERING. (9) Meyer
An advanced course in the essentials of motor vehicle design, construction and operation. Drafting room, laboratory and lectures by appointment.

201b AUTOMOTIVE ENGINEERING. (9) Meyer
Continuation of Mech. Eng. 201a.

202a POWER PLANT ENGINEERING. (9) West
Advanced work in the design, selection, layout and operation of heat-power plant equipment.

202b POWER PLANT ENGINEERING. (9) West
Continuation of Mech. Eng. 202a.

203a HEATING, VENTILATING AND AIR CONDITIONING. (9) May
Advanced work in the design, selection, layout and operation of heating, ventilating and air conditioning equipment.

203b HEATING, VENTILATING AND AIR CONDITIONING. (9) May
Continuation of Mech. Eng. 203a.

204a ADVANCED MACHINE DESIGN. (9) Meyer and Jett
The application of the principles of mechanics of materials, dynamics and kinematics to the design of complete machines. This involves a knowledge of shop practice and methods of construction.

204b ADVANCED MACHINE DESIGN. (9) Meyer and Jett
Continuation of Mech. Eng. 204a.

METALLURGICAL AND MINING ENGINEERING

Professor Crouse and Associate Professors Beebe and McGuire[1]

Metallurgical Engineering

26 ENGINEERING METALLURGY. (3) I, II, III Beebe
(For Civil, Electrical and Mining Engineers.) An elementary course in metallurgy designed to acquaint the user of metals with the fundamental principles employed in the production and treatment of engineering metals and alloys, such principles being necessary to an intelligent use of these materials. Lectures and recitations, 3 hours a week. **Prerequisite: Chem. 1b or 2b.**

27 GENERAL METALLURGY. (3) I, II, III, IV Beebe
(For Metallurgical Engineers.) An elementary course in general metallurgical principles together with a consideration of fuels, refractories, furnaces, pyrometry and the several alloy types. Lectures and recitations, 3 hours a week. **Prerequisite: Chem. 1b or 2b.**

29 METALLURGY OF THE FERROUS METALS. (4) I, III Beebe
This course comprises a study of the principles and processes employed in the production, treatment and preparation for use of iron and steel together with a consideration of their constitution, including the iron-carbon diagram. Lectures and recitations, 4 hours a week. **Prerequisite: Met. 27.**

35 ENGINEERING METALLURGY. (3) I, II Beebe
(For Mechanical Engineers.) This is a course designed to cover the fundamental principles of extractive and mechanical metallurgy from the standpoint of the needs of mechanical engineers. It places emphasis on the application of the above principles in the extraction and fabrication of the more important engineering metals. In addition, it includes the iron carbon diagram and a consideration of alloy steels and cast irons. Recitation, 3 hours a week. **Prerequisite: Chem. 1b or 2b.**

Note.—Credit will not be allowed for both Metallurgy 26 and 35.

[1] Resigned Dec. 31, 1943.

36 PHYSICAL METALLURGY AND HEAT TREATMENT OF METALS AND ALLOYS. (4) II, III Crouse
This course is designed to cover the fundamental principles and practices of physical metallurgy and heat treatment from the standpoint of the requirements of mechanical engineers. Lectures and recitations, 3 hours; laboratory, 3 hours a week. **Prerequisites: Phys. 3b, Met. 26 or 35.**

60 METALLURGICAL LABORATORY AND SHOP PRACTICE. (5) IV Staff
This is a summer course and consists of metallurgical and allied problems worked out practically in the laboratories and shops. The problems given may vary from year to year according to circumstances and the particular fields of interest of the student. Laboratory, 12 hours a week. **Prerequisite: 6 quarters in Metallurgical Engineering.**

120 ASSAYING. (2) Beebe
This course comprises the determination of the constituents of ores and metallurgical products by means of fire methods, primary attention being given to the determination of the precious metals. Laboratory, 6 hours a week. **Prerequisites: Chem. 21b, Met. 27.**

121 FUEL AND METALLURGICAL LABORATORY. (2) III Beebe
This course comprises the analytical determination of the constituents of ores and metallurgical products by both wet and dry methods as well as the determinative methods utilized in the analysis of coals and other fuels. Laboratory, 6 hours a week. **Prerequisites: Chem. 21b, Met. 27.**

128 METALLURGY OF NON-FERROUS METALS. (4) II Crouse
This course comprises a study of the principles and processes employed in the production and preparation for use of copper, lead, aluminum and other non-ferrous metals such as gold, silver, zinc, etc., and of their respective alloys. Lectures and recitations, 4 hours a week. **Prerequisites: Met. 27.**

132a METALLURGICAL CALCULATIONS. (4) II Crouse
This course comprises a study of the calculations involved in the practical application of the principles to general metallurgy, as well as those used in both ferrous and non-ferrous metallurgical practice. Recitations and problems, 4 hours a week. **Prerequisites: Chem. 21b, Met. 29 and Met. 128.**

132b METALLURGICAL CALCULATIONS. (4) III Crouse
A continuation of Met. Eng. 132a. Recitations and problems, 4 hours a week.

140 THE SCIENCE OF METALS. (4) I, III Crouse
This is a first course in physical metallurgy and involves a consideration of the correlation of the structure of metals and alloys to their physical properties together with the effects of mechanical work and heat. Lectures and recitations, 4 hours a week. **Prerequisites: Phys. 3c, Chem. 21b, Met. 29.**

141 ALLOY STEELS. (3) III
The thermal behavior of low and high alloy steels is discussed on the basis of each particular phase diagram. The sub-critical transformation of austenite in alloy steels and the physical properties of the products of this type of decomposition of austenite are reviewed. Martensite and intermediate transformations are treated. The heat

treatment of complex alloy steels such as the high speed and high alloy die steels receive particular emphasis. Lectures and recitations, 3 hours a week. **Prerequisite: Met. 36 or Met. 140.**

142a HEAT TREATMENT. (3) I Crouse
This course comprises a study of the methods used and the principles involved in the heat treatment of metals and alloys. Lectures and recitations, 2 hours; laboratory, 3 hours a week. **Prerequisites: Met. 60, Met. 140.**

142b HEAT TREATMENT. (3) II Crouse
A continuation of Met. 142a. Lectures and recitations, 2 hours; laboratory, 3 hours a week.

143a PHYSICS OF METALS. (4) I
The study of the laws governing the formation of alloys. Subjects discussed are atomic structures of metals and alloys, atomic forces, super-lattics, ferro-magnetism, perfect and imperfect crystals, corrosion, super-conductivity, the physical properties of metals as a function of the periodic and electro-chemical position, diffusion, free energy, Hume-Rothery and other rules. In addition the course entails the application in the X-ray laboratory of the work taken in the classroom together with the development of an operating technique in radiography as applied to metals and alloys. Lectures and recitations, 3 hours; laboratory, 3 hours a week. **Prerequisites: Physics 119; Physics 123b, Met. 140.**

143b PHYSICS OF METALS. (4) II
A continuation of Met. 143a. Lectures and recitations, 3 hours; laboratory, 3 hours a week.

144 NON-FERROUS METALLOGRAPHY. (3) III
The physical properties of the non-ferrous metals and the interpretation of the properties obtained on the basis of the phase diagram is the prime objective of this course. The light alloys and the age hardening theory are emphasized. Bearing metals and the bronzes receive special attention. Lectures and recitations, 2 hours; laboratory, 3 hours a week. **Prerequisite: Met. 140.**

150 INDUSTRIAL MINERAL PREPARATON AND USES. (3) III Beebe
This course comprises a study of the more common non-metallic substances utilized in industry such as carbon, lime, clay nitrogen, etc. Lectures and recitations, 3 hours a week. **Prerequisite: Met. 27.**

164 ELEMENTS OF LOW TEMPERATURE CARBONIZATION. (3) Crouse
An elementary course in the study of the principles involved in the low temperature carbonization of coals and other carbonaceous materials, including hydrogenation. Lectures and recitations, 3 hours a week, with assigned reference reading. **Prerequisites: Phys. 123b, Chem. 140c.**

166a EXTRACTIVE METALLURGY. (5) I
Study of the principles and mechanisms applied to the practices of gravity concentration, flotation, and related processes, in the preparation of mine products for market, including discussion of the principles of plant design, with reference reading planned to keep the student informed of current technological development. Recitations and lectures, 5 hours a week, with reference reading and problems. **Prerequisite: Chem. 1b, Phys. 3b, Math. 20a, Met. 27.**

166b EXTRACTIVE METALLURGY. (4) II
Continuation of Met. 166a. Recitations and lectures, 4 hours a week. with reference reading and problems. **Prerequisite: Met. 166a.**

167 EXTRACTIVE METALLURGY PLANT PRACTICE. (2) III
This is a course in the operation of plants studied in Met. 166a, 166b. Laboratory, 6 hours a week. **Prerequisite: Met. 166b.**

175a SEMINAR. (1) I Staff
This course includes general round table discussions of various metallurgical principles and problems, the preparation and delivery of papers and reports on metallurgical subjects, extemporaneous speaking and the briefing of technical books and articles in the current literature. 2 hours a week. **Prerequisite: 9 quarters in Metallurgical Engineering.**

175b SEMINAR. (1) II Staff
A continuation of Metallurgy 175a. 2 hours a week.

175c SEMINAR. (1) III Staff
A continuation of Metallurgy 175b. 2 hours a week.

Courses open only to Graduate Students

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics and Mathematics. For major work, a candidate must hold a bachelor's degree in Metallurgical Engineering or its equivalent.

205 HEAT TREATMENT OF METALS AND ALLOYS. (9) Crouse
This is an advanced course in which the various factors involved in the heat treatment of metals and alloys are considered with special emphasis upon the particular metal or alloy on which the student wishes to specialize. Reference reading and laboratory work are emphasized. Lectures and recitations, 3 hours; laboratory, 12 hours a week.

207 TECHNOLOGY OF ALLOYS. (9) Crouse
This course comprises a study of the principles and practices used in the production of alloys of various kinds with special stress upon any particular group of alloys that the student may choose. Reference reading and laboratory work are emphasized. Lectures and recitations, 3 hours; laboratory, 12 hours a week.

208 ADVANCED METALLOGRAPHY. (9) Crouse
This course comprises a detailed study of the structure of metals and alloys together with their preparation for examination under the microscope. In addition instruction is given in the taking of microphotographs. Reference reading and laboratory work are emphasized. Lectures and recitations, 3 hours; laboratory, 12 hours a week.

209 ADVANCED ORE DRESSING. (9)
This course comprises a study of the technique of ore dressing plant design and gives an opportunity for original research in concentration problems. Lectures and recitations, 3 hours; laboratory, 12 hours a week.

210 TECHNOLOGY OF LOW TEMPERATURE CARBONIZATION. (9) Crouse
This course comprises a detailed study of the principles and prac-

tices employed in the low temperature carbonization of carbonaceous materials such as bituminous and cannel coals. Reference reading and laboratory work are emphasized. Lectures and recitations, 3 hours; laboratory, 12 hours a week. **Prerequisite: Sufficient background in Physics, Chemistry and Metallurgy, this background to be determined by the Head of the Department after consultation with the student.**

211 ELEMENTS OF OIL SHALE ENGINEERING. (3) Crouse
This course comprises an elementary study of the destructive distillation of oil shales for the production of oil, gas and by-products together with the history of the oil shale industry and the economic factors upon which the future development of the industry depends. Lectures and recitations, 3 hours a week. **Prerequisite: A sufficient background of Physics, Chemistry and Geology.**

212 OIL SHALE TECHNOLOGY. (9) Crouse
This course involves a detailed study of the principles employed and the methods used in the production of oil from shale. Reference reading and laboratory work are emphasized. It is desirable that the student have some knowledge of physical and organic chemistry. Lectures and recitations, 3 hours; laboratory, 12 hours a week. **Prerequisite: Sufficient background in Chemistry and Physics.**

213 X-RAY METALLOGRAPHY. (6)
Radiography of castings and welds. The atomic structure of metals and alloys will be determined. Laue, Debye, focusing, rotating crystal, Phragmen and Sacks type diffraction cameras will be studied; also stereographic and gnomonic projection, pole figures, fibre patterns, crystal structure and Comen's analytical method of calculating lattice parameters. Radiographs will be made and interpreted. Lectures and recitations, 3 hours; laboratory, 6 hours a week. **Prerequisite: Met. 143b.**

214 THE METALLIC STATE. (3)
Fibre patterns, stereographic projection and goniometry. Crystal chemistry and metallic crystals. Quantum mechanical concepts for isolated atoms are applied to interacting atoms, leading to methods of calculating energies and forces binding atoms together in crystals. Lectures and recitations, 3 hours a week. **Prerequisite: Met. 143b.**

230a-b-c-d RESEARCH IN X-RAY METALLOGRAPHY. (9) each.
Research problems in X-ray metallography either diffraction or radiographic. Lectures and recitations, 3 hours; laboratory, 12 hours a week. **Prerequisite or concurrent: Met. 213.**

Mining Engineering

126a DEVELOPMENT OF MINES. (5) III
Includes study of the origin of mineral deposits in general, as they concern the engineering procedures involved in the location and exploration of mineral deposits and of the engineering processes involved in the development of prospects into mines. Recitations, 5 hours a week; reference reading and assigned reports. **Prerequisites: Chem. 2b, Phys. 3b, Geol. 12b.**

126b DEVELOPMENT OF MINES. (3) IV (2nd half)
Continuation of Mining 126a. Recitations, 3 hours a week, with assigned reference reading and reports. **Prerequisite: Min. 126a.**

Courses open only to Graduate Students

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics and Mathematics. For major work, a candidate must hold a bachelor's degree in Mining Engineering or its equivalent.

203 MINE ORGANIZATION. (5)
This course comprises a detailed study of the structure and function of a mining enterprise from both the financial and the engineering standpoints. Lectures and recitations, 5 hours a week.

206 EXPLOSIVE ENGINEERING. (3)
This course comprises a study of the principles involved in the use of explosives in large scale mining and quarrying practice. Lectures and recitations, 3 hours a week.

207 ADVANCED PROSPECTING. (3)
This course comprises a detailed study of the principles involved in the geophysical investigation of the minerals of the earth's crust. Lectures and recitations, 3 hours a week.

208 COAL DUST INVESTIGATION. (6)
This course is essentially research in the design and utilization of a laboratory scale gallery for the investigation of the explosive qualities of native bituminous coals. Laboratory, 18 hours a week.

209a ADVANCED MINE ENGINEERING. (5)
This course comprises a detailed study of the procedure and methods used in collecting and recording data and engineering information involved in the systematic development and exploitation of a mining property. Lectures and recitations, 3 hours; drawing and mapping, 6 hours a week.

209b ADVANCED MINE ENGINEERING. (5)
A continuation of Mining 209a. Lectures and recitations, 3 hours; drawing and mapping, 6 hours a week.

COLLEGE OF LAW

Dean Evans and Professors Eblen[1], Moreland, Murray, Pittman[1], Randall, and Roberts[2]

First Year Subjects

101a-b CONTRACTS I-II. (5) (4) I, II — Murray

Williston's Cases (4th ed.).

The formation of contracts; offer and acceptance; consideration; contracts under seal. The Statute of Frauds. Parties affected by contracts; contracts for the benefit of third persons; assignments; joint and several contracts. The performance of contracts; express and implied conditions; impossibility of performance; illegal contracts.

102a-b-c TORTS I-II-III. (3) (3) (3) I, II, III — Evans

Thurston and Seavey's Cases.

Breach of legal duty, causation, duty of care, contributory negligence, care in the use or occupation of land, extra-hazardous occupation, joint torts, deceit, defamation, slander, libel, privilege, malicious prosecution, interference with social and business relations, inducing breaches of duty, unfair competition, strikes, boycotts, and business combinations.

103 PROPERTY I. (3) I — Randall

Roberts' Cases.

Personal property: possession, the nature and rights of possession, bona fide purchase, purchase by judicial sale, gifts, loss by surrender of possession, assignability, conversion, acts constituting conversion.

104 PROPERTY II. (3) II — Randall

Warren's Cases.

Introduction to the law of conveyancing, tenure, estates and tenancies, joint tenants, reversion and remainder, seisin and disseisin, rents, rights incident to the ownership of land or estates therein. The land itself—air, water, fixtures, waste, profits, easements, licenses, etc.

105 AGENCY. (3) III — Moreland

Keedy's Cases.

Nature of relation, appointment, liabilities of principal for agent's torts, contracts, crimes, liabilities of agents, parties to writings, undisclosed principal doctrines, delegation of agency, termination, ratification.

106a-b PLEADING I-11. (3) (3) I, II — Randall

Keigwin's Cases on Common Law Pleading.

Sunderland's Cases on Code Pleading.

Pleading I: Common-law forms of action—a study of common-law pleading, sufficient to aid the student in an understanding of modern code pleading.

Pleading II: Pleading under the code system with some emphasis on that of Kentucky. The topics include parties, causes of action and joinder thereof, and the different pleadings considered separately.

107a CRIMINAL LAW. (3) I — Moreland

Hall and Glueck's Cases.

Jurisdiction; the criminal act, complete and incomplete; criminal intent, actual and constructive; duress and mistake of fact, of law; justification; parties in crime; crimes against the person; crimes against property.

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[1] Military leave.
[2] On leave 1943-44; 1944-45.

107b CRIMINAL PROCEDURE. (3) III Moreland
Keedy's Cases.
Police officers, arrest, investigation of crime, the magistrate, indictment and information, jurisdiction of the trial court, venue, interstate rendition, arraignment, the petit jury, the prosecuting attorney, counsel for defense, the verdict, methods of review.

144 LEGAL BIBLIOGRAPHY. (1) III Randall
Eldean, Finding the Law.
Practice in the library in the use of statutes, reports, digests, encyclopedias, annotated cases, citation books, reference tables, indices and textbooks.

148 DOMESTIC RELATIONS. (3) I Moreland
Jacobs' Cases.
Contracts to marry; breach of promise; marriage: formal requisites, capacity, etc.; property rights of husband and wife; status of married women at common law and under statute, transactions between husband and wife, torts affecting the marital relations, divorce and separation; parent and child: custody, services and earnings, torts to children, torts by children, adoption, bastardy, infancy—voidable acts, disaffirmance, ratification, contracts for necessaries, liability for torts, insanity, drunkenness, aliens.

120 TRIAL PROCEDURE. (6) I Randall
Sunderland's Cases.
Procedure in the trial courts and also in the appellate courts. Discovery before trial, pre-trial hearings, as well as all the steps in the trial of cases and selection of juries. Students draw the usual instruments in the trial court and a complete set of pleadings and papers in the Court of Appeals of Kentucky.

121a-b EQUITY I-II. (4) (4) I, II Moreland
Cook's Cases (3rd ed.).
Basis of equity jurisdiction, specific performance of contracts, reformation, reexecution, rescission and cancellation, injunctions in relation to torts, bills of peace, quia timet, interpleaders, position of equity in the legal system.

122 PROPERTY III. (3) III Murray
Martin's Cases.
Titles and conveyancing. Adverse possession, prescription, accretion, dedication, mode of conveyance, at common law, under the Statute of Uses, and under modern statutes, execution of easements by implication, estates, covenants for title, estoppel by deed, priorities.

123 NEGOTIABLE INSTRUMENTS. (4) I Murray
Britton's Cases on Bills and Notes.
A general study of the law of bills and notes following the Uniform Negotiable Instrument Law, including: operative facts of negotiability; transfer of negotiable instruments; including types and effects of indorsements; the rights of a holder in due course; defenses that may be asserted against a payee, holder and holder in due course; the effect of illegality, mistake, lack of consideration, forgery, and fraud; the liability of primary and secondary parties and the requirement of presentment, notice and protest; the liability of accommodation parties; problems of collection; transfers after maturity; implied warranties of a transferor; and the method and results of acceptance.

124a-b EVIDENCE I-II. (3) (3) I, II Randall
Morgan & McGuire's Cases.
Rules of admissibility, real evidence, circumstantial evidence, testimonial evidence, rule for preference of documentary origin, rules for

preference between different kinds of witnesses, the hearsay rule and its exceptions, rules of conditional and absolute conclusion, procedure of admissibility, law and fact, judge and jury, burden of proof and presumptions, judicial notice, parol evidence rule.

125 PRACTICE COURT. (2) II Randall

This course is designed to fit the student for actual court practice following his training in the various subjects of substantive law. This training will give some knowledge of the work the young lawyers will experience in their professional career. All proceedings will be conducted in the main under the Kentucky code, but so treated as to give a fair understanding of like work in other states.

141 PARTNERSHIP. (2.5) III Murray

Crane and Magruder's Cases.

Distinction between partnership and other forms of business association, partnership by contract and by estoppel, competency of partners to become partners, nature and character of partnership, characteristics of partnership ownership of property, transfer of property, nature of the partnership obligation, powers of partners, rights and remedies of creditors, termination of partnership.

142 INDUSTRIAL RELATIONS. (2.5) IV Moreland

Albertsworth's Cases.

Relations between employer and employee, the common law background; Employers' Liability Acts and Safety Regulations; Workmen's Compensation. During the latter half of the course a special study is made of the Kentucky Workmen's Compensation Act and Kentucky cases relating thereto.

145 INSURANCE. (3) I Murray

Goble's Cases.

Nature of contract, insurable interest, making the contract, concealment, representations, warranties, implied conditions of forfeiture, waiver and estoppel, rights under the contract, construction of the policy.

147 RESTITUTION. (3) II Murray

Woodruff's Cases.

Restitution at law for mistake, duress and undue influence, illegality, impossibility, benefits received under contracts within and without the Statute of Frauds, benefits received without contracts.

149 MUNICIPAL CORPORATIONS. (2.5) IV Randall

Stason's Cases.

Nature of municipal corporations, distinction between municipal corporations and other corporations, functions, creation, alteration, dissolution, legislative control, organization, powers of, such as police power to tax, power to contract and acquire, manage and dispose of property, liability on contracts and for torts, remedies.

150 PUBLIC UTILITIES. (4) II Moreland

Robinson's Cases (2nd ed.).

Consideration will be given to the numerous classes of business and undertakings which have a double aspect of being privately owned and conducted for private profit and subject to abnormal duties of public service—common carriers, hotels, telephone, telegraph, express, gas, electric light, irrigation, pipe line businesses, undiscriminatory service, provision of reasonable rates.

152 OIL AND GAS. (2.5) IV Moreland

Kulp's Cases (2nd ed.).

General considerations as to oil and gas leases—infants, married women, life tenants, and others as parties. Special study of the

granting clause—lessee's interest, lessee's right to ejectment; the habendum clause—duration of lease; the operating and related clauses; termination; right to specific performance; construction of oil and gas leases and doctrine of development.

153 **TAXATION. (5) III** Eblen
Magill & Maguire's Cases.
Due process limitations upon jurisdiction to tax; multiple taxation of intangibles; property taxes; inheritance and estate taxes; gifts to take effect in possession or enjoyment at death; gifts in contemplation of death; taxation of powers of appointment; gift taxes; individual and corporate income taxes; items included in gross income; accounting basis; capital gains and losses; permissible deductions; excise taxes.

154 **DAMAGES. (2.5) IV** Randall
McCormick's Cases.
Nature of damages, avoidable consequences, counsel fees, certainty, compensation, damages for non-pecuniary injuries, pain, inconvenience, mental suffering, aggravation value, interest, special rules in certain acts, damages for death, eminent domain.

160a-b **PRIVATE CORPORATIONS I-II. (4) (2) I, II** Evans
Ballentine & Lattin's Cases.
Characteristic features of a corporation, formation, powers and liabilities, rights of stockholders, directors, legislative control, dissolution, creditors of the corporation.

161a-b **CONSTITUTIONAL LAW I-II. (2) (4) I, II** Eblen
Dodd's Cases (2nd ed.).
Making and changing constitutions, function of judiciary in enforcing constitutions, separation and delegation of powers of government, personal liberty, interstate privileges and immunities of states, the 14th Amendment, due process and equal protection of the laws, eminent domain, protection to persons accused of crime, powers of federal government, money, banking, postal, military powers, citizenship and suffrage, foreign relations, territories, dependencies, new states, inter-governmental relations.

162 **PROPERTY IV (FUTURE INTERESTS). (4) III** Evans
Leach's Cases.
Rights of entry for condition broken, escheat and possibilities of reverter, reversions, vested remainders and executory interests, contingent remainders, limitations to classes, freehold interest subject to a term, rule against perpetuities, illegal restraints and conditions.

163 **WILLS AND THE ADMINISTRATION OF ESTATES. (4) I** Evans
Mechem & Atkinson's Cases.
Descent and distribution, the making and revocation of wills, including testamentary capacity, execution, attestation, integration, revocation by mistake and dependent relative revocation, probate and administration, including will contests, jurisdiction of probate courts, contracts of personal representatives, and claims against the estate and settlement of estates.

164 **CONFLICT OF LAWS. (5) III** Moreland
Cheatham, Dowling & Goodrich's Cases.
Nature of the subject, penal laws, procedure, judgments, domicile, capacity, form, particular subjects, litigation, family law, inheritance, foreign administrator.

165a-b **TRUSTS I-II. (3) (3) I, II** Evans
Scott's Cases (3rd ed.).
Uses and Statute of Uses; trusts distinguished from other relationships; their creation; their elements; the transfer of the beneficiary's

interest; the administration, termination and modification of trusts; charitable trusts; liability to third persons and of third persons; resulting and constructive trusts.

166 SALES. (5) III Murray

Woodward's Cases (3rd ed.).

Subject matter of the contract; transfer of property and title; destruction of goods and risk of loss; obligation of seller and buyer; rights of unpaid seller against the goods; remedies of the seller on the contract; remedies of the buyer on the contract.

167 ADMINISTRATIVE LAW. (4) III Pittman

Stason's Cases.

The creation, function and powers of administrative tribunals; procedure before such tribunals, the scope and manner of judicial review of their orders.

169 LAW OF THE AIR. (3) III Randall

Selected cases and readings.

The course will deal principally with aircraft law as follows: proprietary rights in air space at common law, federal and state statutes, torts liability, criminal responsibility, aircraft as common carriers, the rules of the road, international aspects of air law. Legislation for future development of air law.

170 LEGAL ETHICS. (2.5) IV Murray

Hicks' Cases, Ethics of the Bench and Bar.

A study of the requirements for admission to the bar; bar organizations, with special reference to the organization in Kentucky and other states having integrated bars; procedure in disciplining lawyers; unauthorized practice of law; proper and improper methods of securing clients; fees and charges; contingent fees; the relation of the lawyer to his client with special attention to confidential communications, representing conflicting interests, collections and accounting and the effect of negligence and incompetence. The course also includes a study of the obligation of the lawyer to the court and society and the limitation on the lawyer in serving the interest of his client. There are chapters on the relation of lawyers and judges; lawyers and juries; lawyers and witnesses; lawyers and other lawyers; and on the effect of a lawyer's acts in private life. The course is taught from special assignment sheets with references to Kentucky Statutes and cases, and the Canons of Ethics of the American Bar Association.

172a-h PROBLEMS OF RESEARCH. (3 each) I, II, III, IV Staff

This course is reserved for students who are preparing to make an independent study of some legal problem under the supervision of some member of the law school staff.

173 FEDERAL JURISDICTION AND PROCEDURE. (3) Randall

Dobie's Cases.

Jurisdiction of and procedure in the several federal courts, diversity of citizenship, jurisdictional amount, venue, concurrent jurisdiction, original and appellate jurisdiction, procedure in district court, circuit court of appeals, and Supreme Court. Special attention is given to pleading and trial practice.

174 CREDIT TRANSACTIONS. (5) III Roberts

Hanna's Cases on Security.

This course deals with real estate loans, suretyship, pledges, mortgages, disposition of stocks and bonds, and problems of agricultural finance.

176 TRADE REGULATION. (3) II Eblen
Oppenheim's Cases.
Contracts not to compete at common law. Competitive practices; intimidating and molesting; unfair practices; unfair advertising; combinations. The federal statutes and the N.R.A. legislation.

177 STATUTORY INTERPRETATION. (2.5) IV Murray
de Sloovere's Cases.
This course covers the interpretation of statutes, including such matters as process of interpretation, subject matter and purpose of the state, content, associated words, extrinsic aids, relation to other statutes and to the common law, mandatory and directory provisions, judicial notice, operation, effect, repeal of statutes.

178 CREDITORS' RIGHTS. (4) II Roberts
Hanna & McLaughlin's Cases (3rd ed.).
Enforcement of judgments; fraudulent conveyances; general assignments; receiverships, bankruptcy, assets, distribution.

179 LEGISLATION. (4) III Eblen
Horack's Cases.
Typical federal and state statutes will be used. The history of legislation, legislative agencies, content, preparation, province and subject matter, legislative drafting, means of making laws effective, mechanics, interpretation, operation, amendment, abrogation and repeal, relation of traditional law to legislation.

180 LABOR LAW. (3) III Eblen
Landis' Cases.
A study of the case and statute law which is applicable to labor controversies. Consideration will be given to strikes, the ends for which men may strike, the trade agreement between the employer and the union, the boycott, the use of the union label on goods, federal intervention in labor disputes, and employer interference with the right to work and trade.

181a-b-c LAW JOURNAL NOTE EDITING. (1.5 each) Staff
This course is to be required of all senior members of the Law Journal staff and consists of criticism of the notes and comments prepared by the student editors of the Law Journal for publication. Definite assignments are made prior to the meeting of the class and the class is under the supervision of a member of faculty in whose particular field the note or comment happens to fall.

182 DEFENSE LEGISLATION AND MILITARY LAW. (4) III Roberts
Schiller's Cases.
This course will deal with recent defense legislation affecting industries; legislation affecting property rights; legislation dealing with the establishing of a more efficient army and navy, including the Selective Service Act of 1940. The course will also cover the constitutional aspects of the questions involved.

183 LANDLORD AND TENANT. (2) I, IV Roberts
Jacobs' Cases.
The course in Landlord and Tenant deals with the characteristics of leases; the creation of the relationship of landlord and tenant; covenants implied in the lease; restrictions on the lessee's use of the property; transfers by the lessor and by the lessee; rent; taxes; repairs; and termination of the relationship.

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION

Professors Hammonds and Woods, and Mr. Armstrong, Mr. Montgomery, Mr. Robbins[1], Mr. Tabb, and Mr. Truitt

Courses open only to Upper Division and Graduate Students

179 DETERMINING CONTENT IN VOCATIONAL AGRICULTURE (4) IV Hammonds
Interpretation of data as a basis for course building. Each student works out the content of a four-year course in vocational agriculture.

181 TEACHING VOCATIONAL AGRICULTURE (11) I, II, III Armstrong, Hammonds, Montgomery, Tabb and Truitt
Preparation for teaching of agriculture. About one half of the course is practice.

182 ADULT-FARMER SCHOOLS AND YOUNG-FARMER COURSES IN AGRICULTURE. (3) I, II, III Hammonds
A general introduction to adult-farmer schools and young-farmer courses with some observation of work in both of these fields.

188 FARM PRACTICE SUPERVISION. (1) Armstrong, Hammonds and Tabb
Practice and directed study in supervising farm practice of pupils in vocational agriculture.

Courses open only to Graduate Students

280 METHOD IN TEACHING VOCATIONAL AGRICULTURE. (4) IV Hammonds
The principles of method applied to the teaching of agriculture. **Prerequisite: Experience in teaching vocational agriculture.**

281 TEACHING PREVOCATIONAL AGRICULTURE. (4) Woods
Aims, purposes, and methods of teaching prevocational agriculture. Each student works out the content of a course, including selecting the teaching materials.

287a ADVANCED PROBLEMS IN AGRICULTURAL EDUCATION. (5) I, II, III, IV Hammonds and Woods
Specific problems selected according to the needs of the group.

287b SELECTING TEACHING MATERIALS. (4) IV Armstrong
Selection of specific references and other teaching materials to be used in the teaching of vocational agriculture.

287c ADULT-FARMER SCHOOLS. (4) IV Hammonds and Woods
Preparation for teaching adult farmers; organization of adult-farmer schools, curriculum content, method of teaching, follow-up work.

287d DIRECTING FARM PRACTICE. (4) IV Hammonds
Farm practice as a method of teaching; standards, planning, supervision, records.

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[1] Resigned October 16, 1943.

287e TEACHING FARM SHOP. (4) IV Tabb
A study of necessary content for shop, plans for securing and equipping the shop, and methods of teaching farm shop.

287f YOUNG-FARMER SCHOOLS. (4) Hammonds and Woods
Content and method of teaching young-farmer courses in vocational agriculture.

289a-b RESEARCH IN AGRICULTURAL EDUCATION. (5) I, II, III, IV Hammonds and Woods
Individual problems of importance to agricultural education.

BUSINESS EDUCATION

Associate Professor Lawrence

Courses open only to Upper Division and Graduate Students

104 FOUNDATIONS OF BUSINESS EDUCATION IN THE HIGH SCHOOL. (4) I, IV Lawrence
The origin, the status, and the objectives of business education in the secondary school. Required of business education majors.

158a TEACHING SECRETARIAL SUBJECTS. (3) II, IV Lawrence
Special techniques and devices for teaching shorthand, typewriting, and secretarial office practice. Required of business education majors.

158b TEACHING ACCOUNTING. (3) III, IV Lawrence
Materials and techniques used in the teaching of accounting. Required of business education majors.

184 TEACHING OFFICE APPLIANCES. (3) I, IV Lawrence
Methods and materials used in teaching the various office appliances to high school pupils. Dictating machines, mimeographs, multigraphs, graphotypes, mimeoscopes, addressing machines, filing devices, calculating machines, and other appliances are used.

192 TEACHING GENERAL BUSINESS. (4) IV Lawrence
A critical study of the objectives of the general business course. A syllabus is prepared for teaching this subject.

Courses open only to Graduate Students

208a-d PROBLEMS IN BUSINESS EDUCATION. (4) III, IV Lawrence
Advanced Problems in the field. The type of problems considered is influenced by the interests and needs of the group. Some of these problems are: testing in business subjects, extracurricular activities in commerce, job studies, placement and follow-up, type of equipment, and supervision.

256 THE SOCIAL BUSINESS SUBJECTS IN HIGH SCHOOL. (4) IV Lawrence
An examination of the various social business subjects, to determine their contribution to the objectives of business education.

257a-b SEMINAR IN BUSINESS EDUCATION. (1) IV Lawrence
A study of current literature in business education with special reference to trends in this field.

259 THE COMMERCE CURRICULUM. (5) II, IV Lawrence
A study of business subjects offered in the high school, to determine their content and the place each should occupy in high school curricula. A course of study is developed for each subject.

260 TEACHING CONSUMER COURSES IN THE HIGH SCHOOL. Lawrence
(4) I, IV
Techniques and devices for teaching high school pupils the various aspects of consumer education. Emphasis is placed on procedures rather than on content and the student is presumed to have a background of training in economics before taking the course.

DISTRIBUTIVE OCCUPATIONS

Assistant Professor Baker

Courses open only to Upper Division and Graduate Students

112 DETERMINING TEACHING CONTENT IN DISTRIBUTIVE OCCUPATIONS. (4) I, II, III, IV Baker
Course construction in the field of distributive occupations. This course is planned to meet the needs of persons engaged as instructors in the field of distributive occupations.

115a-b PROBLEMS IN DISTRIBUTIVE EDUCATION. (4) I, II, III, IV Baker
Problems involved in teaching vocational distributive education in day, part-time, and evening schools. The problems are selected in accordance with the needs and desires of the students. **Prerequisites: Education 112 and 128.**

116 PROBLEMS OF THE COORDINATOR IN DISTRIBUTIVE OCCUPATIONS. (4) I, II, III, IV Baker
Problems facing the coordinator as he acts in the capacity of intermediator between the school and the business world. Problems in placing students in stores, in follow-up methods, in store contacts, and in securing the cooperation of personnel management are discussed.

128 TECHNIQUE OF TEACHING DISTRIBUTIVE OCCUPATIONS. (4) I, II, III, IV Baker
A study of the methods of teaching as applied to distributive occupations education. The purpose of the course is to train prospective teachers to teach in the field of distributive occupations.

EDUCATIONAL ADMINISTRATION

Dean Taylor; Professors Chamberlain, Ligon, and Seay; and Associate Professor Meece

101 SCHOOL ORGANIZATION. (5) I, II, III, IV Seay
A course designed to familiarize the prospective teacher with those activities of school organization and administration in which he may be expected to participate. Topics emphasized are administrative control, selection of teachers, tenure, loads, salaries, retirement, supervision, classification and promotion, attendance, community relationships, and professional ethics.

198 THE ADMINISTRATION OF PUPIL PERSONNEL. (4) IV Seay
The school census, enforcement of attendance, personnel records, marking, pupil progress, classification. The course is designed primarily for prospective superintendents and attendance officers.

Courses open only to Graduate Students

202 LOCAL SCHOOL ADMINISTRATION. (5) I, IV Seay and Meece
Public school administration for the prospective superintendent of a county or city school system. The course deals with the state as an educational agency, the local school district, the board of education, the superintendent, the internal organization for the administration of a school system, problems of the teaching personnel, problems of pupil personnel, business management, finance and accounting, the curriculum, school building planning and management, and the supervision of instruction. This is one of the basic courses in school administration and should be taken at or near the beginning of the student's graduate program.

203 CONSTITUTIONAL AND LEGAL BASIS OF PUBLIC SCHOOL ADMINISTRATION. (4) II, III, IV Ligon
A study of court decisions, to discover the legal principles involved in practical problems of school administration. Topics discussed are: the school and the state, school districts, school officers, relations of school districts and municipalities; authority of school districts and district officers, school board procedure and records, tort liability of school districts, personal liability of school officers, contractual authority and liability of boards of education, school money, the school debt, acquisition and use of school property, employment and dismissal of teachers, school attendance, rules and regulations of school boards, discipline and punishment of pupils, textbooks and studies. **Prerequisites: Education 202, 213, or 232.**

204 REDIRECTING EDUCATIONAL EFFORTS AND RESOURCES TO MEET NEW CONDITIONS. (4) II, IV Seay
The public school and its responsibilities. The course gives particular attention to changing emphases in education resulting from changes in the social and economic order.

206 PROBLEMS OF COLLEGE TEACHING. (4) Taylor
Methods commonly used in college teaching, bases for measuring instruction, marking systems, qualifications for college teaching, and efforts being made to improve college instruction.

207 SCHOOL BUILDING AND EQUIPMENT. (4) Chamberlain
Measurement and evaluation of existing building facilities, planning new school buildings, financing the building program, building operation and maintenance. **Prerequisite: Education 202 or its equivalent.**

210 SPECIAL PROBLEMS IN SCHOOL ADMINISTRATION. (4) I, II, III, IV Seay
An independent work course for students doing their first year of graduate work in education. **Prerequisite: Education 101 or 202.**

213 STATE SCHOOL ADMINISTRATION. (4) II, IV Seay
The administration of American education from the standpoint of the federal and state governments. The course deals with federal relations to education, the state as an educational agency, local units for the administration of education, the scope of the school system, state school support, state control of the material environment and equipment, the training and certification of teachers, and teachers' contracts, tenure, and retirement.

221a-b SEMINAR IN ADMINISTRATION. (4) Seay and Meece
A critical study of selected problems in school administration.

225a SUPERVISION OF INSTRUCTION. (4) I, III, IV Seay
The development, purposes, organization, and planning of supervision; use of classroom visitation, demonstration lessons, teachers' meetings, and individual conferences; the course of study, tests and measurements, equipment and supplies, the teacher, and the pupil.

225b SUPERVISION OF INSTRUCTION. (4) II, IV Seay
Planning of specific programs for the improvement of instruction which are to be directed by superintendents, principals, supervisors, or helping teachers. Special consideration is given to current programs of in-service education of teachers as sponsored by different educational agencies in Kentucky.

231 FINANCING PUBLIC EDUCATION. (4) II, IV Seay and Meece
Budgetary procedure, school costs, school indebtedness, state finance, fiscal reports, and accounting procedures. These topics are treated primarily from the standpoint of the superintendent of schools. **Prerequisite: Education 202 or its equivalent.**

232 HIGH SCHOOL ADMINISTRATION. (4) I, III, IV Ligon
A course designed primarily for high school principals and prospective administrators. Topics emphasized are secondary school organization, the principal, the staff, the pupil, program of studies, schedules, community relationships, records and reports, articulation, library, plant, finance, and the aims of secondary education.

233 THE ADMINISTRATION OF THE TEACHING PERSONNEL. (4) I Seay and Chamberlain
A specialized course in school administration, primarily for prospective superintendents. The course emphasizes principles and practices in teacher preparation, teacher selection and placement, measurement of teaching efficiency, salaries, tenure, retirement, teaching loads, sick leave and related problems, and personnel records.

236 BUSINESS ADMINISTRATION OF PUBLIC EDUCATION. (4) Seay
A specialized course for prospective superintendents covering the following aspects of school administration: the organization for business management; the scope of business administration; appraisal, depreciation, and insurance of school property; maintenance of the school plant; plant operation; selection, training, and pay of the custodial staff; purchase and management of supplies; textbook management; selection and purchase of equipment; inventories; and transportation.

238 TRENDS IN HIGHER EDUCATION. (4) Chamberlain
A survey of modern tendencies in American higher education in the following areas: scope and development, objectives, organization, administration, curricula, finance, faculty and student personnel. The course is designed to serve the needs of present and prospective college administrators and teachers and others interested in developments in higher education. For those desiring special instruction in the work of the registrar a program of laboratory work will be arranged.

239 THE ADMINISTRATION OF PUBLIC SCHOOLS IN RELATION TO OTHER AGENCIES. (4) Seay
The relationship of public schools with other agencies and services, such as the public health service, the agricultural extension service, employment bureaus, public libraries, parent-teacher associations, and professional organizations of teachers. A study is made of the function and organization of such agencies. The general aim of the course

is to give the school administrator an understanding of the social agencies which should be included in the total education program of a community.

250a-b EDUCATIONAL PROBLEMS AND COMMUNITY RESOURCES. (4) Seay
Primary emphasis is on the utilization of community resources in the improvement of instruction. Attention is given to national, regional, and local agencies, the work of which is closely associated with the educational program, and to experiments with and demonstrations of new methods and content in education.

276 ADMINISTRATIVE PROBLEMS IN TODAY'S EDUCATION. (4) Seay
Present-day problems of persons in administrative positions in public education. The course is designed to be of assistance particularly to superintendents of schools.

301a-b RESEARCH PROBLEMS IN EDUCATIONAL ADMINISTRATION. (4) I, II, III, IV Seay and Meece
An independent research course. Students confer individually with the instructor. **Prerequisite: One year of graduate work.**

321a-b RESEARCH PROBLEMS IN HIGHER EDUCATION. (4) I, II, III, IV Taylor and Chamberlain
And independent research course. Students confer individually with the instructor. **Prerequisite: One year of graduate work.**

EDUCATIONAL PSYCHOLOGY

Professors Ross and Hammonds

16 EDUCATIONAL PSYCHOLOGY. (5) I, II, III, IV Ross and Hammonds
Application of psychology to the problems of learning and teaching.

Courses open only to Upper Division and Graduate Students

118 EDUCATIONAL TESTS AND MEASUREMENTS FOR ELEMENTARY TEACHERS. (4) III, IV Ross
The problems of measurement in the elementary school; formal and informal tests; marking systems; etc. **Prerequisite: One quarter of Psychology.**

119 FOUNDATIONS OF ELEMENTARY EDUCATION. (4) Ross
The psychology of the child in the primary and intermediate grades. **Prerequisite: One quarter of Psychology.**

122 EDUCATIONAL TESTS AND MEASUREMENTS FOR HIGH SCHOOL TEACHERS. (5) I, II, III, IV Ross
The problems of measurement in the junior and senior high school, with special emphasis on standardized tests. The construction and use of new-type tests, use and limitations of traditional examinations, marking systems, etc., are also considered.

147 FOUNDATIONS OF SECONDARY EDUCATION. (4) I, IV Ross
The psychology of the pupil in junior and senior high school. **Prerequisite: One quarter of Psychology.**

Courses open only to Graduate Students

216 SEMINAR IN TESTS AND MEASUREMENTS. (4) IV Ross
A critical study of certain problems in measurement; individual work. **Prerequisite: Education 122 or 118.**

223 EDUCATIONAL STATISTICS. (5) III, IV Ross
A non-mathematical study of the applications of statistical and graphical methods to educational data.

254 PROBLEMS IN EDUCATIONAL PSYCHOLOGY. (4) I, II, III Ross
A critical survey of the conflicting schools of psychology, theories of learning, etc. **Prerequisite: One year of Psychology.**

ELEMENTARY EDUCATION

Professor Duncan; Associate Professor Hartford[1]; and Miss Adams, Mrs. Clark, Miss Conroy, Mrs. Haines, Mrs. Henson[2], Miss Molloy, Mrs. Trimble, Miss Walton, and Miss Willson

20 INDUSTRIAL ARTS FOR ELEMENTARY GRADES. (3) I, IV Haines
A practical course involving the use of tools and various materials suitable for use in the elementary school. It is intended for teachers who wish to make industrial arts an integral part of the elementary school curriculum.

42 ARITHMETIC IN ELEMENTARY GRADES. (4) II Duncan
A study of children's interests in, and needs for arithmetic: evaluation of practice and materials, organization of subject matter, activities involving arithmetic, drill, problem solving, diagnosis and remedial instruction, and testing.

44 FUNDAMENTALS OF ELEMENTARY EDUCATION. (10) I, III Haines and Duncan
A course planned to acquaint the student with the principles and practices of a modern elementary school. It includes directed observation and participation on the elementary level. (This course may be substituted for student teaching on the sophomore level for the Provisional Elementary Certificate.)

Courses open only to Upper Division and Graduate Students

110 ADVANCED INDUSTRIAL ARTS. (3) III, IV Haines
The industrial processes involved in records and shelter suitable for classroom experimentation. As a result of work in this course the teacher should be able to guide children in construction activities pertaining to the study of records and shelter—book binding, block printing, paper decorating, toy making, elementary woodwork, and interior decorating.

133 STUDENT TEACHING IN THE ELEMENTARY SCHOOL. (15) I, II, III, IV Duncan and Supervising Teachers
A course designed to give the student experience with and practice in the program of a modern elementary school. Note: The student spends from 8:00 a.m. until 2:00 p.m. in the classroom for the

[1] Military Leave.
[2] Resigned January 1, 1944.

quarter. One hour per day additional, 2:00 p.m. to 3.00 p.m., is spent in conference and discussion with the supervising teacher. (A student who has had three credits in student teaching may take this course with reduced hours and reduced credits.) **Prerequisites: Education 44; senior standing in the elementary curriculum.**

141 PROBLEMS IN DIAGNOSTIC AND REMEDIAL READING. (4) IV Duncan
Problems of prevention, diagnostic, and remedial work in reading, with demonstration of the use of instrumentation in diagnosis and correction of reading difficulties and the application of these clinical procedures to problem cases. The course includes problems of elementary and high school teachers and administrators. Three hours lecture and discussion and two hours laboratory.

172 TEACHING READING IN THE ELEMENTARY SCHOOL. (5) III, IV Duncan
A practical application of principles derived from psychology and research, with discussion of aims, primary reading, activities leading to reading, reading in the intermediate grades, oral and silent reading, phonics, diagnostic and remedial work, means of testing, and suitable material for each grade.

173 TEACHING LITERATURE TO CHILDREN. (5) II, IV Duncan
Literature for children from kindergarten to Grade VI; children's interests at different ages and stages of development; story telling and dramatization; reading and book reports from various types of literature—modern fantastic tales, realistic stories, biography, folklore, myths and legends, and poetry.

174 PRE-SCHOOL THEORY AND MANAGEMENT. (4) I Clark
The nature, development, care and educational training of the pre-school child. Emphasis is placed on the formation of proper emotional and social habits and standards for the right environmental set-up. Students schedule regular periods for observing and assisting in the kindergarten.

176 PRE-SCHOOL ORGANIZATION AND TEACHING. (4) II Clark
The pre-school movement in Europe and America, and the organization, equipment, curriculum, and methods of pre-school teaching. Students taking this course schedule regular periods for observing and assisting in the kindergarten.

196 SCIENCE IN THE ELEMENTARY SCHOOL. (5) I, IV Adams
A background of elementary science usable with children in the first six grades. The course includes planning units of work, organizing and using materials and references, making bibliographies for teachers and children, use of illustrative material, and excursions.

Courses open only to Graduate Students

212 THE ELEMENTARY SCHOOL. (5) III, IV Duncan
A course designed to help the superintendent, elementary principal, and elementary supervisor in a better understanding of the modern elementary school. The activity program, objectives, and research and study in the skills and content subjects of the elementary curriculum are discussed from the standpoint of supervision.

224 ORGANIZATION AND SUPERVISION OF STUDENT TEACHING. (5) II, IV Duncan
A course planned for students preparing to do critic teaching in the fields of elementary and secondary education. It includes the basic principles underlying the entire program and deals with specific problems for critic teachers on the elementary and secondary levels.

229 THE ELEMENTARY PRINCIPAL. (5) I, IV Duncan
Problems related to the elementary principalship: the professional preparation, selection, and status of the principal; the relation of the principal to other administrative officers, supervisors, teachers, pupils, and parents; problems of attendance, discipline, health, and records; and the application of sound principles to the improvement of teaching. Emphasis is placed on the community relationship of elementary principals and teachers and ways in which they may cooperate and improve the life of the community. Attention is given also to problems presented by members of the class.

308a-b RESEARCH PROBLEMS IN ELEMENTARY EDUCATION. (4) I, II, III, IV Duncan
An independent research course. Students confer individually with the instructor. **Prerequisite: One year of graduate work.**

HISTORY OF EDUCATION

Dean Taylor and Professor Patrick[1]

Courses open only to Upper Division and Graduate Students

117a HISTORY OF EDUCATION. (4)
A survey of the history of secondary education from the Greek period to the present time.

117b HISTORY OF EDUCATION. (4)
A survey of the history of elementary education beginning with Athenian education and closing with present elementary education in America.

Courses open only to Graduate Students

201a EARLY HISTORY OF EDUCATION IN THE UNITED STATES. (4)
The development of education through the colonial period and the early years of the national period.

201b RECENT EDUCATIONAL HISTORY IN THE UNITED STATES. (4)
The growth of education from the beginning of public education to the more recent educational movements.

219 GREAT EDUCATORS AND THEIR WORK. (4)
A study of the lives and writings of the world's educators to acquaint the student with the ideals and contributions to society of great educators.

220 COMPARATIVE EDUCATION. (4) II, IV Taylor
Comparisons of modern national systems of education.

235 HISTORY OF EDUCATION IN KENTUCKY. (4)
A course designed to give the student an historical background of education in Kentucky.

237a-b RESEARCH IN HISTORY OF EDUCATION. (4)
Independent work for students in history of education.

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[1] Died May 4, 1944.

HOME ECONOMICS EDUCATION

Professors Parker and Spickard, and Miss Sneed

Courses open only to Upper Division and Graduate Students

160 TECHNIQUE OF TEACHING HOME ECONOMICS.
(4) I, II, III Parker and Spickard
A study of methods of teaching as applied to home economics. **Prerequisites: Home Economics 3, 6a, 6b, 26, 29, and 51; Education 147.**

162 STUDENT TEACHING IN HOME ECONOMICS.
(8) I, II, III Parker and Spickard
Practical application of methods in teaching various phases of home economics. **Prerequisite: Education 160.**

165 ADULT EDUCATION IN HOME ECONOMICS.
(4) I, II, III Parker and Spickard
Problems involved in teaching vocational homemaking in day, part-time, and evening schools.

Courses open only to Graduate Students

261 HOME ECONOMICS SUPERVISION.
(4) IV Parker and Spickard
A course planned primarily to help prepare teacher trainers and supervisors of home economics education. **Prerequisites: Education 160 and 162; experience in teaching; approval of instructor.**

263 CURRENT PROBLEMS IN HOME ECONOMICS EDUCATION. (4) IV Parker and Spickard
Recent developments in the field of home economics education. **Prerequisites: Education 160 and 162; experience in teaching.**

264 MODERN TENDENCIES IN HOME ECONOMICS EDUCATION. (4) Parker
A basic course for graduate students in home economics education. It is designed to acquaint students with modern tendencies in education. Some problems considered are the contribution of home economics to the general education of boys and girls, evaluation, and integration.

266a-c SEMINAR IN HOME ECONOMICS EDUCATION.
(3) I, II, III Parker and Spickard
Individual investigations and reports on special problems in home economics education.

267 DIRECTED SUPERVISION IN HOME ECONOMICS EDUCATION. (4) Parker and Spickard
Teaching home economics classes for observation, directing student teachers under the guidance of a supervising teacher, visiting schools with the itinerant teacher trainer in different sections of the state, organizing teaching materials. (This course may be taken parallel to or following Education 261.) **Prerequisites: Two years' teaching experience; recommendation by the Department of Home Economics Education.**

268 HOME ECONOMICS CURRICULUM CONSTRUCTION.
(4) IV Parker and Spickard
A study of the underlying principles of curriculum building for junior and senior high school home economics. **Prerequisites: Education 160 and 162.**

269 EVALUATION IN HOME ECONOMICS EDUCATION.
(4) IV Parker

A course intended to acquaint teachers of home economics with techniques used in measuring attainment in home economics in the junior and senior high school and college. **Prerequisite: Teaching experience.**

INDUSTRIAL EDUCATION

Professor May, Assistant Professor Hankins, and Mr. Crumpton

71 TRADE ANALYSIS AND COURSE PLANNING.
(4) IV Hankins and Crumpton

A course planned to meet the needs of vocational teachers in the fields of coordination, shop instruction, and related subjects in connection with day, part-time and evening schools.

73 TEACHING RELATED SUBJECTS. (4) Hankins and Crumpton

A study of the techniques of teaching the related technical subjects in the field of trade and industrial education.

77 SHOP MANAGEMENT PROBLEMS. (3) IV Hankins and Crumpton

Industrial education in the school shop. The course evaluates all types of activities in connection with this part of the educational program and gives due weight to each factor.

78 THE CONFERENCE METHOD OF INSTRUCTION IN INDUSTRIAL EDUCATION. (3) Hankins and Crumpton

Methods of presenting subject matter that will allow free and constructive thinking. The conference method does this by developing situations and case studies which are handled by the Box-Head Analysis system of control.

79 DETERMINING RELATED SUBJECTS CONTENT.
(3) I, II, III Hankins and Crumpton

A study of related technical knowledge, in addition to the shop experiences of the pupils, necessary to a complete training program. This course discovers this material and organizes it into courses for the related subjects teacher.

81 ANALYSIS OF LEARNING DIFFICULTIES IN INDUSTRIAL EDUCATION. (3) I, II, III, IV Hankins and Crumpton

A course planned to meet the needs of teachers of vocational subjects in the field of industrial education. An analysis is made of the learning difficulties encountered in teaching trade and related subject courses and remedial measures are studied.

Courses open only to Upper Division and Graduate Students

108 COORDINATION TECHNIQUES IN INDUSTRIAL EDUCATION.
(3) I, II, III, IV Hankins and Crumpton

A course for coordinators in part-time or evening industrial education. It analyzes the social, educational, and economic responsibilities of the coordinator and ties up these findings with the local school program in a better system of student training and student accounting.

123 **VOCATIONAL GUIDANCE. (4)** Hankins and Crumpton
A course designed to give the teachers, principals, superintendents, and welfare workers a comprehensive view of the factors in vocational guidance and of the agencies contributing to or influencing life choices, and an analysis of the human and economic resources of a given civic unit.

143 **MODERN INDUSTRIAL ANALYSIS. (3) I, II, III** Hankins and Crumpton
Modern industrial organizations; trends in industrial educational policies; the proper approach to and analysis of these problems as they affect the industrial vocational teacher.

171a-b **PRINCIPLES AND PHILOSOPHY OF INDUSTRIAL EDUCATION. (3) I, II, III, IV** Hankins and Crumpton
A course planned primarily for the advanced student in industrial education. It covers the general philosophy of vocational education as it is tied up with the problems and principles of industrial education.

183 **METHODS IN INDUSTRIAL EDUCATION. (4) IV** Hankins and Crumpton
The most approved methods in instructional management, including lesson planning, in the field of vocational industrial education.

MUSIC EDUCATION

Professor Capurso

Courses open only to Graduate Students

251 **PROBLEMS IN PUBLIC SCHOOL AND COMMUNITY MUSIC. (5) II, IV** Capurso
Problems in teaching, supervising, organizing and leading public school and community music activities. Students in-service have an opportunity to bring problems from their own school or community situations and, when possible, the instructor visits them in the field. This course includes projects, demonstrations, readings and discussion.

252 **FIELD PROBLEMS IN MUSIC. (2) III, IV** Capurso
A course designed to permit the teacher or leader in the field to work out his local problems as an independent graduate teaching project under the guidance of the music staff.

253 **INDEPENDENT WORK IN MUSIC EDUCATION. (5) III, IV** Capurso
A course designed for graduate students who undertake research problems in music education, conducted in regular consultation with the instructor.

PHILOSOPHY OF EDUCATION

Dean Taylor; Professors Adams, Clifton and Patrick[1]; and Assistant Professor Starnes[2]

35 **INTRODUCTION TO EDUCATION. (4) I, II, III** Adams
The teacher, the teaching process, the school as a social agency, and the philosophy of education.

[1] Died May 4, 1944.
[2] Military Leave.

Courses open only to Upper Division and Graduate Students

114 EDUCATIONAL SOCIOLOGY. (4)
The application of sociological findings to the field of education within the school and home.

127 THE ELEMENTARY CURRICULUM. (4)
The philosophy and techniques of curriculum construction and some practical work in construction.

175a-f MODERN EDUCATIONAL PROBLEMS. (4)
A brief survey of some of the problems in modern education.

175g MODERN EDUCATIONAL PROBLEMS: EDUCATION OF HANDICAPPED CHILDREN. (4) IV
Procedures to be used in the education of children who are handicapped physically, mentally, or emotionally. Attention is given to work with individual children as well as with groups.

175i MODERN EDUCATIONAL PROBLEMS: COMMUNITY ORGANIZATION IN ADULT EDUCATION. (4)
Problems of community organizations as they affect the adult life of citizens of the community served.

186 VISUAL TEACHING. (4) I, IV Clifton
Methods and techniques of visual instruction. Special emphasis is placed on charts, slides, graphs, maps, still pictures, motion pictures, and other visual aids; their effective use in teaching; and the planning of outlines and lessons involving their use. Attention is given also to the administration of visual aids in the school.

Courses open only to Graduate Students

200a PHILOSOPHY OF EDUCATION. (4) II, IV Adams
An advanced course dealing with the philosophy underlying the larger educational problems of today. **Prerequisite: 16 quarter hours in Education.**

200b PHILOSOPHY OF EDUCATION. (4) III, IV Adams
A continuation of Education 200a.

205a REVIEW OF CURRENT EDUCATIONAL LITERATURE. (4) I, III, IV Adams
An extensive study of current educational literature as found in educational periodicals. **Prerequisite: 16 quarters hours in Education.**

205b REVIEW OF CURRENT EDUCATIONAL LITERATURE. (4) II, IV Adams
A continuation of Education 205a.

222 METHODOLOGY OF EDUCATIONAL RESEARCH. (4) I, III, IV Taylor
A course intended to acquaint the students with the various techniques of research and to aid him in methods of attack on his own particular research problems. **Prerequisite: 16 quarter hours in Education.**

226a-d PROBLEMS OF THE SECONDARY SCHOOL CURRICULUM. (4)
Problems in the field of the secondary school curriculum. Students enrolling in this course are required to leave on file with the College of Education a complete report of each problem studied.

227a PRINCIPLES OF CURRICULUM CONSTRUCTION.
(4) II, IV Adams
A survey of modern curriculum-making as carried on in progressive city school systems, laboratory school, and state school systems; also an intensive study of the principles underlying curriculum revision. **Prerequisites: Teaching experience; 16 quarter hours in Education.**

227b TECHNIQUES IN CURRICULUM CONSTRUCTION.
(4) III, IV Adams
The techniques employed to determine content of courses of study. **Prerequisites: Teaching experience; 16 quarter hours in education.**

228a-d SEMINAR IN EDUCATION. (1) Taylor
A course planned for graduate students majoring in education, given under the direction of the faculty of the College of Education.

230 PROBLEMS OF EDUCATIONAL SOCIOLOGY. (4)
An advanced course in the application of sociology to the educational field. **Prerequisite: 16 quarter hours in Education, including Education 114.**

234 PROBLEMS IN CURRICULUM MAKING. (4) II Adams
The selection of materials in the elementary and secondary fields, the types of units used in modern instruction, how the child learns, the various educational agencies in the community, and how the school may be made a real community center.

245 ORGANIZATION OF AUDIO-VISUAL AIDS. (4) Clifton
Beginning the audio-visual program, qualifications and duties of staff members assisting in the audio-visual program, sources and criteria for judging equipment and supplies, the audio-visual aids budget, projection mechanics; in-service teacher training.

246 MOTION PICTURES IN EDUCATION. (4) Clifton
The history of the educational motion picture, technique in the use of films, educational scenario writing, grading and scoring films, and motion picture appreciation.

275 ADVANCED PROBLEMS IN PHILOSOPHY OF EDUCATION. (4) IV
Problems in modern education. Special emphasis is given to such problems as social strains and conflicts, cultural and community foundations, the readjustment and reconstruction of our various traditions, and the process of solving these problems from the standpoint of the schools.

SECONDARY EDUCATION

Professors Capurso, Duncan, and Ligon; Associate Professor Hartford[1]; and Miss Anderson, Miss Belser, Mr. Betz[1], Mr. Briggs, Mrs. Gilb, Mr. Ginger, Mrs. Haines, Mrs. Harelson[2], Miss Humphreys, Mr. Kemper[1], Mr. Kurachek[1], Miss Mason, Mrs. Mercer, Miss Peck, Miss Shipman, Miss Topham[2], and Miss West

Courses open only to Upper Division and Graduate Students

105 FUNDAMENTALS OF SECONDARY EDUCATION.
(4) I, II, III, IV Ligon
Laboratory methods of instruction: fundamental processes, control, operation, and administration.

[1] Military Leave.
[2] Resigned July 1, 1943.

107 SAFETY EDUCATION. (4)
Techniques and skills for the teaching of safety education in all its aspects. Particular emphasis is placed on driver education and the problems related thereto.

111 REMEDIAL READING IN THE SECONDARY SCHOOL.
(3) Duncan
A study of diagnostic and remedial work with reading disability cases in the junior and senior high school. This course is designed to enable the teacher to diagnose reading difficulties and to remedy them. Observation, case studies, and practice in remedial work with children are required of all students. The course includes a critical study of the investigations and literature in the field.

142 STUDENT TEACHING IN ART. (9) I, II, III Haines
A course planned for teachers who contemplate becoming supervisors of art in the public schools. **Prerequisites: Education (see Professional Major); 27 quarter hours in Art; senior standing.**

153 STUDENT TEACHING IN ENGLISH.
(9) I, II, III, IV Anderson, Belser, Briggs and Shipman
Course of study, minimum essentials, materials, methods, testing; language and composition; and literature. The course includes observation and practice, five hours; and conferences, two hours. **Prerequisites: Education (see Professional Major); 27 quarter hours in English; senior standing.**

154 STUDENT TEACHING IN LANGUAGES.
(9) I, II, III, IV West
Aims and objectives, course of study, methods, tests, equipment, analysis of textbooks: The course includes observation and practice, five hours; and conferences, two hours. **Prerequisites: Education (see Professional Major); 27 quarter hours in subject to be taught; senior standing.**

155 STUDENT TEACHING IN THE SCIENCES.
(9) I, II, III, IV Ginger and Mercer
Aims and objectives, courses of study, methods, tests, equipment; general science, biology, physics, and chemistry. The course includes observation and practice, five hours; and conferences, two hours. **Prerequisites: Education (see Professional Major); 27 quarter hours in subject to be taught; senior standing.**

156 STUDENT TEACHING IN MATHEMATICS.
(9) I, II, III, IV Mercer
Course of study, materials, methods, testing. The course includes observation and practice, five hours; and conferences, two hours. **Prerequisites: Education (see Professional Major); 27 quarter hours in Mathematics; senior standing.**

157 STUDENT TEACHING IN THE SOCIAL STUDIES.
(9) I, II, III, IV Belser, Peck, and Shipman
Objectives, preparation of the teachers, courses of study, methods, supplementary materials, visual instruction, testing, professional helps. The course includes observation and practice, five hours; and conferences, two hours. **Prerequisites: Education (see Professional Major); 27 quarter hours in subject to be taught; senior standing.**

169a-c STUDENT TEACHING IN PHYSICAL EDUCATION.
(3) I, II, III Gilb and Ginger
A course for students who desire to become directors of physical education and coaches of athletics in the public schools. **Prerequisites: Education (see Professional Major); 27 quarter hours in Physical Education; senior standing.**

177a-c STUDENT TEACHING IN MUSIC.
(3) I, II, III Capurso and Mason

A course planned for teachers who contemplate becoming supervisors of music in the public schools. **Prerequisites: Education (see Professional Major); 27 quarter hours in Music, senior standing.**

193 STUDENT TEACHING IN BUSINESS EDUCATION.
(9) I, II, III, IV Humphreys

Practice in junior business training; in shorthand; in typewriting; and in such other commercial subjects as are commonly taught on the secondary level. **Prerequisites: Education (see Professional Major); 27 quarter hours in Commerce; senior standing.**

Courses open only to Graduate Students

214a THE SECONDARY SCHOOL. (4) I, II, IV Ligon

A course designed to acquaint the prospective principal or superintendent with the nature and function of the secondary school. This is one of the basic courses in the field of administration and should be taken at or near the beginning of the student's graduate program.

214b THE SECONDARY SCHOOL. (4) III, IV Ligon

A continuation of Education 214a.

241 PROBLEMS IN TEACHING THE SOCIAL STUDIES.
(4) IV Peck

Approved methods of teaching the social studies. Source materials dealing with the problems of teaching, such as research findings, yearbooks, and periodicals are investigated and current practices in the best high schools of the country are stressed.

242 PROBLEMS IN TEACHING ENGLISH. (4) IV Anderson

Approved methods of teaching English. Source materials dealing with the problems of teaching, such as research findings, yearbooks, and periodicals, are investigated and current practices in the best high schools of the country are stressed.

243 PROBLEMS IN TEACHING MATHEMATICS. (4) IV

Approved methods of teaching mathematics. Source materials dealing with the problems of teaching, such as research findings, yearbooks, and periodicals, are investigated and current practices in the best high schools of the country are stressed.

244 PROBLEMS IN TEACHING PHYSICS. (4) IV

Approved methods of teaching physics. Source materials dealing with the problems of teaching, such as research findings, are investigated and current practices in the best high schools of the country are stressed.

249 EXTRACURRICULAR ACTIVITIES. (4) III Ligon

Underlying principles, faculty activities, home-room activities, student council, clubs, athletics, publications, dramatics, honor societies, commencements. **Prerequisite: 16 quarter hours in Education.**

307a-b RESEARCH PROBLEMS IN SECONDARY EDUCATION.
(4) I, II, III, IV Ligon

An independent research course. Students confer individually with the instructor. **Prerequisite: One year of graduate work.**

VOCATIONAL EDUCATION

Professors Hammonds and Woods[1]

Courses open only to Graduate Students

211 THE ADMINISTRATION OF VOCATIONAL EDUCATION. (4) II Hammonds and Woods

A course designed for superintendents and principals of high schools. The purpose of the course is to train for administering and supervising vocational education. Topics emphasized include aims and purposes of vocational education, relationship of vocational to other education, financing vocational education, and relationship of local to state administration.

282 SPECIAL PROBLEMS IN VOCATIONAL EDUCATION. (4) I, II, III, IV Woods

An independent work course for students interested in vocational education. Students make individual investigations and report on special problems.

[1]On leave 1943-44, 1944-45.

COLLEGE OF COMMERCE

Dean Wiest; Professors Carpenter[1], Carter, Haun[1], Jennings, McIntyre[2], Martin and Palmer; Associate Professors Ketchum, Lawrence, Moore[1] and Sullivan; Assistant Professors Beals, Guy[2], and Tolman[1], and Instructors Bekker[2], Lowry and Wilson

1 PRINCIPLES OF ECONOMICS. (5) I, II, III, IV Wiest and others
The theory of production, consumption, value and distribution. **Not open to freshmen.**

2 ECONOMIC HISTORY OF EUROPE.
(4) I, III, IV Jennings and others
A survey of conditions preceding the modern period with a more intensive study of the subsequent development of agriculture, industry, and finance. **Open only to freshmen and sophomores.**

3 ECONOMIC HISTORY OF THE UNITED STATES.
(4) II, III, IV Jennings and others
A brief sketch of economic life in the colonies, followed by a more detailed account of the national evolution in agriculture, manufacture, transportation, commerce and finance. **Open only to freshmen and sophomores.**

6 SECRETARIAL ACCOUNTING. (3) III Beals
A study of accounting systems for the professions, small businesses, and institutions, where the secretary ordinarily keeps the records. **Prerequisite: Com. 7a.**

7a PRINCIPLES OF ACCOUNTING. (5) I, II, III, IV Haun and others
Instruction in the science and adaptation of the accounts of going concerns, together with sufficient practice to acquire proficiency. Recitation, three hours; laboratory, four hours a week.

7b PRINCIPLES OF ACCOUNTING.
(5) I, II, III, IV Haun and others
Continuation of 7a. Recitation, three hours a week; laboratory, four hours a week.

8 ECONOMIC GEOGRAPHY. (4) I, II, III, IV Jennings
A brief study of the earth's physical characteristics and their relation to man's activities, including the effects of climate, natural resources and means of transportation upon the development of social, political and economic phases of life.

9 BUSINESS ORGANIZATION.
(4) I, II, III, IV Ketchum and others
A course designed to introduce students to the field of business. The relation of the business unit to the economic system; the internal organization of business firms of different types and in varied industries; description of the major functions of departments of a business unit; governmental regulation of monopoly and other undesirable commercial practices.

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[1] On leave for the Emergency.
[2] Military leave.

10 PRINCIPLES OF MARKETING.
(5) I, II, III, IV McIntyre and Moore

A functional study of the market organization. Considerable time is given to the discussion of retail types such as general store, chain store, department store and mail order house. Special attention is devoted to market finance, market risk, market news, competition and prices, market price, price maintenance, unfair competition, and the cost of marketing. **Prerequisite: Com. 1.**

11 SALESMANSHIP. (3) I, II, III McIntyre and Moore

Among the problems considered are the formulation of selling policies, the actual selling process, the creation of effective demand, sales campaigns, selecting and training salesmen and kindred subjects. **Prerequisites: Com. 1 and 10.**

12 ECONOMIC GEOGRAPHY OF THE WESTERN HEMISPHERE. (4) III Carter

An intensive regional treatment of the agricultural, mineral and industrial resources of the Western Hemisphere; communication and transportation; foreign trade and its effect upon industrial progress.

13a SECRETARIAL PRACTICE, SHORTHAND.
(4) I, II, III, IV Lawrence and Guy

The theory of Gregg shorthand with sufficient practice in writing to develop skill and speed in writing. Secretarial duties and traits are given some consideration. Personal use as well as vocational values are emphasized. Credit for this course will not be given until 13b is completed. **Prerequisite or concurrent: English 1a.**

13b SECRETARIAL PRACTICE, SHORTHAND.
(4) I, II, III, IV Lawrence and Guy

A continuation of Gregg shorthand with sufficient practice to develop a speed of from 90-100 words a minute in dictation. **Prerequisite: Com. 13a or its equivalent.**

14a ADVANCED SECRETARIAL PRACTICE.
(4) I, II, III, IV Lawrence

This course combines shorthand and typewriting in the transcription of shorthand notes and the development of office proficiency. Accuracy and speed in transcribing are emphasized. Four recitations a week. **Prerequisites: Com. 13a, 13b, 17a, 17b, or their equivalent.**

14b ADVANCED SECRETARIAL PRACTICE.
(4) II, IV Lawrence

A continuation of Commerce 14a with special emphasis on secretarial duties and traits. A speed of 125 words a minute in dictation and 40 words a minute in transcription is required. Four recitations a week. **Prerequisite Com. 14a or its equivalent.**

15 APPLIED ECONOMICS. (4) II Sullivan and others

Fundamental aspects of money and banking, industrial efficiency, marketing, transportation, public utilities, public finance, social control, et cetera.

17a SECRETARIAL PRACTICE, TYPEWRITING. (3) I, II, III, IV Lawrence and Guy

Theory and techniques in typewriting are included with a thorough study of form, style and arrangement of typewritten material. A speed of 40 words a minute is required. **Prerequisite or concurrent: English 1a.**

17b SECRETARIAL PRACTICE, TYPEWRITING. (3) I, II, III, IV Lawrence and Guy
A continuation of Commerce 17a with emphasis on the development of speed and accuracy sufficient for vocational use. A speed of 60 words a minute is required. **Prerequisite: 17a.**

18 FILING. (2) I, III, IV Lawrence
The general principles, procedures, and systems of filing including sufficient practice with laboratory sets to develop facility and skill. Emphasis will be placed upon filing in business and government offices with a view to preparing file clerks for such offices.

19 OFFICE APPLIANCES. (2) II, IV Lawrence
The use of dictating, duplicating, and addressing machines, and similar appliances. Sufficient practice will be given to develop skill in the operation and care of such equipment. **Prerequisite: Com. 17a.**

Courses open only to Upper Division and Graduate Students

101 SECRETARIAL OFFICE PRACTICE. (2) III Lawrence
This course is designed to provide laboratory and office experience for senior secretarial students. A minimum of 48 hours of office experience under supervision is required. **Prerequisites: Com. 14a and 14b.**

102 LABOR PROBLEMS. (4) I, IV Carter
Insecurity, wages and income, substandard workers, industrial conflict; wage theories, the economics of collective bargaining; unionism in its structural and functional aspects; recent developments. **Prerequisite: Com. 1.**

103 TRANSPORTATION. (4) I, IV Sullivan
Railways, waterways, highways, airways. Rates, service, management, regulation. **Prerequisite: Com. 1.**

104 PUBLIC FINANCE. (4) I, III, IV Martin
A study of public receipts; public expenditures; the principles of taxation with special reference to their application to the tax systems, federal and state. **Prerequisite: Com. 1.**

105 MONEY AND BANKING. (4) II, III, IV Carpenter
Nature and functions of money; the importance of credit; relation of money and credit to prices; bank deposits and loans; complete study of our national banking system. **Prerequisite: Com. 1.**

106a INTERMEDIATE ACCOUNTING. (4) II, IV Haun and Beals
Principles of financial statement, arrangement and content. Corporation accounting. Accounting for consignment and installment sales. **Prerequisites: Com. 7a and 7b.**

106b INTERMEDIATE ACCOUNTING. (4) III, IV Haun and Beals
Accounting for partnerships, ventures, agencies and branches. Accounting features of insolvent concerns and of consolidations and mergers. Estate accounting. **Prerequisites: Com. 7a and 7b.**

107 STATISTICAL METHOD. (4) I Palmer
Introduction to the sources of business data, the use of calculating machinery, tabulation, simple charts and graphs, the averages, dispersion, correlation, and time series analysis.

108 ACCOUNTING THEORY. (3) I Beals
The function of accounting, asset valuation, recognition of revenue and expenses, and classification of equities will be studied with a view to presenting a coordinated body of accounting theory. **Prerequisite: Com. 106b.**

109a BUSINESS LAW. (4) I, II, IV Haun and Murray
A survey of the principles of contracts, sales, bills and notes, and that portion of the law of torts applicable to business practices.

109b BUSINESS LAW. (4) II, III, IV Haun and Murray
Continuation of 109a.

110 BUSINESS CYCLES. (4) I, II, III, IV Palmer
The nature and characteristics of the economic factors which underlie the cyclical fluctuations in business conditions; the methods of business and investment forecasting. **Prerequisites: Com. 1 and an elementary course in statistics.**

111 ADVANCED SALESMANSHIP. (4) IV McIntyre
This course is designed primarily for high school and college teachers who are required to give such work in their respective schools. Extensive reading, preparation and presentation of sales demonstrations, critical analysis of modern sales techniques and coordination of selling with the related fields of advertising, merchandising, credit management and market research will be considered. **Prerequisite: Com. 11 or consent of instructor.**

112a-f INDIVIDUAL WORK IN ECONOMICS. (1) I, II, III, IV Staff
In this course a selected group of advanced students who have at least a standing of 2 are given special problems for intensive investigation. The students are expected to do more work than the usual amount required per quarter hour.

113 AUDITING. (4) III, IV Haun and Beals
The theory of auditing, the valuation of assets, analysis of accounting procedure, and the presentation of statements. Special problems applicable to particular businesses will also be presented. **Prerequisites: Com. 7a and 7b.**

114 WAR ECONOMICS. (4) I, III. IV Carpenter
A descriptive and analytical study of the problems involved in the transition to a war economy. The necessity for planning, the peculiar problems connected with strategic materials, the difficulties of maximizing war production, war financing, price control, rationing, priorities, credit control, export control, and post-war reconstruction are examined. **Prerequisite: Com. 1.**

115 VALUE AND DISTRIBUTION THEORY. (4) I Sullivan
The major emphasis is on current theory.

117 CORPORATION FINANCE. (4) I, II, III, IV Ketchum
Stocks and bonds, sound fiscal principles concerning the issue of securities, the management of the corporate income, the disbursement of dividends, the creation of sinking funds, and reorganization procedure. **Prerequisites: Com. 1, 7a, 7b.**

118 COST ACCOUNTING. (4) I, IV Haun and Beals
The place of cost accounting in the general field of accounting, special records and cost statistics, application to particular businesses. **Prerequisites: Com. 7a and 7b.**

119 RETAIL MERCHANDISING. (4) II, IV McIntyre
Selecting a business location, internal layout, departmentalization, merchandizing control; store policies toward the public, training and management of personnel, and related subjects. **Prerequisites: Com. 1 and 10.**

121 ECONOMIC GEOGRAPHY OF THE EASTERN HEMISPHERE. (4) III, IV Jennings
The agricultural, mineral, and industrial resources of the Eastern Hemisphere treated intensively by regions; communication and transportation; foreign trade and its effect upon industrial progress in the regions or countries. **Prerequisite: Com. 8 or consent of instructor.**

124 STATE AND LOCAL TAXATION. (4) II, IV Martin
Classified property taxes; separation of sources of revenue; taxation of banks, forests, public utilities, mines, and rural and urban real estate; income, inheritance, and sales taxes.

125 EVOLUTION OF ECONOMIC INSTITUTIONS. (4) II Jennings
The rise of economic institutions such as property rights, capital formation, contractual labor, et cetera, as influenced by the family, the city, state, nationalism, commerce, finance, the manor, the guilds, and the industrial revolution. **Prerequisites: Com. 2 or consent of instructor.**

126 ECONOMICS OF PUBLIC UTILITIES. (4) I, IV Carter
Growth and development of public utilities; valuation; rate-making; financing; the holding company; regulations; current problems; accounting. No credit for this course can be given if the student has credit for Political Science 158. **Prerequisite: Com. 1.**

127 INTERNATIONAL ECONOMIC POLICIES. (4) III Sullivan
Modern fallacies respecting foreign trade; free trade; protectionism; preferential tariffs; colonial tariff policies; dumping; commercial treaties; control of raw materials; encouragement of shipping; international investments and the movement of capital; international debts; reparations. **Prerequisite: Com. 1.**

129 CREDIT AND STATEMENT ANALYSIS. (3) I Haun and Beals
The theory underlying credit-granting; credit administration; and analysis and interpretation of financial statements. **Prerequisite: Com. 7a.**

130 LABOR LEGISLATION. (4) III, IV Carter
The status of labor law, mediation, conciliation, arbitration, the minimum wage, the eight-hour day, unemployment relief, safety and health legislation, and social insurance. **Prerequisite: Com. 1.**

131 INVESTMENTS. (4) II Ketchum
The general field of investments. Emphasis is placed upon problems which face the investor rather than the seller of securities. Analysis of corporation statements for investment purposes; the security market; market influences on security prices; effect of interest changes on security prices; analysis of specific types of investments; and the development of investment programs. **Prerequisites: Com. 105 and 117.**

132a C. P. A. PROBLEMS. (3) II Haun and Beals
The course is designed to prepare students for C. P. A. examinations. Advanced accounting theory is stressed through the study of a wide range of problems. **Prerequisites: Com. 106a and 106b.**

132b C. P. A. PROBLEMS. (3) III Haun and Beals
Continuation of 132a.

133 INCOME TAX PROCEDURE. (4) II Haun and Beals
The preparation of income tax returns for individuals and corporations of all classes and a practical application of principles of accounting. **Prerequisites: Com. 106a and 106b.**

134 **ADVANCED ECONOMIC HISTORY OF THE UNITED STATES.** (4) II Jennings
An advanced study of English colonial policy, population growth, immigration, territorial expansion, agriculture, manufactures, tariff, labor, industrial combinations, commerce, transportation facilities, money and banking, and conservation. **Not open to students who have had Com. 3 except when doing graduate work.**

135 **ADVANCED MARKETING.** (3) II Moore
The literature and problems in the retail distribution of consumers' goods, wholesale distribution of consumers' goods, industrial goods, sales organizations, sales promotion and advertising, and price policies. **Prerequisite: Com. 10.**

136 **SALES MANAGEMENT.** (3) I McIntyre
The case method is used, supplemented with outside reading and written reports. **Prerequisite: Com. 11 or the consent of the instructor.**

137 **PROBLEMS IN MANAGEMENT.** (4) II, III Carter
Emphasis is placed upon factory management, but an attempt is made to coordinate managerial aspects of business in its entirety. Approximately half of the quarter is devoted to the consideration and criticism of business reports dealing with various managerial problems and prepared by members of the class. **Open only to seniors of the College of Commerce and to graduate students who have had the necessary prerequisite training.**

138 **INVESTIGATION OF BUSINESS PROBLEMS.** (4) III Palmer
The methods of surveying, analyzing and actual investigation of problems of business management. It is intended for mature students who have had a thorough training in commerce and who are capable of doing research work under the guidance of the instructor. The work will involve the statistical analysis of data secured through interviews, questionnaires and otherwise, and the use of the results in determining a satisfactory solution. **Open only to seniors in the College of Commerce and to graduate students who have had the necessary prerequisite training.**

140 **ADVERTISING CAMPAIGNS.** (4) I McIntyre
The procedure necessary for developing an advertising campaign, a study of successful advertising campaigns as used by leading business houses throughout the country, and the planning and execution of an advertising campaign in conjunction with some local business house. The advertising campaign worked out by the student will be checked and tested for its effectiveness. **Prerequisites: Com. 11, Psychology 5, or the consent of the instructor.**

142 **INDEX NUMBERS.** (2) II Palmer
The problems of sampling, selection of formula and weighting in the construction of index numbers; a study of the construction and use of the common index numbers of prices and production. **Prerequisite: An elementary course in statistics.**

143 **LIFE INSURANCE.** (4) I, IV Carpenter
Economics of life insurance, organization and control, special forms of life insurance, and fundamental principles of rate-making. **Prerequisite: Com. 1.**

144 **PROPERTY AND CASUALTY INSURANCE.** (4) II Carpenter
Public control; nature of contracts, analysis of reserve functions and rate-making processes. **Prerequisite: Com. 1.**

145 **OFFICE MANAGEMENT. (4) III, IV** Lawrence
Planning and scheduling of work; employment procedures; supervision of employees, retraining, promotion; equipment.

147 **AMERICAN BUSINESS LEADERS. (2) I** Jennings
Biographical sketches of a selected list of men including their business achievement and their relationships to the economic and social life of their time. **Prerequisite: Com. 3 or consent of instructor.**

148 **EUROPEAN BUSINESS LEADERS. (2) II** Jennings
Biographical sketches of a selected list of men including their business achievements and their relationships to the economic and social life of their time. **Prerequisite: Com. 2 or consent of instructor.**

149 **MARKET ANALYSIS. (4) III** McIntyre
Training in the application of scientific method to research in fields of marketing. A major marketing investigation will be conducted by the class. **Prerequisites: Com. 10 and a course in statistics.**

150 **BUSINESS STATISTICS. (3) I, II, III, IV** Palmer
Advanced statistical techniques with special application in economics and business, a survey of the work of government and private research organizations, a study of general research methods, indicating the importance of each type, and training in the application of statistical and other techniques to business data. **Prerequisite: An elementary course in statistics.**

151 **SECRETARIAL STATISTICS. (4) II** Palmer
The rules of accuracy in computation, tabulation of data, graphing of business data, organization charts, statistical maps, the operation of calculators and other statistical machinery, the sources of statistical materials of interest to business. To be taken by students pursuing the Secretarial-Training curriculum. **Prerequisite: Com. 17a.**

152 **INCOME AND WEALTH. (2) I** Palmer
The definition of these concepts, the relations between them, their relations to economic theory, their measurement on a national, regional, local, corporate, and individual basis, with particular reference to Kentucky, and the causes of differences in income and wealth between different localities. **Prerequisites: Com. 1, and an elementary course in statistics.**

153 **THE ECONOMICS OF CONSUMPTION. (3) II** Sullivan
The place of consumption in economic theory with special emphasis upon its relation to the phases of the business cycle, including the institutional background of our consumer habits; sources of information on consumption; and government regulation of consumer standards.

154 **URBAN REAL ESTATE. (4) III** Ketchum
Urban land economics, the growth and planning of urban communities, survey of the real estate business and institutions, essentials of real estate law and contracts, the financing of real estate transactions, the problem of property valuation and appraisal, the management of real estate properties, the problem of ownership versus rental, the problem of real estate securities as investments, and governmental activities. **Prerequisite: Com. 117.**

155 **INDUSTRIAL RELATIONS. (4) III** Carter
Historical development of industrial relations; the economic implications of job analysis, recruitment, selection and training for industry; wages, hours, promotion and health policies; employee representation, collective bargaining, established policies, practices and procedures under the law; union-management cooperation, building morale; and the public service.

156 BUSINESS REPORTS. (3) II, III Lawrence
Major emphasis is placed upon sources of data, compilation and arrangement of data, documentation, bibliographies and effective presentation of reports. Problems will be assigned in the various areas of interest.

Courses open only to Graduate Students

202a-f SEMINAR. (1 each) I, II, III, IV Palmer and others
An extended investigation of some specific topic with a view to giving training in methods of research and studying intensively a particular subject in the field of economics.

203 HISTORY OF ECONOMIC THOUGHT. (5) I Wiest
A survey of the history of economic thought from the ancient period to about the end of the classical school. **Prerequisite: Com. 1.**

204 ECONOMIC HISTORY OF THE UNITED STATES PRIOR TO 1860. (3) I Jennings
An examination of original sources and class reports, and intensive investigation of all the subjects in detail prior to 1860. **Not open to students who have taken Com. 134 for graduate credit.**

205 ECONOMIC HISTORY OF THE UNITED STATES SINCE 1860. (3) II Jennings
A continuation of Com. 204, but may be taken independently. **Not open to students who have taken Com. 134 for graduate credit.**

206a MUNICIPAL FINANCE. (2) I Martin
City and county budget and related problems are studied in reports and seminar.

206b MUNICIPAL FINANCE. (2) II Martin
City and county debt, purchasing, treasury, and revenue problems are studied in reports and seminar.

207a PROBLEMS IN PUBLIC FINANCE. (2) II Martin
Depending on varying needs of public finance students from time to time, specific subject matter will be selected for study. Each student's report will indicate the class of problems intensively examined.

207b PROBLEMS IN PUBLIC FINANCE. (2) III Martin
Continuation of 207a.

208 ADVANCED ECONOMIC THEORY. (4) III Sullivan
A critical examination of current literature on economic problems and policies. **Prerequisite: Com. 1.**

209 COMPARATIVE BANKING AND MONETARY SYSTEMS. (4) II Carpenter
A comparative study of banking systems and monetary policies in the principal countries of the world. Emphasis is placed upon present-day organization. The commercial bank with its monetary functions is the main theme of the course, but brief surveys of investment banking systems are also attempted.

210 RESEARCH STATISTICS. (2) I Palmer
The place of statistics in research method, the theory of statistical averages, the application of advanced statistical methods to economic data, the statistical meaning of economic concepts and the testing of economic theory. **Prerequisite: An elementary course in statistics.**

211 ADVANCED MONEY AND BANKING. (4) III Carpenter
A general survey of the subject is attempted with the emphasis upon its historical and theoretical aspects.

215 SURVEY OF ECONOMIC THEORY SINCE THE AUSTRIAN SCHOOL. (4) II Wiest
This course is virtually a continuation of Course 203.

216 BUSINESS CYCLE THEORY. (2) III Palmer
An advanced course including a reading of important theories and studies of the business cycle. **Prerequisite: Com. 110.**

Courses in Mathematics of Finance, Psychology of Advertising, Industrial Psychology and Business English are given in departments of the College of Arts and Sciences.

PART IV
SPECIAL SERVICES OF THE UNIVERSITY

SPECIAL SERVICES OF THE UNIVERSITY

While the major function of the University is that of instruction, it renders important service to the state in other ways. Through the efforts of individual members of the staff and by means of special agencies and publications it makes important contributions in research, experimentation, and public service. The divisions, the publications, and the institutes or meetings through which such work is carried on are described in the following paragraphs.

AGRICULTURAL EXPERIMENT STATION

The Kentucky Agricultural Experiment Station was established by the Executive Committee of the Board of Trustees of the Agricultural and Mechanical College of Kentucky on September 25, 1885. It continued to function in accordance with an act of Congress, approved March 2, 1887, entitled, "An Act to establish Agricultural Experiment Stations, in connection with the Agricultural Colleges established in the several states under the provisions of an act approved July 2, 1862, and under the acts supplementary thereto," and an act of the Legislature of the State of Kentucky, approved February 20, 1888, accepting these provisions.

The Experiment Station is established as an institution for investigation and research. Through carefully planned experiments it investigates problems of basic and applied science and interprets them in terms of the needs of the state. The main station farm of 600 acres is located at Lexington. Two substations, one of 15,000 acres at Quicksand and the other of more than 600 acres at Princeton, greatly facilitate investigations dealing with regional problems.

The Experiment Station publishes bulletins and circulars giving the results of its research.

AGRICULTURAL EXTENSION DIVISION

The Division of Agricultural Extension carries the teachings of the College of Agriculture and Home Economics, and the U. S. Department of Agriculture to rural folk in every county in Kentucky. Field agents representing all departments, county farm agents, and county home agents cooperate in building a program of work for the state and for each county.

The Farm and Home Convention is held during the last week in January. It is the purpose of this convention to bring together representative men and women from all sections of the

state to discuss problems of the farm and the home, with the view of developing more profitable farming and more satisfying home life.

The Junior Week program is held annually early in June. At this time county champion demonstration teams and champions in the various projects compete for state championships. Several hundred boys and girls from all over the state attend for the entire week.

Short courses are held from time to time to meet the needs of special groups. The Extension Division publishes circulars written in popular form for use in developing state and county programs of work.

BUREAU OF BUSINESS RESEARCH

The Bureau of Business Research was established to carry on special investigations in economic and business problems supplementary to the work of teaching staff members. The Bureau works primarily in the business problems of federal, state, and local government. Recently, for example, it has done service-research work for such agencies as the Kentucky Legislative Council, Unemployment Compensation Commission, Department of Revenue, city and county governments, and other Kentucky, other state, and federal agencies.

BUREAU OF ENGINEERING RESEARCH AND DEVELOPMENT

The Bureau of Engineering Research and Development of the College of Engineering was established on January 12, 1943 by action of the Board of Trustees of the University.

It was formed in order that there might be an official agency in the College of Engineering to initiate, organize and supervise engineering research of special interest to Kentucky and to the Nation; to advise with state and federal authorities on problems proposed for investigation; to aid and consult industry with its research problems; to serve as an agency for developing and co-ordinating industrial and scientific research; and to collaborate with other agencies engaged in engineering research in order to achieve coordination and prevent duplication of effort.

The departments of research include Civil, Highway, Metallurgical, Mechanical, Electrical, Communications, Mining, Prospecting, and Aircraft Engines.

BUREAU OF GOVERNMENT RESEARCH

The Bureau of Government Research has two chief purposes: (1) the study of problems confronting the various agencies of city, county and state government, and (2) supplying information to any government unit or public official of the state, and assisting in the solution of public problems of these agencies and officials.

In furthering these purposes, the Bureau is constantly engaged in investigations of public problems, and the collection and analysis of data concerning governmental activities. During the year the Bureau publishes not less than three research studies, in addition to giving information on many specialized topics, and consulting with numerous public officials. It cooperates with various agencies, of both a research and service nature, in studying public problems. These agencies include the Tennessee Valley Authority, the Governmental Research Association, the State Planning Board, municipal leagues, and the Social Science Research Council. The Bureau is both a service and research arm of the University.

BUREAU OF SCHOOL SERVICE

This Bureau functions as the research division of the College of Education in conducting original investigations, and in rendering special services to the schools in the solution of their problems. The latter function includes advisory service of all sorts, ranging from casual consultation on minor problems up to and including complete and comprehensive survey programs. Advisory service is being rendered along the lines of financial reorganization, building programs, curriculum revision, testing of pupil achievement, and problems of a similar nature. The scope of the work of the Bureau of School Service embraces the entire field of education, from the elementary school through the college and university.

The Bulletin of the Bureau of School Service is a quarterly publication in which are reported the results of the studies carried on in the Bureau.

BUREAU OF SOURCE MATERIALS IN HIGHER EDUCATION

The purpose of this Bureau is to provide a research laboratory for graduate students in the field of higher education by acquiring and preserving source material in this field and by locating and listing the material available elsewhere.

Special emphasis is placed on source material pertaining to the following:

1. Institutions of higher learning, land-grant colleges and private academies: the official publications, including minutes of the faculty and the board of trustees, the contribution of the faculty and alumni, including their publications, inventions and special services.
2. Trends in education: Charters, admission and degree requirements of the colleges in the United States by twenty-five-year periods.
3. Special collections, such as Kentuckiana founded by Professor Noe, and the International Textbook Exhibit.

A special assignment of the Bureau is to prepare for publication a roster of the faculty, alumni, and former students of the University in the armed forces of the United States, including their rank, branch of service, and citations.

CHILD GUIDANCE SERVICE

The Child Guidance Service offered at the University, through the cooperation of the Lexington Junior League and Community Chest, provides expert psychological diagnosis and recommendations regarding personality difficulties and mental development for children or others brought to it by the schools, welfare organizations, juvenile court and parents. In this it cooperates with the medical clinics. It also provides clinical training for graduate students.

INDUSTRIAL PSYCHOLOGICAL SERVICE

The Department of Psychology makes available to industries, business establishments, and offices, both private and public, industrial psychological service including various forms of industrial testing, personnel surveys, selection devices, and advice on miscellaneous personnel problems. It constitutes a significant opportunity for students interested in industrial personnel work to obtain practical experience and to conduct research in this field.

EDUCATIONAL TESTING SERVICE

The central offices of the Kentucky Cooperative Testing Service are located in the Psychology Department at the University. This service was established by the Kentucky Association of Colleges and Secondary Schools for the purpose of conducting annual testing programs in the colleges and high schools. The programs provide test information for vocational and educational counseling in the colleges and high schools. The Kentucky Cooperative Testing Service prepares and publishes the basic tests used. Complete files of test information are available for use in research projects concerned with the topics of test construction, vocational and educational guidance, and college personnel.

PERSONNEL OFFICE

The University Personnel Office has undertaken special service to students who have been inadequately prepared or are not adjusted to their academic work. In these services it utilizes part of the time of five members of the psychology department. They have specialized in handling various problems of students who come to the office or are sent to it for prolonged guidance concerning their vocational training, or per-

sonal problems. The office has charge of testing the scholastic aptitude, English, and mathematical ability of all new students. These data form a basis for sectioning freshman classes in English and mathematics, and for advising students. It is also continually engaged in research bearing on the procedures in use in the University. The results are published in its Kentucky Personnel Bulletin.

MENTAL HYGIENE SERVICE

The Mental Hygiene Service assists students in solving problems of personal adjustment. Through diagnostic and psychotherapeutic conferences with professionally accredited psychologists, in cooperation with the University Health Service, the student is given an opportunity to understand and to utilize his fundamental abilities, emotions, and interests.

DEPARTMENT OF PUBLIC RELATIONS

The Department of Public Relations has the twofold function of informing residents of Kentucky and elsewhere of the manifold activities of the University of Kentucky, and of endeavoring to encourage people to take advantage of the many services the institution has to offer. These activities are carried out by means of newspapers, magazines, special publications, radio broadcasts, fair exhibits, films, student goodwill organizations, school contacts, and personal appearance of University speakers and University musical groups. The mountain Radio Listening Center System is also under the supervision of this department.

TEACHER PLACEMENT BUREAU

The Teacher Placement Bureau is maintained for the purpose of assisting graduates of the University of Kentucky in securing teaching positions. This service is without charge. It is open to all graduates of the University and to graduate students. The function of the Bureau is to present the candidates for positions to the administrative officers of school boards. The Bureau is located in Room 115 of the Education Building.

EDUCATIONAL CONFERENCE

Annually in October there is held on the campus of the University of Kentucky a joint meeting of the Educational Conference and the Kentucky Association of Colleges and Secondary Schools. At this meeting teachers and administrators from the elementary and secondary schools and from the colleges and universities of the state come together to hear addresses on current educational problems by outstanding authorities and to discuss in sectional meetings their mutual problems.

THE KENTUCKY ENGINEER

The Kentucky Engineer, founded in 1939, is published each quarter of the school year in November, February, May, and August by students and faculty of the College of Engineering. In general the articles are written by students, faculty, and alumni. It is also the official publication of the Kentucky Society of Professional Engineers. Special consideration is given to important engineering projects within the State of Kentucky, to the activities of the College of Engineering, to reporting research projects and to other matters of general interest to the engineering profession.

LAW JOURNAL

The Kentucky Law Journal is published quarterly in November, January, March and May. It consists of the following distinct divisions or parts: (a) leading articles; (b) notes and case comments by students; and (c) book reviews.

The most important purpose of the publication is to train students to write. The recent cases discussed are mainly from Kentucky. The leading articles are written by scholars or practicing lawyers in the various fields of the law and are intended to be of benefit to practitioners.

PUBLIC SERVICE INSTITUTES

The University promotes, organizes, and administers short institutes or study courses for various groups of public officials. From time to time such institutes have been held for peace officers, firemen, welfare workers, finance officers, bankers, legislators, etc.

SCHOOL ACTIVITIES PROGRAM

The Department of University Extension sponsors the Kentucky High School Speech League, the Kentucky High School Music Festivals and the Kentucky High School Art Exhibit. The music and speech events are held in April and May and are preceded by district or regional meetings.

PART V

THE ADMINISTRATIVE AND INSTRUCTIONAL PERSONNEL OF THE UNIVERSITY

ALPHABETICAL LIST OF THE ADMINISTRATIVE, INSTRUCTIONAL, AND EXPERIMENT STATION STAFF[1]

Adams, Estelle, M.A., Second Grade, University School

Adams, Jesse Earl, M.A., Ph.D., Professor of Philosophy of Education; Head of the Department of Philosophy of Education

Allbritten, Herbert Graves, M.S., Assistant in Agronomy, Experiment Station

Allen, Harry Raymond, M.A., Chemist, Feed and Fertilizer Control, Experiment Station

Allen, Richard Sweetnam, M.S., Professor of Anatomy and Physiology; Head of the Department of Anatomy and Physiology

Allen, William Ray, M.S., Ph.D., Professor of Zoology

Anderson, Charles Herbert, Professor of Engineering Design, Emeritus

Anderson, Grace, M.A., English, University School

Anderson, Virginia Frances, B.S., Instructor in Anatomy and Physiology

Anderson, Walter Sewell, M.A., Professor of Genetics, Emeritus

Armstrong, Watson, M.A., Instructor in Agricultural Education

Armstrong, William Davis, B.S., Horticulturist, Experiment Station

[2]Asher, Eston Jackson, M.A., Associate Professor of Psychology

Astle, Melvin J., M.S., Ph.D., Instructor in Chemistry

Averitt, Saxe Dabney, M.S., Chemist Emeritus, Experiment Station

[3]Bach, Alma Jean, B.S. in Ed., Kindergarten Assistant, University School

[4]Backer, Gerald H., B.S.E., Associate Professor of Applied Mechanics

Bailey, Lowell F., M.S., Ph.D., Assistant Chemist, Department of Chemistry, Experiment Station

Baker, K. Y., Staff Sergeant, U. S. Army Instructor in Military Science

Baker, W. Maurice, M.A., Assistant Professor of Education; Head of the Department of Distributive Occupations

Balzola, Hugette, Assistant in French, University School

Barber, Harold, Head Herdsman, Experiment Station

Bardwell, J. L., Sgt., U. S. Army, Instructor in Military Science

Barkenbus, Charles, Ph.D., Professor of Organic Chemistry

Barkley, Marie Rodes, M.A., Assistant Professor of Home Economics

Barkman, John Orville, B.S. in Agr., Assistant Professor of Dairy Manufactures; Field Agent in Dairy Manufactures, Agricultural Extension Division

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[1] A degree is not listed when it is clearly implied by one following.
[2] On leave, fall quarter, 1943-44.
[3] Resigned January 1, 1944.
[4] Resigned March 15, 1944.

Barnett, Brinkley, B.M.E., Associate Professor of Electrical Engineering

Barnhart, C. Raymond, M.A., Assistant Professor of Art

Baugh, Lucille Gaines, B.S., Seed Analyst, Experiment Station

[5]Baute, Edward A., B.S. in Agr., Field Agent in Poultry Improvement, Experiment Station

Beals, Wendell Everett, M.B.A., C.P.A., Assistant Professor of Accounting

Beaumont, Henry, Ph.D., Associate Professor of Psychology

Beazley, James Allen, A.B. in Ed., Instructor in Physical Education; Assistant in Physical Education, University School

Bedford, Matthew Hume, Ph.D., Professor of Physical Chemistry

Beebe, Morris Wilson, M.S., Associate Professor of Metallurgical Engineering

Beers, Howard Wayland, M.S., Ph.D., Professor of Rural Sociology; Rural Sociologist, Experiment Station

Beiter, Jean Sandell, M.S. in H.E., Instructor in Home Economics

[6]Bekker, Konrad, Dr. jur., Ph.D., Instructor in Economics

Belser, Helen, M.A., Seventh Grade, University School

Best, Harry, LL.B., Ph.D., LL.D., Professor of Sociology

[7]Betz, Leslie, B.S. in Com., M.A., Business Education, University School

[8]Bigge, Adolph E., M.A., Ph.D., Professor of German, Head of the Department of German Language and Literature

Boles, Stanley Atwood, M.A., Associate Professor in Department of Athletics, Ticket Sales Manager

Bondurant, John Harvey, M.S., Ph.D., Assistant in Farm Economics, Experiment Station

[9]Bortner, Charles E., M.S., Assistant Agronomist, Experiment Station

Boyd, G. Robert, M.A., Ph.D., Assistant, Bureau of School Service

Boyd, Paul Prentice, M.A., Ph.D., LL.D., Dean, College of Arts and Sciences; Head of the Department of Mathematics and Astronomy; Professor of Mathematics

Boyden, Ruth, M.A., Assistant in Home Economics, Experiment Station

Bradford, Lawrence Allen, M.S. in Ed., Associate Professor of Farm Management; Assistant State Farm Labor Supervisor

Brady, George Keyports, M.A., Ph.D., Professor of English

Branson, Carl C., M.A., Ph.D., Associate Professor of Geology

Brauer, Alfred Charles, M.A., Ph.D., Professor of Zoology

Brewer, B.E., B.S., Colonel, U. S. Army, Professor of Military Science and Tactics; Head of the Department of Military Science and Tactics

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[5] Resigned January 31, 1944.
[6] Military leave.
[7] Military leave.
[8] On leave 1944-45.
[9] Military leave.

Brewer, Lawrence Condit, B.S., Assistant in Short Courses and Exhibits, Agricultural Extension Division

Briggs, Wallace, A.B., Speech and Dramatics, University School

Brooks, Jesse Byron, B.S., Field Agent in Agricultural Engineering, Agricultural Extension Division

Browder, James, B.S. in Agr., Field Agent in Cream Grading

Brown, Aubrey J., M.S., Assistant Professor of Marketing; Assistant in Markets, Experiment Station

[10]Brown, Ernest Benton, Jr., M.S., Instructor in Anatomy and Physiology

Brown, Frances, B.S. in H.E., Home Economics, Bryan Station School

Brown, Henry Corley, B.S. in Agr., Field Agent in 4-H Club Work, Agricultural Extension Division

Brown, Joe Beckham, B.S. in Agr., Inspector, Creamery License Section

Brown, Linwood Arnold, Pharm.D., Ph.G.; Head, Public Service Laboratory, Experiment Station

Brown, Marion Clay, M.A., Assistant Professor of Mathematics

[11]Bruner, Dorsey William, D.V.M., Ph. D., Associate Bacteriologist, Department of Animal Pathology, Experiment Station

Bryant, Thomson Ripley, M.S., Assistant Director of Agricultural Extension Division, Professor of Agricultural Extension

Buckner, Garrett Davis, Ph.D., Chemist in Charge of Animal Nutrition, Experiment Station

Bureau, Ernest Adolphe, B.S., Ph.B., E.E., Professor of Electrical Engineering; Head, Department of Electrical Engineering

Byers, George Boyd, M.S. in Agr., Assistant in Farm Management, Experiment Station

Caldwell, Lowry McReynolds, B.S., Assistant Superintendent Western Kentucky Sub-station

Callihan, Anne Worthington, A.B., Assistant Professor of Art; Acting Head of the Department of Art for Fall Quarter 1943-44

Capurso, Alexander Alexis, B.S. in Music, M.A., Ph.D., Executive Director Department of Music; Professor of Music

Card, Dana George, M.S., Ph.D., Associate Professor of Agricultural Economics; Assistant in Markets, Experiment Station

[12]Carlisle, Floyd L., M.A., Major, U.S. Army, Associate Professor of Military Science and Tactics

[13]Carpenter, Cecil C., M.S., Ph.D., Professor of Economics

[14]Carpenter, Dauris, C., B.S., Major, U. S. Army, Associate Professor of Military Science and Tactics

Carrel, William Joseph, C.E., Professor of Structural Engineering

Carter, Lucian Hugh, M.A., Ph.D., Professor of Economics

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[10] Military leave.
[11] Military leave.
[12] Transferred Sept. 27, 1943.
[13] On leave for the emergency.
[14] Transferred Sept. 18, 1943.

Cass, Norma Beatrice, A.B., B.S., M.A. in L.S., Assistant Professor of Library Science

Caton, Stanley, B.S. in Agriculture, Field Agent in Poultry, Agricultural Extension Division

Cawood, Charles D., M.D., C.P.H., Assistant Professor of Hygiene and Public Health

Chamberlain, Leo Martin, M.A., Ph.D., Dean of the University and Registrar

Chambers, Alvin Lee, C.E., Assistant Professor of Testing Materials

Chambers, John Sharpe, M.S., M.D., Professor of Hygiene and Public Health; Head, Department of Hygiene and Public Health; Director of University Health Service

Cheek, Frank Jacobs, A.B., C.E., M.S., Professor of Sanitary Engineering

Clark, Carl McKinley, M.S., Assistant Professor of Markets and Rural Finance; Assistant in Markets, Experiment Station

Clark, Louise Swinford, A.B., Kindergarten, University School

Clark, Thomas D., M.A., Ph.D., Professor of History, Acting Head of the Department of History

[15]Cleek, Dorothy, M.A., Psychologist, University School

Clifton, Louis, M.A., Director of University Extension, Professor in University Extension, Professor of Education

[16]Cohen, Leon Warren, M.A., Ph.D., Professor of Mathematics

Conroy, Katherine, M.A., Sixth Grade, University School

Cooper, Mary Hester, M.A., Part-time Instructor in Mathematics

Cooper, Thomas Poe, B.S. in Agr., D.Sc., LL.D., Dean, College of Agriculture and Home Economics, Director of Experiment Station, Director of Agricultural Extension Division

Copeland, Lynn, M.S., Field Agent in Dairying, Agricultural Extension Division

Crawford, Albert Byron, M.A., Ph.D., Assistant, Bureau of School Service

Crawley, Clyde B., M.S., Ph.D., Associate Professor of Physics

Crawley, Betty D., M.A., Instructor in Mathematics

[17]Croft, Lysle Warrick, M.A., Ph.D., Assistant Dean, College of Arts and Sciences; Secretary, Personnel Committee; Part-time Assistant Professor of Psychology

Crouse, Charles Stevens, E. M., Professor of Metallurgical Engineering, Head of the Department of Mining and Metallurgical Engineering

Crumpton, Charles R., B.S. in Chem. Engr., M.S., Instructor in Industrial Education

Cullis, Lela, Instructor in Applied Music (Organ)

Curnutt, Vivian Lee, M.A., Field Agent in Home Economics, Agricultural Extension Division

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[15] Resigned, August 17, 1943.
[16] On leave 1943-44.
[17] Military leave.

Cutler, John L., M.A., Instructor in English

Dantzler, Lehre Livingston, M.A., Litt.D., Professor of Philology, Head of the Department of English

Davis, Anita Burnam, M.A., Field Agent in 4-H Club Work, Agricultural Extension Division

Davis, George Tansel, M.S., Acting Field Agent in Poultry Improvement, Agricultural Extension Division

Deen, Encil, B.S. in Agr., Seed Inspector, Experiment Station

[18]Deephouse, Laura, M.S., Assistant Professor of Home Economics

Diachun, Stephen, M.S., Ph.D., Assistant Plant Pathologist, Department of Agronomy, Experiment Station

Dimmick, Graham B., M.A., Ph.D., Professor of Psychology

Dimock, William Wallace, D.V.M., Professor of Veterinary Science; Head of the Department of Animal Pathology, Experiment Station

Doll, Edward B., M.S. in E.E., Ph.D., Associate Professor of Electrical Engineering

Doll, Eldis Roger, M.A., D.V.M., Assistant Pathologist, Department of Animal Pathology, Experiment Station

Downing, Harold Hardesty, B.C.E., M.S., Ph.D., Professor of Mathematics (In charge of Astronomy)

Doyle, George Fergison, A.B., M.D., F.A.C.S., Part-time Physician, University Dispensary

[19]Driver, R. L., M.S., Ph.D., Assistant Professor of Anatomy and Physiology

Duncan, May Kenney, M.A., Professor of Elementary Education, Head of the Department of Elementary Education

Elliott, Jean Phillips, B.S. in H.E., Home Economics, University School

Dupre, J. Huntley, M.A., Ph.D., Professor of History

Eggars, Louis W., Lt. Col., U. S. Army, Assistant Professor of Military Science

[20]Eagon, Angelo, M.A., Instructor in English

[21]Eblen, Amos Hall, A.B., LL.B., S.J.D., Professor of Law

[22]Edlemann, Alexander, M.A., Ph.D., Assistant Professor of Political Science

Edmonson, W. G., Staff Sgt., U. S. Army, Instructor in Military Science

Edwards, Philip Rarick, Ph.D., Bacteriologist, Department of Animal Pathology, Experiment Station

Elliott, Norris Raymond, B.S. in Hort., Professor of Landscape Architecture and Floriculture; Field Agent in Horticulture, Agricultural Extension Division

Ely, Fordyce, M.S., Ph.D., Professor of Dairy Husbandry; in charge of Dairy Section

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[18] Resigned August 31, 1943.
[19] Military leave.
[20] Resigned December 31, 1943.
[21] Military leave.
[22] Military leave.

Emmert, Emery Myers, M.S., Ph.D., Assistant Professor of Horticulture, Assistant in Horticulture, Experiment Station

Erikson, Statie Estelle, Ph.D., Professor of Home Economics, Head of the Department of Home Economics

Evans, Alvin E., M.A., Ph.D., J.D., Professor of Law, Dean of the College of Law

Fallis, Robert White, Assistant Bacteriologist, Public Service Laboratory, Experiment Station

Farquhar, Edward Franklin, M.A., Professor of Literature

Farris, Elgan Brooks, C.E., Chief Engineer, Department of Maintenance and Operations; Part-time Associate Professor of Engineering

[23]Feltner, James Michael, Field Agent in 4-H Club Work, Extension Division

Fergus, Ernest Newton, M.S., Ph.D., Professor of Farm Crops, Agronomist in charge of Pastures and Forage Crops, Experiment Station

Fischer, Lydia Roberts, M.A., Instructor in Mathematics

Fish, Ernest Ellsworth, M.S., Field Agent in 4-H Club Work, Agricultural Extension Division

[24]Fisk, Edward W., Assistant Professor of Art

Fitschen, Fred William, Inspector of Feed and Fertilizer Control Experiment Station

[25]Foster, James Douglas, M.S. in Agr., Inspector in Charge of Creamery License Section, Experiment Station

[26]Fowler, Frank Charles, M.A., Associate Professor of English, Director of Guignol Theatre

Freeman, Joe Frank, M.S., in Agr., Agronomist, Associate Superintendent of Experiment Station Farm, Experiment Station

Freeman, Louise Barton, M.S., Ph.D., Part-time Assistant Professor of Geology

Fried, Katherine, Seed Analyst, Experiment Station

Funkhouser, William Delbert, M.A., Ph.D., Sc.D., Professor of Zoology; Professor of Anthropology; Head of the Department of Zoology; Dean of the Graduate School

Gallaway, William Francis, M.A., Ph.D., Professor of English

Galloway, Louise, A.B. in Ed., Librarian, University School; Part-time Instructor in Library Science

Gardner, John Samuel, M.A., Field Agent in Horticulture, Agriculture Extension Division

Garman, Harrison, D.Sc., Professor of Entomology, Emeritus

Garrigus, Wesley Patterson, M.S., Ph.D., Professor of Animal Husbandry, in charge of Animal Husbandry Section; Chairman, Animal Industry Group

Garside, Matthew Stanley, B.S., Field Agent in 4-H Club Work, Agricultural Extension Division

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[23] Died January 13, 1944.
[24] On leave 1943-44.
[25] Military leave.
[26] On leave 1944-45.

[27]Geiger, Anne Glover, A.B. in Ed., Speech and Dramatics, University School
[28]Geiger, Clarence, M.A., Instructor in English
[29]Gilb, Elmer, M.A., Assistant Football Coach, Assistant Professor of Athletics
Gilb, Stella, A.B., B.P.E., Hygiene and Physical Education, University School
Gillis, Ezra L, A.B., Director, Bureau of Source Materials in Higher Education
Ginger, Lyman, A.B. in Ed., Science, University School; Acting Director, University School
Good, Edwin Stanton, M.S., Professor of Animal Husbandry, Emeritus
Gormley, William, B.S., Instructor in Chemistry
Graddy, Ivan Clay, M.S. in Agr., Assistant State Agent, County Agent Work, Agricultural Extension Division
Graham, James Hiram, C.E., Dean of the College of Engineering
[30]Griffin, Gerald, A.B., Lt. Col., U. S. Army, Associate Professor of Military Science and Tactics
[31]Griffin, Robert J., A.B., M.D., Associate Professor of Hygiene; Physician in the Dispensary
Griffith, Robert Bell, B.S. in Agr., Assistant in Plant Physiology, Department of Agronomy, Experiment Station
Grillot, Gerald F., Ph.D., Instructor in Chemistry
Grundmeier, Edith, M.S., Assistant Professor of Home Economics
[32]Gullette, Arthur T., M.A., Instructor in Physical Education
Gumaer, Kenneth, D.V.M., Assistant Veterinarian, Experiment Station
Gustafson, Richard O., B.S., M.F., Assistant Forester, Department of Farm Economics, Experiment Station
[33]Guy, Hollis Preston, M.A., Assistant Professor of Commerce
[34]Haag, William George, Jr., M.S., Curator, Museum of Anthropology and Archaeology; Assistant Professor of Anthropology and Archaeology
Haak, Pearl J., B.S. in H.E., Field Agent in Home Economics, Agricultural Extension Division
Hackensmith, Charles William, M.A., Professor of Physical Education, Acting Head of the Department of Physical Education
Hagman, Ida C., M.A., Field Agent in Home Economics, Agricultural Extension Division
[35]Hahn, Thomas Marshall, M.S., Ph.D., Associate Professor of Physics

[27] Resigned September 1, 1943.
[28] Resigned September 1, 1943.
[29] Resigned July 1, 1943.
[30] Transferred March 1, 1944.
[31] Military leave.
[32] Resigned November 1, 1943.
[33] Military leave.
[34] Military leave.
[35] Military leave.

Haines, Ruth, M.A., Instructor in Public School Art and Elementary Education

Hall, Ellery Lewis, M.A., Assistant Professor of History

Hamann, Cecil B., M.S., Ph.D., Instructor in Bacteriology

Hamilton, William Brooks, M.S., Ph.D., Associate Professor of Hygiene, Bacteriologist for University Health Service

Hammonds, Carsie, M.A. in Ed., Ph.D., Professor of Agricultural Education; Head of the Department of Agricultural Education

Hankins, Thomas L., M.S., Assistant Professor of Education; Acting Head of the Department of Industrial Education

Hardison, John Robert, M.S., Ph.D., Assistant in Forage Crops Investigations, Experiment Station

[36]Harelson, Katherine C., B.S. in C.E., Science, University School

Harris, Charles Edgar, B.S. in Agr., Field Agent in Poultry, Agricultural Extension Division

[37]Harris, George Moreland, M.S. in Dairying; Field Agent in Dairying, Agricultural Extension Division

Harrison, Lura Claude, A.B., M.T. (A.S.C.P.), Part-time Instructor in Medical Technology

[38]Hartford, Ellis Ford, M.A., Ed.D., Associate Professor of Education; Director, University School

Haselden, Jane, M.A., Ph.D., Part-time Assistant Professor of Romance Languages; Assistant Dean of Women

[39]Haun, Robert Dee, M.A., J.D., C.P.A., Professor of Accounting

Hawkins, Robert Dawson, M.E., M.S., Professor of Theoretical and Applied Mechanics

Hegeman, Daniel V., Ph.D., Associate Professor of German

Heinz, Wilber August, M.S.P.H., Associate Professor of Hygiene

Helton, Stella Elizabeth, M.S., Instructor in Home Economics

Henry, Amanda Harms, B.S., Assistant in Animal Nutrition, Experiment Station

[40]Henson, Lawrence, M.S. in Agr., Assistant Agronomist in Forage Crops Investigations, Department of Agronomy, Experiment Station

[41]Henson, Rhea Beard, M.S., Fourth Grade, University School

[42]Hernandez, J. Eduardo, M.A., Ph.D., Assistant Professor of Romance Languages

Himes, Ralph E., Sgt., U. S. Army, Instructor in Military Science

Holmes, Henry Bert, M.A., Ph.D., Assistant Professor of Romance Languages

Holmes, Sarah Bennett, M.A., Assistant Professor of Sociology; Dean of Women

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[36] Resigned July 1, 1943.
[37] Military leave.
[38] Military leave.
[39] On leave 1943-44.
[40] Military leave.
[41] Resigned January 1, 1944.
[42] Military leave.

[43]Hopkins, James F., M.A., Instructor in History

Horine, John Sherman, M.E., Associate Professor of Engineering Drawing

Horlacher, Levi Jackson, M.S., Professor of Animal Husbandry; Assistant Dean in Resident Teaching, College of Agriculture and Home Economics

Hornbeck, Benn L., B.S.F., Junior Forester, Robinson Experiment Substation

Horsfield, Margaret Bennett, M.A., Diplome d'Etudes Francaises de l'University de Montpelier, 1928, Assistant Professor of Romance Languages

Horton, Lewis Henry, M.A., Assistant Professor of Music

Howard, Noel Judson, B.S. in Agr., Inspector, Acting in charge Creamery License Section, Experiment Station

[44]Huber, Leah Horton, A.B. in Ed., Kindergarten Assistant, University School

[45]Huddleston, Joseph Jenkins, M.A., Assistant Professor of Physical Education

Hull, Floyd Edgar, D.V.M., Professor of Veterinary Science; Associate Veterinarian, Experiment Station

Humphrey, James Ellison, B.S. in Agr., Field Agent in Poultry, Agricultural Extension Division

Humphreys, Margaret Bell, M.A., Business Education, University School

Hunt, Russell Aubrey, M.S. in Agr., Field Agent in Tobacco, Agricultural Extension Division

Imlay, Florence, M.A., Field Agent in Home Economics, Agricul tural Extension Division

Insko, Wyatt Marion, Jr., M.S. in Agr., Associate Professor of Poultry; In charge of Poultry Section

Irvin, Donald, M.A., Instructor in English

[46]Jackson, Susan, A.B., Part-time Instructor in Art

Jackson, William Edward, Jr., B.S. in For., F. Engr., Field Agent in Forestry, Agricultural Extension Division

Jeffrey, Robert Newell, M.S., Ph.D., Plant Physiologist, Department of Agronomy, Experiment Station

Jennings, Walter Wilson, M.A., Ph.D., Professor of Economics

Jett, Carter Coleman, M.E., Professor of Machine Design

Jewett, Howard Herman, M.A., Assistant Research Entomologist, Experiment Station

[47]John, Fritz, Ph.D., Associate Professor of Mathematics

Johnson, Edward Marshall, Ph. D., Associate Plant Pathologist, Department of Agronomy, Experiment Station

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[43] Military leave.
[44] Resigned April 1, 1943.
[45] Military leave.
[46] Resigned June 30, 1943.
[47] On leave 1943-44.

Johnson, James Richard, B.M.E., Professor of Applied Mechanics, Emeritus

Johnson, Orinne, B.S., Assistant in Information, Agricultural Extension Division

Johnson, Ray S., Assistant Supervisior, Mechanical and Electrical Engineering Laboratories

Johnstone, William Clarkson, B.S. in Agr., Field Agent in Agronomy, Agricultural Extension Division

Jones, Carl Wilfred, B.S., Field Agent in 4-H Club Work, Agricultural Extension Division

Jones, Roger Walter, Superintendent, Robinson Experiment Substation

Jones, Sadocie Connellee, M.S., Field Agent in Agronomy, Agricultural Extension Division

Jones, Theodore Tolman, M.A., Ph.D., Professor of Ancient Languages, Head of the Department of Ancient Languages and Literatures; Dean of Men

Josephson, Leonard Melvin, Ph.D., Assistant Agronomist, Experiment Station

Karraker, Perry Elmer, M.A., Professor of Soils; Agronomist in Soil Technology, Experiment Station

[48]Karsner, Milo G., M.A., Assistant Professor of Physical Education

Kelley, James Byron, B.S. in A.E., B.S. in M.E., Professor of Agricultural Engineering; Agricultural Engineer, Experiment Station

[49]Kemper, Durbin Collins, M.A., Science, University High School

Kendall, Thomas Alexander, M.E., Research Analyst in Department of Mining and Metallurgical Engineering

Kenney, Ralph, B.S. in Agr., Field Agent in Agronomy, Agricultural Extension Division

Ketchum, Marshall D., M.S., Ph.D., Associate Professor of Economics

Kilpatrick, Elmer James, M.S. in Agr., Assistant State Agent, County Agricultural Extension Division

King, Margaret Isadora, A.B., B.S., University Librarian, Part-time Instructor in Library Science. Acting Head of the Department of Library Science 1944-45

Kinker, Elmer O., Tech. Sgt., U. S. Army, Instructor in Military Science

Kinney, Edmund J., B.S. in Agr., Professor of Farm Crops; Head of the Department of Agronomy, Experiment Station

Kirwan, Albert D., A.B., Professor in Department of Athletics; Head Football Coach

Knapp, Charles Merriam, Ph.D., Professor of History

Knight, Grant Cochran, M.A., Professor of English

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[48] Military leave.
[49] Military leave.

Koppius, Otto Townsend, Ph.D., Professor of Physics
Kuhlman, Robert H., B.S. in Ed., Instructor in Applied Music
Kuiper, John, M.A., Professor of Philosophy; Head of the Department of Philosophy
[50]Kurachek, Peter William, M.A., Part-time Instructor in Physical Education; Physical Education, University School
Lacy, Edith, M.A., Field Agent in Home Economics, Agricultural Extension Division
Lamb, Frances R., M.S., Part-time Instructor in Mathematics
[51]Lampert, Carl Albert, B.M., Professor of Music, Head of the Department of Music
[52]Lancaster, Harry, A.B., Instructor in Physical Education
Latimer, Claiborne Green, M.S., Ph.D., Professor of Mathematics
Latimer, Frieda H., Ph.B., Part-time Instructor in Mathematics Fall Quarter, 1943-44
Latimer, Ruth, B.S. in H.E., Field Agent in 4-H Club Work, Agricultural Extension Division
Latzke, Verna, M.S., Assistant Professor of Home Economics
Lawrence, Armon Jay, M.A., Associate Professor of Commerce and Education; Head of Department of Business Education (College of Education)
Lawrence, Chester, Assistant Inspector, Creamery License Section, Experiment Station
[53]Lester, Margaret, M.A., Part-time Instructor in Psychology
LeStourgeon, Flora Elizabeth, M.A., Ph.D., Associate Professor of Mathematics
Lewis, Chester Arthur, B.J., Editor, Agricultural Extension Division
Lewis, Mildred, B.S. in Music, M.A., Assistant Professor of Music
Lickert, Raymond Henry, B.S. in Agr., Assistant State Agent, County Agent Work, Agricultural Extension Division
Ligon, Moses Edward, M.A., LL.D., Professor of Secondary Education, Head of the Department of Secondary Education, Director of Placement Bureau
Ligon, William Scherffius, M.S., Ph.D., Associate Professor of Soils
[54]Lincicome, David R., M.S., Ph.D., Instructor in Zoology
Link, Harold Forest, M.S. in Agr., Assistant State Agent, County Agent Work, Agricultural Extension Division
Littell, Mary Lee, A.B., Seed Analyst, Experiment Station
Logan, Lulie Elizabeth, A.B., Assistant State Leader, Home Demonstration Agent, Agricultural Extension Division
[55]Logsdon, Richard H., Ph.D., Associate Professor of Library Science, Acting Head of the Department of Library Science

[50] Military leave.
[51] Special assignment July 1, 1944.
[52] Resigned March 1, 1944.
[53] Resigned January 1, 1944.
[54] Military leave.
[55] Military leave.

Lowry, Samuel Jechonias, B.S. in Agr., Superintendent Western Kentucky Experiment Sub-station

Lunde, Robert Gerhard, M.A., Assistant Professor of History

[56]MacLaury, Donald Wayne, M.S., Assistant in Poultry and Genetics, Experiment Station

[57]McBrayer, Paul, A.B., Part-time Instructor in Department of Athletics; Assistant Basketball Coach

[58]McChesney, Anna Jane, A.B., Part-time Instructor in Political Science

McConnell, Eugene Slagle, M.S. in Agr., Instructor in Poultry Husbandry; Assistant in Poultry, Experiment Station

McDaniel, Alice Marrs, A.B. in Ed., Seed Analyst, Experiment Station

McFarlan, Arthur Crane, Ph.D., Professor of Geology; Head of the Department of Geology

McFarland, Frank T., M.S., Ph.D., Research Professor of Botany

[59]McGuire, Francis T., M.S., Ph.D., Associate Professor of Physical Metallurgy

[60]McGuire, Henry S., Jr., B.S., in Med. Tech., Assistant Bacteriologist, Public Service Laboratory, Experiment Station

McHargue, James Spencer, M.S., Ph.D., D.Sc., Chemist, Head of Department of Chemistry, Experiment Station

McInteer, Berthus Boston, M.S., Ph.D., Associate Professor of Botany

[61]McIntyre, Robson Duncan, M.S., in Com., Professor of Marketing and Salesmanship

McKenney, Garnett Jennings, B.S. in Agr., Field Agent in 4-H Club Work, Agricultural Extension Division

McKitrick, John Leslie, B.S. in Agr., Field Agent in Agricultural Engineering and Soil Management, Agricultural Extension Division

McLaughlin, Marguerite, A.B., Assistant Professor of Journalism

[62]McRight, Ralph, A.B., Assistant Football Coach, Instructor in Athletics

McVey, Frank LeRond, Ph.D., LL.D., L.H.D., President Emeritus; Professor of Agricultural Economics

Magill, Wilbur William, B.S. in Agr., Field Agent in Horticulture, Agricultural Extension Division

[63]Magurean, Charles, M.M., Instructor in Music, Director of the University Band

Mahan, Charles Alfred, M.S., State Agent, County Agent Work, Agricultural Extension Division

Mangelsen, Fred, Superintendent of Machine Shop

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[56] On leave for the duration.
[57] Resigned July 1, 1943.
[58] Resigned December 31, 1943.
[59] Resigned December 31, 1943.
[60] Military leave.
[61] Military leave.
[62] Military leave.
[63] Resigned June 30, 1943.

Mann, Frank, Trainer, Department of Athletics
[64]Manning, John Walker, M.A., Ph.D., Professor of Political Science, Director, Bureau of Government Research
Martin, James Henderson, Ph. G., Assistant Chemist Emeritus, Public Service Laboratory, Experiment Station
Martin, James Walter, M. A., Professor of Economics; Director, Bureau of Business Research
Mason, Lela, M. A., Music, University School
Mathews, Robert, Inspector, Feed and Fertilizer, Experiment Station
[65]Maxson, Ralph Nelson, Ph.D., Professor of Inorganic Chemistry
Maxwell, E. S., M.D., Part-time Professor of Clinical Pathology
[66]May, Augustus Noah, B.S., Professor of Industrial Education, Head of the Department
[67]May, Calvin William, B.S., 2d. Lt., U. S. Army, Assistant Professor of Military Science
[68]May, James Warren, M.E., Associate Professor of Heating and Ventilating Engineering
Meader, Arthur Lloyd, B.A., Assistant Chemist, Public Service Laboratory, Experiment Station
Meece, Leonard, E., M.A., Ph.D., Associate Professor of Educational Administration
Melcher, Columbus Rudolph, M.A., LL.B., LL.D., Professor of German Language and Literature, Special Assignment
Mercer, Anne, A.B., Mathematics, University School
Meyer, Andre Johannes, B.S. in M.E., Professor of Aeronautical and Mechanical Engineering
[69]Miller, Harold Franklin, B.S. in Agr., Assistant in Agronomy, Experiment Station
Miller, Richard Clarence, M.S., Field Agent in Animal Husbandry, Agricultural Extension Division
Mitchell, John Richard, A.B., Assistant Professor of Chemistry
Molloy, Jeanette Elliot Robinson, M.A., Fifth Grade, University School
Monical, Thelma, B.S., Home Economics, Lafayette School
Monroe, Zelma, A.B., B.S., Assistant State Leader, Home Demonstration Agents, Agricultural Extension Division
Montgomery, Murray M., Jr., B.I.E., Captain, U. S. Army, Associate Professor of Military Science
Montgomery, W.C., B.S. in Agr., Agriculture, Lafayette School
[70]Moore, Henry Boian, M.B.A., Associate Professor of Economics
Moran, Alice Barbara, B.S., Assistant Bacteriologist, Department of Animal Pathology

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[64] Military leave.
[65] Died November 18, 1943.
[66] Emeritus July 1, 1943.
[67] Transferred June 16, 1943.
[68] On leave 1943-44.
[69] Military leave.
[70] On leave 1943-44.

Moreland, Roy, A.B., LL.B., J.D., S.J.D., Professor of Law
Morrison, Henry Bartlett, M.S., Ph.D., Associate Professor of Dairying; Assistant in Dairying, Experiment Station
Morton, Margaret, A.B., Seed Analyst, Experiment Station
[71]Moseley, Frank O'Rear, A.B. in Ed., Assistant Professor in Department of Athletics, Assistant Football Coach
Mumford, Mary, M.S., Assistant Professor of Home Economics
Murray, Frank, A.B., LL.B., S.J.D., Professor of Law
Myers, Eugene, Capt., U. S. Army, A.B. in Ed., Associate Professor of Military Science
[72]Nelson, Vincent E., Ph.D., Assistant Professor of Geology
Nesius, Ernest Joseph, M.S. in Agr., Assistant in Farm Management, Experiment Station
Newbury, Edward, M.A., Assistant Professor of Psychology
Nicholls, William Durrett, M.S. in Agr., Ph.D., Professor of Farm Management; Head of the Department of Farm Economics, Experiment Station
Noe, James Thomas Cotton, M.A., Litt.D., Professor of Education, Emeritus
Nollau, Louis Edward, M.E., Professor of Engineering Drawing
[73]Nutter, John William, Superintendent of Dairy Farm, Experiment Station
O'Bannon, Lester Severance, M.E., Research Engineer, Experiment Station
Olney, Albert Jackson, M.H., M.S., Professor of Horticulture, Head of the Department of Horticulture
Osborn, Alta Marie, A.B., in Educ., Kindergarten Assistant, University School
Palmer, Edgar Zavitz, Ph.D., Professor of Economics
[74]Pardue, Louis Arthur, M.S., Ph.D., Associate Professor of Physics
Parker, Ethel Lee, M.A., Professor of Home Economics Education, Head of the Department of Home Economics Education
Parker, Evadine, B.S., Home Economics, Lafayette School
[75]Parsley, John E., M.S., Assistant Chemist, Public Service Laboratory, Experiment Station
[76]Patrick, Wellington, M.A., Ph.D., Professor of History of Education, Head of the Department of History of Education
Peck, Anna Browning, M.A., Social Sciences, University School
Pence, Sallie Elizabeth, M.A., Ph.D., Assistant Professor of Mathematics
Perez, Carmen, A.B. in Ed., Assistant in Spanish, University School
Peter, Alfred Meredith, M.S., D.Sc., Professor of Soil Technology, Emeritus

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[71] Military leave.
[72] On leave 1943-44.
[73] Died August 13, 1943.
[74] On leave for the emergency.
[75] Resigned August 21, 1943.
[76] Died May 4, 1944.

Peterson, Frank D., A.B., University Comptroller

Phillips, Carroll Davidson, M.S., Ph.D., Assistant in Marketing, Experiment Station

Pifer, Raymond Woodrow, M.S. in Agr., Assistant Professor of Animal Husbandry, Assistant in Animal Husbandry, Experiment Station

[77] Pinney, Oliver H., M.D., Associate Professor of Hygiene, Physician in University Health Service

[78]Pittman, William Henry, A.B., LL.B., Professor of Law

Plummer, Leonard Niel, M.A., Ph.D., Professor of Journalism, Head of the Department of Journalism

Polk, Tasker Peter, D.V.S., Office Consultant, Department of Animal Pathology

Portmann, Victor R., B.J., Assistant Professor of Journalism

[79]Potter, Merwin Elwood, M.A., Professor of Physical Education, Head of the Department of Physical Education

Poundstone, Albert Bruce, M.S. in Agr., Field Agent in Farm Management; State Farm Labor Supervisor, Agricultural Extension Division

Price, Hugh Bruce, M.A., Ph.D., Professor of Agricultural Economics; Head of the Department of Markets and Rural Finance

Price, Walter Allen, M.S., Professor of Entomology; Head of the Department of Entomology and Botany; State Entomologist, Experiment Station

Proctor, Roy Estes, M.S. in Agr., Field Agent in Farm Management; Assistant State Farm Labor Supervisor, Agricultural Extension Division

Pryor, Joseph William, M.D., Professor of Anatomy and Physiology, Special Assignment

Quill, Laurence Larkin, M.S., Ph.D., Professor of Chemistry; Head of the Department of Chemistry

Quirk, Dorothy, A.B., Assistant in Paleontology, Department of Geology

[80]Ramsey, Bertrand Pettus, M.S., Ph.D., Associate Professor of Physics

Randall, Frank Hall, A.B., LL.B., S.J.D., Professor of Law

Randle, Helen Caldwell, M.S., Home Economics, University School

Randle, Stacy Boyce, M.S., Ph.D., Chemist, Feed and Fertilizer Control, Experiment Station

Rankin, Rome, M.A., Instructor, Dept. of Athletics, Assistant Football Coach

[81]Rannells, Edward Warder, A.B., M.A., Professor of Art, Head of the Department of Art

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[77] On leave 1943-44.
[78] On leave for the emergency.
[79] Military leave.
[80] On leave 1943-44.
[81] On leave Fall Quarter, 1943-44.

Rapp, Karl, Jr., M.S. in Ind. Chem., Assistant Chemist, Experiment Station

Ratliff, Margaret M., M.A., Ph.D., Assistant Professor of Psychology

[82]Reeves, John Estill, M.A., Assistant Professor of Political Science

[83]Rhoads, Wayland, M.S., Field Agent in Animal Husbandry, Agricultural Extension Division

Richardson, John Shelby, B.Mus., M.M., Instructor in Applied Music (Piano)

[84]Rider, Leona M., M.S., Instructor in Home Economics

Riley, Herbert Parks, M.A., Ph.D., Professor of Botany, Head of the Department of Botany

[85]Ringrose, Arthur T., Ph.D., Assistant Professor of Poultry Husbandry

Ritcher, Paul Osborn, M.A., Ph.D., Assistant Entomologist, Experiment Station

[86]Robbins, Earl Glenn, M.S., Agriculture, Lafayette High School

Roberts, George, M.S., Professor of Agronomy, Emeritus

Roberts, John Bissell, M.S. in Agr., Assistant in Markets, Experiment Station

[87]Roberts, William Lewis, M.A., J.D., S.J.D., Professor of Law

[88]Roemer, Genevieve, B.S., Home Economics, University School

Romanowitz, Harry Alex, E.E., M.S., Associate Professor of Electrical Engineering

Rose, James Joseph, B.S. in Agr., Microscopist in Feed Control, Experiment Station

Ross, Clay Campbell, M.A., Ph.D., Professor of Educational Psychology; Head of the Department of Educational Psychology

Rupp, Adolph F., M.A., Professor in Department of Athletics, Head Basketball Coach

[89]Ryland, Hobart, M.A., Docteur de l'Universite,' Professor of Romance Languages, Head of the Department of Romance Languages

[90]Sanders, Irwin T., Ph.D., Associate Professor of Sociology

Saunier, Stephen Thaddeus, Supervisor of Metallurgical Laboratory

Scherago, Morris, B.S., D.V.M., Professor of Bacteriology, Head of the Department of Bacteriology

Schick, Blaine Wilhelm, M.A., Assistant Professor of Romance Languages; Acting Head of the Department, 1943-44

Schroeder, Jacob, M.S., Assistant Professor of Physics

Scripture, Paul Newton, B.S., Assistant Chemist, Experiment Station

---

[82] On leave 1943-44.
[83] Military leave.
[84] Resigned July 1, 1942.
[85] Military leave.
[86] Resigned October 16, 1943.
[87] Resigned September 1, 1943.
[88] On leave for the emergency.
[89] Military leave.
[90] Military leave.

Scudder, Hazel, A.B., Part-time Instructor in History

Seay, Maurice F., M.A., Ph.D., Professor of Educational Administration; Head of the Department of Educational Administration; Director, Bureau of School Service

Seeds, Frances, M.S., Assistant Professor of Home Economics

[91]Sellards, Henry Grady, B.S. in Agr., Field Agent in Animal Husbandry, Agricultural Extension Division

[92]Semmons, Mildred, B.S., M.A. in L.S., Professor of Library Science; Head of the Department of Library Science

Server, Alberta Wilson, M.A., Doctorat de l'Universite', Assistant Professor of Romance Languages

[93]Shannon, Jasper Berry, M.A., Ph.D., Associate Professor of Political Science

Shaver, Robert Ezekiel, C.E., Associate Professor of Civil Engineering

Shedd, Oliver March, M.S., Research Chemist, Experiment Station

Sherwood, Henry Noble, M.A., Ph.D., LL.D., Assistant Bulletin Editor, Experiment Station and Agricultural Extension; Professor of Political Science (College of Arts and Sciences); Acting Head of the Department of Political Science, Fall & Winter Quarters, 1943-44

Shipman, Martha Virginia, M.A., English and Social Sciences, University School

Shively, Bernie Armstead, M.A., Professor in Department of Athletics, Head of the Department of Athletics, Director of Intercollegiate Athletics

Shrader, J. Aaron, M.S., Ph.D., Assistant Bacteriologist, Public Service Laboratories, Experiment Station

Skaggs, Opal, M.S., Part-time Instructor in Anatomy and Physiology

Skinner, John Taylor, M.S., Ph.D., Assistant Chemist, Experiment Station

[91]Smith, Charles W., M.A., Ph.D., Associate Professor of Political Science

Smith, J. Allan, M.A., Ph.D., Bulletin Editor, Experiment Station and Extension Division

Sneed, Ruth, A.B., M.S., Instructor in Home Economics Education

Snodgrass, Grace L., A.B., Librarian, Experiment Station

Snow, Charles E., M.A., Ph.D., Assistant Professor of Anthropology and Archaeology

South, Dudley Eugene, M.A., Ph.D., Associate Professor of Mathematics and Astronomy

South, Elizabeth E., M.A., Instructor in English

Spickard, Ronella, M.S., Professor of Home Economics Education

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[91] On leave Fall Quarter, 1943-44.
[92] Resigned July 1, 1944.
[93] On leave 1943-44.
[94] Resigned September 1, 1943.

[95]Spielman, Arless A., M.S., Ph.D., Field Agent in Dairying, Agricultural Extension Division

[96]Stammer, William C., B.S., Spectroscopist and Assistant Chemist, Department of Chemistry, Experiment Station

[97]Starnes, W. Gayle, M.A., Assistant Professor of Education; Assistant Director of University Extension

Steele, Dewey G., M.S., Ph.D., Associate Professor of Genetics, in charge Section of Genetics

Stewart, Olus Jesse, M.S., Ph.D., Professor of Chemistry

Stivers, Robert L., B.S. in Com., Captain, U. S. Army, Associate Professor of Military Science

[98]Stout, Florence Offutt, Professor of Physical Education

Strittmatter, Thomas Philip, Jr., V.M.D., Assistant Veterinarian

Sullivan, Merrell Rodman, M.A., Ph.D., Associate Professor of Economics

Sulzer, Elmer G., A.B., Director, Department of Public Relations

Summers, George P., M.S. in Agr., Field Agent in Marketing, Agricultural Extension Division

Survant, William G., B.S. in Agr., Field Agent in Soils, Agricultural Extension Division

Sutherland, William Robert, A.B., Assistant Professor of English

Tabb, William Roy, B.S. in Agr., M.S. in Ed., Instructor in Agricultural Education

Taylor, Rhea, M.A., Part-time Instructor in History, Winter Quarter 1943-44

Taylor, William Septimus, M.S., Ph.D., Professor of Education, Dean of the College of Education

[99]Templeton, William Chelcy, Jr., M.S., Instructor in Farm Crops

Terman, Gilbert L., Ph.D., Assistant in Agronomy, Experiment Station

Terrell, Daniel Voiers, C.E., Professor of Civil Engineering, Head of the Department of Civil Engineering, Assistant Dean of the College of Engineering

Terrell, Willis Granville, Inspector, Feed and Fertilizer Control, Experiment Station

Terry, George Sylvester, M.A., Bacteriologist, Public Service Laboratories, Experiment Station

Thomas, Frank Carlton, A.B., M.D., Part-time Physician, University Health Service

[100]Thomas, Ruth E., A.M., Ph.D., Assistant Professor of Commerce

Thornton, Helen Knott, M.S., Assistant Professor of Bacteriology

Threlkeld, Dorothy Elizabeth, B.S. in H.E., Field Agent in Home Economics, Agricultural Extension Division

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[95] Resigned December 16, 1943.
[96] Resigned April 30, 1943.
[97] Military leave.
[98] On leave Winter and Spring Quarters 1943-44.
[99] Resigned September, 1943.
[100] Resigned September, 1943.

Thurman, Gordon Owen, Supervisor of Mechanical and Electrical Engineering Laboratories

[101]Tice, Robert M., A.B. in Ed., Assistant in Physical Education, University School

Tilson, Howard Gilbert, M.S. in Agr., Nursery Inspector of the Department of Entomology and Botany, Experiment Station

[102]Todd, Jack R., M.A., Analyst, Department of Agronomy, Experiment Station

[103]Todd, Jarvis, M.A., Assistant Professor of Physics

[104]Tolman, William A., M.A., Assistant Professor of Economics

[105]Topham, Laura, M.A., C.E.F., French, University School

Townsend, Lee Hill, M.S., Ph.D., Associate Professor of Agricultural Entomology

Trapp, Francis J., Engineering Assistant, Coal Research Laboratory

[106]Trimble, Ernest Greene, Ph.D., Associate Professor of Political Science

Trimble, Lois, M.A., Fifth Grade, University School

Truitt, J. P., B.S., Agriculture, Lafayette High School

Tucker, Willis Carleton, M.A., Associate Professor of Journalism

Turner, Job Darbin, B.Ped., LL.B., Head of the Department of Feed and Fertilizer Control, Experiment Station

Tuthill, Edward, M.A., Ph.D., Professor of History; Head of the Department of History

Tuttle, Franklin Elliott, M.A., Ph.D., Professor of Chemistry, Special Assignment

Valleau, William Dorney, Ph.D., Professor of Plant Pathology, Department of Agronomy; Pathologist, Experiment Station

[107]Vandenbosch, Amry, Ph.D., Professor of Political Science, Head of the Department of Political Science

Vaughn, Erle Cleveland, A.B., Field Agent in Improved Seed Production, Experiment Station

Vennes, Leon A., M.S., Field Agent in Markets, Agricultural Extension Division

Wachs, Elizabeth, Technician in Animal Nutrition

Walters, Alice, A.B., Assistant Analyst, Department of Agronomy

Waltman, Clair Smith, M.S., Ph.D., Associate Professor of Horticulture; Assistant in Horticulture, Experiment Station

Walton, Nell, B.S., First Grade, University School

Walton, Sylvan Brooks, M.S., Associate Professor of Mechanical Engineering

Warburton, F. W., Ph.D., Associate Professor of Physics

Warren, Margaret, A.B., M.A. in Ed., Instructor in Physical Education

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[101] Resigned February 7, 1944.
[102] Resigned March 27, 1943.
[103] Military leave.
[104] On leave 1943-44.
[105] Resigned July 1, 1943.
[106] On leave 1943-44.
[107] On leave Fall and Winter Quarters 1943-44.

Weaver, Ralph Holder, M.S., Ph.D., Professor of Bacteriology
Webb, Louise Gray, Librarian, College of Engineering
Webb, William Snyder, M.S., D.Sc., Professor of Physics, Head of the Department of Physics; Professor of Archaeology, Head of the Department of Anthropology and Archaeology
Weeks, Martin Edward, Ph.D., Assistant Agronomist, Experiment Station
Welch, Earl George, B.S. in Agr., Field Agent in Agricultural Engineering, Agricultural Extension Division
Weldon, Myrtle, M.A., State Leader of Home Demonstration Agents, Agricultural Extension Division
Wender, Simon H., M.S., Ph.D. Instructor in Chemistry
West, Mary Lucille, M.A., Languages, University School
West, Perry, M.E., Professor of Steam and Power Engineering; Head of the Department of Mechanical Engineering; Operating Consultant on Central Heating Plant and Steam Distribution System
[108]Whitaker, Paul Knowlton, M.A., Ph.D., Assistant Professor of German
White, Helen McMichael, B.S., Assistant State Leader of Home Demonstration Agents, Agricultural Extension Division
White, Martin Marshall, M.A., Ph.D., Professor of Psychology, Head of the Department of Psychology; Acting Assistant Dean of the College of Arts and Sciences; Executive Secretary of Personnel Office
Whitehouse, James William, M.S. in Agr., State Leader in 4-H Club Work, Agricultural Extension Division
Wiest, Edward, M.A., Ph.D., Professor of Economics; Dean of the College of Commerce
Wiggin, G. H., B.S., Instructor in Forestry; Forester, Robinson Substation
Wilford, Edward James, M.S. in Agr., Professor of Animal Husbandry, in charge of Meats Laboratory; Assistant in Animal Husbandry, Experiment Station
Willson, Louise, M.A., Third Grade, University School
Wilmore, Helen, M.S. in H.E., Assistant Professor of Home Economics
[109]Wilson, Logan, M.A., Ph.D., Professor of Sociology, Head of the Department of Sociology
Wilson, William Clark, B.S. in Agr., Assistant State Agent, County Agent Work, Agricultural Extension Division
Wofford, Azile May, M.S., Assistant Professor of Library Science
Wood, Julia, B.S. in H.E., Assistant Analyst, Department of Agronomy, Experiment Station

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[108] Military leave.
[109] Resigned July 1, 1944.

[110]Wood, Lucy Gragg, A.B., B.S., Part-time Instructor in Library Science; Librarian, University School

[111]Woodmansee, Clinton W., M.S., Assistant Chemist in Tobacco Investigations, Experiment Station

[112]Woods, Ralph Hicks, M.A., Ph.D., Professor of Agricultural Education

Wyant, Zae, M.H.E., A.M., Technician, Department of Animal Pathology

Wyatt, Charles Early, B.S. in Agr., Field Agent in Test Demonstrations, Agricultural Extension Division

Young, David Marion, M.S., Assistant Professor of Geology, Curator of Museum

Young, Earl Robert, M.S. in Agr. Engr., Assistant Professor of Agricultural Engineering

[110] Resigned August 9, 1943.
[111] Resigned November 15, 1943.
[112] On leave 1943-44.

ADMINISTRATIVE, SECRETARIAL, AND CLERICAL ORGANIZATION

OFFICE OF THE PRESIDENT

Herman Lee Donovan, M.A., Ph.D., LL.D., President of the University
Jane Jarvis Nichols, Secretary
Lucy Roberta Hogan, A.B., Assistant Secretary

OFFICE OF THE DEAN OF THE UNIVERSITY

Leo M. Chamberlain, M.A., Ph.D., Dean of the University
Elizabeth Hunt, A.B., Secretary

COLLEGE OF ARTS AND SCIENCES

Paul Prentice Boyd, M.A., Ph.D., LL.D., Dean
[1] Lysle Warrick Croft, M.A., Ph.D., Assistant Dean
Martin Marshall White, M.A., Ph.D., Acting Assistant Dean
Idie Lee Turner, B.S., Secretary
Willena Duncan Long, Assistant Secretary
Mary Elizabeth Doyle, A.B., Secretary to the Assistant Dean

Laura Graham Cutler, Part-time Secretary, Department of English
Okla Bradley Doll, Part-time Secretary, Department of Art
Mary Anne Dunne, A.B., Secretary, Department of Military Science
Marjorie Garland, Secretary, Department of Bacteriology
Jeannette Graves, A.B., Secretary, Department of Sociology
Christine Lancaster, A.B., Secretary, Department of Political Science
[2] Anna Jane McChesney, A.B., Secretary, Department of Political Science
W. Lee McDaniel, Military Storekeeper
Betty Matlack, Secretary, Department of Physical Education
[3] Ruby H. Murphy, A.B., Secretary, Department of Music
Katherine W .Owens, Secretary, Department of Hygiene and Public Health
Juanita H. Shely, A.B. in Educa., Secretary, Department of Physics
Mary Louise Wallace, Secretary and Reviser, Department of Library Science
Anna Jane Warren, Secretary, Department of History
Ethel E. Wilner, Secretary, Department of Physics

COLLEGE OF AGRICULTURE AND HOME ECONOMICS, EXPERIMENT STATION, AND EXTENSION DIVISION

Thomas Poe Cooper, B.S. in Agr,, D.Sc., Dean and Director
Levi Jackson Horlacher, M.S., Assistant Dean in Resident Teaching

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[1] Military leave.
[2] Resigned December 31, 1943.
[3] Resigned March 1, 1944.

Thomson Ripley Bryant, M.S., Assistant Director of Agricultural Extension
Oleva L. Ginocchio, Secretary to the Dean and Director, Experiment Station
Susan Kidd Slaughter, Secretary to the Director of Extension
Elizabeth Sloan, A.B., Stenographer, Office of the Dean
[4]Coleman Rogers Smith, B.S. in Com., Accountant

Clerical Staff, Teaching, Experiment Station and Extension

V. Maewood Alsop, B.S. in Com.
Janet Argent
Violette Aswerus, A.B. in Educ.
Dora Baker
Adeleen Gilbert Bangs
Dorothy Watkins Barkley, A.B.
Katherine Bascom
Marguerite Berry
[5] Catherine Bogan, A.B.
Lucille Bush
Ethel Byron
Sophia Campbell
Ethel V. T. Caswell
Jessie Frazer Caswell
Nettie C. Croghan
May Christian Dedman, B.S. in Com.
Ruth O. Deeringer
Alvis Derrickson
Mary Dolan
Anna Mae Duncan
Pauline Elliston
Myra Gentry, A.B. in Educ.
Lucille Graves
Mary Lou Guyn
Gertrude Elizabeth Hanley
Grace Hardman
Mary Hart Harned
Alma Henry
Wynona Hudson
Sarah G. Hutchison
Eudell Jones
Grace Jones
Ruth Kelley, A.B.
Nellie Mae Lawrence
Mardelle Lehnig
Mildred E. McCarty, B.S. in Com.
Frances F. McCourt
Edna Brumagen Marrs, A.B. in Educ.
Roxie Robinson Mathews
Marietta Gerard Meeks
Fannie Bush Merritt
Josephine Mitchell, A.B.
Margaret Gentry Morris
Margaret Neel
Peggy Oliver
Frances Pennebaker
Ione Ramey
Frances Ramsey
Mattie Ramsey
Nancy J. Ratliff
Mary K. Robinson, A.B. in Educ.
Elizabeth Wyatt Rouse
Margaret C. Ryan
Ruth Sallee
Virginia Singleton
Mary E. Stilwell
Erma Taylor
Evazona J. Thomas
Mary Bronston Utterback
Anna Wallis, A.B.
Violette Shankland Weaver
Ethel Louise Welch
Elizabeth Wells
May Wheat
Luzelle Penley Williams, A.B.

[4] Military leave.
[5] Resigned March 25, 1944.

COLLEGE OF ENGINEERING

James Hiram Graham, C.E., Dean
Daniel Voiers Terrell, C.E., Assistant Dean
Ethel Jelley, Secretary
Helen Louise Trapp, Clerk-Stenographer
Cecil Bertram, Clerk
Beatrice R. Skidmore, Secretary to the Assistant Dean

COLLEGE OF LAW

Alvin E. Evans, M.A., Ph.D., J.D., Dean
Margaret Dorothy Salmon, B.S. in Com., LL.B., Secretary
Rosanna A. Blake, M.A., Assistant Librarian

COLLEGE OF EDUCATION

William Septimus Taylor, M.S., Ph.D., Dean
Anne Lewis Wilson, B.S. in Com., Secretary
Helen Jane Truby, Assistant Secretary

Cassie Pace Bobbitt, Secretary, Bureau of School Service
[6] Sara Bolling Davis, A.B., Secretary, University School
Lois Allen Duncan, A.B. in Educ., Secretary, Agricultural Education
Marjorie Geary, Secretary, Agricultural Education and Distributive Occupations Education
Vera Wood Gillespie, A.B., Secretary, Agricultural Education
Willa Belle Hamilton, B.S. in Com., Secretary, Home Economics Education
Ruthe Maxedon Henderson, A.B., Assistant Secretary, Bureau of School Service
Katherine Hammack Kemper, A.B., Secretary, Placement Bureau
Florence Landrum, Part-time Secretary, Elementary Education
[7] Willie Prater Mills, A.B., Secretary, History of Education
[8] Norma Niswonger, Part-time Secretary, Elementary Education
Betsy Roach, A.B., Secretary, University School
Barbara Shipp, Secretary, Industrial Education and Distributive Occupations Education
Billy Whitlow Smith, A.B., Secretary, Educational Psychology and Philosophy of Education
[9] Marie Dickerson Stephenson, Secretary, Agricultural Education

COLLEGE OF COMMERCE

Edward Wiest, M.A., Ph.D., Dean
Jane Earle Middelton, A.B., Secretary

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[6] Resigned September 1, 1943.
[7] Resigned October 1, 1943.
[8] Resigned January 1, 1944.
[9] Resigned September 1, 1943.

Claire C. Herndon, A.B., Secretary, Bureau of Business Research
[10] Caroline W. Newell, Secretary, Bureau of Business Research

THE GRADUATE SCHOOL

William Delbert Funkhouser, M.A., Ph.D., D.Sc., Dean
Queenie Morrow Grable, M.A., Secretary

DEPARTMENT OF UNIVERSITY EXTENSION

Louis Clifton, M.A., Director
[11] W. Gayle Starnes, M.A., Assistant Director
Chloe Gifford, A.B., LL.B., Secretary, Bureau of Club and Community Service
Maude Ward Lafferty, Secretary, Women's Club Service, Emeritus
Mildred Lewis, B.S. in Mus., M.A., Instructor in Music
Effie Cox Starnes, M.A., Instructor
Eva Frances Downing, A.B., Secretary
[12] Beatrice Jacobs Dimitt, Secretary
Mary Rees Land, A.B., Secretary
Bethel Chase Lipps, Secretary
Juanita Purvis, Secretary
Frances C. Smith, Secretary
Jemima C. Harris, Film Technician
John Dicker, Projectionist

OFFICE OF THE DEAN OF MEN

Theodore Tolman Jones, M.A., Ph.D., Dean of Men
Bush Allen Gorman, Secretary

OFFICE OF THE DEAN OF WOMEN

Sarah Bennett Holmes, M.A., Dean of Women
Jane Haselden, Ph.D., Assistant Dean of Women
Anita Gardner, Assistant to the Dean of Women

OFFICE OF THE REGISTRAR

Leo M. Chamberlain, M.A., Ph.D., Registrar
Maple Moores, Assistant Registrar
Dorothy Linville, A.B., Admissions Officer
Jessie Wilson, M.A., Recorder
Bessie Ora Cleveland, Transcript Clerk
Ruth Trumbo, Clerk and Stenographer
Sarah Utterback, M.A., Statistical Clerk
Lucille Hope Newton, A.B., Assistant Recorder
Evelyn Merrell Talbott, A.B., Clerk
Margaret O'Connell, A.B., Stenographer

[10] Resigned July 31, 1943.
[11] Military leave.
[12] Resigned May 1, 1944.

LIBRARIES

Margaret Isadora King, A.B., B. S., University Librarian
Bessie M. Boughton, A.B., B.S., First Assistant Cataloger
[13] Jacqueline Page Bull, A.B., Assistant Reference Librarian
Norma Beatrice Cass, B.S., M.A. in L.S., Reference Librarian
Daisy T. Croft, A.B., B.S., Head of Circulation Department
[14] Margaret Durham, B.S., Part-time Secretary
[15] Maona Shinkle Eaves, A.B., Assistant Cataloger
[16] Helen Elizabeth Fry, A.B., B.S., Assistant Circulation Department
Louise Galloway, A.B. in Educ., Librarian, University School Library
Anne Young Guyn, A.B., Assistant Circulation Department
Mary Elizabeth Hanson, A.B., B.S., in L.S., Periodical Librarian
Margery P. Hornsby, B.L.E., A.B., Head, Order Department
Kate Tipton Irvine, A.B., M.A., Assistant Reference Librarian
Catherine Lynn Katterjohn, A.B., B.S. in L. S., Assistant Cataloger
Carolyn Reading, A.B., B.S., Gift and Exchange Assistant
Grace L. Snodgrass, A.B., Librarian, Experiment Station
Ellen Butler Stutsman, A.B., Head Cataloger
Artie Lee Taylor, Librarian in charge Reserved Book Room
Margaret Helmsing Tuttle, A.B., B.S. in L.S., Librarian in charge of Department Libraries
Emma Jane Walker, B.S. in Com., Assistant, Order Department
Angeline Jett Williams, A.B., Assistant Cataloger
[17] Lucy Gragg Wood, A.B., B.S., Librarian, University School Library
Austell Beaton, Secretary, half-time
Margaret W. Erskine, Secretary, half-time

UNIVERSITY HEALTH SERVICE

John Sharpe Chambers, M.S., M.D., Director
Charles McChord, M.S., Physician
George Fergison Doyle, A.B., M.D., F.A.C.S., Physician
[18] Robert J. Griffin, A.B., M.D., Associate Professor of Hygiene and Public Health
F. Carlton Thomas, A.B., M.D., Physician
Charles D. Cawood, M.D., C.P.H., Assistant Professor of Hygiene and Public Health
[19] Oliver H. Pinney, M.D., Associate Professor of Hygiene and Physician in Dispensary
Wilbur A. Heinz, M.S. in P.H., Associate Professor of Hygiene and Public Health

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[13] On leave 1943-44.
[14] Resigned May 3, 1943.
[15] Resigned September 1, 1943.
[16] Resigned September 1, 1943.
[17] Resigned August 9, 1943.
[18] Military leave.
[19] On leave 1943-44.

W. Brooks Hamilton, M.S., Ph.D., Bacteriologist, Associate Professor of Hygiene and Public Health
Katherine W. Owens, Secretary
Mrs. W. B. Turner, Receptionist
Helen Dickens, Registered Nurse
Esther Montgomery, Registered Nurse
Ann Brown, Registered Nurse
[20] Jane Council, Nurse
A. E. Crowe, Technician

UNIVERSITY Y. M. C. A.

Bart Nixon Peak, A.B., LL.B., Secretary
Martha Huber, Assistant

UNIVERSITY Y. W. C. A.

Rosalie Oakes, A.B., B.D., Secretary

RESIDENCE HALLS

[21] Mary Margaret Lester, M.A., Director of Residence Halls for Women
[22] Alberta Limbach, B.S. in H.E., Mgr. of Residence Halls for Women
Elizabeth Taylor, B.S. in H.E., Mgr. of Residence Halls for Women
Adelle S. Gensemer Dailey, A.B., Acting Director of Residence Halls for Women
[23] Rankin Harris, Head Resident of Boyd Hall
Eugenia Williamson, Postmaster of Residence Halls for Women
Sarah McCormack, A.B., Secretary-Bookkeeper, Residence Halls for Women
Sarah Jouett, House Director, Hamilton House
Lillian Caldwell, House Director, Shelby House
Sarah Anne Hall, House Director, Lydia Brown House
Mary Hawkins, House Director, Patterson Annex
Lula Collier, House Director, Phi Delta Theta Residence for Women
Betty Henry, House Director, Kappa Sigma Residence for Women
Elizabeth Luxon, House Director, Sigma Alpha Epsilon Residence for Women
Catherine A. Spaulding, House Director, Sigma Chi Residence for Women
Myrtle Morgan, House Director, Sigma Nu Residence for Women

UNIVERSITY PERSONNEL OFFICE

Martin Marshall White, Ph.D., Acting Director
[24] Lysle Warrick Croft, M.A., Ph.D., Executive Secretary
Elizabeth Doyle, A.B., Secretary

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[20] Resigned March 16, 1944.
[21] Resigned January 1, 1944.
[22] Resigned August 15, 1943.
[23] Resigned September 1, 1943.
[24] Military leave.

DEPARTMENT OF PUBLIC RELATIONS

Elmer G. Sulzer, A.B., Director
Helen Galvin King, A.B., Assistant
Lolo L. Robinson, A.B., Program Supervisor, Radio Studios

DEPARTMENT OF ATHLETICS

Bernie Armstead Shively, M.A., Director of Intercollegiate Athletics
Albert D. Kirwan, A.B., Head Football Coach
Adolph F. Rupp, M.A., Head Basketball Coach
Rome Rankin, M.A., Assistant Football Coach
[25] Ralph McRight, A.B., Assistant Football Coach
[26] Frank O'Rear Moseley, A.B. in Ed., Assistant Football Coach
[27] Eugene Myers, A.B. in Ed., Assistant Football Coach
Harold Hardesty Downing, M.A., Ph.D., Tennis Coach
Stanley Atwood Boles, M.A., Ticket Sales Manager
Helen M. Shober, Secretary
Frank Mann, Athletic Trainer

BUREAU OF SOURCE MATERIALS IN HIGHER EDUCATION

Ezra L Gillis, A.B., Director
Mary Hester Cooper, M.A., Assistant
Mary Scully, Clerk

ALUMNI ASSOCIATION

Marguerite McLaughlin, A.B., Secretary
Ethel Smoot Rix, A.B. in Ed., Assistant Secretary

OFFICE OF THE COMPTROLLER

Frank D. Peterson, A.B., University Comptroller
David Howard Peak, LL.B., M.A., Business Agent Emeritus
Elizabeth V. Dennis, Secretary

Accounting Division

Jess C. Paris, M.B.A., C.P.A., Assistant Comptroller
Linn Hemingway McCain, Accountant
Ruth Earnest, Assistant Accountant
Patty McCormack, B.S. in Com., Sr. Account Clerk
Margaret Lewis, Cashier

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[25] Military leave.
[26] Military leave.
[27] Military leave.

Virginia Baxter Earnest, Bookkeeper
Frances Brack, Bookkeeper
Emma Grace Merrell, Payroll Clerk
[28] Helen Henry, Payroll Clerk
Nelson B. Turner, Clerk
Virginia Prichard, Clerk
Martha Langdon, Clerk

Purchasing and Stores Division

Charles W. Hayes, M.A., Supervisor
Minnie Pherigo, Order Clerk
Edith Sanders, Stenographer

STENOGRAPHIC BUREAU

Mary Johnston, Head
Marjorie Dennis, Stenographer
Evelyn Rogers, Stenographer
Dora Boaz, Mimeograph Operator

POST OFFICE

Carrie Bean, Superintendent of University Station
Eloise Gray Webb, Assistant Superintendent
[29] Adrian Bradshaw, Clerk

KENTUCKY KERNEL

Niel Plummer, M.A., Ph.D., Acting Director of Student Publications
Mary Louise Naive, B.S. in Com., Secretary

STUDENT UNION BUILDING

Bart Nixon Peak, A.B., LL.B., Acting Director
Mackie Rasdall, M.A., Assistant Director
[30] A. H. Thiele, Supervisor
Ena Sellman, Stenographer-Cashier
Margaret Crutcher, Hostess
Shirley Beeler, Hostess

STUDENT UNION CAFETERIA

Jennie Mae Trigg, B.S. in H.E., Director
Ferne King, B.S., Assistant Director
Jane Hayes, B.S. in H.E., Assistant Director
Mamie Duke, Clerk-Bookkeeper
Clay Maupin, Senior Clerk
Betty Gault, Stores Clerk

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[28] Resigned May 1, 1944.
[29] Military leave.
[30] Resigned September 1, 1943.

DIVISION OF MAINTENANCE AND OPERATION

Elgan B. Farris, C.E., Chief Engineer
Mary Day, Secretary
John Howard, Assistant Engineer
Clyde Lilly, Clerk
Laura Shade, Clerk
Claude Dickerson, Steamfitting and Plumbing Foreman
G. C. Jones, Carpenter Foreman
L. D. Kitchen Electrician Foreman
Julius Rominger, Gardener and Labor Foreman
James Wood, Painter Foreman
H. O. Bradshaw, Mechanic
Edward Hieatt, Supervisor of Janitors

CAMPUS BOOK STORE

James E. Morris, A.B., Manager
[31] Lloyd Q. Mautz, A.B., Assistant Manager
Bess Dudley Mayes, Secretary
Elizabeth Moores, Clerk

[31] Military leave.

ADMINISTRATIVE COMMITTEES[1]
1943-44

Accredited Relations—Paul P. Boyd, E. N. Fergus, J. S. Horine, A. J. Lawrence, Roy Moreland, Maurice F. Seay, W. S. Taylor, M. M. White.

Advisory Athletics Council—President H. L. Donovan, W. D. Funkhouser, L. J. Horlacher, M. E. Ligon, H. D. Palmore, B. A. Shively, D. V. Terrell.

Commencement Exercises—Henry Beaumont, A. E. Bigge, B. E. Brewer, Anne Callihan, E. B. Farris, Jane Haselden, Mrs. A. D. Kirwan, John Kuiper, Mildred Lewis, A. J. Olney, Ethel Smoot Rix.

Foreign Students—A. E. Bigge, J. Huntley Dupre, Grant D. Knight, Dorothy Linville, Alberta Server, Amry Vandenbosch.

Freshman Week—M. M. White. E. J. Asher, L. H. Carter, May K. Duncan, W. A. Heinz, Sarah B. Holmes, J. S. Horine, T. T. Jones, Maple Moores, Bart N. Peak, Dewey G. Steele.

Grants-in-Aid—D. V. Terrell, R. S. Allen, Alexander Capurso, M. E. Ligon, Frank D. Peterson, V. R. Portmann, B. A. Shively, E. G. Sulzer.

Haggin Fund Publications—Frank L. McVey, Howard Beers, T. D. Clark, E. F. Farquhar, W. D. Funkhouser, Edward Wiest.

Insurance—Edward Wiest, Brinkley Barnett, Alvin E. Evans, Robert N. Jeffrey, L. H. McCain, E. Z. Palmer, Frank D. Peterson, C. C. Ross, R. H. Weaver.

Library—George K. Brady, T. D. Clark, C. S. Crouse, J. W. Martin, H. B. Price, Frank H. Randall, Herbert P. Riley, W. S. Taylor.

Music—Alexander Capurso, Howard Beers, Frank C. Fowler, John Kuiper, C. A. Lampert, Mildred Lewis, Maurice Seay.

Non-Resident Fees—Leo M. Chamberlain, Frank Murray, Frank D. Peterson.

Schedule of Classes—O. T. Koppius, L. L. Dantzler, L. J. Horlacher, Marshall Ketchum, Robert G. Lunde, L. E. Meece, Roy Moreland, L. L. Quill, Morris Scherago, R. E. Shaver.

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[1] When not otherwise included, the Dean of the University is ex officio a member of each administrative committee. The first named member of each committee is the chairman.

Scholarship and Attendance—Paul P. Boyd, Alvin E. Evans, Jane Haselden, L. J. Horlacher, W. A. Price, W. S. Taylor, D. V. Terrell, Edward Wiest, M. M. White.

Social Program—Sarah B. Holmes, Dorothy Hillenmeyer Evans, L. J. Horlacher, T. T. Jones, Edward Newbury, and student representatives.

Student Loans—T. T. Jones, W. R. Allen, Sarah B. Holmes, W. W. Jennings, and three student members.

War Advisory Council for Men—W. S. Webb, Jesse E. Adams, C .S. Crouse, Frank H. Randall, George Roberts, Alberta Server, M. R. Sullivan, Edward Tuthill.

War Advisory Council for Women—Sarah B. Holmes, A. E. Bigge, J. S. Chambers, Statie Erikson, Dorothy Hillenmeyer Evans, Chloe Gifford, Gerald Griffin, J. S. Horine, Margaret Warren, Myrtle Weldon.

War Information—Frank L. McVey, George K. Brady, Louis Clifton, Chloe Gifford, Ezra L Gillis, Mary Elizabeth Hanson, R. D. Hawkins, Sarah B. Holmes, E. G. Sulzer, W. S. Taylor, Lee H. Townsend, Myrtle Weldon.

COMMITTEES OF THE UNIVERSITY FACULTY
1943-44

Elections—Edward Wiest, Jesse E. Adams, E. A. Bureau, W. P. Garrigus, C. G. Latimer, Frank Murray, W. S. Ward.

Rules—R. G. Lunde, W. E. Beals, Dana G. Card, Leo M. Chamberlain, C. S. Crouse, M. E. Ligon, Roy Moreland.

Post-War Planning—Leo M. Chamberlain, Jesse E. Adams, Paul P. Boyd, Louis Clifton, L. L. Dantzler, Statie Erikson, Alvin E. Evans, Margaret I. King, John Kuiper, J. W. Martin, H. B. Price, Morris Scherago, D. V. Terrell, W. S. Webb, Logan Wilson.

PART VI
STATISTICAL SUMMARY

UNIVERSITY ENROLLMENT BY SEX AND BY COLLEGES AND CLASSES FOR THE YEAR ENDING JUNE 30, 1944 INCLUDING BOTH SUMMER TERMS OF 1943

(All duplicates excluded)

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	.....	160	381	160	381	541
Seniors	58	138	7	76	30	.....	7	....	9	95	8	29	.....	.....	119	338	457
Juniors	50	152	10	50	10	1	4	1	4	55	8	30	.....	.....	86	289	375
Sophomores	44	140	12	47	34	2	16	4	....	36	6	38	.....	.....	112	267	379
Freshmen	129	223	18	50	71	8	.....	....	5	121	20	46	.....	.....	243	448	691
Specials	5	11	.....	1	.....	.....	2	....	67	439	.....	1	.....	.....	74	452	526
Auditors	4	18	.....	.....	1	.....	.....	....	....	20	.....	1	.....	4	5	43	48
Transients	6	128	2	6	1	.....	1	....	3	46	.....	2	.....	.....	13	182	195
Totals	296	810	49	230	147	11	30	5	88	812	42	147	160	385	812	2400	3212

UNIVERSITY ENROLLMENT FOR THE FALL, WINTER, AND SPRING QUARTERS OF 1943-44 BY SEX AND BY COLLEGES AND CLASSES

(All duplicates excluded)

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	....	....	....	....	....	72	136	72	136	208
Seniors	39	116	3	63	20	.....	7	....	4	53	4	23	.....	.....	77	255	332
Juniors	40	143	7	43	10	1	4	1	3	29	5	30	.....	.....	69	247	316
Sophomores	36	136	9	45	21	2	13	4	....	18	4	37	.....	.....	83	242	325
Freshmen	95	217	17	49	61	8	.....	....	1	20	20	44	.....	.....	194	338	532
Specials	3	7	.....	1	.....	.....	1	....	11	55	.....	.....	.....	.....	15	63	78
Auditors	2	6	.....	.....	1	.....	.....	....	....	2	.....	1	.....	2	3	11	14
Transients	2	88	.....	3	.....	.....	.....	....	....	4	.....	.....	.....	.....	2	95	97
Totals	217	713	36	204	113	11	25	5	19	181	33	135	72	138	515	1387	1902

UNIVERSITY ENROLLMENT FOR THE FALL QUARTER OF 1943-44 BY SEX AND BY COLLEGES AND CLASSES

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	.....	44	90	44	90	134
Seniors	29	83	1	44	16	.....	7	....	1	33	4	10	.....	.....	58	170	228
Juniors	26	101	4	34	10	1	2	1	3	24	2	32	.....	.....	47	193	240
Sophomores	30	156	7	64	17	2	7	4	....	17	6	32	.....	.....	67	275	342
Freshmen	96	209	14	52	54	7	.....	....	1	18	16	45	.....	.....	181	331	512
Specials	1	5	.....	1	.....	.....	3	....	11	53	.....	.....	.....	.....	15	59	74
Auditors	3	5	.....	.....	.....	.....	.....	....	....	2	.....	1	.....	3	3	11	14
Transients	1	44	.....	1	.....	.....	.....	....	....	4	.....	.....	.....	.....	1	49	50
Totals	186	603	26	196	97	10	19	5	16	151	28	120	44	93	416	1178	1594

UNIVERSITY ENROLLMENT FOR THE WINTER QUARTER OF 1943-44 BY SEX AND BY COLLEGES AND CLASSES

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	.....	38	77	38	77	115
Seniors	26	79	1	46	11	.....	5	....	3	37	2	13	.....	.....	48	175	223
Juniors	17	99	6	39	9	1	2	1	....	14	2	32	.....	.....	36	186	222
Sophomores	29	154	3	45	16	2	7	4	1	12	6	32	.....	.....	62	249	311
Freshmen	67	198	14	50	35	6	.....	....	....	13	16	41	.....	.....	132	308	440
Specials	1	3	.....	.....	.....	.....	1	....	....	2	.....	.....	.....	.....	2	5	7
Auditors	.....	1	.....	.....	.....	.....	.....	....	....	1	.....	.....	.....	2	.....	4	4
Transients	1	49	.....	2	.....	.....	.....	....	....	.....	.....	.....	.....	.....	1	51	52
Totals	141	583	24	182	71	9	15	5	4	79	26	118	38	79	319	1055	1374

UNIVERSITY ENROLLMENT FOR THE SPRING QUARTER OF 1943-44 BY SEX AND BY COLLEGES AND CLASSES

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	.....	33	67	33	67	100
Seniors	20	80	2	53	5	.....	3	....	2	38	1	23	.....	.....	33	194	227
Juniors	20	126	7	42	7	1	3	1	2	21	4	28	.....	.....	43	219	262
Sophomores	30	115	7	38	14	1	12	3	....	14	3	27	.....	.....	66	198	264
Freshmen	47	179	13	40	29	8	.....	....	....	13	12	36	.....	.....	101	276	377
Specials	2	3	.....	.....	.....	.....	.....	....	....	.....	.....	.....	.....	.....	2	3	5
Auditors	1	3	.....	.....	1	.....	.....	....	....	1	.....	.....	.....	1	2	5	7
Transients	.....	56	.....	.....	.....	.....	.....	....	....	.....	.....	.....	.....	.....	.....	56	56
Totals	120	562	29	173	56	10	18	4	4	87	20	114	33	68	280	1018	1298

UNIVERSITY ENROLLMENT FOR BOTH SUMMER TERMS OF 1943 BY SEX AND BY COLLEGES AND CLASSES

(All duplicates excluded)

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	.....	105	289	105	289	394
Seniors	38	58	4	34	21	.....	3	....	6	61	7	7	.....	.....	79	160	239
Juniors	34	44	5	20	14	.....	5	....	3	35	3	10	.....	.....	64	109	173
Sophomores	25	48	4	17	22	.....	4	....	....	20	4	7	.....	.....	59	92	151
Freshmen	77	39	5	11	26	.....	.....	....	4	103	4	6	.....	.....	116	159	275
Specials	3	4	.....	.....	1	.....	3	....	56	384	.....	1	.....	.....	63	389	452
Auditors	2	13	.....	.....	.....	.....	.....	....	....	18	.....	.....	.....	2	2	33	35
Transients	7	64	2	3	1	.....	1	....	3	42	.....	2	.....	.....	14	111	125
Totals	186	270	20	85	85	.....	16	....	72	663	18	33	105	291	502	1342	1844

UNIVERSITY ENROLLMENT FOR THE FIRST SUMMER TERM OF 1943 BY SEX AND BY COLLEGES AND CLASSES

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	.....	88	263	88	263	351
Seniors	32	54	4	30	21	.....	3	....	6	57	7	7	.....	.....	73	148	221
Juniors	36	42	3	17	14	.....	4	....	3	34	3	10	.....	.....	63	103	166
Sophomores	22	41	3	14	20	.....	3	....	....	18	4	7	.....	.....	52	80	132
Freshmen	66	38	5	12	26	.....	.....	....	4	81	4	7	.....	.....	105	138	243
Specials	2	2	.....	.....	1	.....	1	....	42	246	.....	1	.....	.....	46	249	295
Auditors	2	14	.....	.....	.....	.....	.....	....	....	11	.....	.....	1	2	3	27	30
Transients	7	46	2	1	1	.....	1	....	3	18	.....	2	.....	.....	14	67	81
Totals	167	237	17	74	83	.....	12	....	58	465	18	34	89	265	444	1075	1519

UNIVERSITY ENROLLMENT FOR THE SECOND SUMMER TERM OF 1943 BY SEX AND BY COLLEGES AND CLASSES

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	....	....	.....	.....	.....	51	90	51	90	141
Seniors	29	43	2	20	20	.....	3	....	2	36	5	3	.....	.....	61	102	163
Juniors	27	32	2	14	14	.....	5	....	2	15	.....	7	.....	.....	50	68	118
Sophomores	22	36	2	11	16	.....	3	....	....	3	2	7	.....	.....	45	57	102
Freshmen	67	36	4	9	25	.....	.....	....	....	22	2	3	.....	.....	98	71	169
Specials	1	4	.....	.....	.....	.....	3	....	15	137	.....	.....	.....	.....	19	140	159
Auditors	1	.....	.....	.....	.....	.....	.....	....	....	7	.....	.....	.....	.....	1	7	8
Transients	4	39	.....	2	1	.....	1	....	....	26	.....	2	.....	.....	6	69	75
Totals	151	190	10	56	76	.....	15	....	19	246	9	22	51	90	331	604	935

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