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Bulletin of the

UNIVERSITY OF KENTUCKY

GENERAL CATALOG

1937-1938

Announcements
1938-39

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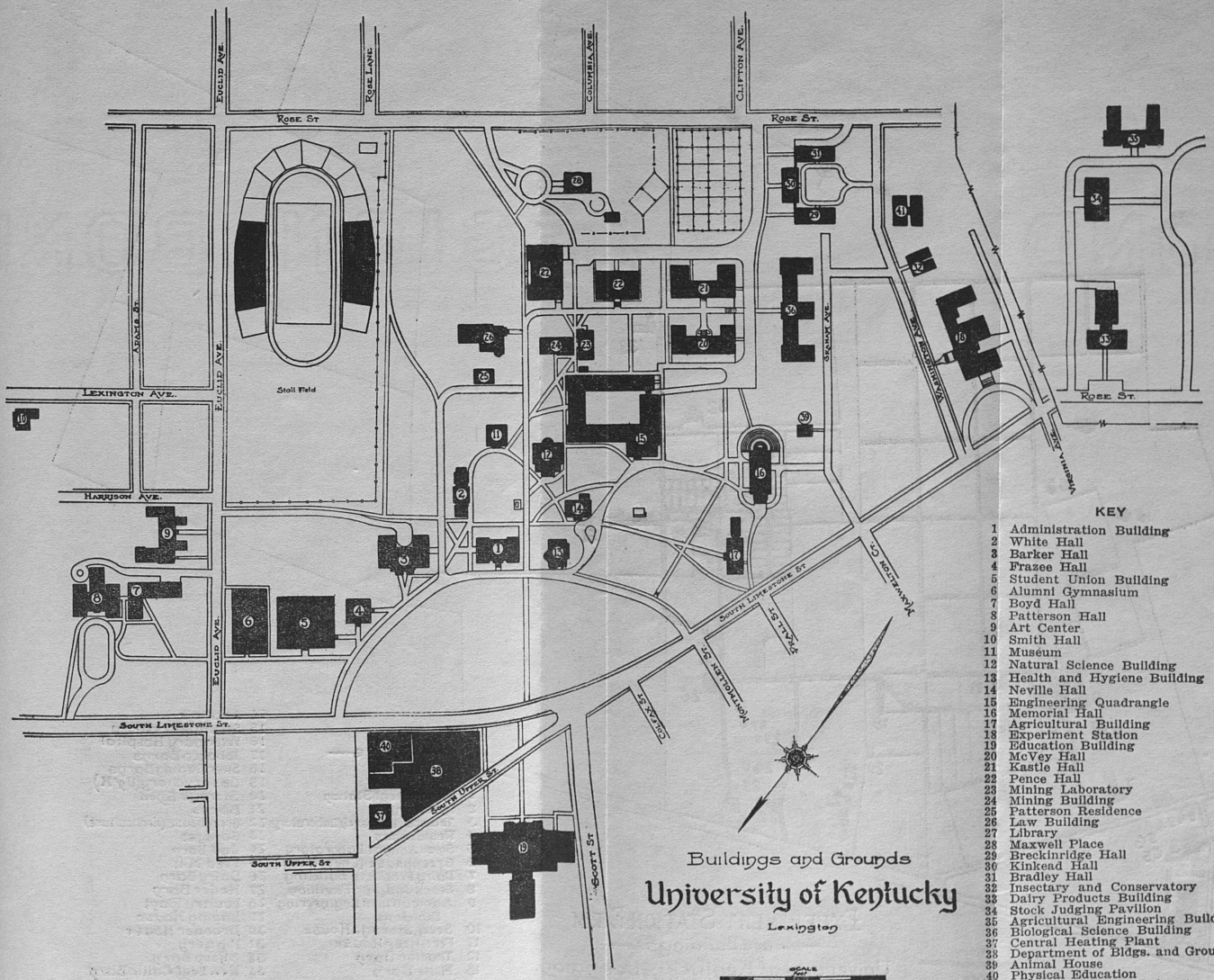


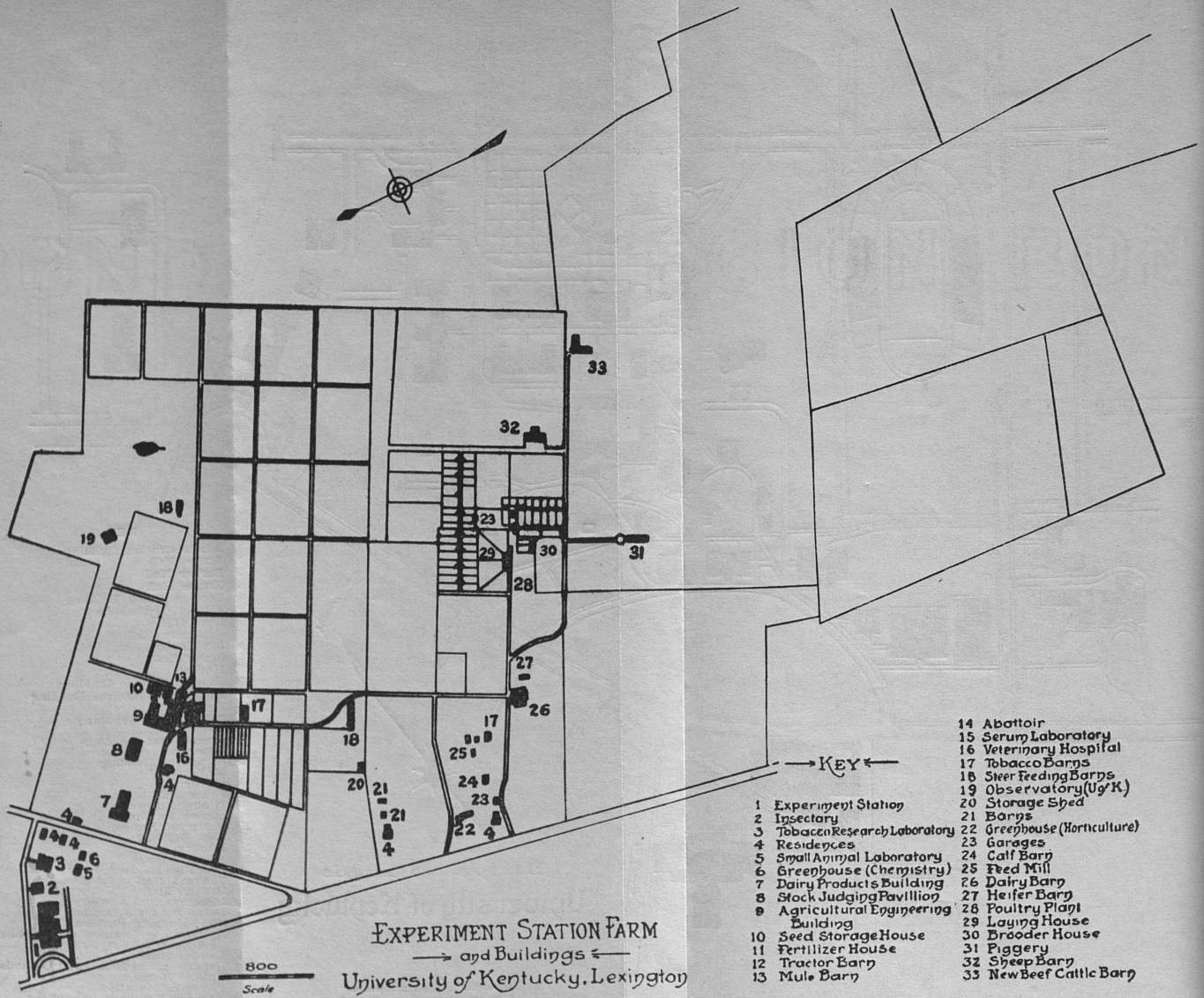
Buildings and Grounds

University of Kentucky

Lexington

KEY

1 Administration Building
2 White Hall
3 Barker Hall
4 Frazee Hall
5 Student Union Building
6 Alumni Gymnasium
7 Boyd Hall
8 Patterson Hall
9 Art Center
10 Smith Hall
11 Museum
12 Natural Science Building
13 Health and Hygiene Building
14 Neville Hall
15 Engineering Quadrangle
16 Memorial Hall
17 Agricultural Building
18 Experiment Station
19 Education Building
20 McVey Hall
21 Kastle Hall
22 Pence Hall
23 Mining Laboratory
24 Mining Building
25 Patterson Residence
26 Law Building
27 Library
28 Maxwell Place
29 Breckinridge Hall
30 Kinkead Hall
31 Bradley Hall
32 Insectary and Conservatory
33 Dairy Products Building
34 Stock Judging Pavilion
35 Agricultural Engineering Building
36 Biological Science Building
37 Central Heating Plant
38 Department of Bldgs. and Grounds
39 Animal House
40 Physical Education
41 Tobacco Research Laboratory



EXPERIMENT STATION FARM
and Buildings
University of Kentucky, Lexington

800
Scale

KEY

1 Experiment Station
2 Insectary
3 Tobacco Research Laboratory
4 Residences
5 Small Animal Laboratory
6 Greenhouse (Chemistry)
7 Dairy Products Building
8 Stock Judging Pavillion
9 Agricultural Engineering Building
10 Seed Storage House
11 Fertilizer House
12 Tractor Barn
13 Mule Barn
14 Abattoir
15 Serum Laboratory
16 Veterinary Hospital
17 Tobacco Barns
18 Steer Feeding Barns
19 Observatory (U. of K.)
20 Storage Shed
21 Barns
22 Greenhouse (Horticulture)
23 Garages
24 Calf Barn
25 Feed Mill
26 Dairy Barn
27 Heifer Barn
28 Poultry Plant
29 Laying House
30 Brooder House
31 Piggery
32 Sheep Barn
33 New Beef Cattle Barn

BULLETIN OF THE

University of Kentucky

LEXINGTON, KENTUCKY

GENERAL CATALOG

For 1937-38

Announcements
1938-39

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.

Going to College	Publicity Bureau
Campus Picture Book	Publicity Bureau
General Information (Prepared especially for the prospective student)	Registrar's Office
General Catalogue	Registrar's Office
Summer Session Bulletin	Director of Summer Session
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 Bulletin	College of Agriculture 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, 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 School	Director of the Summer Session
Class extension and correspondence study	Director of University Extension
Agricultural extension	Director of Agricultural Extension

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CALENDAR

1938

July

S	M	T	W	T	F	S
....	....	....	....	....	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	....	....	....	....	....	....

August

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September

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October

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November

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December

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1939

January

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February

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March

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April

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May

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June

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July

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August

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September

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October

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November

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December

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24	25	26	27	28	29	30
31	....	....	....	....	....	....

UNIVERSITY CALENDAR

1938-39

First Semester

1938	
September 12	Monday—Classification tests and physical examinations for all new students
September 13	Tuesday, 1:30 p. m.—Freshman registration
September 14	Wednesday, 8 a. m.—Freshman classification
September 14-15	Wednesday, 1:30 p. m. to 5 p. m., and Thursday—Registration and classification of upper classmen
September 16	Friday—Class work begins
September 20	Tuesday—Meeting of Board of Trustees
September 26	Monday—Last date on which a student may enter an organized class
October 10-11	Monday and Tuesday—Period for filing application for degrees to be granted in 1939
November 24–28	Thursday, 8 a. m. to Monday, 8 a. m.—Thanksgiving Holiday
December 13	Tuesday—Meeting of Board of Trustees
December 17	Saturday noon—Christmas Holiday begins
1939	
January 2	Monday, 8 a. m.—Christmas Holiday ends
January 21–28	Saturday to Saturday—Midyear examinations
January 29	Sunday—Baccalaureate services
January 30	Monday—Mid-Year Commencement

Second Semester

Jan. 31–Feb. 1	Tuesday and Wednesday—Registration for second semester
February 2	Thursday—Instruction resumed
February 13	Monday—Last date on which a student may enter an organized class
February 20	Monday—Date for filing applications for degrees by students who were not in college the first semester
April 4	Tuesday—Meeting of the Board of Trustees
April 20–24	Thursday, 8 a. m. to Monday, 8 a. m.—Spring Vacation
May 5	Friday afternoon—May Day
May 24	Wednesday afternoon—Military Field Day
May 25	Thursday, 9 a. m.—Last date for reporting grades for candidates for degrees.
May 25–June 1	Thursday to Thursday—Final examinations
June 1	Thursday—Baccalaureate address
June 1	Thursday—Meeting of the Board of Trustees
June 2	Friday—Seventy-second Annual Commencement
June 5–10	Junior Club Week

Summer Session

June 12	Monday—Registration for first term of summer school
July 17	Monday—Registration for second term of summer school
August 18	Friday—Summer Commencement
August 19	Saturday—Summer School ends

REGISTRATION SCHEDULE FOR SEPTEMBER, 1938

September 12 Monday—All freshmen and all other new students will report in Memorial Hall for classification tests and physical examinations. All freshmen and all new students, except those enrolled 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 13 Tuesday, 1:30 p. m. to 4:30 p. m.—Freshmen registration

September 14 Wednsday, 8 a. m. to 12 noon—Freshmen classification

September 14-15 Wednesday afternoon and Thursday—Registration and classification of all upper classmen according to the following alphabetical schedule:

September 14

Wednesday afternoon

1:30 to 2:20—T through Z
2:30 to 3:20—S
3:30 to 4:20—P through R

September 15

Thursday Morning	Thursday Afternoon
8:00 to 8:50—M through O	1:30 to 2:20—C through D
9:00 to 9:50—K through L	2:30 to 3:20—A through B
10:00 to 10:50—H through J	3:30 to 5:00—Miscellaneous A through Z
11:00 to 11:50—E through G	

Freshmen who register late should register with upper classmen in alphabetical groups.

September 16 Friday—Class work begins

PART I

GENERAL INFORMATION OF SPECIAL INTEREST TO THE PROSPECTIVE STUDENT

THE UNIVERSITY OF KENTUCKY

The University of Kentucky is located at Lexington, an urban community of about 57,000 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 to the provision of agricultural experiment stations and extension services in agriculture and home economics.

The University of Kentucky is a fully accredited institution. It is on the approved list of the Association of American Universites and holds memberships in the following organizations: the Southern Association of Colleges and Secondary Schools, the American Council on Education, the National Association of State Universities, the Association of American Colleges, the Association of Land-Grant Colleges, the Association of American Law Schools, the American Association of Collegiate Schools of Business, the Kentucky Association of Colleges and Secondary Schools, the American Association of Schools and Departments of Journalism, and the National Association of Schools of Music.

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, 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 two semesters of eighteen weeks each, and through two summer terms of five weeks each.

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, the Bureau of Business Research, the Bureau of Government Research, the Bureau of School Service, the Bureau of Source Materials, the Personnel Bureau, the Publicity Bureau, the

Teachers Placement Bureau, and the Department of University Extension.

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 re-established 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 freshman; with advanced standing from other institutions; as special students; and as auditors. Admission to certain colleges is also governed by special regulations.

All students, irrespective of their classification, are required to register on designated days at the beginning of each semester, at such places and according to such schedules as may be announced by the Registrar's office. **The period for registration closes on the second Monday following the beginning of classes.** Additional fees are charged for late registration, for late classification, or for a late change of college

Applications for admission to the University should be made to the Registrar. 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 arranging his program.

Admission to the Freshman Class

An applicant for admission to the freshman class should have his principal submit a statement of his high school work on the blank furnished by the Registrar's office.

It is always of advantage to any student, as well as to his principal, if a transcript of the student's record is made up and mailed before the close of the school year. It is difficult, if not impossible, for the principal who is away on his vacation to comply with a request for this information.

Graduates of Kentucky high schools accredited by the Kentucky Association of Colleges and Secondary Schools are admitted to the

University on certificate, provided they have fifteen units of high school work acceptable to the University. These fifteen units must include **five basic units as follows: three in English, one in algebra, and one in plane geometry.** The remaining ten units, within the limitations shown in the following outline of entrance requirements, may be distributed among the other subjects usually offered in high school, except that not more than four units may be offered in Group B, usually referred to as the miscellaneous or vocational group.

Outline of entrance requirements. The figures in the following summary indicate the maximum and minimum number of units that may be offered in any subject. The minimum amount of credit allowed in any subject is one-half unit. In addition to the five basic units, a sufficient number of units to make a total of fifteen must be offered from Groups A and B, **provided that not more than four units may be offered from Group B.**

Basic Units

English, 3. Algebra, 1. Plane Geometry, 1.

Group A

English	1	**Mathematics**	
Foreign Languages*		Advanced Arithmetic	½—1
French	1 —3	Advanced Algebra	1
German	1 —3	Solid Geometry	½
Greek	1 —3	Trigonometry	½
Latin	1 —4	**Sciences**	
Spanish	1 —3	Biology	½—1
Social Sciences†		Botany	½—1
History and Civics	1 —4	Chemistry	½—1
Economics	½	General Science	½—1
Prob. of Democracy	1	Geology	½—1
Sociology	½	Physics	½—1
Education (including		Physical Geography	½—1
Psychology)	½—1	Physiology and Hyg.	½—1½
		Zoology	½—1

Group B

(Only four units may be offered in this group)

Agriculture‡	½—4	Music	½—1
Bookkeeping	½—1	Shop Work°	½—2
Commercial Law	½	Shorthand	½—1
Commercial Geography	½	Surveying	½
Art or Drawing°	½—2	Salesmanship	½
Drawing—Mechanical°	½—2	Typewriting°	½—1
Home Economics‡	½—4		

* Not less than one unit in Foreign Languages will be accepted.
† Students offering credit in Problems of Democracy may not offer credit in Sociology, Economics, and Advanced Civics.
‡ Not more than one unit may be offered in any one subject in Agriculture and Home Economics.
° Double periods required.

Students who come from Kentucky high schools which are not accredited may be admitted to the University if, in addition to meeting the above requirements, they successfully pass examinations for admission.

Applicants for admission to the freshman class who have graduated from accredited high schools outside of Kentucky are admitted on certificate provided their high school work meets the above requirements and **provided they rank in scholarship in the upper two-thirds of their graduating classes.** Students in this classification who do not rank in the upper two-thirds of their classes must pass examinations for admission. Students who are graduates of non-accredited high schools outside of Kentucky may be admitted if they successfully pass examinations for admission.

Admission to Advanced Standing

Students coming from other institutions of higher learning are required to present certified transcripts of all work done elsewhere. Work done at a fully accredited college or university ordinarily will be recognized credit for credit at the University of Kentucky, except that **credit is not allowed on transfer for work done with the lowest passing mark.** To be accepted on transfer from another institution a student ordinarily must have made a standing which would insure normal progress toward a degree. He must also present evidence of honorable dismissal or leave of absence.

Advanced standing in the University may also be secured by passing an examination on each subject for which credit is desired, provided there is evidence of a serious intent to continue a program of study leading to a degree.

Before a transfer student can become a candidate for a degree he must have met the entrance requirements outlined above for admission to the freshman class.

Admission as a Special Student

A graduate of another university or college may enter the University to pursue any special work. Under the following conditions, other persons may be admitted as special students regardless of whether they have met the entrance requirements for admission to the freshman class.

1. They must be prepared to do the work desired.
2. They must be at least twenty-one years of age.

Before a special student can become a candidate for a degree he must have satisfied the entrance requirements for admission to the freshman class.

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 regis-

tered 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.

Admission to Colleges and Schools

The College of Education. For admission to the College of Education the student must have attained junior classification with a standing of at least one (an average of C on all previous work).

The College of Engineering. It is strongly recommended that a student desiring to enter the College of Engineering, in addition to meeting general admission requirements, offer for entrance one unit in physics, one and one-half units in algebra, and one-half unit in solid geometry. If this is not done, he will be required to carry additional courses in college in these subjects to make up the deficiency.

The College of Law. An applicant for admission to the College of Law must offer sixty college credits (exclusive of gymnasium and military science) with a standing of 1.0 in colleges other than Law, six of which must be in English.

The Graduate School. Graduates of fully accredited institutions of higher learning may be admitted to the Graduate School upon evidence of graduation and an official transcript of undergraduate courses. 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, nonresident, full-time, part-time, auditor, etc. The following table gives the schedule of regular fees for each semester. 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.

Fees for Graduation and for Special Privileges

Graduation Fee. Candidates for the bachelor's degree will be charged a graduation fee of $9.00. This will include the rental of cap and gown, diploma fee, and senior dues. Candidates for the Master's degree will be charged a fee of $15.00, which will include the above and in addition the candidate will be presented with the Master's hood. **Graduation fees are payable not later than the fourth day preceding the commencement.**

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

SCHEDULE OF REGULAR FEES PER SEMESTER

Classification	Resident Students*				Non-Resident Students*			
	General Deposit[1]	Registration Fee[2]	Incidental Fee	Total	General Deposit[1]	Registration Fee[2]	Incidental Fee	Total
Full-Time Students:								
All Colleges Except Law	$6.00	$5.00	$44.00	$55.00	$6.00	$5.00	$57.00	$68.00
College of Law	6.00	5.00	47.00	58.00	6.00	5.00	60.00	71.00
Part-Time Students:								
All Undergraduate Except Law	6.00†	4.00	$4.00 per credit		6.00†	4.00	$5.00 per credit	
College of Law (Undergraduate)	6.00†	4.00	5.00 per credit		6.00†	4.00	6.00 per credit	
All Graduate Work	6.00†	4.00	5.00 per credit		6.00†	4.00	6.00 per credit	
Auditors:								
In lecture and recitation courses		2.00	$1.00 per credit hr.			2.00	$1.00 per credit hr.	
In studio and laboratory courses		2.00	4.00 per credit hr.			2.00	4.00 per credit hr.	

[1] To be returned at the end of the year less any charges that may be assessed against it. This deposit takes the place of a number of deposits formerly required, with the exception of room reservation.

[2] The registration fee is payable each semester by all students and is not returnable.

* The rules of the University Senate respecting resident and non-resident students read as follows:

a. No person over 21 years of age will be considered eligible to register in the University as a resident of the State of Kentucky unless he has resided in the State for twelve consecutive months next preceding the date of his original enrollment.

b. No person will be considered to have gained or lost his resident status during his sojourn in the University as a student.

c. The legal residence of minors will follow that of the parents or legal guardian except in the case of minors who have always resided in Kentucky but whose legal guardians are residents of other states.

d. Aliens who have received their first citizenship papers may register as residents of Kentucky under the forgoing provisions.

† Not charged students taking fewer than 9 hours.

Late Classification. After the third Tuesday of each semester or term a fee of $1.00 will be charged for filing a classification card.

Change of College. After five days following the regular registration period, a fee of $2.00 will be charged for transfer from one college to another.

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.

$25.00 per semester for each student for three-credit courses in Applied Music.

$20.00 per semester for each student in two-credit courses in Applied Music.

$7.00 per semester for each student for courses in Organization and Training of Music Groups.

$7.50 per semester for each student for rental one hour daily of University practice room.

Ex-Service Privileges

Ex-Service Men. Ex-service men who were residents of Kentucky at the time of enlistment in the World War will be granted free tuition and free room rent in the residence halls for men. Application for ex-service privileges should be made to the Registrar of the University and if a room is desired, special application should be made to the Dean of Men thirty days in advance of the opening of the semester or term. After that date, rooms not taken will be assigned other students.

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.

Refund of Fees

The registration fee is not refunded and no other fees are refunded after the ninth week of the semester. Students leaving during the first nine weeks of the semester will receive a refund, the amount of which will depend upon the date of withdrawal. In no case will

d. Aliens who have received their first citizenship papers may register as residents of Kentucky under the forgoing provisions.
† Not charged students taking fewer than 9 hours.

refunds be granted unless the student makes his withdrawal official. A student wishing to make an official withdrawal should call at the Registrar's office for instructions.

Living Expenses

Room and board in the residence halls for women is $280 a year, payable quarterly in advance. Rooms in the men's residence halls range in price from $37.50 to $49.00 a semester and board may be obtained in the University Commons for a minimum of $5.00 per week.

Following is an estimate of **minimum** expenses of a student for an academic year, based on the lowest cost of a room in the University dormitories for men. The actual expenses, of course, vary greatly according to the habits of economy or extravagance of the individual student. Fees for law students are $6.00 more than the amounts shown, and for law and engineering students the cost of books and supplies may be greater than the estimate shown.

Item of Expense	Resident Students*	Non-Resident Students*
Fees	$ 98.00	$124.00
Board and Room	255.00	255.00
Laundry and Pressing	20.00	20.00
Books and Supplies	35.00	35.00
Incidentals	50.00	50.00
Totals	$458.00	$484.00

* For distinction between resident and non-resident students see p. 14.

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 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 semester. 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 should be made to the Dean of Men or the Dean of Women, and for graduate scholarships and fellowships to the Dean of the Graduate School. Freshmen are not eligible for loans or scholarships.

LIVING CONDITIONS

The University maintains two residence halls for women and a cooperative house. There are three residence halls for men. These buildings are modern, well furnished, thoroughly heated, and satisfactorily lighted. The atmosphere is homelike and pleasant. Each of the women's residence halls is under the supervision of a resident house mother, and in addition there is a director of dormitories who has charge of the plant, dining room, and the general conduct of the business of the dormitories. Any parent who sends his daughter to the University may be assured that she will be given excellent care, physically, mentally, and spiritually. The dormitories for men are under the supervision of a resident director.

Applications for reservations in the residence halls should be made to the Dean of Women or the Dean of Men and should be accompanied by a deposit of $5.00. This deposit will be returned at the end of the year, less any charges that may be assessed against it. If a room is reserved and not occupied the deposit will be forfeited unless notice of cancellation is given the Dean of Men or the Dean of Women ten days before the opening of the term for which the reservation is made.

The University does not maintain dining halls in the men's dormitories. However, the University Commons, located in the Student Union, serves excellent and inexpensive meals. The Commons is conveniently located and students may easily get their meals there.

Many of the householders living around the University rent rooms to students at reasonable rates. However, it is necessary for women students to secure permission from the Dean of Women to live in a private home. The fraternities have their own houses and provide room and board for their members at moderate cost. Board may be had at private houses from $5.00 to $7.00 a week.

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. The University endeavors to guard from excesses of all kinds the students who come to it, yet in order that the students may obtain the greatest self-development, it wishes at the same time to give them a reasonable amount of freedom.

Personnel Service

The work of the Dean of Men and Dean of Women in the field of student counseling and adjustment is supplemented by the Personnel Bureau of the Department of Psychology, the offices of the Deans of the various colleges, and a special counseling and tutorial service recently established to assist probation students and others having academic difficulties. Students are expected to seek the services of and to cooperate with these agencies.

Health Service

The University feels a special obligation to look after the health of students. It has, therefore, established a dispensary under the direction of able medical men. This dispensary which occupies the lower floor of Neville Hall, is open to students every week day of the college year. No fee is charged except a small amount included in the incidental fee at the opening of the University sessions. The staff consists of the director, one full-time physician, and three part-time physicians. In addition there are two registered nurses and a technician. The dispensary has X-ray machines and other laboratory equipment equivalent to that found in any first-class clinic. The medical staff of the University, without charge, will call on students who are ill in their rooms.

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. For the most part they are rules of the University Senate. In other cases, they are interpretations placed on the Senate rules by the University Council.

Committee on Scholarship and Attendance. This is a Senate committee, composed of one member from each college, the Dean of Men, the Dean of Women, and the Registrar, appointed to consider cases of students delinquent in studies or attendance referred to it by the deans of colleges, and to consider appeals for reinstatement of students dropped for unsatisfactory work.

Minimum Program. In all colleges a regular student must carry at least 12 credits each semester.

Extra Work. To be eligible to carry extra credit-hours of work a student must have attained the preceding semester a standing of at least 2. Students with a standing of 2 may be assigned extra work (not to exceed three credit-hours) by permission of the Dean of their college. No student in the College of Law will be allowed to carry more than 16 credit-hours of class work a week. The Dean may assign 14, but permission to carry one or two extra credit-hours must be obtained from the Committee on Scholarship and Attendance.

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 the preceding year (preceding semester for a new student) may be placed on probation by the Committee on Scholarship and Attendance. If during the semester of probation he again fails to pass in three-fourths of the normal load, he may be dropped from the University for at least one semester. The Committee on Scholarship and Attendance has power to reinstate students who have been dropped for poor scholarship, and to place a student on probation at any time.

A part-time student, carrying less than three-fourths of the normal load, may be placed on probation by the Committee on Scholarship and Attendance if he fails to pass in half of the scheduled load.

Inferior 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, which shall have power to require additional work in composition without credit.

Reports on 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 is reported by his Dean to the Committee on Scholarship and Attendance.

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

Classification. A student who has a standing of 1 or more and who is allowed to carry sufficient work to complete his requirements for graduation by the close of the Summer Session is classified as a senior for the current year.

A student in any college, to be classified as a junior, must have within 10 credits of the normal amount of work, and a standing of 1; to be classified as a sophomore, he must have within 10 credits of the normal amount, with a standing of 1.

Extension Work. Not more than 25 per cent of the credit required for the bachelor's degree may be gained by extension.

Not more than twelve credits 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.

Students are limited to twelve credits of extension work during the senior year.

A student lacking twelve credits or less of graduation may not offer more than six of the last twelve credits by extension.

Students may not satisfy in excess of one-half the requirements for a major by extension courses.

Examinations for Credit. A student may be given a special examination for college credit, provided the request for the examination be approved by the Registrar and the Head of the Department concerned. Application should be made in writing, on a form provided by the Registrar. **Credit by examination may not be earned by a student in courses which he has failed, in courses which he has audited, or in courses for which he has had paid instruction by a member of the University staff.**

Absences. The instructor shall keep a record of absences, and when in his opinion the number of absences for any student has become excessive or when absences appear to be unjustified, he shall report such student to his Dean, together with the total number of absences and their dates. All absences occurring on the day immediately following a holiday shall be reported to the Registrar at the time of their occurrence.

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. Absences shall be counted beginning with the first day of recitations, and absences incurred because of late entrances shall be counted.

All absences shall be considered unexcused except when an excuse is given by the Scholarship and Attendance Committee for absence on the day immediately preceding or following a holiday. A student with an unexcused absence on the day immediately preceding or following a vacation or holiday shall have a penalty of one credit (and one quality point) added to his requirements for graduation.

A student may be dropped from a course because of absence, upon recommendation of the Dean and the instructor. When, because of absence, the Dean and the instructor recommend that a student be dropped from the course, the name of the student and the number of the course shall be reported to the Registrar by the Dean, and the student shall be dropped by the Registrar. When a student is dropped from a class because of absences the instructor shall report the grade the student is making at the time he is dropped.

A student must make a satisfactory explanation to the instructor for any absence before he shall be permitted to make up the work missed. Absences due to officially authorized trips such as those of athletic teams, of musical, oratorical and dramatic organizations, and of University classes shall be considered as having been satisfactorily explained to the instructor upon presentation of a certificate from the proper official.

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 many details. The University expects all students to hold to the strictest standards of honesty in all University work and

expects them to conduct themselves in a seemly manner, bearing in mind that their conduct determines in a large measure the reputation of the institution.

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 credit.
B—Good, valued at 2 points for each credit.
C—Fair, valued at 1 point for each credit.
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 credits and 0 points.
I—Incomplete.
X—Absent from examination.
WP—Withdrew, passing.
WF—Withdrew, failing.

The standing of a student is defined as the ratio of his total number of points to his total number of credits. For example, a student who makes an average mark of C throughout his course of 127 semester hours, would have 127 points and 127 credits, and a standing of one. An average mark of B would give the student 254 points and 127 credits and a standing of two. When a semester's work is to be considered, "standing" is understood to be the ratio of the number of points gained to the number of credits scheduled.

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

Recording of Marks. After November 1 in the first semester, March 20 in the second semester, and the tenth class day in the summer sessions marks for students who are dropped or withdrawn from classes will be recorded in the Registrar's Office as reported by instructors and deans. Prior to these dates in each term there will be no marks recorded.

Prizes and Awards

The following prizes and awards are available at the University of Kentucky, primarily for excellence in scholarship.

General

Algernon Sidney Sullivan Medallions (Three)
Association of Women Students Prize
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

German Department
- Hamilton Foreign Study Scholarship

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

Alpha Zeta Freshman Medal
Alpha Zeta Merit Award
Block and Bridle Cups
Block and Bridle Plaque
Horticulture Society Cup
Phi Upsilon Omicron Freshman Medal
Poultry Club Cup

College of Engineering

E. G. Ellis Prize ($100)

College of Law

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

College of Commerce

Chi Omega Sorority Prize ($25.00)

Requirements for Graduation

To be eligible for graduation from any college of the University, a student must have gained the specified number of credits, plus an equal number of points—that is, a standing of 1. At least the senior year, 30 credits, must have been in residence, the last semester in the college through which the degree is obtained.

Two semesters of work at the University of Kentucky will satisfy the residence requirements for the bachelor's degree. Three summer terms are considered equivalent to one semester. For requirements for graduate degrees see pp. 93 to 100.

Filing of Application. 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.

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

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

A student who does only his last 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.

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 at least once a month in Memorial Hall. At these convocations students and faculty are given opportunity to hear able speakers discuss a variety of current problems. The program for 1937-38, through March, was as follows:

September	Dr. Frank L. McVey, President of the University Opening Address
October	Senator Mills M. Logan Subject: "The Constitution, Its History and Development"
November 12	Homer Clay, London, Kentucky Subject: "Shall We March Again?" (Armistice Day Convocation)
November 18	Sherman K. Smith, New York City Subject: "Voice—A Golden Gift"
December 2	Dr. Charles E. Collier, Washington, D. C. Subject: "Development of Constitutional Law in the United States"
December 18	Dr. Frank L. McVey, President of the University Subject: "Between Us"
January	Edgar Dewitt Jones, Detroit, Michigan Subject: "Proverbs We Should Know" (Mid-year Commencement)
February	Dr. Herman Finer, University of London Subject: "An Analysis of Democracy"
March	Dr. Oskar Morgenstern, Professor, University of Vienna Subject: "Austria in Middle Europe"

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 1937-38 was as follows:

November 14	November 21
Natalie Bodanya, Soprano	Parvin Titus, Organist

November 28
University Philharmonic Orchestra
Carl Lampert, Conductor
December 5
Men's Glee Club
Carl Lampert, Director
December 12
Carol Service—University Choristers
Mildred Lewis, Director
January 9
Stephen Hero, Violinist
January 16
Ernest McChesney, Lyric Tenor
January 23
University Concert Band
John Lewis, Director
January 30
Baccalaureate Service
February 6
Young Artists
February 13
Ezra Rachlin, Pianist
February 20
Jefferson County Elementary School Chorus
Helen McBride, Director
February 27
University Concert Band
John Lewis, Director
March 6
University Philharmonic Orchestra
Carl Lampert, Conductor
March 13
Women's Glee Club
Mildred Lewis, Director
March 20
Phi Beta-Phi Mu Alpha
March 27
University Chorus
University Philharmonic Orchestra
Carl Lampert, Director

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 bi-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. Each year this department cooperates with the musicians of central Kentucky in producing at least one oratorio. The Y. M. C. A. sponsors a series of informal discussions in 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 broad-

cast through the facilities of WHAS, Louisville, and WLAP, Lexington. Excellent exhibits of 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. The Newman Society cooperates in looking after the spiritual life of its members.

Since the University and its staff are interested in the best all-round development of the student, every encouragement is given them 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, originally limited to twenty-five. The limit has now been raised to seventy-five, and at present there is a long waiting list of students who wish to become members.

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 cooperating with the Men's Student Council or the Association of Women Students, 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 yearbook

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 yearbooks. Both of these publications have had a long history.

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

Alma Magna Mater
Alpha Chi Sigma (Chemistry)
Alpha Zeta (Agriculture)
American Institute of Electrical Engineers—Student Branch
American Society of Civil Engineers—Student Branch
American Society of Mechanical Engineers—Student Branch
American Institute of Mining and Metallurgical Engineers—Student Branch (Norwood Mining Society)
Association of Women Students
Ateneo Castellano
Beta Gamma Sigma (Honorary Commerce)
Block and Bridle Club
Chi Delta Phi (Literary—Women)
Cosmopolitan Club
Cwens (Sophomore Women)
Dairy Club
Delta Sigma Chi (Journalism—Men)
Dutch Lunch Club
Eta Sigma Phi (Latin and Greek)
German Club
Home Economics Club
Hort Club
Inter-Fraternity Council
International Relations Club
Kappa Delta Pi (Honorary Education)
Keys (Sophomore—Men)
La Cercle Francaise
Lamp and Cross (Senior—Men)
Lances (Junior—Men)
Men's Glee Club
Men's Student Council
Mortar Board (Honorary Senior—Women)
Omega Beta Pi (Pre-Medical)
Omicron Delta Kappa (Senior—Men)
Order of the Coif (Honorary Law)
Pan-Politikon
Patterson Literary Society
Pershing Rifles (Military)
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)
Pi Mu Epsilon (Mathematics)
Pitkin Club (Religious)
Poultry Club
Pryor Pre-Medical Society
Scabbard and Blade (Military)
Sigma Gamma Epsilon (Geology)
Sigma Phi Sigma (Honorary Physics)
Sigma Xi
SuKy (Pep Organization)
Tau Beta Pi (Honorary Engineering)
Tau Kappa Alpha
Theta Sigma Phi (Journalism-Women)
University Four-H Club
White Mathematics Club
Women's Administrative Council
Women's Athletic Association
Women's Glee Club
Women's Pan-Hellenic Association
Young Men's Christian Association
Young Women's Christian Association

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 on the campus, 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 first 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.

Alumni Representatives on Board of Trustees

James Park, Lexington, Kentucky
Louis Hillenmeyer, Lexington, Kentucky
Marshall Barnes, Beaver Dam, Kentucky

Officers of the Association 1937-38

Marcus Redwine, '19, President
Lulie Logan, '13, Vice President
Robert K. Salyers, Ex. '28, Secretary
James S. Shropshire, '29, Treasurer

Executive Committee 1937-38

L. K. Frankel, '00
Dr. E. C. Elliott, '02
T. H. Cutler, '03
Marguerite McLaughlin, '03
Dr. George H. Wilson, '04
G. Davis Buckner, '08
Ray B. Moss, '10
Wayland Rhoads, '15
Mrs. T. R. Underwood, '19
Keen Johnson, '22
William Blanton, '24
George Kavanaugh, '25
Willy King, '27
John Stevenson, Jr., '33

THE FACILITIES OF THE UNIVERSITY

The facilities of the University of Kentucky include the 94-acre campus and the Experiment Station Farm of 600 acres at Lexington;

a forest reserve and sub-experiment station at Quicksand of 15,000 acres, and the sub-experiment station of 600 acres at Princeton. The buildings on the Lexington campus now number more than forty, and additional ones are in process of construction. 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 College of Arts and Sciences, the Dean of Men, the Dean of Women, the Business Agent, the Registrar, the Publicity Bureau, the Alumni Association, the Kentucky Municipal League, and the Stenographic Bureau. The building also houses the Geological Museum and the departments of German and Political Science.

Agriculture Building. The offices of the Assistant to the Dean of the College of Agriculture and of the Department of Home Economics are located in this building. The remainder of the building furnishes classroom and laboratory space for home economics, 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, entomology and botany, farm economics, markets and rural finances, feed control, fertilizer control, agricultural extension, and the agricultural conservation administration. 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 House. Formerly the small animal house, this building now serves as a laboratory for the Department of Anatomy and Physiology and the Department of Psychology.

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

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

Biological Science Building. This building is now under construc-

tion. When completed it will house the Department of Anatomy and Physiology and the Department of Bacteriology.

Boyd Hall. This is a residence hall for women. Dining facilities for women are also housed in this building.

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 New Small Animal House, the Dairy Products Building, the Livestock Judging Pavilion, and the Agricultural Engineering Building.

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 office of the Director of the Summer Session, 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 departments of mechanical, electrical, civil, and 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.

Health and Hygiene Building. Formerly the law building, this structure now houses the University Dispensary, the Department of Hygiene, and the Mental Hygiene Survey.

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

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, completed in 1938, houses the offices, classrooms, and library of the College of Law.

Library. The University Library, including departmental collections, contains approximately 213,000 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, the Bureau of Source Materials in Higher Education, and some of the work of the departments of Art and Music.

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, 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.

Mining Laboratory. This building furnishes a laboratory for the Department of Mining and Metallurgical Engineering.

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

Natural Science Building. The departments of Zoology, Geology, and Romance Languages have office, classroom, and laboratory space in this building.

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 departments of Mining and Metallurgical Engineering and the State Department of Mines and Minerals.

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

Pence Hall. The 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 Department of Buildings and Grounds.

Smith Hall. Smith Hall is used as a residence for women students.

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 greenhouse contained in this building the College of Agriculture is carrying forward research in tobacco culture and curing.

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

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, a College of Engineering, a College of Law, a College of Education, a College of Commerce, and a Graduate School. Unless entered as a special student or auditor, each student is enrolled in one of these divisions. Instruction is given in each college or school through two semesters of eighteen weeks each, and through two summer terms of five weeks each. 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 (A. B.)
Bachelor of Arts in Journalism (A. B. in Journ.)
Bachelor of Science (B. S.)
Bachelor of Science in Industrial Chemistry (B. S. in Ind. Chem.)
Bachelor of Science in Medical Technology (B. S. in Med. Tech.)
Bachelor of Science in Music (B. S. in Mus.)

College of Agriculture

Bachelor of Science in Agriculture (B. S. in Agr.)
Bachelor of Science in Home Economics (B. S. in H. Ec.)

College of Engineering

Bachelor of Science in Civil Engineering (B. S. in C. E.)
Bachelor of Science in Electrical Engineering (B. S. in E. E.)
Bachelor of Science in Mechanical Engineering (B. S. in M. E.)
Bachelor of Science in Metallurgical Engineering (B. S. in Met. E.)
Bachelor of Science in Mining Engineering (B. S. in Min. E.)

College of Law

Bachelor of Laws (LL. B.)

College of Education

Bachelor of Arts in Education (A. B. in Ed.)
Bachelor of Science in Education (B. S. in Ed.)

College of Commerce

Bachelor of Science in Commerce (B. S. in Com.)

Graduate School

Master of Arts (M. A.)
Master of Arts in Education (M. A. in Ed.)
Master of Science (M. S.)
Master of Science in Agriculture (M. S. in Agr.)
Master of Science in Civil Engineering (M. S. in C. E.)
Master of Science in Education (M. S. in Ed.)
Master of Science in Electrical Engineering (M. S. in E. E.)
Master of Science in Home Economics (M. S. in H. Ec.)
Master of Science in Mechanical Engineering (M. S. in M. E.)
Master of Science in Metallurgical Engineering (M. S. in Met. E.)
Master of Science in Mining Engineering (M. S. in Min. E.)
Master of Science in Public Health (M. S. in P. H.)
Civil Engineer (C. E.)
Electrical Engineer (E. E.)
Mechanical Engineer (M. E.)
Metallurgical Engineer (Met. E.)
Mining Engineer (E. M.)
Doctor of Philosophy (Ph. D.)

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 a variety of 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-four departments as follows: Anatomy and Physiology, Ancient Languages and Literatures, 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, Sociology and Zoology.

College of Agriculture. The student enrolled in this college may take a general course in agriculture or he may major in any one of the following fields: Agricultural entomology, animal husbandry, crops, dairying, extension, farm economics, farm engineering, high school teaching, general horticulture, ornamental horticulture, markets and rural finance, plant pathology, poultry, and soils.

Home Economics work is also given in this college. In this field the student may take the general course, or she may major in dietetics and institutional management, home economics education, or textiles and clothing.

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 architec-

tural engineering, a course in electrical engineering, a course in mechanical engineering, a course in metallurgical engineering, and three courses in mining engineering, one with a metallic option, one with a non-metallic option, and one with a petroleum option.

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 combined degree of Bachelor of Science in Commerce and Bachelor of Laws, or to the combined degree 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, an industrial-administration curriculum, a combined commerce-law course, and a curriculum in secretarial training.

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 chemistry, education, economics, history, mathematics, physics, political science, and psychology.

COLLEGE OF ARTS AND SCIENCES

PAUL PRENTICE BOYD, M. A., Ph. 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 interest 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 acquisition and use of knowledge, to the end that he may be broadly informed and skillful in the solution of problems, which is the essence of thinking and 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 interests, resourceful, capable of continuous growth and of adaptation to times and circumstances.

Organization. The College of Arts and Sciences embraces twenty-seven departments: Anatomy and Physiology, Ancient Languages and Literatures, Anthropology and Archaeology, Art, Athletics, 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 Literature, Social Work, Sociology, Zoology. These twenty-seven departments have been grouped into four divisions: Literature, Philosophy and the Arts; Social Studies; Physical Sciences; Biological Sciences. The chairmen of these divisions form an Advisory Committee for the Dean.

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 for other colleges of the University.

Advisers. Each student upon registering is assigned to a faculty adviser who helps him arrange his course of study and is available for consultation at any time.

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 ninth and tenth deciles 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 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, 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 Music, 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 127 credits and 127 points,* that is, a standing of 1; and in the departments of Anatomy and Physiology, Ancient Languages, Art, Economics, Geology, German, Journalism, Mathematics and Astronomy, Music, Philosophy, Physical Education, Physics, Political Science, Romance Languages, Sociology, Zoology, pass a final comprehensive examination on his major subject. The detailed conditions are as follows:

LOWER DIVISION

Freshman and Sophomore Years

General Requirements

Matriculation Lectures, first semester, freshman year, .3 credits.
English, 6 to 12 credits (12 credits if only 3 units of entrance are presented).
General Hygiene, freshman year, 1 credit.

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

Physical Education, freshman and sophomore years, 2.8 credits.
Military Science (men), freshman and sophomore years, 5.6 credits.

Group Requirements

Foreign Languages, 6 to 18 credits.

6 credits in one language, if 3 or more units of entrance are presented; 12 credits, if only 2 units of entrance; 18 credits if only 1 or no unit of entrance.

(French, German, Greek, Italian, Latin or Spanish.)

Social Studies, 6 to 12 credits, in one department.

12 credits, including 6 credits in history, if no entrance unit in history is presented.

(Economics, History, Political Science, or Sociology.)

Mathematics, Philosophy, Psychology, 6 to 10 credits in one department.

Physical Sciences, 6 to 10 credits in one department.

(Astronomy, Chemistry, Geology, Physics.)

Biological Sciences, 6 to 8 credits in one department.

(Bacteriology, Botany, Physiology, Zoology.)

UPPER DIVISION

Junior and Senior Years

The student is required to gain, while registered in the Upper Division, at least 40 credits in a Field of Concentration. These 40 credits 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, Romance Languages and Literatures.

2. **Social Studies**

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

3. **Physical Sciences**
This field includes Chemistry, Engineering, Geology, Mathematics, Astronomy, Military Science, 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), Zoology.

Courses outside of the formal field of concentration may be included in the required 40 credits on approval of the adviser and the dean.

The student is required to gain at least 15 of his required 40 credits 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 to be 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 6 credits 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, 6 credits in Education may be included in the 40 credits 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 20 credits 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. This may lead to choices of courses from two or more of the generically related fields.

Tutorial Work and Comprehensive Examinations

Students majoring in the departments of Anatomy and Physiology, Ancient Languages, Art, Economics, Geology, German, Journalism, Mathematics and Astronomy, Music, Philosophy, Physical Education, Physics, Political Science, Romance Languages, Social Work, Sociology and Zoology will be required to schedule tutorial 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 semester papers of some sustained effort. Credit for such courses may be granted to an amount of not more than 12 credits. At the end of the semester 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 semester paper must be filed in the office of the dean.

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 semester'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 semester's work.

Classification in Foreign Languages

Students who present foreign languages for entrance are classified in college languages according to the amount of such entrance work. For example, a student who presents one unit of entrance in a foreign language is not allowed to carry for credit the beginning semester'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 thirty semester credits. 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 senate 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 eight hours of law during a semester 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.

Maximum and Minimum Credits Allowed

A regular student is required to carry, each semester, work amounting to at least 12 credits. He may carry, without special permission, 16 credits.

To be eligible to carry extra work the student must have a standing* of at least 2 for the preceding semester. Freshmen will not be allowed to carry extra work during the first semester.

Residence Requirements

To obtain the bachelor's degree in this college, the student must have registered in the University during his senior year and have gained at least 30 credits in the University and have registered in this college during his last semester. Three summer terms of residence are considered equivalent to one semester. At least 10 credits of the major must be gained in this college.

Credits by Extension

A maximum of 32 credits, taken by extension, may be counted toward the baccalureate degree. Not more than 12 credits of extension work can be taken in one calendar year and not more than 6 of the last 12 credits required for graduation may be taken by extension. Not more than half of the credits required for the major may be gained by extension.

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 60 credits in science.

THE DEGREE OF A. B. IN JOURNALISM

The course 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. For details of the course see the statement of the Department of Journalism.

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* "Standing" here means the ratio of the total number of points gained to the total number of credits scheduled for the semester.

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 course which is set out in detail under the Department of Chemistry. 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.

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. See the statement of the Department of Music.

THE DEGREE OF B. S. IN MEDICAL TECHNOLOGY

The degree of B. S. in Medical Technology is offered to those who complete a required course, which will be found outlined under the Department of Bacteriology. The aim is to prepare men and women for positions in hospital laboratories, physicians' and surgeons' clinics and federal, state and municipal laboratories. This course also fits the especially adapted student for either commercial or research laboratory work requiring a knowledge of medical bacteriology in its broadest sense.

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 97 credits in Arts and Sciences subjects, with a standing of 1 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 20 credits 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 30 credits 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 semester credits to bring his total in the Arts and the professional work up to 127 credits, and must secure a standing of at least 1, 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 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.

RECOMMENDED COURSES PREPARATORY TO THE STUDY OF MEDICINE*

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Mat. Lec. Required of all	.3	Eng. 1b English Composition	3.
Eng. 1a English Composition	3.	Chem. 1b General Inorganic Chem.	5.
Chem. 1a General Inorganic Chem.	5.	Zool. 1b General Zoology	4.
Zool. 1a General Zoology	4.	**Ger. 1b Elem. German	3.
Ger. 1a Elementary German	3.	or	
or		Rom. Lang. 1b Elem. French	3.
Rom. Lang. 1a Elem. French	3.	†Math. 18 Plane Trigonometry	2.
Mil. Sci. 1a First Year Basic Course, Infantry	1.3	Mil. Sci. 1b First Year Basic Course, Infantry	1.3
Phys. Edu. Gymnasium or Field Athletics	.7	Phys. Edu. Gymnasium or Field Athletics	.7

* 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 1 year. If the student is a candidate for the A. B. or B. S., he will be required to take from 1 to 3 years' work in Foreign Language, according to his entrance units.

† Prerequisite to Physics 2a. To carry this course, the student must have a standing of 2 or better.

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
†Chem. 20a Organic Chem.	5.	†Chem. 20b Organic Chem.	5.
or		or	
Chem. 4 Qualitative Analysis	4.	Chem. 8 Quantitative Anal.	5.
Phys. 1a General Physics	5.	Phys. 1b General Physics	5.
or		or	
Phys. 2a Gen. College Phys.	5.	Phys. 2b Gen. College Phys.	5.
Ger. 2a Intermediate German	3.	Ger. 2b Intermediate German	3.
or		or	
Rom. Lang. 2a French Read.	3.	Rom. Lang. 2b French Read.	3.
*Elective	3.	*Elective	3.
Mil. Sci. 6a Second Year Basic Course, Infantry	1.5	Mil. Sci. 6b Second Year Basic Course, Infantry	1.5
Phys. Edu. Gymnasium or Field Athletics	.7	Phys. Edu. Gymnasium or Field Athletics	.7

* This should be a group requirement or a prerequisite for the major.
† Some medical schools require only 1 semester of Organic Chemistry.

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 Educational 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.

PRE-LAW COURSES

Two years of college work (sixty credits, exclusive of physical education and military science) 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 especial emphasis on English, history, economics, accounting, political science and psychology.

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.

TRAINING FACILITIES FOR SOCIAL WORK

Under present economic and social conditions there is an increasing demand for qualified social workers. The work is in fact to a large extent becoming of professional character and on a professional

basis. The extensive programs in particular of the Federal Government and of the State Government with respect to relief and public welfare measures are providing wide opportunities for capable men and women with proper training. Forms of social work for which there is greater or less call today are as follows: Family welfare societies, charitable societies, or similar organizations; Red Cross work; work in social settlements; leadership in boy scout work and corresponding work for girls; directing work in community centers and in playgrounds; work in prisons, reformatories and other punitive and correctional institutions; probation, parole and similar work; work in home and institutions for the defective and dependent; various forms of child welfare work; directing and conducting research work in Federal, State and local departments or bureaus concerned with economic and social conditions; welfare work in industrial and mercantile establishments; work of civic organizations; work in Y. M. C. A.'s and Y. W. C. A.'s; and similar work.

To meet these new and enlarging demands, special schools of social work have been set up in certain of the larger cities of the country, while in some of the universities special training facilities have been made available. For the facilities offered at the University of Kentucky, see announcement of the Department of Social Work.

PREPARATION FOR WORK IN GEOLOGY

The demand for the professional geologist comes from the need of 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 our mineral resources. 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.

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 is offered in the College of Agriculture. Students who complete this work 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 30 advanced credits.

LIBRARY SCIENCE

The college affords through the Department of Library Science, opportunity for thirty credit-hours of professional training in library

work including practice and observation in well-organized libraries. The courses meet the standards of the Southern Association of Colleges and Secondary Schools, and are designed to fit students for librarianships in public school libraries and junior colleges, or for assistantships in the larger public and college libraries. A certificate is granted to graduate students completing thirty credit hours of professional courses in the Department.

THE RESERVE OFFICERS' TRAINING CORPS

The Department of Military Science conducts a four-year course, the first two years of which are 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 advanced course of two years, including one summer camp, is offered to students who have successively completed the basic course, and who have been recommended by the President of the University, and the Head of the Department of Military Science for further training. Recommendations for this course will be limited to those students who have manifested special interest and demonstrated ability during the basic course, and who desire to pursue the course to completion with a view to qualify for a commission in the Officers' Reserve Corps of the army.

PUBLIC SERVICE CURRICULUM

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 has led to the demand for people qualified and trained for government positions.

The attention of students interested in this type of work is drawn to the courses of study prepared for various fields of public service. For further information concerning these courses, leading to a degree of Bachelor of Arts with the field in public service, see the statement of the Department of Political Science.

COLLEGE OF AGRICULTURE

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

ORGANIZATION

The College of Agriculture includes three divisions:

1. The College { Agriculture / Home Economics
2. The Experiment Station
3. The Extension Division

REQUIREMENTS FOR GRADUATION

To receive the degree of Bachelor of Science in Agriculture, a student must complete 139.3 credits of work with a standing of 1. These credits are classified as follows:

Prescribed subjects, non-agriculture	47.0 credits
Prescribed subjects, agriculture	34.3 credits
Electives required in agriculture	28.0 credits
Free electives	30.0 credits
Total	139.3 credits

Students who have not had physics in high school will be required to take a six-credit course in college which will reduce the number of free elective credits to 24. The free electives may be in agriculture.

To receive the degree of Bachelor of Science in Home Economics, a student must complete 133.7 credits of work with a standing of 1.

The amount of work a student will be permitted to carry is indicated in the outline of courses. However, if a student has maintained a standing of 2 during a semester, he may, upon permission of the Dean, carry additional hours the following semester. A regular student should carry at least 12 credit hours each semester.

Prior to the senior year all candidates for the degree in agriculture must satisfy the Dean that they have had the equivalent of six months of farm experience. Upon recommendation of the department in which a student is majoring, the Dean may permit work in the field of the student's major interest to be substituted for farm experience

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
A. I. 31 Market Classes and Breeds of Livestock	3	A. I. 32 Farm Poultry Production	3
A. I. 33 Farm Dairying	3	Bot. 1b Genl. Botany	4
Agr. 11 Farm Crops	3	*Chem. 1a Genl. Inorganic	5
Bot. 1a Genl. Botany	4	Eng. 1b English Comp.	3
Eng. 1a Eng. Comp.	3	M. S. 1b First Year Basic	1.3
Freshman Assembly	.3	Phy. Ed. Gym. Practice	.7
M. S. 1a First Year Basic	1.3		
Phy. Ed. Gym. Practice	.7		
	18.3		17.0

* Chemistry 1a may be taken in the first semester.

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Chem. 1b Genl. Inorganic	5	Agr. 4 Soils	3
Econ. 1 Principles of Econ.	3	A. I. 20 Animal Nutrition	3
F. E. 10 Mech. of Farmstead	3	Bact. 52 Prin. of Bacteriology	4
Hort. 1 Genl. Horticulture	3	F. Ec. 4 Agricul. Economics	3
M. S. 6a Sec. Year Basic	1.5	Geol. 3 Elem. Geology	3
Elective	2	M. S. 6b Sec. Year Basic	1.5
	17.5		17.5

Students who have not had a year of physics in high school will be required to take a six-credit course in college physics.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
F. Ec. 113 Farm Management	3	Ed. 16 Educ. Psychology	3
M. & R. F. 108 Marketing	3	Zool. 25 Genl. Animal Biol.	3
*Electives	11	Electives	11
	17		17

* Students planing to teach under the Smith-Hughes Act are required to take Fm. Eng. 12. Agronomy 115 and 105 are required of students who have had the equivalent of Agronomy 4 and 11 in other institutions. Students entering as juniors take Agronomy 105 instead of Agronomy 11.

SENIOR YEAR

The work in the senior year is all elective. The normal load is 18 credit hours each semester.

ADVISORY SYSTEM

Upon entering the College of Agriculture each student is assigned a faculty adviser. It is the function of this faculty member to serve as a friendly personal adviser to the student. During or before the second semester of the sophomore year each student may select a major field of study. When the major field of study is selected, the student is assigned an adviser in the major field.

MAJOR WORK

The curriculum as outlined is for the student who desires a general course. A student desiring to prepare for a major field of work may postpone certain courses or make substitutions for them if these changes are recommended by the student's adviser and the head of

the major department, and are approved in the manner prescribed by the University rules.

The College of Agriculture offers opportunity for major work in the following fields:

Agricultural Entomology
Animal Husbandry
Crops
Dairying
Extension
Farm Economics
Farm Engineering
High School Teaching
General Horticulture
Ornamental Horticulture
Markets and Rural Finance
Plant Pathology
Poultry
Soils

ELECTIVES SUGGESTED FOR STUDENTS WHO ARE PREPARING TO BE COUNTY AGRICULTURAL AGENTS

JUNIOR AND SENIOR YEARS

First Semester	Credits	Second Semester	Credits
A. E. 10 Agr. Entomology	3	A. E. 102 Adv. Agricul. Entomology	3
Agr. 113 Agron. Experimentation	3	Agr. Ext. 1 Agricul. Exten.	1
Agr. 115, Soil Management	3	Agr. 23 Plant Pathology	4
A. I. 19 Genetics	3	Agr. 105 Adv. Crops	3
A. I. 102 Meats	4	A. I. 13 Live Stock Judging	2
A. I. 106 Pork Production	3	A. I. 105 Beef Production	3
Eng. 7a Public Speaking	3	A. I. 107 Sheep Production	3
F. Ec. 120 Rural Community Problems	3	A. I. 125 Dairy Cattle Feeding and Management	3
F. E. 12 Farm Structural Engineering	3	A. I. 134 Adv. Poultry Prod.	3
Hort. 103 Pomology	3	A. P. 116 Diseases of Domestic Animals	4
Hort. 110 Vegetable Garden.	3	F. E. 11 Engineering Practices in Soil Management	3
Jour. 1a Reporting	3		
M. & R. F. 111 Agr. Prices	3		

TRAINING FOR TEACHERS OF VOCATIONAL AGRICULTURE

The Federal Vocational Education Act passed by Congress in 1917 makes provision for the training of teachers of vocational education in agriculture for schools below college grade. The University of Kentucky has been designated as one of the institutions in the state to train white teachers for this work.

Students who complete the work for a Bachelor's degree in agriculture and who present fifteen credits in education meeting the approval of the staff in agricultural education will be entitled to a state certificate to teach agriculture on a vocational basis in the public schools of Kentucky.

ELECTIVES SUGGESTED FOR STUDENTS WHO ARE PREPARED TO TEACH VOCATIONAL AGRICULTURE

JUNIOR AND SENIOR YEARS

First Semester	Credits	Second Semester	Credits
*Agr. Ed. 181, Teach. Voc. Agriculture	7	*Agr. Ed. 181 Teach. Voc. Agriculture	7
Agr. 113 Agron. Experimentation	3	A. E. 102 Adv. Agricul. Entomology	3
Agr. 115 Soil Management	3	Agr. 23 Plant Pathology	4
A. I. 19 Genetics	3	Agr. 105 Advanced Crops	3
A. I. 102 Meats	4	A. I. 13 Live Stock Judging	2
A. I. 106 Pork Production	3	A. I. 105 Beef Production	3
Fm. Ec. 120 Rural Community Problems	3	A. I. 107 Sheep Production	3
*F. E. 12 Farm Structural Engineering	3	A. I. 134 Adv. Poultry Production	3
Hort. 105 Pomology	2	A. I. 125, Dairy Cattle Feeding and Management	3
Hort. 110 Vegetable Garden.	3	A. P. 116 Diseases of Domestic Animals	4
Jour. 1a Reporting	3	Hort. 113 Landscape Garden.	3
M. & R. F. 111 Agricul. Prices	3	F. E. 13 General Farm Shop	3
		*Agr. Ed. 182 Evening School and Part-Time Courses	2

* Starred courses are required of students planning to teach vocational agriculture. The student should take as many of the unstarred courses as his time and ability permit. Students who become teachers are required to take Agricultural Education 179, Determining Course-Content in Vocational Agriculture, which is offered the first two and one-half weeks of the summer school. Including Agricultural Education 179, the student must present at least fifteen credits in education.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE WITH A MAJOR IN ORNAMENTAL HORTICULTURE

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Art 61a Drawing	3	Art 61b Drawing	3
Bot. 1a Genl. Botany	4	Bot. 1b Genl. Botany	4
Math. 18 Trigonometry or	2	Chem. 1a Genl. Inorganic	5
Math. 17 Algebra	3	Eng. 1b English Comp.	3
Freshman Assembly	.3	M. S. 1a First Year Basic	1.3
Eng. 1a English Comp.	3	Phy. Ed. Gym. Practice	.7
M. S. 1a First Year Basic	1.3		
Phy. Ed. Gym. Practice	.7		
Electives	2		
	16.3 or 17.3		17.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Art 63a Inter. Drawing	3	Agr. 4 Soils	3
Chem. 1b Genl. Inorganic	5	Agr. 23 Plant Pathology	4
Econ. 1 Principles of Economics	3	E. D. 17a Engineering Drawing	2
Hort. 1 Genl. Horticul.	3	F. E. 11 Engineering Pract. in Soil Management	3
M. S. 6a Sec. Year Basic	1.5	Geol. 3 Elem. Geology	3
Electives	2	M. S. 6b Sec. Year Basic	1.5
	17.5		16.5

JUNIOR AND SENIOR YEARS

First Semester	Credits	Second Semester	Credits
A. E. 10 Agr. Entomology	3	Hort. 113 Landscape Gard.	3
A. E. 103 Econ. Entomology	3	Hort. 115 Adv. Landscape Gardening	3
Agr. 115 Soil Management	3	Hort. 115b Special Problem	3
Hort. 115a Special Problem	3	Hort. 117 Floriculture	3
		Hort. 118 Adv. Floriculture	3

Electives in Agriculture 21
Free electives 26

The twenty-one credits required as agricultural electives plus free electives may be applied as a minor in the following fields of study:

Animal Industry
Agronomy
Agricultural Entomology
Agricultural Engineering
Farm Economics
Markets and Rural Finance

Total credits required 139.3. Students who have not had a year of physics in high school will be required to take a six-credit course in college physics.

A MODIFIED CURRICULUM FOR TWO YEARS OF COLLEGE WORK

A modification of the first two years of the curriculum is suggested for the student who can not complete the four years of consecutive college work leading to a degree. Under this modified plan subjects may be elected to provide general or special information concerning any phase of agriculture. Upon the completion of 69.3 credits with a standing of 1 the student may be awarded a certificate.*

Required Work

FIRST YEAR

First Semester	Credits	Second Semester	Credits
Freshman Assembly	.3	Eng. 1b English Comp.	3
Bot. 1a Genl. Botany	4	M. S. 1b First Year Basic	1.3
Eng. 1a English Comp.	3	Phy. Ed. Gym. Practice	.7
M. S. 1a First Year Basic	1.3	Electives	12
Phy. Ed. Gym. Practice	.7		
Electives	8		
	17.3		17.0

* At least 29.3 of these credits must be in agriculture.

SECOND YEAR

First Semester	Credits	Second Semester	Credits
Chem. 1a Genl. Inorganic	5	M. S. 6b Second Year Basic	1.5
Econ. 1 Principles	3	Electives	16
M. S. 6a Sec. Year Basic	1.5		
Electives	8		
	17.5		17.5

The following is a list of electives from which the faculty advises the student generally to select his electives, but he may elect any course in the University for which he has the prerequisites.

List of Electives

FIRST YEAR

First Semester	Credits	Second Semester	Credits
A. E. 10 Agr. Entomology	3	A. E. 11 Apiculture	3
Agr. 11 Farm Crops	3	A. I. 4 Livestock Management	1
A. I. 31 Market Classes and Breeds of Livestock	3	A. I. 13 Livestock Judging	2
A. I. 33 Farm Dairying	3	A. I. 19 Genetics	3
Chem. 1a Genl. Inorganic	5	A. I. 32 Farm Poultry Production	3
Biological Science	3–4	Chem. 1b General Inorganic	5
Physical Science	3–5	F. E. 9 Farm Motors	3
Social Science	3	Biological Science	3–4
		Physical Science	3–5
		Social Science	3

SECOND YEAR

First Semester	Credits	Second Semester	Credits
Agr. 14 Market Grain Grading	2	Agr. 4 Soils	3
A. I. 25 Judging Dairy Products	1	Agr. 23 Plant Pathology	4
F. E. 10 Mech. of Farmstead	3	A. I. 20 Prin. Animal Nutrition	3
F. E. 12 Farm Structural Engineering	3	A. I. 35 Artificial Incubation	2
Hort. 1 General Horticul.	3	Bact. 52 Genl. Bacteriol.	4
Biological Science	3–4	Fm. Ec. 4 Agr. Economics	3
Physical Science	3–5	F. E. 11 Engineering Practices in Soil Mangt.	3
Social Science	3	Biological Science	3–4
		Physical Science	3–5
		Social Science	3

* Courses in the first year list not previously elected may be elected in the second year.

DEPARTMENT OF HOME ECONOMICS

The curriculum as outlined, with the proper electives, offers opportunity for training for any one of the phases of home economics. A student desiring to do major work in any group of home economics subjects should select her courses of study upon the advice of the Head of the Department.

Upon entering the College of Agriculture each student is assigned a faculty adviser. It is the function of this faculty member to serve as a friendly, personal adviser to the student. To receive the degree of Bachelor of Science in Home Economics, a student must complete 133.7 credits of work with a standing of 1. These credits are classified as follows:

Prescribed non-home economics	54.8 credits
Prescribed home economics	45.0 credits
Assemblies	.9 credits
Electives required in home economics	4.0 credits
Free electives	29.0 credits
Total	133.7 credits

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN HOME ECONOMICS

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Art 30a Introd. to Art	2	Art 30b Introd. to Art	2
Chem. 1a Genl. Inorganic	5	Chem. 1b Genl. Inorganic	5
H. E. 6a Foods	3	H. E. 6b Foods	3
H. E. 26 Textiles	2	H. E. 29 Costume Design	3
Phys. 51a Introd. to Phys.	3	Phys. 51b Introd. to Phys.	3
Freshman Assembly	.3	Phy. Ed. Gym. Practice	.7
Phy. Ed. Gym. Practice	.7		
	16.0		16.7

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Chem. 7 Organic Chem.	4	A. & P. 3 Physiology	4
Eng. 6 Essen. of Speech	2	Econ. 1 Prin. of Econ.	3
or		Eng. 1b English Comp.	3
Jour. 1a Reporting	3	H. E. 47 Adv. Clothing	3
Eng. 1a English Comp.	3	Psy. 7 Child Psychology	3
H. E. 46 Clothing	3	Phy. Ed. Gym. Practice	.7
Psy. 1 Elem. Psychology	3		
Sophomore Assembly	.3		
Phy. Ed. Gym. Practice	.7		
	16 or 17.0		16.7

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
H. E. 3 Food and Nutrition	4	H. E. 115 Child Care and Development	3
H. E. 41 Housing	3	H. E. 117 Interior Dec.	3
Eng. 3a or 3b Hist. of Eng. Lit.	3	H. E. 124 Dietetics	4
Junior Assembly	.3	H. E. 125 Consumer Prob.	3
Electives	7	Electives	4 or 5
	17.3		17 or 18.0

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
F. E. 120 Rural Com. Prob.	3	Electives	16
or			
Soc. 1a Prin. of Sociol.	3		
H. E. 33 Health of the Fam.	3		
*H. E. 142 Home Mgmt.	5		
Electives	6		
	17		16

*May be taken either semester.

Major Work

The curriculum as outlined is for the student who desires a general course. The College offers opportunity for major work in the following fields: Home Economics Education, Dietetics and Institution Management, and Textiles and Clothing.

Training for Teachers of Vocational Home Economics

The Federal Vocational Education Act passed by Congress in 1917 makes provision for the training of teachers of vocational education in home economics for schools below college grade. The University of Kentucky has been designated as the institution in the state to train white teachers for this work.

Students who complete the work for a Bachelor's degree in home economics and who present eighteen credits in education meeting the approval of the staff in home economics education will be entitled to a state certificate to teach home economics on a vocational basis in the public schools of Kentucky.

Suggested Curriculum for Home Economics Education

The curriculum for the freshman and sophomore years is the same as that of the general curriculum.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Eng. 3a or 3b Hist. of Eng. Lit.	3	Ed. 160 Technique of Teach. Home Economics	3
Bact. 52 Prin. of Bact.	4	H. E. 115 Child Care and Development	3
H. E. 3 Food and Nutrition	4	H. E. 117 Interior Dec.	3
H. E. 41 Housing	3	H. E. 124 Dietetics	4
Ed. 147 Foundations of Secondary Educ.	3	H. E. 125 Consumer Prob.	3
Junior Assembly	.3	Elective	1
	17.3		17

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
*Ed. 162 Direct. Teach. in Home Economics	6	Ed. 101 School Organization	3
F. E. 120 Rural Com. Prob.	3	*Ed. 162 Direct. Teach. in Home Economics	6
or		*H. E. 142 Home Mgmt.	5
Soc. 1a Prin. of Sociology	3	Electives	2
*H. E. 142 Home Mgmt.	5		
	17		16

*May be taken either semester. It is recommended that H. E. 142 and Ed. 162 be taken the same semester.

Suggested Curriculum for Dietetics and Institution Management

The curriculum for the freshman year and the first half of the sophomore year is the same as that of the general curriculum

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Chem. 7 Organic Chem.	4	A. & P. 3 Physiology	4
Eng. 6 Essen. of Speech	2	Econ. 1 Prin. of Econ.	3
or		Eng. 1b English Comp.	3
Jour. 1a Reporting	3	H. E. 47 Adv. Clothing	3
Eng. 1a English Comp.	3	H. E. 82 Institution Foods	4
H. E. 46 Clothing	3	Phy. Ed. Gym. Practice	.7
Psy. 1 Elem. Psychology	3		
Sophomore Assembly	.3		
Phy. Ed. Gym. Practice	.7		
	16 or 17.0		17.7

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
H. E. 3 Food and Nutrition	4	Eng. 3a or 3b Hist. of	
H. E. 41 Housing	3	Eng. Lit.	3
H. E. 81 Institution Mark.	3	H. E. 117 Interior Dec.	3
H. E. 33 Health of Family	3	H. E. 124 Dietetics	4
Junior Assembly	.3	Electives	6
Electives	4		
	17.3		16

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Bact. 52 Prin. of Bact.	4	H. E. 112 Pub. Sch. Nutri.	3
F. E. 120 Rural Com. Prob.	3	H. E. 115 Child Care and	
or		Development	3
Soc. 1a Prin. of Sociology	3	*H. E. 142 Home Mgmt.	5
H. E. 119a Experimental		H. E. 178 Institution Org.	3
Cookery	3	Electives	3
Psy. 7 Child Psychology	3		
Electives	3		
	16		17

* May be taken either semester.

Suggested Curriculum for Textiles and Clothing

The curriculum for the freshman year is the same as that of the general curriculum.

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Chem. 7 Organic Chem.	4	A. & P. 3 Physiology	4
Eng. 1a English Comp.	3	Econ. 1 Prin. of Econ.	3
R. L. 1a Elem. French	3	Eng. 1b English Comp.	3
or		H. E. 47 Adv. Clothing	3
Ger. 1a Elem. German	3	R. L. 1b Elem. French	3
H. E. 46 Clothing	3	or	
Psy. 1 Elem. Psychology	3	Ger. 1b Elem. German	3
Sophomore Assembly	.3	Phy. Ed. Gym. Practice	.7
Phy. Ed. Gym. Practice	.7		
	17.0		16.7

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Art 61a Drawing	3	Art 61b Drawing	3
Eng. 6 Essen. of Speech	2	or	
or		H. E. 104 Prob. in Text.	4
Jour. 1a Reporting	3	H. E. 117 Interior Dec.	3
Eng. 3a or 3b Hist. of Eng.		H. E. 124 Dietetics	4
Lit.	3	Psy. 7 Child Psychology	3
H. E. 3 Food and Nutrition	4	R. L. 2b Inter. French	3
H. E. 41 Housing	3	or	
R. L. 2a Inter. French	3	Ger. 2b Inter. German	3
or		H. E. 125 Consumer Prob.	3
Ger. 2a Inter. German	3		
Junior Assembly	.3		
	18.3 or 19.3		19 or 20

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Art 62a Design	3	Art 62b Design	3
H. E. 33 Health of Family	3	Ed. 101 School Organ.	3
H. E. 106a Seminar in Textiles and Clothing	1	H. E. 142 Home Mgmt.	5
H. E. 115 Child Care and Development	3	Electives	6
H. E. 116 Adv. Costume Design	3		
Soc. 1a Prin. of Sociol.	3		
or			
F. E. 120 Rural Com. Prob.	3		
	16		17

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 a professional career in their chosen branch of engineering.

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

Admission. For admission to the freshman class in the College of Engineering, applicants should present one and one-half units in Algebra and one-half unit in Solid Geometry, other requirements being the same as specified for admission to the freshman class in general. Applicants meeting all of the general requirements, but deficient in Algebra or Solid Geometry, will be admitted to the freshman class, but will be required to take extra courses designated to remove the deficiencies. It is desirable, but not obligatory, that applicants also have high school credit in Chemistry, Physics and Trigonometry.

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—A General Course in Civil Engineering.
- Option 2—A Course with Special Emphasis on Sanitary Engineering.
- Option 3—A Course 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.

- Option 1—A Course with Special Emphasis on Metallic Mining.

Option 2—A Course with Special Emphasis on Non-Metallic Mining.

Option 3—A Course with Special Emphasis on Petroleum Production.

The courses of study leading to these degrees are identical during the freshman year. This gives the student the benefit of one year of training in fundamental subjects before he is required to choose among the various fields.

Options and Electives. Under each curriculum certain options or electives are allowed. In some cases reference is made to "technical" electives and "non-technical" electives. Any course given in the College of Engineering and numbered above 100 will be considered as technical. Certain courses in Physics, Chemistry and Mathematics may be designated by the Head of the Department as technical; otherwise any course taught in colleges other than engineering will be considered as non-technical. Not more than six credits in advanced Military Science may be used as electives. 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 146.0 credits with a standing of "one", exclusive of the basic work in Military Science and Physical Education, Summer Surveying Camp or Summer in the Engineering Laboratories.

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

(c) Attend one Summer Surveying Camp or one Summer in the Engineering Laboratories or submit evidence satisfactory to the Head of his Department that he has had the equivalent in experience.

Graduate Courses. The College of Engineering offers graduate courses 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, and the graduate courses listed under each department.

Study Hall. Freshmen in the College of Engineering are required to spend ten hours a week in supervised study. During this time they will be under the general supervision of a faculty member.

Students who may be having especial difficulty in one or more classes will be assigned in small groups of about five to coaching classes in which their study of these subjects will be carefully supervised by selected men from the Junior and Senior Classes.

ALL COURSES LEADING TO ENGINEERING DEGREES

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Assby. 1 Introduc. to Eng.	.3	Assby. 2 Engin'ring Problems	.7
Chem. 2a Gen. Inorganic	4.	Chem. 2b Gen. Inorganic	4.
Eng. Draw. 1 Elem. Eng. Draw.	2.	Civ. Eng. 12 Plane Surveying	2.7
Math. 17 College Algebra	3.	Eng. Draw. 3 Descrip. Geometry	3.
Math. 18 Plane Trigonometry	2.	Math. 19 Analy. Geometry	3.
Phys. 10 Elem. Exp. Phys.	5.	Mil. Sci. 1b First Year Basic	1.3
Mil. Sci. 1a First Year Basic	1.3	Phys. Ed. Gym. Practice	.7
Phys. Ed. Gym. Practice	.7		18.4
	21.3		
Study Hall 10 hours		Study Hall 10 hours	

NOTE 1—Students who offer only one entrance unit in Algebra will take in the first semester Mathematics 5 (5.0 credits) instead of Mathematics 17 and postpone English 1a.

NOTE 2—Students who have not had Solid Geometry will take Mathematics 2 (3.0 credits) in the second semester.

NOTE 3—Any subjects which are not completed during the regular school year should be taken during the following summer session, if the student expects to complete the curriculum in four years.

CIVIL ENGINEERING

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Assby. 3a Class Society	0.0	Assby. 3b Class Society	0.0
Civ. Eng. 5 Masonry Const.	2.	Appl. Mech. 1 Analy. Mechanics	4.
Civ. Eng. 13 Adv. Surveying	3.	Civ. Eng. 16a Route Surveying	2.
Civ. Eng. 18 Mapping and Topog. Drawing	2.	Civ. Eng. 72 Graphic Statics	1.3
Math. 20a Differ. Calculus	4.	Math. 20b Integral Calculus	4.
Phys. 2a Gen. Col. Physics	5.	Phys. 2b Gen. Col. Physics	5.
Mil. Sci. 6a Second Yr. Basic	1.5	Pol. Sci. 15 Problems of Citizenship or Com. 1 Princ. of Econ.	3.
		Mil. Sci. 6b Second Yr. Basic	1.5
	17.5		20.8

SUMMER SURVEYING CAMP (7 Weeks)

Located at Camp Robinson, Noble, Breathitt County, Kentucky

	Hrs. Per Week	Credits
Civ. Eng. 15 General Surveying (3 weeks)	44	3.
Civ. Eng. 16b Route Surveying (3 weeks)	44	3.
Civ. Eng. 17 Hydrographic Surveying (1 week)	44	1.

OPTION ONE

A General Course in Civil Engineering

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 4a Class Society	0.0	Assby. 4b Class Society	0.0
Appl. Mech. 100 Strength of Materials	4.	Civ. Eng. 23 Seminar	1.
Civ. Eng. 31 Highway Const. and Maint.	2.	Civ. Eng. 106 Foundations and Tunneling	2.
Civ. Eng. 35 Highway Mat. Lab.	1.	*Civ. Eng. 107 Soil Mechanics	2.
Civ. Eng. 49 Railway Const. and Maint.	3.	*Civ. Eng. 171b Theory of Struct.	2.
Civ. Eng. 81 Testing Materials	1.	Civ. Eng. 173a Steel Structures	3.
Civ. Eng. 170 Elem. Struct. Design.	3.	Eng. Adm. 100a Eng. Val. and Appr.	3.
Civ. Eng. 171a Theory of Structures	3.	Geol. 12 Elem. Geology	3.
Elec. Eng. 101 Elem. of Elec. Eng. Machinery	3.	Math. 11 Spherical Trig.	1.
		Math. 12 Least Squares	1.
		Met. 26 Eng. Metallurgy	2.
	20.0		20.0

* The student may with the approval of the Head of the Department, substitute other courses for an equal number of credits marked *.

Not more than 6.0 credits will be accepted in Advanced Military Science as substitutions.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 5a Class Society	0.0	Assby. 5b Class Society	0.0
Civ. Eng. 102 Reinf. Concrete	3.	*Arch. Eng. 7 Building Const.	1.
Civ. Eng. 104 Reinf. Concrete Design	.7	Civ. Eng. 32 Streets and Pavements	2.
Civ. Eng. 113 Geodesy	3.	Civ. Eng. 36 Bitum. Materials	1.
Civ. Eng. 120 Hydraulics	2.	*Civ. Eng. 105 Masonry Structures	3.7
Civ. Eng. 123 Hydraulics Lab.	1.5	Civ. Eng. 111 Contracts and Specifications	1.
*Civ. Eng. 173b Steel Br. Design	1.3	Civ. Eng. 122 Water Power Eng.	2.
*Civ. Eng. 181a Independent Problems	1.	*Civ. Eng. 181b Independent Problems	3.
Eng. Adm. 100b Eng. Val. and Appr. or Law — Law of Contracts and Spec.	3.	San. Eng. 151 Water Supply and Waterworks	2.
Geology 7 Eng. Geology	2.	San. Eng. 152 Sewers and Sewage Disposal	2.
Mech. Eng. 103 Elem. of Heat-Power Engineering	2.	*San. Eng. 153 Design of Waterworks and Sewers	1.3
		*San. Eng. 156 Water and Sewer Plant Operation	1.
	19.5		20.0

OPTION TWO

A Course with Special Emphasis on Sanitary Engineering

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 4a Class Society	0.0	Assby. 4b Class Society	0.0
Appl. Mech. 100 Strength of Materials	4.	Bact. 57 Bact. of Water and Sewage	4.
Bact. 52 Principles of Bacteriology	4.	Chem. 10 Quant. Analysis	2.5
Chem. 4 Qual. Analysis	4.	Civ. Eng. 170 Elem. Struct. Design	2.
Civ. Eng. 81 Testing Materials	1.	Civ. Eng. 171a Theory of Struct.	3.
Hyg. 100a Public Health	3.	Eng. Adm. 100a Eng. Val. and Appr.	3.
Zool. 1a General Zoology	4.	Zool. 1b General Zoology	4.
	20.0		18.5

* The student may with the approval of the Head of the Department, substitute other courses for an equal number of credits marked *.

Not more than 6.0 credits will be accepted in Advanced Military Science as substitutions.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 5a Class Society	0.0	Assby. 5b Class Society	0.0
Civ. Eng. 102 Reinf. Concrete	3.	Arch. Eng. 5 Building Equip.	2.
*Civ. Eng. 104 Reinf. Concrete Design	.7	Civ. Eng. 111 Contracts and Specifications	1.
Civ. Eng. 120 Hydraulics	2.	Civ. Eng. 173a Steel Structures	3.
Civ. Eng. 123 Hydraulic Lab.	1.5	*Com. 107 Statistical Methods	3.
Elec. Eng. 101 Elem. of Elec. Eng. Machinery	3.	*Geol. 12 Elem. Geology	3.
Eng. Adm. 100b Eng. Val. and Appr. or Law — Law of Contracts and Spec.	3.	San. Eng. 151 Water Supply and Waterworks	2.
*Mech. Eng. 103 Elem. of Heat-Power Eng.	2.	San. Eng. 152 Sewers and Sewage Disposal	2.
San. Eng. 182 Sanitation	3.	San. Eng. 156 Water and Sewer Plant Operation	1.
Zool. 105 Medical Entomology	3.	*San. Eng. 158 Sewer and Water Design	3.
	21.2		20.0

OPTION THREE

A Course with Special Emphasis on Architectural Engineering

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 4a Class Society	0.0	Assby. 4b Class Society	0.0
Appl. Mech. 100 Strength of Materials	4.	Arch. Eng. 1 Arch. Rendering	2.
Art 61a Drawing	3.	Art 61b Drawing	3.
Art 145a Hist. of Architecture	1.	Art 145b Hist. of Architecture	1.
Civ. Eng. 81 Testing Materials	1.	Civ. Eng. 23 Seminar	1.
Civ. Eng. 170 Elem. Struct. Design	3.	Civ. Eng. 106 Foundations and Tunneling	2.
Civ. Eng. 171a Theory of Structures	3.	Civ. Eng. 173a Steel Structures	3.
Elec. Eng. 101 Elem. of Elec. Eng. Machinery	3.	Eng. Adm. 100a Eng. Val. and Appr.	3.
Mech. Eng. 103 Elem. of Heat-Power Eng.	2.	*Geol. 12 Elem. of Geology	3.
	20.0		18.0

* The student may with the approval of the Head of the Department, substitute other courses for an equal number of credits marked *.

Not more than 6.0 credits will be accepted in Advanced Military Science as substitutions.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 5a Class Society	0.0	Assby. 5b Class Society	0.0
Arch. Eng. 3 Sanitation, Accoustics, Fire Prevention	3.	Arch. Eng. 4b Arch. Design	2.7
Arch. Eng. 4a Arch. Design	2.7	Arch. Eng. 5 Building Equip.	2.
Art 17a Art Appreciation	1.	*Arch. Eng. 6 Independent Probs.	5.
Civ. Eng. 102 Reinf. Concrete	3.	*Arch. Eng. 7 Building Const.	1.
Civ. Eng. 104 Reinf. Concrete Design	.7	Art 17b Art Appreciation	1.
*Civ. Eng. 120 Hydraulics	2.	Civ. Eng. 111 Contracts and Specifications	1.
*Civ. Eng. 123 Hydraulics Lab.	1.5	*Elec. Eng. 11 Electrical Lab.	1.
Eng. Adm. 100b Eng. Val. and Appr. or Law — Law of Contracts and Spec.	3.	*Elec. Eng. 136 Illumination Eng.	4.
Mech. Eng. 116 Heating, Ventil. and Air Conditioning	3.	*Mech. Eng. 110 Heating and Ventil. Design	1.3
	19.9		18.0

* The student may with the approval of the Head of the Department, substitute other courses for an equal number of credits marked *.

Not more than 6.0 credits will be accepted in Advanced Military Science as substitutions.

ELECTRICAL ENGINEERING

For Freshman Year (See Page 59).

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Assby. 3a Class Society	0.0	Assby. 3b Class Society	0.0
Com. 1 Principles of Economics or Pol. Sci. 15 Problems of Citizenship	3.	Appl. Mech. 1 Analy. Mechanics	4.
Elec. Eng. 11 Electrical Lab.	1.	Appl. Mech. 2 Mechanisms	2.
Eng. Draw. 18 Eng. Drawing	2.	Elec. Eng. 21 Principles of Elec. Engineering	4.
Math. 20a Differ. Calculus	4.	Math. 20b Integral Calculus	4.
Met. 26 Eng. Metallurgy	2.	Phys. 2b Gen. Col. Physics	5.
Phys. 2a Gen. Col. Physics	5.	Mil. Sci. 6b Second Yr. Basic	1.5
Mil. Sci. 6a Second Yr. Basic	1.5		
	18.5		20.5

SUMMER SESSION (7 Weeks)

	Hrs. Per Wk.	Credits
Mech. Eng. 15 Engineering Laboratory (Machine Shop)	44	6.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 4a Class Society	0.0	Assby. 4b Class Society	0.0
Appl. Mech. 100a Mechanics of Materials	4.	Elec. Eng. 110 Elec. Laboratory	2.
Civ. Eng. 81 Testing Materials	1.	Elec. Eng. 116 A. C. Circuits and Machinery	4.
Elec. Eng. 115 D. C. Machinery	4.	Elec. Eng. 141 Analytical Elec. Engineering	3.
Math. 105a Differ. Equations	3.	Eng. Adm. 100a Eng. Val. and Appr.	3.
Mech. Eng. 104 Eng. Thermodynamics	4.	Mech. Eng. 105 Steam Power Plant Equipment	2.
Mech. Eng. 112 Mech. Laboratory	2.	Mech. Eng. 111 Eng. Reports	2.
Mech. Eng. 121 Machine Design	2.	Phys. 114a Radio Communication or Mech. Eng. 106a Heating, Ventil. & Air Condition'g	3.
	20.0		19.0

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 5a Class Society	0.0	Assby. 5b Class Society	0.0
Elec. Eng. 107 Electrical Control	3.	Civ. Eng. 120 Hydraulics	2.
Elec. Eng. 111a Adv. Elec. Lab.	2.	Civ. Eng. 123 Hydraulics Lab.	1.5
Elec. Eng. 117 A. C. Machinery	3.	Elec. Eng. 108 Eng. Electronics	3.
Elec. Eng. 151a Elec. Eng. Seminar	.5	Elec. Eng. 123 Elec. Equip. Prob.	2.
Eng. Adm. 100b Eng. Val. and Appr. or Law — Law of Contracts and Spec.	3.	Elec. Eng. 151b Elec. Eng. Seminar	.5
Mech. Eng. 106b Heating, Ventil. & Air Condition'g or Phys. 114b Radio Communication	2. or 3.	Non-Technical Elective	3.
Non-Tech. Elective	3.	Elec. Eng. Electives in Elec. Eng. (See the following list.)	7.
Technical Elective	3. or 2.		
	19.5		19.

APPROVED ELECTIVES IN ELECTRICAL ENGINEERING

	Credits
Elec. Eng. 111b Electrical Laboratory	1.
Elec. Eng. 124 Electrical Design	3.
Elec. Eng. 131 Communication Engineering	4.
Elec. Eng. 136 Illumination Engineering	4.
Elec. Eng. 137 Electrical Power Trans. and Distribution	3.
Elec. Eng. 152a Independent Problems	2.
Elec. Eng. 152b Independent Problems	3.
Elec. Eng. 152c Independent Problems	4.

MECHANICAL ENGINEERING

For Freshman Year (See Page 59).

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Assby. 3a Class Society	0.0	Assby. 3b Class Society	0.0
Com. 1 Principles of Economics or Pol. Sci. 15 Problems of Citizenship	3.	Appl. Mech. 1 Analy. Mechanics	4.
		Appl. Mech. 2 Mechanisms	2.
Eng. Draw. 18 Eng. Drawing	2.	Eng. Draw. 12 Graphical Computations	2.7
Math. 20a Differ. Calculus	4.	Math. 20b Integral Calculus	4.
Met. 26 Eng. Metallurgy	2.	Phys. 2b Gen. Col. Physics	5.
Phys. 2a Gen. Col. Physics	5.	Mil. Sci. 6b Second Yr. Basic	1.5
Mil. Sci. 6a Second Yr. Basic	1.5		
	17.5		19.2

SUMMER SESSION (7 Weeks)

	Hrs. Per Wk.	Credits
Mech. Eng. 15 Engineering Laboratory (Machine Shop)	44	6.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 4a Class Society	0.0	Assby. 4b Class Society	0.0
Appl. Mech. 100 Strength of Materials	4.	Appl. Mech. 101 Analy. Mechanics	4.
Civ. Eng. 81 Testing Materials	1.	Elec. Eng. 106 A. C. Circuits and Machinery	4.
Elec. Eng. 105 D. C. Cir. and Machinery	4.	Eng. Adm. 100a Eng. Val. and Appr.	3.
Mech. Eng. 100a Machine Design	2.3	Mech. Eng. 100b Machine Design	3.3
Mech. Eng. 104 Eng. Thermodynamics	4.	Mech. Eng. 106a Heating, Ventil. and Air Conditioning	3.
Mech. Eng. 112 Mech. Laboratory	2.	Mech. Eng. 108 Internal Comb. Engines	3.
Met. 36 Phys. Met. of Heat Treat.	3.		
	20.3		20.3

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 5a Class Society	0.0	Assem. 5b Class Society	0.0
Appl. Mech. 102 Strength of Materials	3.	Appl. Mech. 103 Adv. Applied Mechanics	3.
Civ. Eng. 20 Hydraulics	1.	Engl. 30 Business English	2.
Eng. Adm. 100b Eng. Val. and Appr. or Law — Law of Contracts and Spec.	3.	Mech. Eng. 111 Eng. Reports	2.
		Mech. Eng. 120 Independent Problems	5.
Mech. Eng. 101 Mech. Eng. Design	3.	Mech. Eng. 122b Seminar	1.
Mech. Eng. 105 Steam Pr. Pt. Eng.	2.	Non-Technical Elective	3.
Mech. Eng. 106b Heating, Ventil. and Air Conditioning	2.		
Mech. Eng. 107 Flow of Gases	1.		
Mech. Eng. 109 Refrigeration	3.		
Mech. Eng. 113 Mech. Lab.	2.		
Mech. Eng. 122a Seminar	1.		
	21.0		16.0

METALLURGICAL ENGINEERING

For Freshman Year (See Page 59).

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Assby. 3a Class Society	0.0	Assby. 3b Class Society	0.0
Chem. 6 Qual. Analysis	4.	Chem. 8 Quant. Analysis	5.
Com. Principles of Economics or Pol. Sci. 15 Problems of Citizenship	3.	Geol. 12 Elem. Geology	3.
Math. 20a Differential Calculus	4.	Math. 20b Integral Calculus	4.
Met. 27 General Metallurgy	2.	Met. 29 Metallurgy of Ferrous Metals	3.
Phys. 2a Gen. Col. Physics	5.	Phys. 2b Gen. Col. Physics	5.
Mil. Sci. 6a Second Yr. Basic	1.5	Mil. Sci. 6b Second Yr. Basic	1.5
	19.5		21.5

SUMMER SCHOOL (7 Weeks)

	Hrs. Per Wk.	Credits
Met. 60 Metallurgical Laboratory	44	6.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 4a Class Society	0.0	Assby. 4b Class Society	0.0
Appl. Mech. 1 Analytical Mechanics	4.	Appl. Mech. 100 Strength of Materials	4.
Chem. 131a Physical Chemistry	4.	Chem. 131b Physical Chemistry	4.
Elec. Eng. 101 Elem. of Elec. Eng. Machinery	3.	Civ. Eng. 120 Hydraulics	2.
Geol. 123a Mineralogy	3.	Elec. Eng. 102 Elec. Engineering Machinery	2.
Met. 128 Met. of Non-Ferrous Metals	3.	Eng. Adm. 100a Eng. Val. and Appr.	3.
Phys. 123 Principles of Thermodynamics	3.	Met. 121 Fuel Laboratory	2.
		Met. 140 Science of Metals	3.
	20.0		20.0

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 5a Class Society	0.0	Assby. 5b Class Society	0.0
Chem. 7 Organic Chemistry	4.	Met. 131 Met. Calc., Ferrous	2.
Eng. Adm. 100b Eng. Val. and Appr. or Law — Law of Contracts and Spec.	3.	Met. 142 Heat Treatment	3.3
Met. 120 Assaying	2.	Met. 150 Ind. Mineral Preparation and Uses	3.
Met. 130 Met. Calculations, Gen. and Non-Ferrous	3.	Met. 161 Flotation	2.
Met. 160 Ore Dressing	3.	Met. 163 Ore Dressing Lab.	2.3
Met. 175a Seminar	2.	Met. 175b Seminar	2.
Phys. 119 Principles of X-Rays	3.	Phys. 122 X-Ray Analysis of Crystals	3.
	20.0		17.6

MINING ENGINEERING

For Freshman Year (See Page 59).

OPTIONS ONE AND TWO

Metallic and Non-Metallic Mining

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Assby. 3a Class Society	0.0	Assby. 3b Class Society	0.0
Chem. 4 Qual. Analysis	4.	Chem. 8 Quant. Analysis	5.
Com. 1 Principles of Economics or Pol. Sci. 15 Problems of Citizenship	3.	Geol. 12 Elem. Geology	3.
Math. 20a Differential Calculus	4.	Math. 20b Integral Calculus	4.
Met. 27 General Metallurgy	2.	Phys. 2b Gen. Col. Physics	5.
Phys. 2a Gen. Col. Physics	5.	Mil. Sci. 6b Second Yr. Basic	1.5
Mil. Sci. 6a Second Yr. Basic	1.5		
	19.5		18.5

SUMMER SESSION (7 Weeks)

	Hrs. Per Wk.	Credits
Min. 60 Mine Surveying and Field Practice in Mining Engineering	44	6.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 4a Class Society	0.0	Assby. 4b Class Society	0.0
Appl. Mech. 1 Analytical Mechanics	4.	Appl. Mech. 100 Strength of Materials	4.
Civ. Eng. 72 Graphic Statics	1.3	Civ. Eng. 81 Testing Materials	1.
Civ. Eng. 171a Theory of Structures	3.	Civ. Eng. 120 Hydraulics	2.
Elec. Eng. 101 Elements of Elec. Eng. Machinery	3.	Elec. Eng. 102 Elec. Eng. Machinery	2.
Geol. 7 Engineering Geology	2.	Eng. Adm. 100a Eng. Val. and Appr.	3.
Geol. 123a Mineralogy	3.	Geol. 123b Mineralogy	3.
Phys. 123 Principles of Thermodynamics	3.	Met. 121 Fuel and Metallurgical Laboratory	2.
		Min. 111 Mine Vetilation	3.
	19.3		20.0

OPTION ONE

A Course with Special Emphasis on Metallic Mining

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 5a Class Society	0.0	Assby. 5b Class Society	0.0
Civ. Eng. 102 Reinforced Concrete	3.	Elec. Eng. 107 Elec. Control	3.
Civ. Eng. 104 Reinf. Concr. Design	.7	Met. 161 Flotation	2.
Eng. Adm. 100b Eng. Val. and Apprs. or Law — Law of Contracts and Spec.	3.	Met. 163 Ore Dressing Lab.	2.3
Met. 120 Assaying	2.	Min. 122b Mining Surface Mineral Deposits	3.
Met. 160 Ore Dressing	3.	Min. 123b Mining Geology and Prospecting	3.
Min. 122a Min. Metallic Mineral Deposits	3.	Min. 150 Independent Problems	3.
Min. 123a Min. Geology and Prosp.	2.	Min. 175b Seminar	2.
Min. 175a Seminar	2.		
	18.7		18.3

OPTION TWO

A Course with Special Emphasis on Non-Metallic Mining

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 5a Class Society	0.0	Assby. 5b Class Society	0.0
Civ. Eng. 102 Reinforced Concrete	3.	Met. 150 Industrial Mineral Preparation and Uses	3.
Civ. Eng. 104 Reinf. Concr. Design	.7	Met. 161 Flotation	2.
Eng. Adm. 100b Eng. Val. and Apprs. or Law — Law of Contracts and Spec.	3.	Met. 163 Ore Dressing Lab.	2.3
		Met. 165 Coal Preparation	3.
		Min. 122b Mining Surface Mineral Deposits	3.
Met. 160 Ore Dressing	3.	Min. 123b Mining Geology and Prospecting	3.
Met. 164 Elem. of Low Temperature Carbonization	3.	Min. 175b Seminar	2.
Min. 110 Mining Stratified Mineral Deposits	2.		
Min. 123a Mining Geology and Prospecting	2.		
Min. 125 Management of Coal Mines	2.		
Min. 175 Seminar	2.		
	20.7		21.3

OPTION THREE

A Course with Special Emphasis on Petroleum Production

For Freshman Year (See Page 59).

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Assby. 3a Class Society	0.0	Assby. 3b Class Society	0.0
Chem. 4 Qual. Analysis	4.	Chem. 8 Quant. Analysis	5.
Chem. 7 Organic Chemistry	4.	Geol. 12 Elementary Geology	3.
Com. 1 Principles of Economics or Pol. Sci. 15 Problems of Citizenship	3.	Math. 20b Integral Calculus	4.
		Phys. 2b Gen. Col. Physics	5.
		Mil. Sci. 6b Second Yr. Basic	1.5
Math. 20a Differ. Calculus	4.		
Phys. 2a Gen. Col. Physics	5.		
Mil. Sci. 6a Second Yr. Basic	1.5		
	21.5		18.5

SUMMER SESSION (7 Weeks)

	Hrs. Per Wk.	Credits
Min. 60 Mine Surveying and Field Practice in Mining and Petroleum Production Engineering	44	6.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 4a Class Society	0.0	Assby. 4b Class Society	0.0
Appl. Mech. 1 Analytical Mechanics	4.	Appl. Mech. 100 Strength of Materials	4.
Chem. 109 Quant. Analysis	5.	Civ. Eng. 81 Testing Materials	1.
Elec. Eng. 101 Elem. of Elec. Machinery	3.	Civ. Eng. 120 Hydraulics	2.
Geology 7 Eng. Geology	2.	Elec. Eng. 102 Electrical Eng. Machinery	2.
Geol. 9a Field Geology	2.	Eng. Adm. 100a Eng. Val. and Apprs.	3.
Phys. 123 Principles of Thermodynamics	3.	Geol. 9b Field Geology	2.
		Pet. Eng. 101a Petroleum Lab.	4.7
		Pet. Eng. 102a Oil Property Devel.	2.
	19.0		20.7

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Assby. 5a Class Society	0.0	Assby. 5b Class Society	0.0
Chem. 131a Physical Chemistry	4.	Chem. 131b Physical Chemistry	4.
Civ. Eng. 72 Graphic Statics	1.3	Geol. 122 Petroleum Geology	3.
Civ. Eng. 171a Theory of Structures	3.	Pet. Eng. 104 Field Storage, Prel. Refining and Transportation	3.
Eng. Adm. 100b Eng. Vals. and Apprs. or Law — Law of Contracts and Spec.	3.	Pet. Eng. 105 Deep Bore Hole Surveys and Problems	2.
Pet. Eng. 101b Petroleum Lab.	4.7	Pet. Eng. 106 Oil Field Hydrology	3.
Pet. Eng. 102b Oil Property Devel.	2.	Pet. Eng. 120 Seminar	2.
Pet. Eng. 103 Production of Gas and Oil	3.		
	21.0		17.0

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, some 30 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 schol ars, notes and case comments by students, and book reviews. The staff is composed of those students who have made a standing of B or better in the Law School. The members of the staff are required to prepare two case notes each year.

THE LIBRARY

The library has enjoyed a material growth in recent years. The volumes now number somewhat more than 25,000. It contains the existing statutes of all the states and territories of the United States. It also contains all of the reports of American courts of final jurisdiction and such intermediate reports as are published; the English Irish and the Canadian Provincial Reports, together with the Reports of the District of Columbia, the Hawaiian and the Philippine, Alaska

and some fifteen hundred treatises and current digests and citators.

It takes the various services such as bankruptcy, social security and tax services, and some 80 legal periodicals, 12 of which are foreign, and it has complete sets of legal periodical indexes and digests

ENROLLMENT

The student body has increased, with continued regularity, so that now the total for the entire year amounts to approximately 170. There has been a constantly increasing tendency to select the student body with greater care and to discharge applicants who have not shown special proficiency in their pre-legal work. Also many who have been admitted to the college are advised to transfer to other work at the end of their first year of law when it appears to the faculty that they are not adapted to the high requirements of the profession.

Fellowships have been obtainable in the large schools for graduate work in law with considerable regularity until the last year or so, when financial considerations cut them off. This seems to indicate the esteem in which the law school work is held by the large universities. One member of last year's class has a fellowship at the Yale Law School and another has a fellowship at the Michigan Law School.

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 field of procedure, property, contracts, equity and trusts, constitutional law and public law, and in criminal law and procedure. All the members of the staff have done graduate work in one or more of the large law schools, and give at least some time to research.

THE LAW BUILDING

In order to accommodate the growing student body and the increasing library, a new 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 9 offices, 3 classrooms, a court room, a stack room for reports, a grill room for treatises, and a study room. Various other rooms are provided, such as an apartment for the Kentucky Law Journal. The building occupies a most sightly and beautiful location, being across the walk and to the west of the main library. It is both fireproof and air-conditioned and should be an especially comfortable place for summer school study.

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 (sixty semester hours exclusive of gymnasium and military science).

Pre-Law Work. In order to meet the two years of college credit required for entrance, no special course is prescribed except six college credits in English. The credits obtained in the two years of college work that are required 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.

COURSES LEADING TO DEGREES OF A. B. AND B. S. IN COMMERCE COMBINED WITH THE LL. B. COURSE

Inasmuch as the requirements of the law school now call for a total of 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 courses 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 completing 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

First Semester	Credits	Second Semester	Credits
Property I	2	Property II	2
Pleading I	2	Pleading II	2
Contracts I	3	Contracts II	3
Torts I	3	Torts II	3
Domestic Relations	2	Agency	2
Crimes I	2	Crimes II	2

SECOND YEAR SUBJECTS

First Semester	Credits	Second Semester	Credits
Property III	3	Public Utilities	3
Trial Procedure	4	Insurance	2
Constitutional Law I	2	Constitutional Law II	2
Equity I	3	Equity II	3
Legal Bibliography	—	Municipal Corporations	2
Quasi-Contracts	2	Evidence	4
Negotiable Instruments	3	Wills	3

THIRD YEAR SUBJECTS

First Semester	Credits	Second Semester	Credits
Corporations I	2	Corporations II	3
Credit Transactions	3	Property IV	3
Administrative Law	3	Conflict of Laws	3
Practice Court	2	Legislation	3
Taxation	3	Creditors Rights	3
Trusts	4	Sales	3

SUMMER SESSION

A limited number of courses in law are offered in the summer session of the University. The work in these courses is the same in kind and amount as that given in the same courses in the regular sessions of the school, and credit obtained in the summer session is counted towards a degree.

The attention of students is directed to the fact that work done in the summer session may materially shorten the time required for the completion of the LL. B. degree. A student who begins his law work at the close of his sophomore year in June, 1938, by attending summer sessions for three years and also attending the regular sessions, will obtain his law degree at the close of the summer session in 1940, or if he desires to obtain both the academic and law degrees he may do so in June, 1941. This saving of nine months, in the case of the law degree alone and of one year in the case of both degrees, is accomplished without sacrifice of standards or requirements. Students who are interested in the summer session should consult with the dean, as the particular subjects to be given are largely determined by the number of students applying for instruction therein.

SUMMER SESSION, 1938

FIRST YEAR SUBJECTS

Contracts I. Williston's Cases (4th ed.). Daily. First Term. Professor Evans.

Contracts II. Williston's Cases (4th ed.). Daily. Second Term. Professor Pittman.

Legal Ethics. Hick's Cases. Daily. First Term. Professor Roberts.

Agency. Keedy's Cases. Daily. Second Term. Professor Pittman.

SECOND AND THIRD YEAR SUBJECTS

Property III. Warren's Cases. Daily. First Term. Professor Roberts.

Federal Procedure. Dobie's Cases. Daily. First Term. Professor Randall.

Wills. Costigan's Cases. Daily. First Term. Professor Evans.

Municipal Corporations. Took's Cases. Daily. Second Term. Professor Randall.

Oil and Gas. Kulp's Cases. Daily. Second Term. Professor Moreland.

Industrial Relations. Selected Cases. Daily. Second Term. Professor Moreland.

COLLEGE OF EDUCATION

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

INTRODUCTORY STATEMENT

Organization. The College of Education was established by the University to provide for the education of teachers, supervisors, elementary and high school principals, and city and county superintendents for the public schools of Kentucky. School boards are demanding professionally prepared teachers, supervisors, and administrators. The curricula offered by the College have been planned to enable the student to procure the education that will best equip him for the work he contemplates doing.

Students in elementary education do their observation, participation, and directed teaching in the University Elementary School. Students in secondary education do their observation, participation, and directed teaching in the University High School. Each student is given an opportunity to study good methods and to develop skill in teaching.

Through the cooperation of the board of education in Fayette County students preparing to teach agriculture and home economics have an opportunity to do their observation and practice in the high schools near Lexington offering agriculture and home economics on a vocational basis. The University also has a cooperative relationship with the school board of Versailles that makes possible splendid facilities for observation and practice in home economics. The students in both agriculture and home economics work under skilled supervisors in their respective fields.

Arrangements have been made with public school systems in and around Lexington to cooperate with the University in offering a fifth year of teacher training called an internship. These internships are open to graduate students who have strong scholarship records and who have had successful student teaching experience. By taking 10 credits in the two summer terms before the internship begins in September, 9 credits each semester, and 10 credits the two summer terms following the internship, the requirements for the degree of Master of Arts in Education can be met.

The interne will receive from $400 to $600 for his work in the public school system. He will carry from 2/3 to 4/5 of a teacher's load. The arrangement with the public school provides that the student does not take the place of a regular teacher. The cooperating public school systems are under no obligation to employ the interne at the close of the internship; however, in many instances the student does become a member of the regular staff.

The advantages of this program are:

1. The student begins teaching in a normal situation under efficient supervision with an opportunity for professional growth.
2. It enables the student to earn living expenses while doing a year of graduate work.
3. If the work of internship has been highly satisfactory, the student may be placed on the regular staff in one of Kentucky's better public school systems.

Teachers' Certificates. The University of Kentucky offers curricula for all certificates issued by the State Department of Education on four years of college education in accordance with the new school code adopted by the General Assembly in 1934. Programs that prepare especially for teaching in the elementary school, the junior high school, and the senior high school, for attendance officers, supervisors, elementary principals, high school principals, county superintendents, city superintendents, and other administrative, supervisory, and instructional employees will be offered through the College of Education at the University.

Admissions. To be admitted to the College of Education a student shall meet the following requirements:

a. Junior classification.
b. A standing of at least 1 (average of C on all previous work).

Only candidates of proved scholastic ability are admitted to the professional training for teachers at the University of Kentucky. A student is not permitted to do directed teaching unless he has a standing of at least 1.0 and is classified as a senior or graduate student.

Only candidates possessing healthy bodies, free of major physical defects, are accepted for professional training. A thorough physical examination by University physicians is required the semester prior to enrollment in directed teaching.

Candidates for directed teaching are advised to file their applications a semester previous to their directed teaching.

REQUIREMENTS FOR GRADUATION

The College of Education grants two degrees: A Bachelor of Arts in Education and a Bachelor of Science in Education.

Students who major in education and select their group work in English, mathematics, social sciences, natural sciences, or the languages, will be entitled to consideration for the degree of Bachelor of Arts in Education.

Students who major in education and select their group work in agriculture, engineering, or home economics will be entitled to consideration for the degree of Bachelor of Science in Education.

Students who desire to complete the curriculum for elementary teachers will be entitled to consideration for the degree, Bachelor of Arts in Education.

REQUIREMENTS FOR STUDENTS MAJORING IN ELEMENTARY EDUCATION

A total of 127 credits with a standing of 1.

Students who major in Elementary Education may select their group electives and have directed teaching in either the lower elementary (Grades I, II, III) or upper elementary grades (Grades IV, V, VI). It is desirable that the student make this decision as early as possible. The observation and special problems connected with the theory classes may then be assigned accordingly.

Electives in this field should be chosen largely from the field of English and the social sciences.

If the critic teacher reports a student deficient in spelling, penmanship, or English fundamentals the student will be required to take extra work to make up this deficiency.

VOCATIONAL EDUCATION

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

Students who complete the work for a Bachelor's degree in agriculture and who present fifteen credits in education meeting the approval of the staff in agricultural education will be entitled to a state certificate to teach agriculture on a vocational basis in the public schools of Kentucky.

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

Students who complete the work for a Bachelor's degree in home economics and who present fifteen credits in education including special methods and practice teaching in home economics will be entitled to a state certificate to teach home economics on a vocational basis in the public schools of Kentucky.

Industry. The Federal Vocational Education Act passed by Congress in 1917 provides for the education of teachers for part-time, general continuation and industrial education. The University of Kentucky has been designated as the institution in the state responsible for the education of teachers for this work.

Distributive Occupations. The George-Deen Act approved June 8, 1936, effective July 1, 1937, provides for the education of teachers for

distributive occupations education. The University of Kentucky has been designated as the institution in the state to educate teachers for this work.

CURRICULA FOR ELEMENTARY AND SECONDARY TEACHERS

Although students will not register in the College of Education until the junior year, in order that they may receive proper guidance, the courses in each field and each subject for the freshman and sophomore years are included in the curricula that follow:

SUGGESTED FOUR-YEAR CURRICULUM FOR ELEMENTARY TEACHERS

FRESHMAN YEAR†

First Semester	Credits	Second Semester	Credits
Eng. 1a English Composition	3.	Eng. 1b English Composition	3.
Hist. 5a History of U. S.	3.	Hist. 5b History of U. S.	3.
P. S. 15 Prob. of Citizenship	3.	Psych. 1 Elem. Psychology	3.
Hyg. 9 Hygiene for Teachers	2.	Art Elective	2.
Mus. 4a Music in Primary Grades	2.	Mus. 4b Music in Intermediate Grades	2.
Science	3.	Science	3.
P. E. 1a Gym. Practice	.7	P. E. 1b Gym. Practice	.7
	16.7		16.7

SOPHOMORE YEAR†

First Semester	Credits	Second Semester	Credits
Eng. 3a Survey of Eng. Lit.	3.	Eng. 3b Survey of Eng. Lit.	3.
Geol. 24a Elem. of Geog.	3.	Geol. 24b Elem. of Geog.	3.
Psych. 7 Child Psychology	3.	Art 10 Public School Art	2.
Science	3.	Science	2.
P. E. 14 Plays and Games	1.	Elective	6.
Elective	3.		
	16.		16.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Ed. 44 Fund. of Elem. Ed.	5.	Soc. 1b Prin. of Sociology	3.
Ed. 42 Teaching Arithmetic	3.	Ed. 172 Teaching Reading	3.
Econ. 15 Economic Problems	3.	Ed. 20 Industrial Arts	2.
H. E. 16 Elem. Nutrition	3.	**Ed. 196 Teaching Science	3.
Hist. 40 Hist. of Kentucky	2.	Elective	5.
	16.		16.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Ed. 173 Children's Literature	3.	*Ed. 133 Directed Teaching (either semester)	10.
*Ed. 133 Directed Teaching in Elementary Grades (either semester)	10.	Zool. 108b Heredity	2.
Ed. 118 Tests and Meas. for Elementary Teachers	2.	Electives	
Electives			
	15.		15.

*The student may take only 6 credits in addition to Educ. 133, and these classes must come either at the first hour or late afternoon. Students having 3 credits in practice teaching take Educ. R133, 6 credits.

Transfer students will be required to take a minimum of three semester hours in elementary education at the University of Kentucky before enrolling for practice teaching.

**Kindergarten majors omit Educ. 196 and take the following courses:
Ed. 174—Pre-School Theory and Management (Junior year).
Ed. 176—Pre-School Organization and Teaching (Junior year).
Kindergarten majors may substitute a music elective course for Music 4b.

† The first two years of this curriculum are included here merely for the guidance of the student. Before admission to the College of Education the student must have junior standing.

REQUIREMENTS FOR HIGH SCHOOL TEACHERS

	Credits
1. General Requirements	
English	12
Science, selected from Biology, Chemistry, General Science, Geology, Physics	12
Mathematics (exclusive of Arithmetic)	6
or	
Foreign Language*	(6 to 12)
Social Science, selected from Economics, Government, History, Sociology	12
Psychology	6
Hygiene 9, Hygiene for Teachers	2
Physical Education	1.4
Military Science 1a-b, 6a-b	5.6
Total	57 to 63
2. Two Teaching Majors	24-48 each
or	
(One Teaching Major)	24-48
(Two Teaching Minors)	18-21 each
3. Professional Major	
Education 35, Introduction to Education	3
Education 122, Tests and Measurements	3
Education 105, Fundamentals of Secondary Education	3
Education 101, School Organization	3
Directed Teaching	6

* If three units or more of a single foreign language are offered for admission, six semester hours in the same language as offered for admission will be required, if two units are offered for admission nine semester hours will be required, if one unit or less is offered for admission twelve semester hours will be required.

The general requirements listed above should be completed in the first two years of the student's college work.

COURSES RECOMMENDED FOR A TEACHING MAJOR IN ENGLISH

	Credits
FIRST YEAR	
English 1a-b, English Composition	6
English 6, The Essentials of Speech	2
SECOND YEAR	
English 3a-b, English Literature	6
English 34a-b, Dramatic Production (one or both semesters)	2 or 4
THIRD YEAR	
English 123a-b, American Literature	6
English (Elective)	6
English 7a or b, Public Speaking	3
FOURTH YEAR	
English (Elective)	6

Suggested electives: Journalism 21, Etymology; Library Science 105, Reading Guidance.

COURSES RECOMMENDED FOR A TEACHING MAJOR IN FRENCH

	Credits
FIRST YEAR	
French 1a-b, Elementary	6
SECOND YEAR	
French 2a-b, Intermediate French	6
French 16a-b, Civilization of France	2
THIRD YEAR	
French 6a-b, French Novel and Drama	6
French 8a, Phonetics	3
French 113a, Advanced Grammar and Composition	3
(To be taken in junior year if student teaching is done first semester of senior year.)	
FOURTH YEAR	
French 113a, Advanced Grammar and Composition	3
(To be taken in first semester of senior year if student teaching is done second semester of senior year.)	
French (Elective)	6

Note.—French majors should consult with their advisers in order to avoid duplicating any course that has been taken in high school.

COURSES RECOMMENDED FOR A TEACHING MAJOR IN LATIN

	Credits
FIRST YEAR	
Latin 5 and 6, Livy and Horace	6
SECOND YEAR	
Latin 7 and 8, Tacitus and Pliny or Terence	6
THIRD YEAR	
Latin 109a-b, Latin Literature	6
Latin 120, Greek Civilization	3
Latin 121, Roman Civilization	3
Latin 114a-b, Adv. Latin Composition	2
FOURTH YEAR	
Latin Electives	6

COURSES RECOMMENDED FOR A TEACHING MAJOR IN MATHEMATICS

	Credits
FIRST YEAR	
Mathematics 17, College Algebra	3
Mathematics 18, Plane Trigonometry	2
Mathematics 2, Solid Geometry	3
SECOND YEAR	
Mathematics 19, Analytic Geometry	3
Mathematics 20a, Differential Calculus	4
THIRD YEAR	
Mathematics 20b, Integral Calculus	4
Mathematics 14, Mathematics of Finance	5
FOURTH YEAR	
Mathematics 119, Modern Geometry	3
Mathematics 103, Theory of Equations	3

COURSES RECOMMENDED FOR A TEACHING MAJOR IN THE BIOLOGICAL SCIENCES

	Credits
FIRST YEAR	
Botany 1a-b, General Botany	8
SECOND YEAR	
Zoology 1a-b, General Zoology	8
Anatomy and Physiology 1a-b, General Physiology	6

THIRD YEAR

Botany 19, Dendrology	2
Botany 15, Local Flora	3

FOURTH YEAR

Zoology 102, Ornithology	3
Zoology 108a-b, Principles of Zoology	4

COURSES RECOMMENDED FOR A TEACHING MAJOR IN THE PHYSICAL SCIENCES

FIRST YEAR	Credits
Chemistry 1a-b, General Inorganic Chemistry	10

SECOND YEAR

Physics 1a-b, General Elementary Physics	10
Chemistry 4, Qualitative Analysis	4

THIRD YEAR

Chemistry 8, Quantitative Analysis	5
Physics 51a-b, Introduction to Physics	6

FOURTH YEAR

Physis 116a-b, Physical Manipulations	2

COURSES RECOMMENDED FOR A TEACHING MAJOR IN THE SOCIAL SCIENCES

FIRST YEAR	Credits
History 5a-b, History of the United States	6
Political Science 51, American Government	3
History 1a, History of the Ancient World	3

SECOND YEAR

History 4a-b, History of Modern Europe	6

THIRD YEAR

Political Science 155a-b, Comparative Government	6
History 105, Colonial America	3
History 106, Latin America	3

FOURTH YEAR

History 166, Division and Reunion	3
History 147, Recent History of the United States	3

Suggested electives: Sociology 1a-b, Principles of Sociology; Economics 1, Principles of Economics; Economics 15, Applied Economics.

COURSES RECOMMENDED FOR COMMERCE TEACHERS

FIRST YEAR	Credits
Commerce 2, Economic History of Europe	3
Commerce 3, Economic History of the United States	3

SECOND YEAR

Commerce 1, Principles of Economics	3
Commerce 7a-b, Principles of Accounting	8
Commerce 8, Economic Geography	3
Commerce 9, Forms of Business Organization	3

THIRD YEAR

Commerce 11, Salesmanship	2
Commerce 13a-b, Secretarial Practice	10
Commerce 105, Money and Banking	3
Commerce 117, Corporation Finance	3
Commerce 145, Problems in Office Management	3
*Education 104, Foundations of Business Education in the High School	3

FOURTH YEAR

Commerce 14a-b, Advanced Secretarial Practice	6
Commerce 15, Applied Economics	3
Commerce 109a-b, Business Law	6
**Education 158a, Methods of Teaching Secretarial Practice	2
**Education 158b, Methods and Materials in Teaching Accounting	2

Note.—The prospective teacher is encouraged to elect as many courses in English as possible. Changes may be made in this curriculum with the advice and consent of the Head of the Department of Business Education so as to prepare for teaching specific combinations.

* Will substitute for Education 101 in professional requirements.
** Will substitute for Education 105 in professional requirements.

COURSES RECOMMENDED FOR A TEACHING MAJOR IN PHYSICAL EDUATION

	Credits
FIRST YEAR	
Physical Education, Activity Courses	1.4
Physical Education 20, Rhythms, Calisthenics, and Gymnastic Stunts	4
Physical Education 29, Practice of Organized Play	2
SECOND YEAR	
Physical Education, Activity Courses	1.4
Physical Education 36, Basketball and Football Fundamentals	4
Physical Education 50, Track and Field Athletics	4
THIRD YEAR	
Physical Education, Activity Courses	1.4
Physical Education 124, History and Philosophy of Physical Education	2
Physical Education 128, School Programs of Physical Education	3
FOURTH YEAR	
Physical Education, Activity Courses	1.4

A minimum of nine hours credit from the following courses:

Physical Education 60a-b, Tutorial Work in Physical Education	2
Physical Education 70, Training and First Aid	1
Physical Education 120, Physical Diagnosis and Remedial Gymnastics	3
Physical Education 142, Advanced Football	2
Physical Education 131, Advanced Basketball	2
Physical Education 125, Organization and Administration of Municipal and Community Recreation	3
Physical Education 148, Organization and Administration of Athletics	3

COMPREHENSIVE EXAMINATION

NOTE.—In addition to the above, the following academic courses are recommended:

Anatomy and Physiology 4, 5, Anatomy and Physiology for Physical Education Majors	6
Hygiene 100a-b, Public Health	6
Psychology 7, Psychology of the Child	3

CURRICULUM FOR TEACHERS OF HOME ECONOMICS

(Leading to the degree of Bachelor of Science in Home Economics in the College of Agriculture.)

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Art 2a Art Structure	2.	Art 2b Art Structure	2.
H. E. 26 Textiles	2.	H. E. 6b Foods	3.
H. E. 6a Foods	3.	Chem. 1b Gen. Inorganic	5.
Chem. 1a Gen. Inorganic	5.	Phys. 51b Intro. to Physics	3.
Phys. 51a Intro. to Physics	3.	H. E. 29 Costume Design	3.
Freshman Assembly	.3	Ph. Ed. 1b Physical Educ.	.7
Ph. Ed. 1a Physical Educ.	.7		
	16.0		16.7

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Eng. 1a Composition	3.	Eng. 1b Composition	3.
Chem. 7 Organic	4.	Anat. and Physiology 3	4.
Psychology 1	3.	Clothing 47 Adv. Cloth.	3.
Clothing 46	3.	Econ. 1 Prin. of Economics	3.
Eng. 6 The Essen. of Speech. or Journalism 1a	2. or 3.	Psych. 7 Child Psychology	3.
Sophomore Assembly	.3	Ph. Ed. 2b Physical Educ.	.7
Ph. Ed. 2a Physical Educ.	.7		
	16 or 17.0		16.7

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
H. E. 3 Foods and Nutrition	4.	H. E. 115 Child Care and Development	3.
H. E. 45a Housing	3.	H. E. 124 Dietetics	4.
H. E. 17 Food Sources and Costs	3.	H. E. 43b Interior Decoration	3.
Junior Assembly	.3	Eng. 3a or b English Lit.	3.
Ed. 147 Foundations of Secondary Education	3.	Ed. 160 Technique of Teaching Home Economics	3.
Bacteriology 52	4.	Elective	2.
	17.3		18.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Ed. 160 (if not taken previously)	3.	*H. E. 142 Home Management and Family Relations	5.
Home Hygiene	2.	*Ed. 162 Directed Teaching in Home Econ.	6.
*H. E. 142 Home Management and Family Relations	5.	Sociology 1 Prin. of Soc.	6.
*Ed. 162 Directed Teaching in Home Econ.	6.	Electives	2. or 11
Ed. 101 School Organ.	3.		
Electives	0. or 11		
	16.		16.

* May be taken either semester.

CURRICULUM FOR MEN PREPARING TO TEACH VOCATIONAL AGRICULTURE

FRESHMAN YEAR

First Semester

Course	Subject	Credits
A. I. 31	Market Classes and Breeds of Livestock	3
A. I. 33	Dairying	3
Agronomy 11	Farm Crops	3
Botany 1a	General Botany	4
English 1a	English Composition	3
Military Sci. 1a	First Year Basic Course, Infantry	1.3
Physical Education 1a	Gymnasium or Field Athletics	.7
Assembly (Freshmen)		.3
		18.3

Second Semester

A. I. 32	Farm Poultry Productions	3
Chemistry 1a	General Inorganic Chemistry	5
Botany 1b	General Botany	4
English 1b	English Composition	3
Military Sci. 1b	First Year Basic Course, Infantry	1.3
Physical Ed. 1b	Gymnasium or Field Athletics	.7
		17.0

SOPHOMORE YEAR

First Semester

Course	Subject	Credits
Chemistry 1b	General Inorganic Chemistry	5
Economics 1	Principles of Economics	3
Horticulture 1	General Horticulture	4
Farm Engr. 10	Mechanics of the Farmstead	3
Military Sci. 6a	Second Year Basic Course, Infantry	1.5
		16.5

Second Semester

Bacteriology 52	Principles of Bacteriology	4
Geology 3	Elements of Geology	3
Farm Econ. 4	Agricultural Economics	3
A. I. 20	Principles of Animal Nutrition	3
Agronomy 1	Soils	4
Military Sci. 6b	Second Year Basic Course, Infantry	1.5
		18.5

JUNIOR YEAR

First Semester

Course	Subject	Credits
Farm Economics 113	General Farm Management	3
Markets and Rural Finance 108	Marketing	3
Farm Engr. 8 or 101	Farm Structural Engineering (Farm Shop)	4
A. I. 19	Genetics	3
Agronomy 115	Soil Management	3
A. I. 106	Pork Production	3
		19

Second Semester

*Education 16	Educational Psychology	3
Zoology 25	General Animal Biology	3
Horticulture 110	Vegetable Gardening	3
A. I. 107	Sheep Production	3
A. I. 13	Livestock Judging	2
Agronomy 23	Plant Pathology	4
Agronomy 105	Advanced Crops	3
Agrl. Ent. 102	Advanced Agricultural Entomology	3
Hort. 113	Landscape Gardening	3

Student load of 18 hours to be chosen from this list.

SENIOR YEAR

First Semester

Course	Subject	Credits
Markets and Rural Finance 133	Agricultural Policy	3
Farm Economics 120	Rural Community Problems	3
A. I. 102	Farm Butchering and Curing of Meats	4
Agronomy 113	Agronomy Experimentation	3
Horticulture 105	Small Fruits	2
*Ed. 181	Teaching Vocational Agriculture (either semester)	7
Journalism 1a	Reporting	3
Markets and Rural Finance 111	Agricultural Prices	3

Student load of 18 hours to be chosen from this list.

Second Semester

Education 122	Educational Tests and Measurements for High School Teachers	3
A. I. 105	Beef Production	3
A. I. 134	Advanced Poultry Production	3
A. I. 116	Diseases of Domestic Animals	4
A. I. 125	Dairy Cattle Feeding and Management	3
*Ed. 181	Teaching Vocational Agriculture (either semester)	7
*Ed. 182	Evening School and Part-Time Courses in Agri.	3

Student load of 18 hours to be chosen from this list.

* Starred courses are professional courses required of students planning to teach vocational agriculture. After the sophomore year, the student's schedule must be approved by his adviser in agricultural education and by his adviser in agriculture. Students who become teachers are required to take Ed. 179, Determining Course-Content in Vocational Agriculture, which is offered the first 2½ weeks of the summer school. Including Ed. 179, the student must present at least 18 credits in education.

SUGGESTED CURRICULUM FOR TEACHER LIBRARIANS

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Hist. 4a Introduction to Modern Europe	3.	Hist. 4b Introduction to Modern Europe	3.
Science	3.	Science	3.
P. S. 15 Problems of Citizenship	3.	P. S. 51 Amer. Government	3.
Mathematics or Foreign Language	3.	Mathematics or Foreign Language	3.
Hyg. 9 Hygiene for Teachers	2.	Mus. 19b Music Appreciation	2.
Phy. Ed. 1a Physical Educ.	.7	Phy. Ed. 1b Physical Educ.	.7
	17.7		17.7

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Eng. 3a Eng. Lit.	3.	Eng. 3b Eng. Lit.	3.
Hist. 5a Hist. of the U. S.	3.	Hist. 5b Hist. of the U. S.	3.
Science	3.	Psy. 7 Psychol. of the Child	3.
*Foreign Language or **Elective	3.	*Foreign Language or Science	3.
Art 17a Art Appreciation	1.	Art 17b Art Appreciation	1.
	16.		16.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Ed. 147 Founda. of Sec. Ed.	3.	Ed. 105 Fundamentals of Secondary Ed.	3.
Ed. 101 School Organization	3.	Eng. 110b Shakespeare Tragedy	3.
Eng. 110a Shakespeare Comedy	3.	Eng. 123b Amer. Literature	3.
*Science or **Elective	3.	Ed. 122 Tests and Meas.	3.
L. Sc. 133a Reference and Bibliography	3.	**Elective	3.
	15.		15.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Directed Teaching	6.	Library Science	16.
Library Science	11.		
	17.		16.

* See general requirements for high school teachers, page 76.

** Electives may be chosen from the following: English 34a, 111b, 130a, b; History 106b, 119b, 120, 147, 166; Political Science 101, 154, 155a, b, 165; Journalism 12.

GRADUATE CURRICULA LEADING TO THE MASTER'S DEGREE

The entire curriculum must in each case be a well rounded program of courses related to the student's major interest and approved by his adviser. In case of deficient preparation the adviser, with the approval of the Dean, may prescribe prerequisite undergraduate courses to be taken.

The program for the elementary-school principal and supervisor should be supplemented, by previous experience, by courses in school administration, child psychology, fine or industrial arts, music, children's literature, social studies, health, science, or other subject-matter fields.

Advisers for curricula leading to the master's degree in the field of education are as follows:

For Superintendents and Principals of Twelve-Grade Schools—Seay, Taylor, Williams

For Elementary-School Principals and Supervisors—Duncan, Taylor, Williams

For Secondary-School Principals—Ligon, Adams, Ross

For Critic Teachers on the Elementary Level—Duncan, Williams

For Critic Teachers on the High School Level—Williams, Ligon, Duncan

For Business Teachers—Lawrence, Taylor

For Teachers of Home Economics—Parker, Spickard, Taylor

For Teachers of Vocational Agriculture—Hammonds, Woods, Taylor

For Teachers Who Desire to Major in Education—Adams, Ross, Taylor

In following the programs suggested below, these general requirements should be kept in mind:

1. The student must complete a minimum of 24 semester hours of graduate work and write a thesis.
2. At least 16 semester hours of graduate work must be in education.
3. At least 15 semester hours of graduate work must be on the 200 level or above.
4. At least 36 weeks must be spent in residence at the University of Kentucky as a graduate student.
5. The total number of credits in education must be at least 36 semester hours. (This may include not more than 20 hours taken as an undergraduate student.)
6. A standing of 2.0 or 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 do additional work in lieu of writing a thesis, in which case the following requirements would apply:

1. A minimum of 36 hours of graduate work including Education 205, Review of Educational Literature, must be completed.
2. At least 24 hours of graduate work must be in education.
3. At least 21 semester hours must be in courses at the 200 level or above.
4. At least 48 weeks must be spent in residence at the University of Kentucky as a graduate student.
5. The total number of credits in education must be at least 36 semester hours. (This may include not more than 12 hours taken as an undergraduate student.)

6. A standing of 2.0 or an average of B must be made on all graduate work.

For the standard certificate in administration, the state requires the completion of the master's degree with a major in the field of administration and supervision. For the three types of positions for which this certificate is designed to serve the following courses are recommended:

CURRICULUM FOR SUPERINTENDENTS AND FOR PRINCIPALS OF TWELVE-GRADE SCHOOLS

Course	Credits
Education 202—Local School Administration	3
Education 212—The Elementary School	3
Education 214—The Secondary School	3
Education 222—Methodology in Educational Research	3
Education 225—Supervision of Instruction	3
Education 227a—Principles of Curriculum Construction	3
Education 231—Financing Public Education	3
Electives	3

CURRICULUM FOR ELEMENTARY-SCHOOL PRINCIPALS AND FOR SUPERVISORS

Course	Credits
Education 200—Advanced Course in Philosophy of Education	3
Education 212—The Elementary School	3
Education 222—Methodology of Educational Research	3
Education 229—The Elementary Principal	3
Electives	12

A minimum of 15 hours must be on the 200 level.

CURRICULUM FOR SECONDARY-SCHOOL PRINCIPALS

Course	Credits
Education 214—The Secondary School	3
Education 222—Methodology of Educational Research	3
Education 223—Educational Statistics	3
Education 225—Supervision of Instruction	3
Education 227a—Principles of Curriculum Construction	3
Education 232—High School Administration	3
Electives	6

The state of Kentucky issues a critic teacher's commission based upon the completion of a year of graduate work in an accredited graduate school. The program outlined below offers the required work to obtain a commission to serve as critic teacher in Kentucky.

GRADUATE CURRICULUM FOR CRITIC TEACHERS ON THE ELEMENTARY LEVEL

Course	Credits
Education 200—Advanced Course in Philosophy of Education	3
Education 212—The Elementary School	3
Education 222—Methodology of Educational Research	3
Education 224a—Organization and Supervision of Student Teaching	3
Education 224c—Organization and Supervision of Student Teaching	3
Electives	9

GRADUATE CURRICULUM FOR CRITIC TEACHERS ON THE HIGH SCHOOL LEVEL

Course	Credits
Education 200—Advanced Course in Philosophy of Education	3
Education 214—The Secondary School	3
Education 222—Methodology of Educational Research	3
Education 224a—Organization and Supervision of Student Teaching	3
Education 224b—Organization and Supervision of Student Teaching	3
Electives	9

GRADUATE CURRICULUM FOR HOME ECONOMICS EDUCATION

Graduate work in home economics education is planned primarily for students who wish to continue teaching and for those who desire

to enter the field of teacher-training and supervision. The curriculum must be well-rounded and related to the student's major interest and approved by her adviser. The program for teacher-training and supervision should be preceded by experience in teaching. The adviser, with the approval of the Dean, may prescribe prerequisite undergraduate courses to be taken.

Course	Credits
Education 263—Current Problems in Home Economics Education	3
Education 264—Modern Tendencies in Home Economics Education	3
Education 266a—Seminar in Home Economics Education	3
Education 268—Home Economics Curriculum Construction	3
Education 269—Achievement Testing in Home Economics	3
Education 222—Methodology of Education Research	3
Home Economics 125—Consumer Problems	3
Home Economics 201—Adv. Home Managem't and Family Relationships	3
or	
Home Economics 126—Family Living	(3)
Home Economics 119a—Experimental Cookery	3

CURRICULUM FOR TEACHERS OF VOCATIONAL AGRICULTURE

The following courses are recommended for teachers of vocational agriculture who elect the thesis route. The same courses should be included by men who elect the non-thesis route.

Course	Credits
Education 179—Determining Content in Vocational Agriculture	3
Education 222—Methodology of Educational Research	3
Education 287b—Selecting Teaching Materials	3
Education 287c—Evening Schools	3
Education 287d—Directing Farm Practice	3
Electives (Minoring in Agriculture)	9

A minimum of 15 hours must be on the 200 level.

GRADUATE CURRICULUM FOR BUSINESS TEACHERS

This curriculum is designed in such a way as to provide for differences in undergraduate education and differences in requirements for certification in the various states. The graduate program of studies should supplement the student's previous training so as to provide a balanced business education. The courses listed below are designed to meet the needs of most teachers. Changes may be made with the consent of the Head of the Department of Business Education and of the Dean of the College of Education.

Course	Credits
Education 158a—Methods of Teaching Secretarial Subjects	2
or	
Education 158b—Methods of Teaching Accounting	(2)
Education 200—Advanced Course in Philosophy of Education	3
or	
Education 205 Review of Current Educational Literature	(3)
Education 208a or 208b—Problems in Business Education	3
Educaiton 259—The Commerce Curriculum	3
Education 223—Educational Statistics	3
or	
Commerce 107—Statistical Method	(3)
One course in economic theory (Commerce 215, 203, or 208)	3
One course in finance (Commerce 104, 105, or 117)	3
One course in institutional economics (Commerce 102, 103, 126, 135)	3
Elective	3

Elementary teachers and high school teachers frequently find it desirable to supplement their professional program with additional

work in education. The following curriculum has been outlined to provide an enriched background of professional training for teachers in the public and private schools of the state.

GRADUATE CURRICULUM FOR TEACHERS WHO DESIRE TO MAJOR IN EDUCATION

Course	Credits
Education 200—Advanced Course in Philosophy of Education	3
Education 219—Great Educators and Their Work	3
or	
(Education 230—Problems of Educational Sociology)	(3)
Education 220—Comparative Education	3
or	
(Education 222—Methodology of Educational Research)	(3)
Education 223—Educational Statistics	3
Electives	12

CURRICULUM LEADING TO THE DOCTORATE DEGREE

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

COLLEGE OF COMMERCE

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

INTRODUCTORY STATEMENT

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 provide 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.

REQUIREMENTS FOR GRADUATION

The degree of Bachelor of Science in Commerce is conferred upon students who meet the requirements of any one of the four curricula offered by the College of Commerce. The minimum number of credits required for graduation under the General-Business Curriculum, the Combined Commerce-Law Course and the Secretarial-Training Course, is 127, while under the Industrial-Administration Curriculum it is 142. The scholarship standing must be at least "1". Unless two units in the ancient or 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 one year of foreign language.

GENERAL–BUSINESS CURRICULUM

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Com. 2 Econ. Hist. of Europe	3.	Com. 3 Econ. Hist of U. S. or	
Math. 17 College Algebra	3.	Com. 8 or 12 Econ. Geography	3.
Psych. 2a Gen. Psych.	3.	Math. 14 Math. of Finance	5.
Hyg. 1 Per. and Com. Health	1.	Psych. 2b Gen. Psychology	3.
Eng. 1a English Comp.	3.	English 1b English Comp.	3.
Mil. Sci. 1a First Year Basic	1.3	Mil. Sci. 1b First Year Basic	1.3
Phy. Ed. Gym. Practice	.7	Phy. Ed. Gym. Practice	.7
Elective	1. to 3		
	16.0		16.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Com. 1 Prin. of Econ.	3.	Com. 9 Forms of Bus. Org.	3.
Com. 7a Prin. of Accounting	4.	Com. 7b Prin. of Accounting	4.
Pol. Sci. 51 Amer. Govt.	3.	Hist. Mod. Europe since the French Revolution	3.
Biol. or Phys. Science	3. or 4	Biol. or Phys. Science	3. or 4
Eng. 30 Bus. English	2.	Com. 10 Prin. of Mark.	3.
Mil. Sci. 6a Sec. Year Basic	1.5	Mil. Sci. 6b Sec. Year Basic	1.5
	16.5		17.5

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Com. 107 Statistical Meth.	3.	Com. 117 Corporation Fin.	3.
Com. 105 Money and Bank.	3.	Com. 110 Business Cycles	3.
Electives including one from Advertising, Salesmanship or Sociology	10.	Electives including one Commerce Course	9.
	16.		15.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Com. 109a Business Law	3.	Com. 109b Business Law	3.
Com. 104 Public Finance	3.	Com. 137 Problems in Management or Com. 138 Investigation of Business Problems	3.
Electives including one Commerce Course	9. to 11	Electives including one Commerce Course	9. to 11
	15.		15.

Total credits, 127.

INDUSTRIAL-ADMINISTRATION CURRICULUM

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Com. 2 Econ. Hist. of Eur.	3.	Com. 8 Econ. Geog. or Com. 12 Economic Geog. of N. A.	3.
Math. 17 College Algebra	3.	Math. 19 Plane Analytics	3.
Math. 18 Plane Trig.	2.	Chem. 1b Gen. Inorganic	5.
Chem. 1a Gen. Inorg.	5.	Hyg. 1 Per. and Com. Health	1.
Eng. 1a Eng. Comp.	3.	Eng. 1b English Comp.	3.
Mil. Sci. 1a First Year Basic	1.3	Mil. Sci. 1b First Year Basic	1.3
Phy. Ed. Gym. Practice	.7	Phy. Ed. Gym. Practice	.7
	18.0		17.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Com. 1 Prin. of Economics	3.	Com. 9 Forms of Bus. Org.	3.
Com. 7a Prin. of Accounting	4.	Com. 7b Prin. of Accounting	4.
Pol. Sci. 51 American Govt.	3.	Phys. 1b Gen. Physics	5.
Physics 1a Gen. Physics	5.	Eng. 30 Business English	2.
Draw. 17a Eng. Drawing	2.	Draw. 17b Eng. Drawing	2.
Mil. Sci. 6a Sec. Year Basic	1.5	Mil. Sci. 6b Sec. Year Basic	1.5
	18.5		17.5

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Com. 107 Statis. Method	3.	Com. 117 Corp. Finance	3.
Com. 10 Mark. or Com. 11 Salesmanship	3. or 2	Com. 103 Transportation	3.
Com. 118 Cost Accounting	3.	Hist. 4b Mod. Eur. since the French Revolution	3.
Psych. 10 Intro. to Psych.	3.	Psych. 112 Personnel Adm.	3.
*Electives in Physics, Geology, Chemistry or theoretical courses in Engineering	6.	*Electives in Physics, Geology, Chemistry or theoretical courses in Engineering	6.
	18.		18.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Com. 109a Business Law	3.	Com. 109b Business Law	3.
Com. 126 Econ. of Pub. Util.	3.	Com. 137 Prob. in Man.	3.
Com. 105 Money and Banking	3.	Com. 102 Labor Prob. or Com. 130 Labor Legis.	3.
Com. 104 Public Finance	3.	Elective in Commerce	3.
*Electives in Physics, Geology, Chemistry or theoretical courses in Engineering	6.	*Electives in Physics, Geology, Chemistry or theoretical courses in Engineering	6.
	18.		18.

Total minimum credits, 142.

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

COMBINED COMMERCE–LAW COURSE

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Com. 2 Econ. Hist. of Europe	3.	Com. 3 Econ. Hist. of U. S. or Com. 8 or 12 Econ. Geog.	3.
Math. 17 College Algebra	3.	Math. 14 Math. of Finance	5.
Psy. 2a Gen. Psychology	3.	Psych. 2b Gen. Psychology	3.
Hyg. 1 Per. and Com. Health	1.	Eng. 1b English Comp.	3.
Eng. 1a English Comp.	3.	Mil. Sci. 1b First Year Basic	1.3
Mil. Sci. 1a First Year Basic	1.3	Phy. Ed. Gym. Practice	.7
Phy. Ed. Gym. Practice	.7		
Elective	1. to 3		
	16.0		16.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Com. 1 Prin. of Econ.	3.	Com. 9 Forms of Bus. Org.	3.
Com. 7a Prin. of Accounting	4.	Com. 7b Prin. of Accounting	4.
Pol. Sci. 51 Am. Govt.	3.	Pol. Sci. 80 State Govt.	3.
Biol. or Phys. Sci. or Foreign Language	3. or 4	Biol. or Phys. Sci. or Foreign Language	3. or 4
Eng. 30 Business English	2.	Hist. 4b Intro. to Mod. Europe	3.
Mil. Sci. 6a Sec. Year Basic	1.5	Mil. Sci. 6b Sec. Year Basic	1.5
	16.5		17.5

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Com. 102 Labor Problems	3.	Com. 117 Corp. Finance	3.
Com. 105 Money and Banking	3.	Com. 10 Prin. of Marketing	3.
Com. 104 Public Finance	3.	Electives in Commerce	8.
Com. 107 Statistical Method	3.	Elem. Phil. or Logic	3.
Electives in Commerce or Sociology	4. or 5		
	16.		17.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Property I	2.	Property II	2.
Torts I	3.	Torts II	3.
Contracts I	3.	Contracts II	3.
Domestic Relations	2.	Agency	2.
Criminal Law I	2.	Criminal Procedure II	2.
Pleading I	2.	Pleading II	2.
	14.		14.

Total, 127.

The Combined Commerce-Law Course 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.

SECRETARIAL–TRAINING COURSE

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Com. 2 Econ. Hist. of Europe	3.	Com. 3 Econ. Hist. of U. S. or Com. 8 or 12 Econ. Geog.	3.
For Lang. or Math. 17 College Algebra	3.	For. Lang. or Math. 14 Math. of Finance	3. or 5
Psych. 2a Gen. Psych.	3.	Psy. 2b Gen. Psych.	3.
Eng. 1a English Comp.	3.	Hyg. 1 Per. and Com. Health	1.
Mil. Sci. 1a First Year Basic	1.3	Eng. 1b Eng. Comp.	3.
Phy. Ed. Gym. Practice	.7	Mil. Sci. 1b First Year Basic	1.3
Elective	1. to 3	Phy. Ed. Gym. Practice	.7
	15.0		15.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Com. 1 Prin. of Econ.	3.	Com. 9 Forms of Bus. Org.	3.
Com. 7a Prin. of Accounting	4.	Com. 7b Prin. of Accounting	4.
Pol. Sci. 51 Am. Govt.	3.	Hist. 4b Mod. Europe since French Revolution	3.
Biol. or Phys. Science	3. or 4	Biol. or Phys. Science	3. or 4
Eng. 30 Bus. English	2.	Com. 10 Prin. of Mark.	3.
Mil. Sci. 6a Sec. Year Basic	1.5	Mil. Sci. 6b Sec. Year Basic	1.5
	16.5		17.5

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Com. 107 Statistical Method	3.	Com. 11 Salesmanship	2.
Com. 105 Money and Banking	3.	Eng. 30 Business English	2.
Soc. Prin. of Sociology	3.	Com. 117 Corp. Finance	3.
Com. 13a Secretarial Pract.	5.	Com. 13b Secretarial Prac.	5.
Com. 6 Secretarial Acct.	3.	Elective in English	2.
		Electives	3.
	17.		17.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Com. 109a Business Law	3.	Com. 109b Business Law	3.
Com. 14a Advanced Secretarial Practice	3.	Com. 14b Advanced Secretarial Practice	3.
Com. 145 Problems in Office Management	3.	Electives including two Commerce Courses	9.
Electives	3.		
	15.		15.

Total, 127.

CURRICULUM FOR COMMERCE TEACHERS

Students preparing to teach business subjects in the high school should take enough work in education to meet the requirements for teachers' certificates. Attention is called to a special curriculum for

the training of commerce teachers offered by the College of Education It is possible for students registered for either the General-Business Curriculum or the Secretarial-Training Curriculum to prepare for teaching by electing required courses in education.

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.

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.

PREPARATION FOR PUBLIC SERVICE

In view of the increased demands from federal, state and local governments for experts in finance, accounting, marketing, statistics and personnel management, students should cosider the possibilities of careers in the field of public service. Comparative Government and other courses in Political Science should be taken as electives in addition to the requirements in the General-Business Curriculum.

If preparation for the field of foreign service is desired, various courses in economics, political science and history dealing with international relations, should be taken. Foreign languages, of course, are indispensable.

OTHER FIELDS OF SPECIALIZATION

In addition to the fields of specialization above suggested, students pursuing the General-Business Curriculum, and to some extent those following the Secretarial-Training Course, may concentrate their electives in such professional fields as merchandising, salesmanship, advertising, insurance and personnel management, or else they may scatter their efforts and take a number of unrelated courses with a view to broaden their education. Students should seek the advice of members of the Faculty concerning the availability of courses in the various departments of the University that will meet their needs.

GRADUATE SCHOOL

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

INTRODUCTORY STATEMENT

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

The following advanced degrees are conferred by the University:

Master of Arts
Master of Science
Master of Arts in Education
Master of Science in Education
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
Master of Science in Public Health
Civil Enginee (C. E.)
Electrical Engineer (E. E.)
Mechanical Engineer (M. E.)
Metallurgical Engineer (Met. E.)
Mining Engineer (E. M.)
Doctor of Philosophy

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

ADMISSION TO GRADUATE STANDING

Graduates of institutions accredited by the University may be admitted to the Graduate School upon the presentation of a certificate of graduation and an official transcript of undergraduate courses taken. 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 steps in the procedure for admission to the Graduate School is the filing of a formal application with the Registrar. Applicants from institutions other than this University are also required to file 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 this bulletin, and all courses which may appear later in the regular University catalog, which have numbers above 100, may be counted as credit towards a graduate degree. A grade of D in a course will not be given graduate credit.

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 $5.00 per credit hour. Non-residents pay $6.00 per credit hour. Part-time students also pay a registration fee of $3.00.

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

REQUIREMENTS FOR THE DEGREE 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 twenty-four semester hours of graduate work in course with a standing of 2 and no grade below C shall be counted.

Courses. The major field shall comprise, as to courses, approximately two-thirds of the work and a minor (within the department or allied departments) of approximately one-third of the work. The two shall have graduate relationship.

Residence. The minimum residence is one academic year of 36 weeks. This residence may be fulfilled by any combination of regular semester or summer school sessions which total 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 semester is evaluated on the basis of the amount of work carried.

Transfer of Credits. No transferred credits are accepted toward the Master of Arts or Master of Science degrees. 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 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 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 semester. 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 reached the degree of B. A. or B. A. 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. Twenty-four credits in graduate courses exclusive of the thesis, one academic year (36 weeks) in residence, and an acceptable thesis.
2. At the option of the department (not of the student) the master's degree in Education may be granted for the completion of thirty-six credits in graduate courses with an average standing of 2 or better, forty-eight weeks in residence, and no requirement of a thesis.

There is no language requirement for either of the professional degrees in Education.

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

Students 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 24 credits of graduate work for which all grades above D are counted, 36 weeks of residence, and a thesis, or
2. The completion of 36 credits of graduate work with a standing of 2 or better, 48 weeks of residence, and no thesis requirement.
3. One-half the work must be in one department, the remainder in any other department or departments approved by the major professor.
4. There is no language requirement for either of these professional degrees.

REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN PUBLIC HEALTH

Students 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. Twenty-four credits in graduate courses
2. Thirty-six weeks of residence
3. An acceptable thesis
4. The passing of a final comprehensive examination

REQUIREMENTS FOR ADVANCED DEGREES IN ENGINEERING

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

The Master's Degrees in Engineering. The master's degrees in engineering may be obtained by satisfying the following requirements:

Twenty-four credits in graduate courses, one academic year (thirty six weeks) in residence and an acceptable thesis.

The candidate must hold the corresponding Bachelor of Science 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, 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 graduates of the University of Kentucky, College of Engineering, who present satisfactory evidence of professional work of creditable quality in the engineering fields of their choice, extending over a period of five years, and who submit satisfactory theses as further evidence of their professional attainments.

Applications for professional degrees must be made with the Dean of the Graduate School not less than one year before the degree may be granted, and have the approval of the Graduate Committee of the College of Engineering.

The Graduate Committee will pass on the qualifications of all applicants for the professional degrees. It may, at its discretion, require an oral examination.

A candidate holding the M. S. degree in engineering shall be considered to have fulfilled two years of the five-year requirement for the corresponding professional degree.

A candidate holding the B. 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.

The fees for residence students who are candidates for M. S. degrees in engineering are the same as for undergraduates (see page 14). The fees for the professional degrees are $15.00 registration fee and $15.00 graduation fee.

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 in 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. Altho 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 of 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 Examinations. Applicants for the degree of Doctor of Philosophy are required to pass a Qualifying Examination. This examination shall be taken during the second semester 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 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 four 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 Business Agent 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 recommmended. 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.

Application. All candidates who desire to be admitted to the final examination must file an application, approved by the Dean of the Graduate School, with the Registrar of the University at least three weeks before the examination is held.

Final Examination. After the acceptance of the dissertation by the special committee and the Dean of the Graduate School, the candidate shall be given a 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 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 Senate for recommendation to the Board of Trustees for the degree of Doctor of Philosophy in course.

FELLOWSHIPS AND SCHOLARSHIPS

For the encouragement of research and scholarship the following fellowships and scholarships have been established:

Ten University scholarships with a stipend of $200.00 each.
Five University fellowships with a stipend of $400.00 each.
One Registrar's fellowship with a stipend of $400.00.

Scholars and fellows will be expected to devote their whole time to graduate work, and no teaching or other departmental work may be required of them. Students employed as assistants in departments should as a rule take two years' requirement.

Fellowships and scholarships are open to those who already hold, or will receive at the close of the academic year, a bachelor's degree from any college or university of good standing, provided the student has shown some special aptitude for the line of work he desires to pursue.

The primary object of these appointments is to stimulate research and not to give pecuniary aid. No departmental duties of any kind will be required of fellows and scholars. Candidates for the awards must be graduates of standard colleges or universities and must show

evidence of high scholarship and fitness for graduate study. No student should apply for the award who does not cherish a real and earnest desire to do research work. The appointments are made for one year only, but may be renewed if it can be satisfactorily shown that the prosecution of research undertaken should continue.

Forms for making application may be secured from the Dean of the Graduate School, University of Kentucky, Lexington, Kentucky. All applications should be on file not later than the 15th of April.

GRADUATE STUDENTS NOT CANDIDATES FOR A DEGREE

Graduate students who are not candidates for an advanced degree 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.

THE GRADUATE CLUB

All graduate students are members of the Graduate Club, in which they are expected to take an active part. The club serves the purpose of developing an esprit de corps among graduate students and provides ways and means for securing prominent men for addresses on various subjects of interest.

SUMMER SESSION

JESSE E. ADAMS, M. A., Ph. D., Director

The Summer Session for 1939 consists of two terms of five weeks each. The first term opens June 12 and closes July 15. The second term opens July 17 and closes August 19.

The tuition fee for each college, with the exception of the College of Law and Department of Health, is $22.75 a term where a load of more than three hours is carried. Students registering for three hours or less will be charged $5.00 per credit hour, with a minimum registration fee of $10.00. In the College of Law the fee is $27.50. In the Department of Health the fee for health officers is $75.00 for eight weeks, and for nurses and sanitary engineers $50.00 for eight weeks.

The normal load for a student is six semester hours per term, but where the standing is 2 (average of "B") or better, a student may make thirteen semester hours in the two terms. Three full summers is equivalent to one year's residence work for either undergraduate or graduate degrees.

A wide program of curricular studies will be offered on both the undergraduate and graduate levels. All colleges and all departments will offer a comprehensive selection of courses.

The Summer Session also stresses the extra-curricular side of the student's life. Social activities, consisting of teas, receptions, dances, band concerts, picnics, convocations, and various entertainments, are an integral part of the summer schedule.

The graduate program has had a phenomenal growth since 1932, in fact the enrollment has just about doubled in that time. An increasing number of graduate students are making application for the Ph. D. degree.

The Summer Session is planned for teachers, school administrators and supervisors, coaches, librarians, doctors, nurses, sanitary engineers, persons majoring in law, engineering, commerce and agriculture, and county agents.

Rooms per term in the women's residence halls range in price from $11.75 to $14.00, while rooms in the men's halls range in price from $10.00 to $12.50 per term. Meals are served at the University Commons during the Summer Session at very reasonable prices.

The University of Kentucky is following the policy during the Summer Session of bringing nationally known authorities in various fields to the campus as a part of its teaching staff, in addition to its regular faculty. By this means, it is possible for persons interested in

specialized training in Kentucky to come in contact with some of the greatest authorities in the various fields, without having to leave their state and attend other institutions at a much greater cost. As in the past two summers, this policy will be continued during 1939.

The entire plant of the University, including laboratories, libraries, and buildings is available for summer use.

Students desiring bulletins or other information about the Summer Session should write the Director of the Summer Session.

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, 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 forensic 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. The Kentucky High School Achievement Tests and the Kentucky High School Tennis Tournament are administered by this bureau.
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 Woman's Club Service.—Furnishing club programs and package library materials as well as helps for clubs.
6. A Bureau of Visual Aids.—Furnishing educational motion picture films and other visual aids service to schools and clubs.

A separate bulletin for correspondence study is published.

PART III

STATEMENT OF COURSES OFFERED AT THE UNIVERSITY

STATEMENT OF COURSES

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

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Metallurgical Engineering	219
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Petroleum Production Engineering	
Philosophy	231
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Courses open to freshmen and sophomores are numbered from 1 to 99 inclusive; courses numbered from 100 to 199 inclusive are open to upper division and graduate students; courses numbered 200 and above are open only to graduate students. The first half of a year's course is indicated by the letter a; the second half by the letter b. Seminar courses and independent or individual work courses in which more than two semesters' 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 semester hours is indicated by a number in parentheses; thus, (3); the first semester is indicated by I, the second by II, and the summer session by S. Thus, Education 210, Special Problems in School Administration (3) I, II, S, is a graduate course giving three credits and offered in both semesters and the summer session.

A student in the College of Arts and Sciences may elect towards the A. B. or B. S. degree a total of 30 credits from other colleges of the University. However, election of law courses is restricted.

AGRICULTURE—STUDENT ASSEMBLIES

Dean Cooper, Professor Horlacher, and Assistant Professors Deephouse and Grundmeier

1 FRESHMAN ASSEMBLY. (.3) I Horlacher

The purpose of the series of lectures is to aid freshmen in becoming acquainted with the college and the curriculum and in solving problems which confront them as students. One lecture each week.

2 SOPHOMORE ASSEMBLY. (HOME ECONOMICS) (.3) I Grundmeier

Lectures on current problems in home economics.

3 JUNIOR ASSEMBLY. (HOME ECONOMICS) (.3) I Deephouse

Lectures on current problems in home economics.

4 SENIOR ASSEMBLY. (0) II Cooper, Horlacher

The purpose of the series of lectures is to present to seniors various aspects of their relationship to work which may be undertaken after graduation. One lecture each month. Requirement for graduation.

AGRICULTURAL EDUCATION

Professor Hammonds, Associate Professor Woods and Mr. Armstrong, Mr. Hilton and Mr. Robbins

179 DETERMINING CONTENT IN VOCATIONAL AGRICULTURE. (3) S — Hammonds

Interpreting data as a basis for course building. Working out the content of a four-year course in vocational agriculture.

181 TEACHING VOCATIONAL AGRICULTURE. (7) II — Hammonds, Hilton, Robbins, and Tabb

Designed to prepare men for the teaching of agriculture. About one-half of the course is practice.

182 EVENING SCHOOL AND PART-TIME COURSES IN AGRICULTURE. (2) II — Hammonds

A general introduction to evening school and part-time work with some observation of work in both of these fields.

188 FARM PRACTICE SUPERVISION. (1) I, II, S — Hammonds, Woods, and Armstrong

Practice and directed study in supervising farm practice of pupils in vocational agriculture.

280 METHOD IN TEACHING VOCATIONAL AGRICULTURE. (3) S — Hammonds

The principles of method are applied to the teaching of agriculture. For men with experience in teaching vocational agriculture.

281 TEACHING PREVOCATIONAL AGRICULTURE. (3) S — Woods

Each student works out the content of a course in prevocational agriculture, including selecting the teaching materials. Aims, purposes, and methods of teaching are considered.

287a ADVANCED PROBLEMS IN AGRICULTURAL EDUCATION. (3) I, II, S — Hammonds and Woods

The specific problems considered vary according to the needs of the group.

287b SELECTING TEACHING MATERIALS. (3) S — Armstrong

Specific references and other teaching materials are selected to be used in the teaching of vocational agriculture.

287c EVENING SCHOOLS. (3) S — Hammonds and Woods

Designed to prepare men to teach adult farmers. Includes organizing the school, determining content, method of teaching, follow-up work.

287d DIRECTING FARM PRACTICE. (3) S — Hammonds

Considers farm practice as a method of teaching. Takes up standards, planning, supervision, records.

287e TEACHING FARM SHOP. (3) S — Woods

Includes determining content for shop, securing and equipping the shop, and methods of teaching farm shop.

287f PART-TIME SCHOOLS. (3) S — Hammonds and Woods

Determining content and teaching part-time courses in vocational agriculture.

289 RESEARCH IN AGRICULTURAL EDUCATION. (3) I, II, S — Hammonds and Woods

The student works on some problem of importance to agricultural education.

AGRICULTURAL ENTOMOLOGY

Professor W. A. Price and Mr. Townsend

10 AGRICULTURAL ENTOMOLOGY. (3) I, II, S — Townsend
A general consideration of the fundamentals of insect structures, biology, and classification with frequent discussions of current topics relating to both beneficial and destructive insects. Lectures, 2 hours; laboratory, 2 hours.

11 APICULTURE. (3) II — Price and Townsend
The anatomy of the bee; the colony; location and equipment of the apiary; production and marketing of comb and extracted honey; diseases and enemies of bees. Much of the laboratory work has to do with manipulation of bee-keeping equipment and with the bees themselves. Lectures, 2 hours; laboratory, 2 hours.

102 ADVANCED AGRICULTURAL ENTOMOLOGY. (3) II, S — Townsend
Life history, control and means of identification of the common and important insects of Kentucky; the making and care of school collections, cages and aquaria. Especially planned for those intending to take up vocational agriculture teaching and county agent work. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITE: A. E. 10.**

103 ECONOMIC ENTOMOLOGY: FRUIT AND GARDEN INSECTS. (3) I — Townsend
Beneficial and injurious insects of fruit and garden crops with special attention to the life histories, habits, and control of injurious species found in Kentucky. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITE: A. E. 10.**

104 ECONOMIC ENTOMOLOGY: FARM CROP INSECTS AND ANIMAL PARASITES. (3) II — Townsend
Beneficial and injurious insects of common farm crops including those of stored grain and forage; also internal and external insect parasites of domestic animals. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITE: A. E. 10.**

106a-b SYSTEMATIC AND TECHNICAL AGRICULTURAL ENTOMOLOGY. (3, 3) I, II — Townsend
Insect physiology, anatomy, ecology, and taxonomy; entomological literature and technique; studies of special groups of insects. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITES: A. E. 10 AND ANY OF THE FOLLOWING: 102, 103, 104.**

201a-b ENTOMOLOGICAL PROBLEMS. (3, 3), I, II — Price
Investigations of chosen insect problems, including original work. Discussion and assignment of current insect subjects. Time to be arranged. **PREREQUISITES: A. E. 10, 103, 104.**

AGRICULTURAL EXTENSION

Professor Bryant

1 METHODS IN AGRICULTURAL EXTENSION. (1) II — Bryant
Presenting the methods used in extension work in agriculture and home economics, organization, administration and financing; cooperating agencies; forms of organizing the working forces and methods of making programs of work. Open to juniors and seniors. One hour a week.

AGRONOMY

Professors Roberts (Soils), Kinney (Crops), and Valleau (Plant Pathology); Associate Professors Karraker (Soils) and Fergus (Crops), and Mr. Phillippe (Crops)

4 SOILS. (3) II — Karraker

An introductory study of the origin, properties, and management of soils. Lecture and recitations, 3 hours. **PREREQUISITES: CHEM. 1a, 1b.**

5 SOILS LABORATORY. (2) II — Karraker

Exercises on soil texture, structure, classification, water, erosion, absorption, base exchange, acidity, nutrient supply, and nitrate production. Laboratory, 4 hours. **PREREQUISITE OR CONCURRENT: AGRON. 4.**

11 FARM CROPS. (3) I — Phillippe, Fergus

recitation, 2 hours; laboratory, 2 hours.

A survey course considering the geographical distribution, science of production, and uses of important field crops. Lecture and

14 MARKET GRAIN GRADING AND GRAIN JUDGING. (2) I — Phillippe, Fergus

Studies of federal classes and grades of market grains. Attention is also given to show standards. Laboratory, 4 hours. **PREREQUISITE: PERMISSION OF INSTRUCTOR.**

23 PLANT PATHOLOGY. (4) II — Valleau

A general survey of the causes, effects of, and methods of control of plant diseases. Recitation, 2 hours; laboratory, 4 hours. **PREREQUISITES: BOTANY 1a, 1b.**

105 ADVANCED CROPS. (3) II, S — Kinney, Fergus

Important crops of the world are studied in some detail as regards distribution, soil and climatic adaptation and technique of production. Lectures and recitations, 3 hours. **PREREQUISITE: AGRON. 11.**

106 FIELD CROP IMPROVEMENT. (2) II — Kinney

A study of the principles involved and the technique used in breeding field crop plants. Lectures, 2 hours. **PREREQUISITES: AGRON. 11 OR EQUIVALENT; A. I. 19.**

109 RECENT DEVELOPMENTS IN SOIL MANAGEMENT. (3) S — Karraker

Consideration will be given to the water erosion, leaching, tillage, liming, fertilization, and cropping of soils in the light of recent knowledge. **PREREQUISITES: UNDERGRADUATES, AGRON. 115; GRADUATES, AGRON. 4.**

110 ADVANCED SOILS: BIOLOGICAL STUDIES IN SOILS. (3) II — Karraker

A study in some detail of the soil organisms and biological soil processes. Lecture, 1 hour; laboratory, 4 hours. **PREREQUISITE: AGRON. 4.**

111 ADVANCED SOILS: PHYSICO-CHEMICAL STUDIES IN SOILS. (3) II — Karraker

A study in some detail of the physico-chemical conditions and changes in soils. Lecture, 1 hour; laboratory, 4 hours. **PREREQUISITE: AGRON. 4.**

112a-b **SPECIAL WORK IN SOILS.** (3, 3) I, II Roberts, Karraker
Students interested will be given the opportunity to do work not covered in the other courses in soils. **PREREQUISITE: AGRON. 4.**

113 **AGRONOMY EXPERIMENTATION.** (3) I Roberts
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, 3 hours. **PREREQUISITE: AGRON. 4.**

114a-b **SPECIFIC CROPS.** (2, 2) I, II Kinney, Fergus
This course is for the student who wishes to study in detail the production of a particular crop. First semester work limited to forage crops; second semester work to cereal crops and tobacco. **PREREQUISITE: PERMISSION OF INSTRUCTOR.**

115 **SOIL MANAGEMENT.** (3) I Roberts
Deals with erosion, soil moisture, tillage operations, soil organic matter and nitrogen, including animal and green manures, lime and fertilizers. Lectures, 3 hours. **PREREQUISITE: AGRON. 4.**

116 **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 per week; laboratory, 2 hours. Open to juniors and seniors. Offered 1938-39; not offered 1939-40.

202a-b **SPECIAL PROBLEMS IN CROP PRODUCTION.** (2, 2) I, II Kinney, Fergus
This course is for graduate students wishing to study form and growth of a crop plant in relation to production practices and problems.

203a-b **LITERATURE OF PLANT PATHOLOGY.** (3, 3) I, II Valleau
A survey of the literature of plant pathology. **PREREQUISITE: AGRON. 23.**

204a-b **INVESTIGATIONS IN SOILS.** (3, 3) I, II Roberts, Karraker
PREREQUISITE: PERMISSION OF INSTRUCTOR.

207a-b **SEMINAR.** (1, 1) I, II. Agronomy Staff

ANATOMY AND PHYSIOLOGY

Professor Allen, Assistant Professor Sherwood, and Assistants

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 degree from the College of Arts and Sciences before entering the Medical School and who choose Anatomy and Physiology as their major will have met all the requirements and recomended courses of study of 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.

Requirements for a Major. Prerequisites: Anatomy and Physiology, 1a, 1b, or the equivalent; Chemistry, 1a, 1b; Zoology, 1a, 1b; Physics, one year. Required: Anatomy and Physiology, 116a, 116b and 14 additional credits of advanced work in Anatomy and Physiology. Major students are required to enroll in tutorial courses (A. and P. 116a, b) during the senior year and to pass a final comprehensive examination in the department.

Requirements in Field of Concentration. Forty credits in the field of Biological Sciences, including the major work, in courses not open to freshmen.

1a **GENERAL PHYSIOLOGY.** (3) I, S — Allen, Sherwood

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.** (3) II, S — Allen, Sherwood

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 are studied in detail. **NOT OPEN TO FRESHMEN.**

3 **PHYSIOLOGY.** (4) I — Allen and Assistant

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, two hours a week; laboratory, four hours a week. **PREREQUISITES: CHEMISTRY 1a AND 1b OR THE EQUIVALENT; CHEMISTRY 7.**

4 **ELEMENTARY ANATOMY.** (3) I — Sherwood and Assistant

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. Lecture, one hour a week; laboratory, four hours a week. Offered for 1937-38. **PREREQUISITE: SOPHOMORE STANDING.**

5 **PHYSIOLOGY.** (3) II — Allen and Assistant

A course for students who are majoring in Physical Education but can be taken by others. Emphasis will be placed upon the physi-

ology 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. Lecture, two hours a week; laboratory, two hours a week. Offered for 1937-38. **PREREQUISITE: A. & P. 4.**

6 GENERAL ANATOMY AND PHYSIOLOGY FOR NURSES. (4) I — Allen and Assistant

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; the vascular system; 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 OR CONCURRENT: GEN. CHEM.**

Courses open only to Upper Division and Graduate Students

***103a-d INDEPENDENT WORK IN ANATOMY.** (3) I, II — Sherwood

The pursuit of some advanced problems in anatomy under the direct supervision of the instructor. Discussion period, one hour a week; laboratory, four hours a week. Given 1937-38; not offered 1938-39. **PREREQUISITES: A. & P. 1a AND 1b OR THE EQUIVALENT.**

104a-d INDEPENDENT WORK IN PHYSIOLOGY. (3) 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 four hours a week. Not offered 1937-38; offered 1938-39. **PREREQUISITES: A. & P. 1a AND 1b OR EQUIVALENT; CHEMISTRY 1a AND 1b.**

105 ARCHITECTURE OF THE HUMAN SKELETON. (4) I, S. — Sherwood and Assistant

The 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 and 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 are studied in detail. Lecture and recitation, one hour a week; laboratory, six hours a week. Given 1937-38; offered 1938-39. **PREREQUISITE: JUNIOR STANDING.**

106 INTRODUCTION TO ENDOCRINOLOGY. (3) II, S — 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 interests. Lectures and recitations, three hours a week. Given 1937-38; offered 1938-39. **PREREQUISITES: A. & P. 1a AND 1b OR THE EQUIVALENT; ZOOLOGY 7b; CHEMISTRY 1a AND 1b; AND THE INSTRUCTOR'S CONSENT.**

107 ADVANCED ANATOMY. (4) II — Sherwood

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 are considered. The relation of the structure of the nervous system to psychological reactions are studied. Lectures and recitations, two hours a week; laboratory, four hours a week. Given 1937-38; offered 1938-39. **PREREQUISITES: A. & P. 1a AND 1b OR THE EQUIVALENT.**

108a ADVANCED PHYSIOLOGY. (4) I — Allen, Sherwood

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 the course, graphic records which show the character of contraction of muscle (skeletal and smooth) are made. This is followed by observing the different factors that vary the character of the contraction. Experiments are performed to show that muscle is a thermogenic and an electrogenic organ. The nervous system which includes the structures and functions of the spinal cord, the medulla oblongata, the cerebellum, the cerebrum and the autonomic system are taken up in great detail. The course will close with an intensive study of the special sense organs. Practically half of the semester will be devoted to the nervous system. Lectures and recitations, two hours a week; laboratory, four hours a week. Given in 1937-38; offered 1938-39. **PREREQUISITES: A. & P. 1a AND 1b; CHEMISTRY 1a AND 1b; PHYSICS 1a AND 1b.**

108b ADVANCED PHYSIOLOGY. (4) II — Allen, Sherwood

This is a continuation of 108a. The course is opened with the study of the circulatory system. Much time is given to the consideration of the mechanics of the heart, its nervous regulation and the functional peculiarities of its tissues. The mechanics of the circulation (hemodynamics) which includes the nervous regulation of the blood vessels are also surveyed. Other subject material to be covered consists of the respiratory system; the gastro-intestinal tract with its secretory organs; the processes of digestion, absorption, excretion, heat production; voice and production of speech. Lectures and recitations, two hours a week; laboratory, four hours a week. Given in 1937-38; offered 1938-39. **PREREQUISITE: A. & P. 108a.**

109 APPLICATION OF PHYSICAL PRINCIPLES TO THE HUMAN BODY. (3) I — Allen

This course is especially designed for students interested 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. Lecture and recitation, two hours a week; laboratory, two hours a week. Given 1937-38; offered 1938-39. **PREREQUISITES: A. & P. 1a AND 1b; CHEMISTRY 1a AND 1b. PHYSICS 1a AND 1b.**

116a **SEMINAR IN ANATOMY AND PHYSIOLOGY.** (1) I — Allen, Sherwood

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. Given 1937-38; offered 1938-39. **PREREQUISITES: A. & P. 1a AND 1b OR THE EQUIVALENT.**

116b **SEMINAR IN ANATOMY AND PHYSIOLOGY.** (1) II — Allen, Sherwood

Continuation of 116a. One two-hour discussion period a week. Open only to Seniors and Graduates. Given 1937-38; offered 1938-39. **PREREQUISITES: A. & P. 1a AND 1b OR THE EQUIVALENT.**

Courses open only to Graduate Students

201a **RESEARCH IN PHYSIOLOGY.** (5) I — Allen, Sherwood

The pursuit of an assigned problem in which the student will have the opportunity to demonstrate his or her originality. Conferences and laboratory ten hours a week. Given 1937-38; offered 1938-39. **PREREQUISITES: A. & P. 1a AND 1b OR THE EQUIVALENT; CHEMISTRY 127a AND 127b OR THE EQUIVALENT; PHYSICAL CHEMISTRY DESIRABLE; PHYSICS, ONE YEAR.**

201b **RESEARCH IN PHYSIOLOGY.** (5) II — Allen, Sherwood

Continuation of 201a. Conferences and laboratory, ten hours a week. Given 1937-38; offered 1938-39. **PREREQUISITES: A. & P. 1a AND 1b OR THE EQUIVALENT; CHEMISTRY 127a AND 127b OR THE EQUIVALENT; PHYSICAL CHEMISTRY DESIRABLE; PHYSICS, ONE YEAR.**

Suggestive Course for Major in Anatomy and Physiology

JUNIOR YEAR†

First Semester	Credits	Second Semester	Credits
Soc. Sci. Hist., Pol. Sci., Sociology, or Ec. Hist.	3.	Soc. Sci. (Continue in the Department elected in first semester)	3.
Psych. 2a Gen. Psychology	3.	Psych. 2b Gen. Psychology	3.
Chem. 127a Organic Chem.	5.	Chem. 127b Organic Chem.	5.
Zool. 101a Histology	3.	Zool. 106 Embryology	4.
Anat. & Phys. 105 Architecture of Human Skeleton	4.	Anat. & Phys. 106 Introduction to Endocrinology	3.

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

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Anat. & Phys. 116a Seminar (Tutorial Course)	1.	Anat. & Phys. 116b Seminar (Tutorial Course)	1.
Anat. & Phys. 108a Adv. Phys.	4.	Anat. & Phys. 108b Adv. Phys.	4.
or		or	
Anat. and Phys. 109 Application of Physical Principles to the Human Body	3.	Anat. & Phys. 107 Adv. Anat.	4.
Chem. 101 Physical Chem.	5.	Bact. 52 Prin. of Bacteriology	4.
Eng. 3a Hist. of Eng. Lit.	3.	Eng. 3b Hist. of Eng. Lit.	3.
Elective Modern Lang., social subject, or Botany	3.	Elective (Continue subject elected in first semester)	3.
		Hyg. 1 Personal and Community Health	1.

ANCIENT LANGUAGES AND LITERATURE

Professor Jones and Assistant

Requirements for a Major. Prerequisites: First two years of college Latin. Required: A. L. 16a, b; a minimum of 15 credits of Ancient Languages. Major students are required to enroll in tutorial courses during the senior year and to pass a final comprehensive examination in the department.

Requirements in Field of Concentration. Forty credits in the field of Literature, Philosophy and the Arts, including the major work, in courses not open to freshmen.

Latin

*1 BEGINNING LATIN. (3) I — Jones

*2 CAESAR AND SELECTIONS. (3) II — Jones
The equivalent of four books of Caesar. PREREQUISITE: LATIN I.

*3 CICERO AND SELECTIONS. (3) I — Jones
The equivalent of five orations of Cicero. PREREQUISITE: LATIN II.

*4 VIRGIL. (3) II — Jones
(Books I, II, IV, VI of the Æneid.) PREREQUISITE: LATIN 2 OR 3.

*5 LIVY. (3) I — Jones
(Book I and Selections.) PREREQUISITE: LATIN 3 OR 4.

*6 HORACE. (3) II — Jones
(Odes and Selected Satires.) PREREQUISITE: LATIN 4 OR 5.

7 TACTITUS. (3) I — Jones
(Germania, Agricola, Selections.) PREREQUISITE: LATIN 5 or 6.

8 PLINY'S LETTERS. (3) II — Jones
(Selections.) Terence (One Play). PREREQUISITE: LATIN 5 OR 6.

Courses open only to Upper Division and Graduate Students

16a TUTORIAL WORK IN ANCIENT LANGUAGES. (1) I — Jones
16b TUTORIAL WORK IN ANCIENT LANGUAGES. (1) II — Jones

* Courses open to freshmen.

109a LATIN LITERATURE. (3) I — Jones

(Selections from various authors.) Given each year. **PREREQUISITE: LATIN 7 OR 8.**

109b LATIN LITERATURE. (3) II — Jones

(Continuation of 109a.) Given each year. **PREREQUISITE: LATIN 7 OR 8.**

110a LATIN LITERATURE. (3) I — Jones

Given each year. **PREREQUISITE: LATIN 7 OR 8.**

110b LATIN LITERATURE. (3) II — Jones

(Continuation of 110a.) Given each year. **PREREQUISITE: LATIN 7 OR 8.**

Note.—The authors read in the preceding four courses are not specified because the classes are composed of students from colleges with different reading requirements.

114a ADVANCED LATIN COMPOSITION. (1) I — Jones

(Easy selections of connected discourse.) Given each year. **PREREQUISITE: LATIN 5.**

114b ADVANCED LATIN COMPOSITION. (1) II — Jones

(Continuation of 114a.) Given each year. **PREREQUISITE: LATIN 5.**

115a LATIN COMPOSITION. (1) I — Jones

(Continuation of 114b.) Given each year. **PREREQUISITE: LATIN 5.**

115b LATIN COMPOSITION. (1) II — Jones

(Continuation of 115a.) Given each year. **PREREQUISITE: LATIN 5.**

120 SURVEY OF GREEK CIVILIZATION. (3) I — Jones

History, Public and Private Life, Archaeology. Not given 1937-38; offered 1938-39. **PREREQUISITE: JUNIOR STANDING.**

121 SURVEY OF ROMAN CIVILIZATION. (3) I — Jones

(Continuation of 120.) Given 1937-38; not offered 1938-39. **PREREQUISITE: JUNIOR STANDING.**

150a TEACHER'S COURSE IN LATIN; BASED ON FIRST YEAR WORK. (3) I, S — 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. **PREREQUISITE: JUNIOR STANDING.**

150b TEACHER'S COURSE IN LATIN; BASED ON SECOND YEAR WORK. (3) II, S — Jones

This course will follow closely the recommendation 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. **PREREQUISITE: LATIN 2 OR 150a.**

"Two-Hundred" courses open to Graduate Students only

201a LATIN PASTORAL POETRY. (3) I — Jones

Given on demand. **PREREQUISITE: LATIN 109a OR EQUIVALENT.**

201b LATIN ELEGIAC POETRY. (3) II — Jones
Given on demand. PREREQUISITE: LATIN 109a OR EQUIVALENT.

Greek

51 BEGINNING GREEK. (3) I — Jones
Given each year. PREREQUISITE: FRESHMAN STANDING.

Courses open only to Upper Division and Graduate Students

122a GREEK LITERATURE IN ENGLISH TRANSLATION; EPIC AND LYRIC POETRY. (3) II — Jones
Not given 1937-38; offered 1938-39. PREREQUISITE: JUNIOR STANDING.

122b GREEK LITERATURE IN ENGLISH TRANSLATION; DRAMA, ORATORY, PHILOSOPHY. (3) II — Jones
Given 1937-38; not offered 1938-39. PREREQUISITE: JUNIOR STANDING.

149 EASY SELECTED READINGS FROM GREEK AUTHORS. (3) II — Jones
Given each year. PREREQUISITE: GREEK 51.

152 ANABASIS. (3) I — Jones
Given on demand. PREREQUISITE: GREEK 51.

153 HOMER. SELECTIONS. (3) II — Jones
Given on demand. PREREQUISITE: GREEK 149.

154 PLATO. SELECTIONS. (3) I — Jones
Given on demand. PREREQUISITE: GREEK 149.

155 HERODOTUS. SELECTIONS. (3) II — Jones
Given on demand. PREREQUISITE. GREEK 149.

ANIMAL INDUSTRY

Professors Good (Animal Husbandry), Horlacher (Animal Husbandry), Martin (Poultry), and Ely (Dairying), Associate Professor Wilford (Animal Husbandry), Assistant Professors Barkman (Dairying), and *Morrison (Dairying), Mr. Garrigus (Animal Husbandry), Mr. Bywaters (Animal Husbandry), Mr. Ringrose (Poultry)

4 LIVESTOCK MANAGEMENT. (1) II — Garrigus
Strictly practical phases of livestock production are handled in this course, including preparation of animals for show and sale ring. Laboratory, 2 hours. PREREQUISITE: A. I. 31.

13 LIVESTOCK JUDGING. (2) II — Garrigus
Judging beef cattle, sheep, swine and draft horses. Practice in writing reasons and giving reasons orally. Laboratory, 4 hours. PREREQUISITE: A. I. 31.

19 GENETICS. (3) I, II — Martin
The fundamental laws of heredity, including variation, Mendelian inheritance and the fundamental principles of breeding. Lectures, 3 hours.

20 PRINCIPLES OF ANIMAL NUTRITION. (3) II Good, 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, 3 hours. **PREREQUISITE: CHEMISTRY 1a.**

25 JUDGING DAIRY PRODUCTS. (1) I Barkman

A study of the accepted standards for judging market milk, butter, ice cream, cheese, and starters, and practice in scoring these products in accordance with standard methods. Laboratory, 2 hours.

26 ADVANCED LIVESTOCK MANAGEMENT. (1) I Garrigus

Individual intensive application of correct management practices on Station livestock. Primarily for those who intend to manage livestock farms. Laboratory, 2 hours. **PREREQUISITES: A. I. 31 AND A. I. 4.**

27 HORSE PRODUCTION. (3) I Horlacher

Development of the horse industry in this and other countries; judging, breeding, feeding, management and marketing. Lectures, 2 hours; laboratory, 2 hours.

31 MARKET CLASSES AND BREEDS OF LIVESTOCK. (3) I Garrigus

A course to familiarize students with the present market requirements and with the origin and development of the more important breeds of farm animals. Lectures, 2 hours; laboratory, 2 hours.

32 FARM POULTRY PRODUCTION. (3) II Ringrose

A general course dealing with the practical application of the principles of poultry husbandry to general farm conditions; breeds and breeding; selection and culling; incubation and brooding; feeding, housing and disease control; marketing poultry products. Lectures, 2 hours; laboratory, 2 hours.

33 FARM DAIRYING. (3) I Ely, 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, 2 hours; laboratory, 2 hours.

34 JUDGING DAIRY CATTLE. (2) II Ely

Selection of sires, cows and heifers with due consideration for breed and dairy type, and the application of the principles involved to the problem of herd improvement. To be taken concurrently with or preceded by A. I. 137. The judging team will be selected from this class. To be given alternate years. Offered 1938-39. Laboratory, 4 hours.

35 ARTIFICIAL INCUBATION AND BROODING. (3) II Ringrose

The fundamental principles involved in the operating of mammoth incubators and brooders; hatchery operation and management; factors influencing the developing avian embyro. Practice in the operation of mammoth incubators and storage brooders. Laboratory, 4 hours; lecture, 1 hour. **PREREQUISITE: A. I. 32 AND PERMISSION TO REGISTER.**

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* On leave 1938-39.

102 FARM BUTCHERING AND CURING MEATS. (4) I, II Wilford

Slaughtering and blocking out of beeves, veals, hogs and lambs; judging on foot and on the hook; wholesale and retail cuts, meat curing and cures with special emphasis on pork. Lectures, 2 hours; laboratory, 4 hours. **PREREQUISITE: A. I. 31.**

104 ANIMAL BREEDING. (3) I Martin, Bywaters

Breeding plans, inbreeding, linebreeding, outcrossing; disease resistance; inheritance of lethal characters; genetics of sex; heredity in cattle, sheep, swine and laboratory animals. To be given alternate years. Offered 1938-39. Lectures, 3 hours. **PREREQUISITE: A. I. 19.**

105 BEEF PRODUCTION. (3) II Good

Development of the beef cattle industry in this and other countries; feeding, breeding and management of beef cattle. Laboratory work consists of judging beef cattle and practical problems relating to the industry. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITE: A. I. 20.**

106 PORK PRODUCTION. (3) I Wilford

A study of breeds and types; general management and feeding of all classes of swine supplemented with laboratory in judging and management. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITE: A. I. 20.**

107 SHEEP PRODUCTION. (3) II Horlacher

Breeds and market classes; judging, breeding, feeding, management and marketing of sheep; production and marketing of wool. Lectures, 3 hours. **PREREQUISITE: A. I. 31.**

110 ADVANCED LIVESTOCK JUDGING. (3) I Garrigus

Primarily for judging team candidates. Open only to those who have made good standings in the prerequisite course. Lectures and laboratory. **PREREQUISITES: A. I. 13, AND A. I. 31.**

111a-b SPECIAL PROBLEMS IN ANIMAL HUSBANDRY. (3, 3) I, II Animal Husbandry Staff

125 DAIRY CATTLE FEEDING AND MANAGEMENT. (3) II Ely

The application of the principles of nutrition to dairy cattle feeding problems; up-to-date methods contributing to maximum efficiency in the production of quality dairy products on the farm. Lectures, 3 hours. **PREREQUISITE: A. I. 20.**

127 POULTRY BREEDING. (3) I Martin

Fundamental genetic principles involved in poultry breeding; disease resistance; inheritance of egg production and related characters; development of breeding programs. To be given alternate years. Not offered 1938-39. Lectures, 3 hours. **PREREQUISITE: A. I. 19.**

129 DAIRY BACTERIOLOGY. (4) I Morrison

The application of bacteriological principles to the production and processing of milk and other dairy products involving methods of entrance of microorganisms into dairy products, effects of their growth and methods for their control. Lectures, 2 hours; laboratory, 4 hours. Not offered 1938-39. **PREREQUISITE: BACTERIOLOGY 52, OR 102.**

130 BUTTER AND ICE CREAM. (3) I — Barkman

A study of the various processes and problems involved in the manufacture and storage of butter and ice cream. Lecture, 1 hour; laboratory, 6 hours. **PREREQUISITE: A. I. 33.**

131 MARKET MILK AND CHEESE. (3) II — Morrison

A study of the problems connected with the production and handling of milk and manufacture of certain types of cheese. Not offered 1938-39. Lecture, 1 hour; laboratory, 6 hours. **PREREQUISITE: A. I. 33.**

132a-b SPECIAL PROBLEMS IN DAIRYING. (3, 3) I, II — Dairy Staff

133a-b SPECIAL PROBLEMS IN POULTRY. (3, 3) I, II — Martin, Ringrose

134 ADVANCED POULTRY PRODUCTION. (3) I — Ringrose

Fundamental studies in control measures of poultry diseases, nutrition, marketing, flock management and replacement. Lectures, 3 hours. **PREREQUISITE: A. I. 32.**

136 TECHNICAL CONTROL OF DAIRY PRODUCTS. (3) II — Morrison

Various chemical and bacteriological tests used in the control of production or processing of dairy products. Given in alternate years. Not offered 1938-39. Laboratory and recitations, 6 hours. **PREREQUISITE: A. I. 33, 129.**

137 DAIRY CATTLE BREEDING. (3) II — Ely

The application of genetics to present day problems of breed and herd improvement, an analysis of progress and mistakes of the past compared with present day approved methods of interpreting records, the progeny test of sires, type classification, selective registration as employed by leading breeders. The rise and fall in popularity of prominent families and strains within the leading dairy breeds. To be given in alternate years. Offered 1938-39. Lecture, 3 hours. **PREREQUISITE: A. I. 19.**

202a-b RESEARCH IN MEATS. (3, 3) I, II — Wilford

Problems involving original investigation.

203a-b RESEARCH IN ANIMAL GENETICS. (3, 3) I, II — Martin

Problems involving original investigation.

204a-b RESEARCH IN DAIRYING. (3,3) I, II — Dairy Staff

Special problems involving original investigation on the part of the student in either dairy production or dairy manufacturing.

205a-b RESEARCH IN HORSE HUSBANDRY. (3, 3) I, II — Horlacher

Problems involving original investigation.

206a-b RESEARCH IN POULTRY SCIENCE. (3, 3) I, II — Martin, Ringrose

Problems involving original investigation.

207a-b RESEARCH IN SHEEP HUSBANDRY. (3, 3) I, II — Horlacher

Problems involving original investigation.

209a-b ANIMAL HUSBANDRY SEMINAR. (1, 1) I, II — Staff

210a-b RESEARCH IN BEEF CATTLE HUSBANDRY. (3, 3) I, II — Good, Garrigus

Problems involving original investigation.

211a-b RESEARCH IN SWINE HUSBANDRY. (3, 3) I, II — Wilford

Problems involving original investigation.

ANIMAL PATHOLOGY

Professor Dimock and Assistant Professor Hull

116 **DISEASES OF DOMESTIC ANIMALS.** (4) II — Dimock
Distribution, general nature, methods of dissemination, sanitation, prevention, and eradication of infectious and parasitic diseases of animals; hygiene and preventive medicine, with emphasis on the transmissible diseases. Lectures, recitations, and reference reading.

126 **ANATOMY AND PHYSIOLOGY OF DOMESTIC ANIMALS.** (4) I — Hull
Correlation of structure and function of the various organs of the body; a study of anatomy and physiology as related to work offered in other courses as live stock judging, butchering, animal nutrition, animal breeding, and animal diseases. Lectures, 3 hours; laboratory, 2 hours.

201a-b **INVESTIGATIONS IN ANIMAL DISEASES.** (4, 4) I, II — Dimock
PREREQUISITES: A. P. 126 AND 116 OR EQUIVALENT.

ANTHROPOLOGY AND ARCHAEOLOGY

Professors Webb and Funkhouser

Courses open only to Upper Division and Graduate Students

101 **PRINCIPLES OF ANTHROPOLOGY.** (2) I — Funkhouser
Lectures, 3 hours.

102 **KENTUCKY ARCHAEOLOGY.** (2) II — Webb
Lectures, 3 hours.

103a-d **INDEPENDENT WORK.** (3) — Webb and Funkhouser

105 **ETHNOLOGY.** (2) II — Funkhouser
Lectures, 3 hours.

110a-c **FIELD WORK IN ARCHAEOLOGY.** (3) — Webb and Funkhouser
Laboratory practice in field during summer.

ART

Professor Rannells, Assistant Professors Fisk and Callihan, and Mr. Barnhart

Requirements for a Major. Lower Division: 10 credits in Drawing, Introduction to Art, History of Art. Upper Division: 23 credits minimum—9 to 12 credits in studio courses, 9 to 12 credits in History of Art courses, and 2 credits in Senior Seminar in preparation for a final comprehensive examination in Art.

Requirements in Field of Concentration. Forty credits of advanced work including Art in the Field of Literature, Philosophy and the Arts. Advanced courses in European history are counted in the field of concentration. Majors in Art are expected to acquire a reading knowledge of French or German.

*30a **INTRODUCTION TO ART.** (2) I, II, S. — Callihan
Principles. Lectures, notebooks, problems in design.

*30b **INTRODUCTION TO ART.** (2) I, II — Callihan
The plastic arts. Lectures, notebooks, reports

60a **SEMINAR IN ART.** (1) I — Rannells
Open to senior majors only.

60b **SEMINAR IN ART.** (1) II — Rannells
Open to senior majors only.

* Courses open to freshmen.

Drawing and Painting

*61a **DRAWING.** (3) I, II — Barnhart
Line and form in pencil, brush and charcoal mediums. Six studio hours and weekly problems.

*61b **DRAWING.** (3) I, II — Barnhart
Continuation of 61a. Six studio hours and weekly problems.

63a **INTERMEDIATE DRAWING.** (3) I, II — Fisk
Problems in analysis and construction of form. Values in monochrome. Nine studio hours a week. **PREREQUISITE: 61b.**

63b **INTERMEDIATE DRAWING.** (3) I, II — Fisk
Continuation of 63a. Nine studio hours a week.

55a **PAINTING.** (3) I, II — Fisk
Still life and outdoor painting in oil and water color mediums. Composition problems. Nine studio hours a week. **PREREQUISITE: 63b.**

55b **PAINTING.** (3) I, II — Fisk
Continuation of 55a. Nine studio hours a week.

* Courses open to freshmen.

"One-Hundred" courses open only to Upper Division and Graduate Students

112a **ADVANCED COMPOSITION.** (2) I, II — Fisk, Rannells
A study of pictorial organization for advanced students. Six studio hours per week. **PREREQUISITE: 63b.** Offered 1938-9.

112b **ADVANCED COMPOSITION.** (2) I, II — Fisk, Rannells
Continuation of 112a. Six studio hours per week. Offered 1938-9.

115a-d **INDEPENDENT WORK.** (3) I, II — Staff
Specialized problems in painting or design; individual research in art history. Each semester's work subject to review by the staff. Open only to advanced students upon approval of department head. Offered 1938-9.

116a **ADVANCED ETCHING.** (4) I, II — Fisk
Eight studio hours and weekly problems. **PREREQUISITES: 63b AND APPROVAL OF DEPARTMENT HEAD.** Offered 1938-39.

116b **ADVANCED ETCHING.** (4) I, II — Fisk
Continuation of 116a. Eight studio hours and weekly problems. Offered 1938-9.

159a **INTERMEDIATE PAINTING.** (3) I, II — Fisk
Still life, landscape and portrait painting problems. Nine studio hours a week. **PREREQUISITE: 55b.** Offered 1938-9.

159b **INTERMEDIATE PAINTING.** (3) I, II — Fisk
Continuation of 159a. Nine studio hours a week. Offered 1938-9.

Design

64a **INTERMEDIATE DESIGN.** (3) I, II — Callihan, Barnhart
Consideration of materials and processes in designing objects of use. Six studio hours and weekly problems. **PREREQUISITES: 61a AND 30b.**

64b **INTERMEDIATE DESIGN.** (3) I, II — Callihan, Barnhart
Continuation of 64a. Six studio hours and weekly problems.

29 **ADVERTISING ART.** (2) I, II — Barnhart
Art principles in advertising; weekly problems in layout design. four studio hours a week. **PREREQUISITES: 61a AND 30a OR JUNIOR STANDING IN JOURNALISM OR COMMERCE.**

History and Appreciation of Art

*17a **ART APPRECIATION.** (1) I — Callihan, Rannells
Architecture and sculpture. Lecture and notebooks.

*17b **ART APPRECIATION.** (1) II — Callihan, Rannells
Painting and graphic arts. Lecture and notebooks.

23a **DECORATIVE ARTS OF THE EIGHTEENTH CENTURY.** (2) I — Callihan
English interiors, furniture, textiles, ceramics, etc. Lecture and weekly problems.

23b **DECORATIVE ARTS OF THE EIGHTEENTH CENTURY.** (2) II — Callihan
French interiors, furniture, textiles, ceramics, etc. Lecture and weekly problems.

35 **HISTORY OF ANCIENT ART.** (3) I — Rannells
Lectures and reports. Not open to freshmen.

36 **HISTORY OF MEDIEVAL ART.** (3) II — Rannells
Lecture and reports. Not open to freshmen.

44a **APPRECIATION OF PRINTS.** (1) II — Fisk
Etchings, engravings, etc. Lecture and weekly problems.

44b **APPRECIATION OF PRINTS.** (1) I — Fisk
Woodcuts, wood engravings, lithographs. Lecture and weekly problems.

"One-Hundred" courses open only to Upper Division and Graduate Students

137 **HISTORY OF RENAISSANCE ART IN ITALY.** (3) I — Rannells
Lectures and reports. Offered 1938-9.

138 **HISTORY OF RENAISSANCE ART IN THE NORTH.** (3) II — Rannells
Flemish, German, and French art. Lectures and reports. Given 1937-8. Not offered 1938-9.

139a **HISTORY OF MODERN ART.** (3) I, S — Rannells
Seventeenth and eighteenth centuries. Lectures and reports. Offered 1938-9.

139b **HISTORY OF MODERN ART.** (3) II, S — Rannells
Nineteenth and twentieth centuries. Lectures and reports. Offered 1938-9.

145a **HISTORY OF ARCHITECTURE.** (1) I — Rannells
Ancient and medieval periods. Architectural styles and the several factors influencing their development. Lecture and reports. Given 1937-8. Not offered 1938-9.

145b **HISTORY OF ARCHITECTURE.** (1) II — Rannells
Continuation of 145a. Renaissance and modern periods. Lecture and reports. Given 1936-7. Not offered 1938-9.

151a **CRITICISM OF ART.** (3) I, S — Rannells
Analyses, interpretations, evaluations. Lectures, discussions, reports. For advanced students only. **PREREQUISITES: TWO YEARS STUDIO WORK IN ART, TWO YEARS HISTORY OF ART.** Offered 1938-9.

151b **CRITICISM OF ART.** (3) II, S — Rannells
Continuation of 151a. Lectures, discussions, reports. Offered 1938-9.

Public School Art

10 **PUBLIC SCHOOL ART.** (2) I, II, S — Haines
A study of art principles in preparation for teaching art in the elementary grades. Lectures, four studio hours and weekly problems.

Note.—Two-credit studio courses in Drawing and Painting (S1a-b; S3a-b) are offered during the Summer Sessions. Other courses, such as Period Furniture (21), American Arts and Crafts (22), Architecture in the United States (41), Painting and Sculpture in the United States (42), and individual work in Illustration, Interior Decoration, etc., are given from time to time. "Independent Work" courses (115a-d) provide for the advanced student of special interests and abilities.

BACTERIOLOGY

Professors Scherago and Weaver, Associate Professor Maxwell, and Mr. Majors, Mr. Scutchfield, †Miss Hood, Mr. Whitehouse, Miss Starks, and Miss Harris

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. 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 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 (30 credits in Bacteriology).

The University of Kentucky, through the Department of Bacteriology, is registered as an approved school for the training of clinical laboratory technicians 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 entrance 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 by those taking the premedical course. 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.

Requirements for a Major. Prerequisites: Chemistry 1a and 1b; Bacteriology 2b, 52 or 102. Required: Two credits in Seminar, plus an additional thirteen credit hours of advanced work in bacteriology, including Bacteriology 125.

Requirements in Field of Concentration. Forty credits in the Biological Sciences Field, including the major work, in courses not open to freshmen.

*2a **ELEMENTARY MICROBIOLOGY.** (4) I, II Weaver and Harris
A study of the fundamental nature of bacteria and other microorganisms, 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, two hours; laboratory, four hours a week.

*2b **ELEMENTARY MICROBIOLOGY.** (4) I, II Weaver and Harris
Continuation of course 2a. A cultural study of bacteria. Microbial physiology. A discussion of the relationship of microorganisms to soil fertility, foods, industrial fermentations, disease, etc. Lectures and recitations, two hours; laboratory, four hours a week. **PREREQUISITE: BACTERIOLOGY 2a.**

*6 **BACTERIOLOGY FOR NURSES.** (3) I, II Scherago and Starks
A study of the characteristics and habits of microorganisms and of their relation to medicine, surgery, and public health. Lecture, one hour a week; laboratory, four hours a week.

52 **PRINCIPLES OF BACTERIOLOGY.** (4) I, II
Scherago, Majors, Scutchfield, and Starks
An alternative course for students who do not have the prerequisites for 102. Lectures and recitations two hours; laboratory, four hours a week. **PREREQUISITE OR CONCURRENT: CHEM. 1b.**

56 **BACTERIOLOGY OF FOODS.** (For Sophomores.) (4) I, S Weaver
Microbiology of milk, butter, cheese, ice cream and other milk products, eggs, tomato products, meat and meat products; food preservation; bacterial food poisoning. Relation of microorganisms to food production and handling. 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 102 OR 52; OR 2b AND CHEMISTRY 1b.**

* Courses open to freshmen.

57 BACTERIOLOGY OF WATER AND SEWAGE.
(For Sophomores.) (4) II, S Weaver

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.**

Courses open only to Upper Division and Graduate Students

102 GENERAL BACTERIOLOGY. (4) I, II, S
Scherago, Majors, Scutchfield, and Starks

Observation and cultivation of bacteria and related microorganisms; study of their morphology, classification, physiology, relation to certain fermentations, to food, to soil fertility and to disease. Lectures and recitations, two hours; laboratory, four hours a week. **PREREQUISITE: CHEMISTRY 1b.**

103 PATHOGENIC BACTERIOLOGY. (4) I, S Scherago

A study of human and animal pathogenic microorganisms, especially their morphological, cultural and pathogenic properties. Lectures and recitations, two hours; laboratory, four hours a week. **PREREQUISITES: BACTERIOLOGY 102 OR 52; OR 2b AND CHEMISTRY 1b.**

104 APPLIED BACTERIOLOGY. (2) I, II, S Weaver

A course in bacteriological analysis to supplement Courses 52 and 102. Laboratory four hours a week. **PREREQUISITES: BACTERIOLOGY 102 OR 52; OR 2b AND CHEMISTRY 1b.**

110a LABORATORY DIAGNOSIS. (3) I, S Scherago

Laboratory methods employed in diagnostic and public health laboratories. Designed primarily for students interested in medical technology. Examination of sputum, urine and blood. Laboratory, six hours a week. **PREREQUISITES: PRECEDED OR ACCOMPANIED BY BACTERIOLOGY 103.**

110b LABORATORY DIAGNOSIS. (3) II, S Scherago

Continuation of 110a. Laboratory diagnosis of intestinal parasitism; examination of stomach and intestinal contents; laboratory methods used in diagnosis of gonorrhea, typhoid fever, diphetheria, syphilis, etc. Laboratory, six hours a week. **PREREQUISITE: BACTERIOLOGY 110a.**

111 GENERAL PATHOLOGY. (4) I Maxwell

The effect of disease on the organs and tissues of the human body. Fresh and museum specimens as well as histological sections will be examined. Degeneration, infiltrations, regenerations, inflammations, disturbances of the circulation, infectious granulomata, neoplasms, etc., will be studied. Lectures and recitations, two hours; laboratory, four hours a week. **PREREQUISITES: ANATOMY AND PHYSIOLOGY 1a-b; ZOOLOGY 7b, 101b, AND 106; BACTERIOLOGY 103, AND CONSENT OF HEAD OF DEPARTMENT.**

115a-d INDEPENDENT WORK. (3) I, II, S Scherago, Weaver, Maxwell

Students will be assigned special problems in laboratory work and reference reading. Laboratory, six hours a week. **PREREQUISITE: ANY BACTERIOLOGY COURSE ABOVE 102.**

120a **HOSPITAL LABORATORY PRACTICE.** (4) I, II Maxwell
Students will be required to carry out, under supervision, the laboratory work in one of the hospitals in Lexington. Laboratory, twelve hours a week. **PREREQUISITES: BACTERIOLOGY 110a AND b; CONSENT OF HEAD OF DEPARTMENT.**

120b **HOSPITAL LABORATORY PRACTICE.** (6) I, II Maxwell
Continuation of 120a. Laboratory, eighteen hours a week. **PREREQUISITES: BACTERIOLOGY 110a AND b; CONSENT OF HEAD OF DEPARTMENT.**

125 **IMMUNOLOGY AND SEROLOGY.** (5) II, S Scherago
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, precipitation, complement fixation, etc.; receptor analysis; hypersensitiveness. Lectures and recitations, two hours a week; laboratory, six hours a week. **PREREQUISITE: BACTERIOLOGY 103.**

150a-d **SEMINAR.** (1) I, II 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 and graduate students. Two hours a week.

The following courses open to Graduate Students only

201a-d **RESEARCH IN BACTERIOLOGY.** (5) I, II
Laboratory, ten hours a week. Scherago, Weaver, Maxwell

203a **PUBLIC HEALTH BACTERIOLOGY.** (3) S Scherago
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 application of biological products used in the diagnosis, treatment and prevention of infectious diseases; the standardization of disinfectants. Lectures and recitations, one hour; laboratory, four hours a week. **PREREQUISITES: OPEN ONLY TO PHYSICIANS AND HEALTH OFFICERS OR THOSE WITH EQUIVALENT TRAINING.**

203b **PUBLIC HEALTH BACTERIOLOGY.** (3) S Scherago
Continuation of Course 203a. Lectures and recitation, one hour; laboratory, four hours a week. **PREREQUISITE: BACTERIOLOGY 203a.**

206 **BACTERIOLOGY OF FOODS.** (4) I, S Weaver
Microbiology of milk and milk products, eggs, tomato products, meat and meat products. food preservation; bacterial food poisoning. Lectures and recitations, two hours a week; laboratory, four hours a week. **PREREQUISITE: BACTERIOLOGY 2b, OR 52, OR 102; CHEMISTRY 8.**

207 **BACTERIOLOGY OF WATER AND SEWAGE.** (4) II, S Weaver
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, four hours a week. **PREREQUISITES: BACTERIOLOGY 2b, OR 52, OR 102; CHEMISTRY 8.**

Outline of Course Leading to the Degree B. S. in Medical Technology

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Matric. Lec. Required of all Freshmen	.3	Hyg. 1 Personal and Community Health	1.
Eng. 1a Eng. Composition	3.	Eng. 1b Eng. Composition	3.
Chem. 1a Gen. Inorganic Chem.	5.	Chem. 1b Gen. Inorganic Chem.	5.
Bact. 2a Elem. Microbiology	4.	Bact. 2b Elem. Microbiology	4.
Zool. 1a General Zoology	4.	Zool. 1b General Zoology	4.
Mil. Sci. 1a First Year Basic Course	1.3	Mil. Sci. 1b First Year Basic Course	1.3
Phys. Ed. Freshman Gym.	.7	Phys. Ed. Freshman Gym.	.7
	18.3		19.0

SOPHOMORE YEAR*

First Semester	Credits	Second Semester	Credits
Chem. 4 Qualitative Analysis	4.	Zool. 7b Comparative Anat.	4.
Phys. 1a General Physics	5.	Phys. 1b General Physics	5.
Bact. 56 Bacteriology of Foods	4.	Bact. 57 Bact. of Water and Sewage	4.
Anat. & Phys. 1a Gen. Phys.	3.	Anat. & Phys. 1b Gen. Phys.	3.
Mil. Sci. 2a Second Year Basic Course	1.5	Mil. Sci. 2b Second Year Basic Course	1.5
Phys. Ed. Sophomore Gym.	.7	Phys. Ed. Sophomore Gym.	.7
	18.2		18.2

* Women students must substitute one year of foreign language for the two years of Military Science. This should be taken in the sophomore year.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Chem. 8 Quantitative Anal.	5.	Zool. 101b Histology	3.
Zool. 101a Histology	3.	Bact. 125 Immunology and Serology	5.
Bact. 103 Pathogenic Bact.	4.	Zool. 106 Embryology	4.
For. Lang. Elective	3.	For. Lang. Elective	3.
Bact. 110a Lab. Diagnosis	3.	Bact. 110b Lab. Diagnosis	3.
	18.		18.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Chem. 127a Organic Chem.	5.	Chem. 127b Organic Chem.	5.
Bact. 111 Gen. Pathology	4.	Bact. 150b Seminar	1.
Bact. 150a Seminar	1.	Physics 120 X-Ray Technique	2.
Bact. 120a Hosp. Lab. Prac.	4.	Bact. 120b Hosp. Lab. Prac.	6.
Math., Phil. Psych. or Soc. Sci. Elective	3.	Math., Phil., Psych. or Soc. Sci. Elective	3.
	17.		17.

Students will be given an opportunity in the summer to obtain additional practical experience in one of the hospitals in and around Lexington.

Total credits 143.7.

BOTANY

Professor McFarland, Associate Professor McInteer, and Mr. Shacklette and Mr. Plymale

Requirements for a Major. Prerequisites: Botany 1a, 1b. Required: Botany 6, 15, 19, 103, 125a, 125b; a minimum of 20 credits of advanced botany.

Requirements in Field of Concentration: Forty credits in the Field of Biological Sciences, including the major work, in courses not open to freshmen.

*1a **GENERAL BOTANY.** (4) I
McFarland, McInteer, Shacklette, Plymale
This introductory course to plant life deals with a brief history of botany, a detailed study of the cell, its structure and functions and its relation to other cells. A comparative study is made of the various types of Thallophytes and Bryophytes, including structure, reproduction and classification.

*1b **GENERAL BOTANY.** (4) II
McFarland, McInteer, Shacklette, Plymale
This is a continuation of Botany 1a in which the Pteridophytes (Ferns) and Spermatophytes (see Plants) are studied. Emphasis is placed on structure, method of reproduction and life histories of the various plants studied. The last six to eight weeks of this semester, the students will be given some work concerning plant heredity and instruction in the use of a manual in identifying unknown flowering plants. **PREREQUISITE: BOTANY 1a.**

6 **PLANT HISTOLOGY.** (3) II McFarland
A laboratory course dealing with the principles of killing, fixing, imbedding, sectioning, staining, mounting and the study of the different kinds of tissue involved. Finished slides of at least fifty kinds of tissue will be required of each student. **PREREQUISITES: BOTANY 1a, 1b.**

15 **LOCAL FLORA (SYSTEMATIC BOTANY.** (3) I
McFarland, Shacklette
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. **PREREQUISITES: BOTANY 1a, 1b.**

19 **DENDROLOGY.** (2) I OR II 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. **PREREQUISITES: BOTANY 1a, 1b.**

Courses open only to Upper Division and Graduate Students

103 **PLANT PHYSIOLOGY.** (4) I McInteer
A course dealing with the fundamental functions of the plant cell life, nature of protoplasmic membranes, osmotic phenomena, metabolism, growth and responses of various kinds. **PREREQUISITES: BOTANY 1a, 1b.**

106a **SPECIAL PROBLEM.** (3) I McFarland, McInteer
This course is designed to give students who have acquired at least 18 advanced credits in botany an opportunity to take up independently, some problem that may be assigned by the instructor in charge. The problem assigned will depend upon the qualifications and fitness of the student. **PREREQUISITES: ADVANCED BOTANY COURSES, 18 HOURS.**

* Courses open to freshmen.

106b SPECIAL PROBLEM. (3) II — McFarland, McInteer
A continuation of Course 106a.

106c SPECIAL PROBLEM. (3) I OR II — McFarland, McInteer
A continuation of Course 106b.

106d SPECIAL PROBLEM. (3) I OR II — McFarland, McInteer
A continuation of Course 106c.

107 MORPHOLOGY OF THE ALGAE. (3) II — McInteer
A laboratory course dealing with representative algae with regard to structure, reproduction and their general classification. **PREREQUISITES: BOTANY 1a, 1b.**

114 ECOLOGY. (3) II — McInteer
This course gives the student a chance to study the relationships existing between plants and their various environments, both plant and animal associates. Frequent half-day and two all day field trips are required of students taking this course. Since this course deals mainly with plants, students should have had Botany 15 before signing for this course. **PREREQUISITES: BOTANY 1a, 1b.**

125a MORPHOLOGY OF THE FUNGI. (4) I — McFarland
A comprehensive study is made of many typical forms of the Myxomycetes, Phycomycetes and a few of the Ascomycetes. Their structure, method of reproduction and classification are studied in detail. **PREREQUISITES: BOTANY 1a, 1b.**

125b MORPHOLOGY OF THE FUNGI. (4) II — McFarland
This is a continuation of Course 125a. The balance of the fungi groups are taken up and a study is made as in the previous semester. The Ascomycetes and Basidiomycetes are studied as well as the Fungi Imperfecti. **PREREQUISITE: BOTANY 125a.**

126a MYCOLOGY. (3) I — McFarland
In this course the student spends the entire time in identifying unknown species of fungi. Considerable time is spent in the field collecting and learning the habitats of the various fungi. Opportunity is given to make use of the standard works on identification of fungi. **PREREQUISITES: BOTANY 125a, 125b.**

126b MYCOLOGY. (3) II — McFarland
A continuation of Course 126a.

150a ADVANCED SYSTEMATIC BOTANY. (3) I
McFarland, McInteer, Shacklette
In this course the student is expected to identify many more species of plants than given in Botany 15. It is expected that each student study critically some group of flowering plants. **PREREQUISITES: BOTANY 15, 107, 125a, 125b.**

150b ADVANCED SYSTEMATIC BOTANY. (3) II
McFarland, McInteer, Shacklette
This is a continuation of Course 150a.

Courses open only to Graduate Students

206a RESEARCH IN MORPHOLOGY. (5) I — McFarland, McInteer
206b RESEARCH IN MORPHOLOGY. (5) II — McFarland, McInteer
207a RESEARCH IN MYCOLOGY. (5) I — McFarland
207b RESEARCH IN MYCOLOGY. (5) II — McFarland
210a RESEARCH IN PLANT PHYSIOLOGY. (5) I — McInteer
210b RESEARCH IN PLANT PHYSIOLOGY. (5) II — McInteer
213a RESEARCH IN SYSTEMATIC BOTANY. (5) I — McFarland
213b RESEARCH IN SYSTEMATIC BOTANY. (5) II — McFarland

BUSINESS EDUCATION

Associate Professor Lawrence

104 FOUNDATIONS OF BUSINESS EDUCATION IN THE HIGH SCHOOL. (3) I, S — Lawrence
This course is designed to give to the student preparing to teach commerce in the high school an understanding of the origin, the status, and the objectives of business education in the secondary school. Required of Commerce majors.

158a METHODS OF TEACHING SECRETARIAL SUBJECTS. (2) II, S — Lawrence
Special techniques and devices for teaching shorthand, typewriting, and secretarial office practice are considered. Required of Commerce majors.

158b METHODS AND MATERIALS IN TEACHING ACCOUNTING. (2) I, S — Lawrence
This course provides materials and techniques in the teaching of accounting. Required of Commerce majors.

192 METHODS AND MATERIALS IN GENERAL BUSINESS. (3) II, S — Lawrence
Objectives of the general business course are studied critically and a syllabus prepared for teaching this subject.

208a PROBLEMS IN BUSINESS EDUCATION. (3) I, S — Lawrence
Some of the more advanced problems in the field are studied. The type of problems considered is influenced by the interests and needs of the group. Some of these problems are: testing in business subjects; extra-curricular activities in commerce; job studies; placement and follow-up; types of equipment; and supervision.

208b PROBLEMS IN BUSINESS EDUCATION. (3) II, S — Lawrence
This course is a continuation of Education 208a with special emphasis on research studies already made and research techniques.

256 METHODS AND MATERIALS IN THE SOCIAL BUSINESS SUBJECTS. (3) S — Lawrence
The various social business subjects will be examined to determine their contribution to the objectives of business education.

257 SEMINAR IN BUSINESS EDUCATION. (1) II, S — Lawrence
A study of current literature in business education with special reference to trends in this field.

259 THE COMMERCE CURRICULUM. (3) I, S — Lawrence
Business subjects offered in the high school are examined critically to determine their content and the place each should occupy in high school curricula. A course of study is developed for each subject.

CHEMISTRY

Professors Maxson, Barkenbus, Bedford, Associate Professor Stewart, Assistant Professor Mitchell, Mr. Allen, Mr. Baker, Mr. Brown, Mr. Gabbard, Dr. Keller, Mr. Krewson,† Mr. Martin

The department of Chemistry affords opportunity for students to gain the A. B. or B. S. degree with chemistry as a major, and also provides a course in Industrial Chemistry. The Course in Industrial Chemistry is a prescribed course throughout and leads to the degree of Bachelor of Science in Industrial Chemistry.

Requirements for a Major. Prerequisites: Chemistry 1a, 1b, 4, 8. Required: Chemistry 109, 127a, 127b, and either 101 or 131a and 131b.

Electives: Chemistry 150, 112, 114, 17, 118, 119a 119b, 122a, 122b, 130a, 130b, 104, 106, 107, 108, 110, 111, 102, 129.

Requirements in Field of Concentration. Forty credits in the Field of Physical Sciences, including the major work, in courses not open to freshmen.

*1a **GENERAL INORGANIC CHEMISTRY.** (5) I, II — Mitchell and others
Lecture, 1 hour; recitations, 2 hours; laboratory, 4 hours.

*1b **GENERAL INORGANIC CHEMISTRY.** (5) I, II — Mitchell and others
Lecture, 1 hour. recitations, 2 hours; laboratory, 4 hours. **PREREQUISITE: CHEMISTRY 1a.**

*2a **GENERAL INORGANIC CHEMISTRY FOR ENGINEERS.** (4) I — Mitchell and others
Lecture, 1 hour; recitation, 1 hour; laboratory, 4 hours.

*2b **GENERAL INORGANIC CHEMISTRY. FOR ENGINEERS.** (4) II — Mitchell and others
Lecture, 1 hour; recitation, 1 hour; laboratory, 4 hours. **PREREQUISITE: Chemistry 2a.**

4 **QUALITATIVE ANALYSIS.** (4) I, II — Maxson
Recitation, 1 hour; laboratory, 6 hours. **PREREQUISITE: CHEMISTRY 1b.**

6 **QUALITATIVE ANALYSIS FOR MINING AND METALLURGICAL ENGINEERS.** (4) I, II — Maxson
Recitation, 1 hour; laboratory, 6 hours. **PREREQUISITE: CHEMISTRY 2b.**

7 **ORGANIC CHEMISTRY.** (4) I, II — Baker
Recitations, 3 hours; laboratory, 2 hours. **PREREQUISITE: CHEMISTRY 1b.**

8 **QUANTITATIVE ANALYSIS.** (5) I, II — Stewart
Introductory course. Recitation, 1 hour; laboratory, 8 hours. **PREREQUISITE: CHEMISTRY 4 OR 6.**

17 **GAS ANALYSIS.** (1) I, II — Bedford
Laboratory, 2 hours. **PREREQUISITE: CHEMISTRY 1b.**

20a **ORGANIC CHEMISTRY.** (5) I — Barkenbus
Recitations, 3 hours; laboratory, 4 hours. **PREREQUISITE: CHEMISTRY 1b.**

20b **ORGANIC CHEMISTRY.** (5) II — Barkenbus
Continuation of 20a. **PREREQUISITE: CHEMISTRY 20a.**

49a **CHEMISTRY FOR NURSES.** (2) I, II — Keller
Lecture, 1 hour; recitation, 1 hour; laboratory, 1 hour.

Courses open only to Upper Division and Graduate Students

101 **PHYSICAL CHEMISTRY.** (5) I, II — Bedford
For students in Agriculture and the biological sciences. Lectures and recitations, 3 hours; laboratory, 4 hours. Given 1937-38; offered 1938-39. **PREREQUISITES: CHEMISTRY 7, 8; PHYSICS 1b; MATHEMATICS 17.**

† On leave of absence 1938-1939.
* Courses open to freshmen.

102 ELECTRO CHEMISTRY. (5) I, II — Bedford
Elementary electro-analysis, electroplating and preparation of some inorganic and organic substances by electrolysis. Laboratory, 10 hours. Offered upon request. **PREREQUISITES: CHEMISTRY 101 OR 131b, 109, 127b.**

103 QUALITATIVE ORGANIC ANALYSIS. (5) I, II — Baker, Barkenbus
A systematic study of the separation and identification of organic compounds. Laboratory, 10 hours. Required course. **PREREQUISITE: CHEMISTRY 127b.**

104 ADVANCED SYNTHETIC INORGANIC CHEMISTRY. (5) I, II — Maxson
Laboratory, 10 hours. Offered 1938-39. **PREREQUISITE OR CONCURRENT: CHEM. 150.**

106 ADVANCED ORGANIC CHEMISTRY. (5) I, II — Barkenbus, Baker
Laboratory, 10 hours. Given 1937-38; offered 1938-39. **PREREQUISITE: CHEMISTRY 127b.**

107 SELECTED PROBLEMS IN QUANTITATIVE ANALYSIS. (5) I, II — Stewart
Laboratory, 10 hours. Given 1937-38; offered 1938-39. **PREREQUISITE: CHEMISTRY 109.**

108 COLLOID CHEMISTRY. (5) I, II — Maxson
A course involving the study of the physical and the chemical properties of matter in the colloidal state. Laboratory and conferences, 10 hours. Offered upon request. **PREREQUISITE: CHEMISTRY 101 OR 131a.**

109 QUANTITATIVE ANALYSIS. (5) I, II — Stewart
Recitation, 1 hour; laboratory, 8 hours. Given yearly. **PREREQUISITE: CHEMISTRY 8.**

110 PHYSICAL CHEMISTRY. (3) I, II — Bedford
Intermediate course. Lectures, 3 hours. Given 1937-38; offered 1938-39. **PREREQUISITES: CHEMISTRY 131b AND CALCULUS.**

111 PHYSICAL CHEMISTRY. (2) I, II — Bedford
Intermediate course. Laboratory, 4 hours. Given 1937-38; offered Recitation, 1 hour; laboratory, 8 hours. Given yearly. **PRE-**1938-39. **PREREQUISITE OR CONCURRENT: CHEM. 110.**

114 ADVANCED QUANTITATIVE ANALYSIS. (5) I, II — Stewart
The analysis of iron, steel and related metallurgical products. Recitation, 1 hour; laboratory, 8 hours. Given 1937-38; offered 1938-39. **PREREQUISITE: CHEMISTRY 109.**

118 WATER ANALYSIS. (2) I — Stewart
Laboratory, 4 hours. Given yearly. **PREREQUISITE: CHEMISTRY 109.**

119a INDUSTRIAL CHEMISTRY. (2) I, II — Maxson
Lecture, 2 hours. Given yearly. **PREREQUISITE: CHEMISTRY 131b.**

119b INDUSTRIAL CHEMISTRY. (2) I, II — Maxson
Lecture, 2 hours. Given yearly. **PREREQUISITE: CHEMISTRY 131b.**

122a JOURNAL CLUB. (1) I, II — Maxson
Training in the use of chemical literature and special reports on typical research publications. Given yearly. **PREREQUISITE: CHEMISTRY 131b.**

122b **JOURNAL CLUB.** (1) I, II — Maxson
Continuation of 122a. Given yearly. **PREREQUISITE: CHEMISTRY 131b.**

127a **ORGANIC CHEMISTRY.** (5) I — Barkenbus, Baker
Recitations, 3 hours; laboratory, 4 hours. Given yearly. **PREREQUISITE: CHEMISTRY 1b.**

127b **ORGANIC CHEMISTRY.** (5) II — Barkenbus, Baker
Recitations, 3 hours; laboratory, 4 hours. Given yearly. **PREREQUISITE: CHEMISTRY 127a.**

129 **FOOD CHEMISTRY AND ANALYSIS.** (5) I — Stewart
Lectures and recitation, 1 hour; laboratory, 8 hours. **PREREQUISITES: CHEMISTRY 7, OR 127a, 8.**

130a **PHYSIOLOGICAL CHEMISTRY.** (5) I — Barkenbus
A study of the chemistry of living processes. Lectures, 2 hours; laboratory, 6 hours. Given 1937-1938; offered 1938-1939. **PREREQUISITES: CHEMISTRY 8, 127b.**

130b **PHYSIOLOGICAL CHEMISTRY.** (5) II — Barkenbus
Continuation of Chemistry 130a. Lectures, 2 hours; laboratory, 6 hours. Given 1937-38; offered 1938-39. **PREREQUISITE: CHEMISTRY 130a.**

131a **PHYSICAL CHEMISTRY.** (4) I — Bedford
Recitation, 2 hours; laboratory, 4 hours. Given yearly. **PREREQUISITES: CHEMISTRY 8; MATH. 20a; PHYSICS 2a OR CONCURRENT.**

131b **PHYSICAL CHEMISTRY.** (4) II — Bedford
Lectures and recitations, 2 hours; laboratory, 4 hours. Required course. **PREREQUISITE: CHEMISTRY 131a.**

140 **INDUSTRIAL STOICHIOMETRY.** (3) II — Bedford
Chemical calculations of manufacturing processes. Recitations, 3 hours. Given yearly. **PREREQUISITE: CHEMISTRY 119a.**

150 **ADVANCED INORGANIC CHEMISTRY.** (4) I, II — Maxson
Primarily for students specializing in chemistry. Recitations, 2 hours; laboratory, 4 hours. Given yearly. **PREREQUISITE: CHEMISTRY 101 OR 131a.**

151 **CHEMISTRY OF VITAMINS FOR HEALTH OFFICERS.** (1) S — Barkenbus
Two hours lecture per week for 8 weeks.

Courses open only to Graduate Students

201 **SYNTHETIC INORGANIC CHEMISTRY.** (5) I, II — Maxson
Laboratory, 10 hours. Offered upon request.

202 **QUANTITATIVE ANALYSIS.** (5) I, II — Stewart
Research. Laboratory, 10 hours. Offered upon request.

204a **ORGANIC CHEMISTRY.** (5) I, II — Barkenbus
Laboratory, 10 hours. Given 1937-38; offered 1938-39. **PREREQUISITE: CHEMISTRY 106 OR 103.**

204b **ORGANIC CHEMISTRY.** (5) I, II — Barkenbus
Laboratory, 10 hours. Offered 1938-39. **PREREQUISITE: CHEMISTRY 204a.**

205a ADVANCED PHYSICAL CHEMISTRY. (2) I, II Bedford
Given 1937-38; offered 1938-39. **PREREQUISITES: CHEMISTRY 131b AND CALCULUS.**

205b ADVANCED PHYSICAL CHEMISTRY. (2) I, II Bedford
Continuation of 205a. Given 1937-38; offered 1938-39. **PREREQUISITE: CHEMISTRY 205a**

206a ADVANCED PHYSICAL CHEMISTRY. (3) I, II Bedford
Laboratory course on selected topics, in advanced physical or electro-chemistry. Laboratory, 6 or more hours. Offered upon request. **PREREQUISITE OR CONCURRENT: CHEMISTRY 205a.**

206b ADVANCED PHYSICAL CHEMISTRY. (3) I, II Bedford
Continuation of Chemistry 206a. Laboratory, 6 or more hours. Offered upon request. **PREREQUISITE OR CONCURRENT: CHEMISTRY 205b**

207a SYSTEMATIC INORGANIC CHEMISTRY. (2) I OR II Maxson
Lectures and conferences, 2 hours. **PREREQUISITE: CHEMISTRY 131b OR ITS EQUIVALENT. NOT OFFERED 1938-39.**

207b SYSTEMATIC INORGANIC CHEMISTRY. (2) I OR II Maxson
Continuation of Chemistry 207a. Lectures and conferences, 2 hours. Not offered 1938-39.

210a-d SEMINAR. (1) I, II Staff
Reports and discussions on recent research and current literature. Required of all Graduate Students. Given 1937-38, a, b.

Course in Industrial Chemistry

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

Outline of Course Leading to the Degree B. S. in Industrial Chemistry

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Mat. Lec. Required of all	.3	Eng. 1b Eng. Composition	3.
Eng. 1a Eng. Composition	3.	Math. 19 Plane Analytic Geom.	3.
Math. 17 College Algebra	3.	Ger. 1b Elem. German	3.
Math. 18 Plane Trig.	2.	Chem. 1b Gen. Inorg. Chem.	5.
Ger. 1a Elem. German	3.	Eng. Draw. 2b Mech. Draw.	1.3
Eng. Draw. 2a Mech. Draw.	1.3	Mil. Sci. 1b First Year Basic Course, Infantry	1.3
Chem. 1a Gen. Inorg. Chem.	5.	Phys. Ed. Freshman Gym.	.7
Mil. Sci. 1a First Year Basic Course, Infantry	1.3	Hyg. 1 Personal and Community Health	1.
Phys. Ed. Freshman Gym.	.7		
	19.6		18.3

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Phys. 2a Gen. Col. Phys.	5.	Phys. 2b Gen. Col. Phys.	5.
Math. 20a Diff. Calculus	4.	Ger. 2b Intermed. German	3.
Ger. 2a Intermed. German	3.	Chem. 8 Quan. Analysis	5.
Chem. 4 Qual. Analysis	4.	Math. 20b Integral Calculus	4.
Mil. Sci. 6a Second Year Basic Course, Infantry	1.5	Mil. Sci. 6b Second Year Basic Course, Infantry	1.5
Phys. Ed. Sophomore Gym.	.7	Phys. Ed. Sophomore Gym.	.7
	18.2		19.2

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Chem. 127a Organic Chem., Aliphatic Series	5.	Chem. 127b Organic Chem., Cyclic Series	5.
Chem. 109 Quan. Analysis	5.	Chem. 17 Gas Analysis	1.
Chem. 131a Physical Chem.	4.	Econ. 15 Applied Econ.	3.
Com. 1 Principles of Ec.	3.	Chem. 131b Phys. Chem., Continued	4.
French 1a Elem. French	3.	French 1b Elem. French	3.
Geol. 109a Mineralogy	2.	Phys. 117 Theory of Heat	3.
	22.		19.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Elec. Engr. 105 Direct Currents and Machinery	4.	Elec. Engr. 106 Alternating Currents	4.
or		or	
Physics Advanced Physics	3.	Physics Advanced Physics	3.
Chem. 119a Indus. Chem.	2.	Chem. 150 Adv. Inorg. Chem.	4.
Chem. 122a Journal Club	1.	Chem. 119b Indus. Chem.	2.
Eng. Elective	3. or 2	Eng. Elective	3. or 2
Chem. 118 Water Analysis	2.	Chem. 122b Journal Club	1.
Chem. 103 Qual. Org. Anal.	5.	Chem. Elective	5.
Physics 123 Principles of Thermodynamics	3.	Chem. 140 Industrial Stoichiometry	3.
	18, 19, 20		20, 21, 22

Minimum credits for a degree 154.3.

Note.—Students excused from Military Science or Physical Education must gain equivalent credits in other subjects.

CIVIL, ARCHITECTURAL AND SANITARY ENGINEERING

Professors Terrell, Carrel and Cheek, Associate Professors Farris and Shaver, Assistant Professor Chambers and Mr. Gillig

Architectural Engineering

1 ARCHITECTURAL RENDERING. (2) II Farris
Pictorial delineation of architectural subjects in the medium of pencil, ink and water color. Drawing, 6 hours a week. **PREREQUISITE: ART 61a.**

3 SANITATION, ACCOUSTICS, FIRE PREVENTION. (3) I Farris
Theory and practice as applied to architectural design. Lectures and recitations, 3 hours a week. **PREREQUISITE: JUNIOR CLASSIFICATION.**

4a ARCHITECTURAL DESIGN. (2.7) I Farris
Principles of aesthetic design and functional planning of buildings. Drawing room, 8 hours a week. **PREREQUISITE: JUNIOR CLASSIFICATION.**

4b ARCHITECTURAL DESIGN. (2.7) II Farris
Continuation of Arch. Eng. 4a. Drawing room, 8 hours a week. **PREREQUISITE: ARCH. ENG. 4a.**

5 BUILDING EQUIPMENT. (2) II Farris
Theory and practice of modern building equipment. Lectures and recitations, 2 hours a week. **PREREQUISITE: MECH. ENG. 103.**

6 INDEPENDENT PROBLEMS. (5) II 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, 6 hours a week. **PREREQUISITE: ARCH. ENG. 4a.**

7 BUILDING CONSTRUCTION. (1) II — Gillig
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. (2) II — Chambers
Properties of stone, brick, cement, and their uses in engineering structures.

***12 PLANE SURVEYING.** (2.7) I, II — 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, 2 hours a week; field work four hours a week, first half of first semester or second half of second semester. **PREREQUISITE: MATH. 18**

13 ADVANCED SURVEYING. (3) 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, 2 hours a week; field work, 6 hours a week, first half of first semester. **PREREQUISITE: CIV. ENG. 12**

15 GENERAL SURVEYING. (3) S — Terrell, 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. (2) II — 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 recitation, 2 hours a week. **PREREQUISITE: CIV. ENG. 12.**

16b ROUTE SURVEYING. (3) S — Terrell, 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) S — Terrell, Shaver
Given at the summer surveying camp located at Camp Robinson, Noble, Breathitt County, Kentucky. Stream gaging, 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.**

* Courses open to freshmen.

18 MAPPING AND TOPOGRAPHIC DRAWING. (2) I Terrell, Shaver
Construction of maps from field notes, reproductions and changing scale of maps, topographic symbols, contours, projected locations, profile, line and grade. Drafting room, 6 hours a week. **PREREQUISITE: CIV. ENG. 12.**

20 HYDRAULICS. (1) I Cheek
A brief course for mechanical engineers, in the flow of liquids through orifices, venturi meters, nozzles and pipes. This course omits advanced material related to the design of hydraulic structures. Recitation, 2 hours a week for one-half semester. **PREREQUISITE: PHYS. 2a. PREREQUISITE OR CONCURRENT: MATH. 20b.**

23 SEMINAR. (1) II 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. (2) I Chambers
Principles of location, topographic conditions, economic considerations, benefits and costs. Materials and types of roads, and general maintenance. Lectures and recitations, 2 hours a week.

32 STREETS AND PAVEMENTS. (2) II Chambers
Drainage, subgrade, foundations, surfacing materials; resistance to friction, safety appliances, construction, maintenance and traffic census. Lectures and recitations, 2 hours a week. **PREREQUISITE: CIV. ENG. 31.**

35 HIGHWAY MATERIALS. (1) I Chambers
Methods of testing stone, gravel, sand, brick, culvert pipe, cement, concrete and other highway materials. Laboratory, 2 hours a week. **PREREQUISITE OR CONCURRENT: CIV. ENG. 31.**

36 BITUMINOUS MATERIALS. (1) II Chambers
Testing of asphalts, road oils, coal tars, flux oils and dust layers. Laboratory, 2 hours a week. **PREREQUISITE OR CONCURRENT: CIV. ENG. 36.**

49 RAILWAY CONSTRUCTION AND MAINTENANCE. (3) I 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. (1.3) I, II Carrel
Principles and methods of finding stresses by graphic solution as applied to roof and bridge trusses. Drawing room, 4 hours a week. **PREREQUISITE: PHYS. 2a.**

81 TESTING MATERIALS. (1) I, II 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, 2 hours a week. **PREREQUISITE OR CONCURRENT: APPLIED MECH. 100.**

102 REINFORCED CONCRETE. (3) I Terrell
A study of concrete mixtures. Theory and design of beams, slabs, columns, bridges and buildings. Lectures and recitations, 3 hours a week. **PREREQUISITE: APPLIED MECH. 100.**

104 REINFORCED CONCRETE DESIGN. (0.7) I 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. (3.7) II Terrell
Theory and design of retaining walls, dams, arches, plane and reinforced structures, rigid frames. Lectures and recitations, 3 hours; drawing room, 2 hours a week. **PREREQUISITE: CIV. ENG. 171a.**

106 FOUNDATIONS AND TUNNELING. (2) II Graham, 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. (2) II 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. **PREREQUISITE: APPLIED MECH. 100.**

111 CONTRACTS AND SPECIFICATIONS. (1) II Carrel, Farris
Legal forms and provisions of an engineering contract and details for specification writing. Lectures and recitations, 1 hour a week.

113 GEODESY, PRECISE SURVEYING AND LEVELING. (3) II 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, 2 hours a week; field work, 3 hours a week. **PREREQUISITES: MATH. 11, 12; CIV. ENG. 13.**

120 HYDRAULICS. (2) I, II 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, 2 hours a week. **PREREQUISITE: PHYS. 2a. PREREQUISITE OR CONCURRENT: MATH. 20b.**

122 WATER POWER ENGINEERING. (2) II Carrel
Investigations, design and operation of water power projects. Lectures and recitations, 2 hours a week. **PREREQUISITE: CIV. ENG. 120.**

123 HYDRAULICS LABORATORY. (1.5) I Cheek
Experimental investigation of flow of water in pipes, channels, over weirs, measure of friction and hydrostatic pressure, hydraulic machinery. Laboratory, 3 hours a week. **PREREQUISITE OR CONCURRENT: CIV. ENG. 120.**

170 ELEMENTS OF STRUCTURAL DESIGN. (3) I, II Carrel, Cheek
Drafting room practice, problems in the design of timber, steel and masonry structures. Lecture, 1 hour; drafting room, 6 hours a week. **PREREQUISITE OR CONCURRENT: CIV. ENG. 171a.**

171a THEORY OF STRUCTURES. (3) I, II 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, 3 hours a week. **PREREQUISITE OR CONCURRENT: APPLIED MECH. 100.**

171b THEORY OF STRUCTURES. (2) II Carrel
Continuation of Civ. Eng. 171a. Lectures and recitations, 2 hours a week. **PREREQUISITE: CIV. ENG. 171a.**

173a STEEL STRUCTURES. (3) II Carrel
Design and detail of steel buildings and highway bridges. Lecture, 1 hour; drawing room, 6 hours a week. **PREREQUISITE: CIV. ENG. 171a.**

173b STEEL STRUCTURES. (1.3) I Carrel
Design and detail of steel railway bridges. Drawing room, 4 hours a week. **PREREQUISITE: CIV. ENG. 173a.**

181a INDEPENDENT PROBLEMS. (1) I 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) II 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) S 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. (2) II Terrell, 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, 2 hours a week. **PREREQUISITE: CIV. ENG. 120.**

152 SEWERS AND SEWAGE DISPOSAL. (2) II Terrell, Cheek
Sanitary and storm sewer system; theory of design; method of disposal. Lectures and recitations, 2 hours a week. **PREREQUISITE: CIV. ENG. 120.**

153 DESIGN OF WATERWORKS AND SEWERS. (1.3) II Terrell, Cheek
Design of water supply system, storm and sanitary sewers and disposal plants. Specifications and estimates of cost. Drawing room, 4 hours a week. **PREREQUISITE OR CONCURRENT: SAN. ENG. 151, 152.**

156 WATER AND SEWER PLANT OPERATION. (1) II Cheek
Standard methods of control for producing best results in the treatment of water and sewage. Practice with miniature plants. Laboratory, 2 hours a week. **PREREQUISITE OR CONCURRENT: SAN. ENG. 151, 152.**

157 SANITARY ENGINEERING FOR HEALTH OFFICERS. (2) S — 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. (2.7) II — 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, 8 hours a week. **PREREQUISITE OR CONCURRENT: SAN. ENG. 151, 152.**

182 SANITATION. (3) I — 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.**

183 STREAM POLLUTION. (3) II — Cheek

Survey of sources of pollution, including sewage and industrial waste, prevention, sanitation laws, relation to public health. 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. (6) I — Terrell

Advanced work in plain and reinforced concrete, theory, design and experimental work. Class work, 3 hours; laboratory, 9 hours a week.

202b CONSTRUCTION. (6) II — Terrell

Continuation of 202a.

232a HIGHWAY ENGINEERING. (6) 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, 3 hours; laboratory, 9 hours a week.

232b HIGHWAY ENGINEERING. (6) II — Chambers

Continuation of 232a.

242a RAILROAD ENGINEERING. (6) I — Shaver

Advanced course in location, construction, maintenance, economical selection of lines, grade reduction, cost of operation, valuation, structures and their maintenance. Class work, 3 hours; laboratory, 9 hours a week.

242b RAILROAD ENGINEERING. (6) II — Shaver
Continuation of 242a.

252a SANITARY ENGINEERING. (6) I — 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, 3 hours; laboratory, 9 hours a week.

252b SANITARY ENGINEERING. (6) II — Cheek
Continuation of 252a.

262a GEODETIC SURVEYING. (6) I — 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, 3 hours; laboratory, 9 hours a week.

262b GEODETIC SURVEYING. (6) II — Terrell
Continuation of 262a.

272a STRUCTURAL ENGINEERING. (6) I — Carrel
Advanced course of theory of structures, mill building, railroad and highway bridges. The use of influence diagrams and detail drawings. Class work, 3 hours; laboratory, 9 hours a week.

272b STRUCTURAL ENGINEERING. (6) II — Carrel
Continuation of 272a.

COMMERCE

Professors Wiest, Carter, Haun, Jennings, McIntyre, Martin, Palmer and Pittman, Associate Professors Lawrence, Moore and Sullivan, and Assistant Professors Beals, Guy and Tolman

1 PRINCIPLES OF ECONOMICS. (3) I, II — Wiest and others
An examination of the fundamental principles of economics and the application of these principles to practical problems. **NOT OPEN TO FRESHMEN.**

2 ECONOMIC HISTORY OF EUROPE. (3) I — 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. (3) II — 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) II — Lawrence
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. (4) I Haun and others
Instruction in the science and adaptation of the accounts of going concerns, together with sufficient practice to acquire proficiency. Recitation, two hours; laboratory, four hours a week. **NOT OPEN TO FRESHMEN.**

7b PRINCIPLES OF ACCOUNTING. (4) II Haun and others
Continuation of 7a. Recitation, two hours a week; laboratory, four hours a week. **NOT OPEN TO FRESHMEN.**

8 ECONOMIC GEOGRAPHY. (3) I Carter
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 FORMS OF BUSINESS ORGANIZATION. (3) II Tolman and others
A study of business organization primarily from a social point of view. The course traces the origin and development of forms of business organization; treats of advantages and disadvantages of the various forms; includes a study of the trust or combination movement and its effect upon society.

10 PRINCIPLES OF MARKETING. (3) II McIntyre and Moore
A functional study of market organization. Considerable time is given to the discussion of retail types such as the 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. (2) I 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 NORTH AMERICA. (3) II Carter
A detailed study of the agricultural, mineral, lumber, fishery and other economic resources of North America. The emphasis is placed upon the resources of the United States, the various geographical sections being intensively studied.

13a SECRETARIAL PRACTICE. (5) I Guy
This course offers training in the theory of shorthand and is supplemented with some discussion of secretarial duties. Credit for this course will not be given until 13b is completed. Recitation, four hours a week; laboratory, two hours a week.

13b SECRETARIAL PRACTICE. (5) II Guy
Continuation of 13a. Much attention is given to the principles of speed writing. Practice material is selected which will give the student an idea of the form and general lay-out of business papers. Recitation, four hours a week; laboratory, two hours a week. **PREREQUISITE: COM. 13a OR ITS EQUIVALENT.**

14a ADVANCED SECRETARIAL PRACTICE. (3) I, II Lawrence and Guy
This course includes advanced dictation with a minimum achievement of 90 words a minute and the development of skill and speed in transcribing from shorthand notes. It also includes filing and general office practice. **PREREQUISITES: COM. 13a AND 13b OR THEIR EQUIVALENT.**

14b ADVANCED SECRETARIAL PRACTICE. (3) II — Lawrence and Guy
Continuation of 14a with the attainment of a speed in dictation of 100 to 125 words a minute in shorthand. **PREREQUISITES: COM. 13a AND 13b OR THEIR EQUIVALENT.**

15 APPLIED ECONOMICS. (3) II — Sullivan and others
Fundamental aspects of money and banking, industrial efficiency, marketing, transportation, public utilities, public finance, social control, et cetera.

102 LABOR PROBLEMS. (3) I — Carter
A study of the labor market in its industrial setting, including such directly related topics as immigration, unemployment, and labor organizations. **PREREQUISITE: COM. 1.**

103 TRANSPORTATION. (3) II — Sullivan
Railways, waterways, highways, airways. Rates, service, management, regulation. **PREREQUISITE: COM. 1.**

104 PUBLIC FINANCE. (3) I — Sullivan
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. (3) I — Wiest and 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 ADVANCED ACCOUNTING. (3) I — Haun and Beals
Principles of valuation and income determination. Statement arrangement. Corporation accounting. Manufacturing accounts. Advanced partnership accounting. **PREREQUISITES: COM. 7a AND 7b.**

106b ADVANCED ACCOUNTING. (3) II — Haun and Beals
Continuation of 106a. Accounting for installment sales, agencies and branches, ventures, and consignments. Accounting features of insolvent concerns and of consolidations and mergers. Estate accounting. Analysis of financial statements.

107 STATISTICAL METHODS. (3) I — Palmer
Training in the process of treating multiple phenomena with mathematical exactitude. The methods are illustrated with material from the fields of psychology, education, economics and sociology. Recitation, one hour; laboratory, four hours. **NOT OPEN TO FRESHMEN AND SOPHOMORES.**

109a BUSINESS LAW. (3) I — Haun and Pittman
A survey of the principles of contracts, sales, bills and notes, and that portion of the law of torts applicable to business practice. **PREREQUISITE: TWO YEARS OF COMMERCE COURSE.**

109b BUSINESS LAW. (3) II — Haun and Pittman
Continuation of 109a.

110 BUSINESS CYCLES. (3) II — Palmer
The nature and characteristics of the economic factors which underlie the cyclical fluctuations in business conditions; the methods of business and investment forecasting. **PREREQUISITE: COM. 1 AND 107.**

112a INDIVIDUAL WORK IN ECONOMICS. (2) I Palmer and others
In the 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 credit hour.

112b INDIVIDUAL WORK IN ECONOMICS. (2) II Palmer and others
Continuation of 112a.

113 AUDITING. (3) II 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.**

115 VALUE AND DISTRIBUTION THEORY. (3) I Sullivan
The major emphasis is on price and distribution theory.

117 CORPORATION FINANCE. (3) II Lawrence and others
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 AND 9.**

118 COST ACCOUNTING. (3) I 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. (2) I Moore
Selecting a business location, internal layout, departmentalization, merchandising control, store policies toward the public, training and management of personnel, and related subjects. **PREREQUISITES: COM. 1 AND 10.**

124 STATE AND LOCAL TAXATION. (3) II 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. **PREREQUISITE: COM. 1.**

125 ADVANCED ECONOMIC HISTORY OF EUROPE. (3) I Jennings
An advanced study of population, immigration, labor, agriculture, industry, and finance, and the effects of the various lines of development upon national life. **NOT OPEN TO FRESHMEN AND SOPHOMORES NOR TO STUDENTS WHO HAVE HAD COM. 2 EXCEPT WHEN DOING GRADUATE WORK.**

126 ECONOMICS OF PUBLIC UTILITIES. (3) I Carter
No credit for this course can be given if the student has credit for Political Science 158. Growth and development of public utilities; valuation; rate-making; financing; the holding company; regulations; current problems; accounting. **PREREQUISITE: COM. 1.**

127 INTERNATIONAL ECONOMIC POLICIES. (3) II 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. (2) I Haun and Beals
The theory underlying credit-granting; credit administration; analysis and interpretation of financial statements. **PREREQUISITE: COM. 7a.**

130 LABOR LEGISLATION. (3) II — 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. (2) II — Palmer

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. 1 AND 9.**

132a C. P. A. PROBLEMS. (3) I — 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) II — Haun and Beals

Continuation of 132a.

133 INCOME TAX PROCEDURE. (3) I — 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. (3) 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 FRESHMEN AND SOPHOMORES NOR 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) II — McIntyre

The case method will be used, supplemented with outside reading and written reports. **PREREQUISITE: COM. 11 OR THE CONSENT OF THE INSTRUCTOR.**

137 PROBLEMS IN MANAGEMENT. (3) II — 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 semester 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 WHO ARE REQUIRED TO TAKE EITHER THIS COURSE OR 138, AND TO GRADUATE STUDENTS WHO HAVE HAD THE NECESSARY PREREQUISITE TRAINING.**

138 **INVESTIGATION OF BUSINESS PROBLEMS.** (3) II 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 WHO ARE REQUIRED TO TAKE EITHER THIS COURSE OR 137, AND TO GRADUATE STUDENTS WHO HAVE HAD THE NECESSARY PREREQUISITE TRAINING. PREREQUISITE: COM. 107.**

140 **ADVERTISING CAMPAIGNS.** (3) 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.**

141 **MANAGERIAL STATISTICS.** (3) I Palmer
An advanced practical course in the use of charts and graphs by the business manager; logarithmic, double logarithmic and other rulings, pin maps, organization charts, work schedule graphs, computation graphs and nomographs, plotting the error area of trends, construction of three-dimensioned surfaces, etc. Data will be drawn from the fields of accounting, advertising, personnel work, credit granting, purchasing, scheduling and the like. **PREREQUISITE: AN ELEMENTARY COURSE IN STATISTICS.**

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. **PREREQUISITIE: AN ELEMENTARY COURSE IN STATISTICS.**

143 **LIFE INSURANCE.** (3) I Carpenter
Economics of life insurance; organization and control; special forms of life insurance; fundamental principles of rate-making. **PREREQUISITE: COM. 1.**

144 **PROPERTY AND CASUALTY INSURANCE.** (3) II Carpenter
Public control; nature of contracts. analysis of reserve functions and rate-making processes. **PREREQUISITE: COM. 1.**

145 **PROBLEMS IN OFFICE MANAGEMENT.** (3) S Lawrence
The theories and principles underlying office management and control. The course is designed for superintendents of schools, high school principals, registrars, office workers, and others.

147 **AMERICAN BUSINESS LEADERS.** (2) I 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.

148 **EUROPEAN BUSINESS LEADERS.** (1) 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.

149 **MARKET ANALYSIS.** (3) I — 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.**

202a-k **SEMINAR.** (1 to 3) I, II — Palmer and others
An extended original 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.** (3) 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.** (2) I — Jennings
An examination of original sources and class reports; 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.** (2) II — Jennings
A continuation of Com. 204, but may be taken independently. **NOT OPEN TO STUDENTS WHO HAVE TAKEN COM. 134 FOR GRADUATE CREDIT.**

206 **MUNICIPAL FINANCE.** (3) I — Martin
The budget problems of municipalities are analyzed; the debt policies critically examined; and the auditing and reporting plans compared and evaluated. Problems of taxation are dealt with incidentally. Each individual conducts one or more independent investigations.

207 **LITERATURE OF PUBLIC FINANCE.** (3) I — Martin
Several of the great masterpieces of government finance are read critically. Each student makes a careful study of one system or of the development of one idea. A reading knowledge of French or German is desirable, but not necessary.

208 **ADVANCED ECONOMIC THEORY.** (3) I — Sullivan
A critical examination of current literature on economic problems and policies. **PREREQUISITE: COM. 1.**

209 **COMPARATIVE BANKING AND MONETARY SYSTEMS.** (3) 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.** (3) II — Palmer
For those who wish to become connected with government, state, and industrial research bureaus; particularly devoted to the study of the practical applications of probable error formulae, in estimating the most profitable size of samples. Applications will be made in the fields of frequency series, correlation problems, and time series. **PREREQUISITES: AN ELEMENTARY COURSE IN STATISTICS AND CONSENT OF INSTRUCTOR.**

211 **ADVANCED MONEY AND BANKING.** (3) II — Wiest
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. (3) II Sullivan

A survey of current literature of theoretical economics. Special emphasis is placed on analysis of fundamental institutions. This course is virtually a continuation of Course 203.

Courses in Mathematics of Finance, Advertising, Personnel Administration and Business English are given by the departments of Mathematics, Psychology and English in the College of Arts and Sciences.

DISTRIBUTIVE OCCUPATIONS

Mr. Baker

112 DETERMINING TEACHING CONTENT IN DISTRIBUTIVE OCCUPATIONS. (2) I, II, S Baker

This course is planned to meet the needs of persons engaged as instructors in the field of distributive occupations. It will cover the analysis and course construction in the field of distributive occupations.

116 PROBLEMS OF THE COORDINATOR IN DISTRIBUTIVE OCCUPATIONS. (2) I, II, S Baker

The purpose of this course is to discuss some of the 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, problems in follow-up methods, problems in store contacts and problems in securing the cooperation of personnel management will be discussed.

128 TECHNIQUE OF TEACHING DISTRIBUTIVE OCCUPATIONS. (2) I, II, S Baker

This course is 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.

ECONOMICS

Requirements for a Major in the College of Arts and Sciences. Prerequisites: Junior standing; six credits in Economics including Course 1. Required: A minimum of 17 credits of advanced work in Economics including Course 9, if not taken as a prerequisite, and Courses 102 and 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 and b must be taken in the senior year to prepare for the required comprehensive examination.

Requirements in Field of Concentration in the College of Arts and Sciences. Forty credits of advanced work in the Field of Social Studies, including the major work.

List of Courses. The courses that may be used to satisfy the above requirements are listed and described under Commerce, p. 145, 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 Accounting; 8—Economic Geography; 9—Forms of Business Organization; 12—Economic Geography of North America; 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; 115—Contemporary Economic Theory; 124—State and Local Taxation; 125—Advanced Economic History of Europe; 126—Economics of Public Utilities; 127—International Economic Policies; 130—Labor Legislation; 134—Advanced Economic History of the United States; 141—Managerial Statistics; 142—Index Numbers; 147—American Business Leaders; 148—European Business Leaders; 202a-k—Seminar; 203—History of Economic Thought; 204—Economic History of the United States Prior to 1860; 205—Economic History of the United States Since 1860; 206—Municipal Finance; 207—Literature of Public Finance; 208—Advanced Economic Theory; 209—Comparative Banking and Monetary Systems; 210—Research Statistics; 211—Advanced Money and Banking.

EDUCATIONAL ADMINISTRATION

Dean Taylor, Professors Seay, Chamberlain, Hammonds and Ligon, Associate Professor Duncan, Mrs. Holmes and Dr. Hill

101 SCHOOL ORGANIZATION. (3) I, II, S 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.

148 ADVISERS OF GIRLS AND DEANS OF WOMEN. (3) S Holmes

This course is designed for teachers, advisers of girls, and deans of women, with particular reference to the needs of Kentucky schools. Some of the problems studied are: the adjustment of students; the aims, organization, and content of the extra-curricular program; the technique of counseling; work with groups; student government; vocational and educational guidance; record forms and office organization.

198 THE ADMINISTRATION OF PUPIL PERSONNEL. (3) S Seay

This course deals with the school census, enforcement of attendance, personnel records, marking, pupil progress, and classification. The course is designed primarily for prospective superintendents and attendance officers.

202 LOCAL SCHOOL ADMINISTRATION. (3) II, S Seay or Hill

A general course in 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. (3) I, S Ligon

A study of court decisions in order to discover the legal principles involved in practical problems of school administration. Topics: 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. **PREREQUISITE: EDUCATION 202 OR 213 OR 232.**

206 PROBLEMS OF COLLEGE TEACHING. (3) S Taylor

This course covers among others the following topics: 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. (3) S Chamberlain

The major topics considered are the measurement and evaluation of existing building facilities, planning new school buildings, financing the building program, and building operation and maintenance. The student should have had considerable graduate work in education before enrolling in this course. **PREREQUISITE: EDUCATION 202 OR ITS EQUIVALENT.**

210 SPECIAL PROBLEMS IN SCHOOL ADMINISTRATION. (3) I, II, S Seay

An independent work course for students doing their first year of graduate work in education. **PREREQUISITE: EDUCATION 101 OR 202.**

211 THE ADMINISTRATION OF VOCATIONAL EDUCATION. (3) S Hammonds

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.

212 THE ELEMENTARY SCHOOL. (3) II, S Duncan

For description see Elementary Education.

213 STATE SCHOOL ADMINISTRATION. (3) I, S 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.

214 THE SECONDARY SCHOOL. (3) S Ligon

For description see Secondary Education.

225 SUPERVISION OF INSTRUCTION. (3) II, S Seay or Hill

Topics considered are the development of supervision, purpose of supervision, organization for supervision, planning supervision, use of classroom visitation and demonstration lessons, use of teachers' meetings and individual conferences, use of the course of study, use of tests and measurements, equipment and supplies, the teacher, and the pupil. The student should have had Education 202 or its equivalent before enrolling in this class.

231 FINANCING PUBLIC EDUCATION. (3) S Hill

Topics covered are budgetary procedure, school costs, school indebtedness, state finance, fiscal reports, and accounting procedures. These topics are treated primarily from the viewpoint of the superintendent of schools. The student should have had Education 202 or its equivalent before enrolling in this class.

232 HIGH SCHOOL ADMINISTRATION. (3) II, S 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. (3) I, S Hill or Chamberlain

A specialized course in school administration, primarily for prospective superintendents. The course will emphasize 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. (3) S 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. (3) I, S Chamberlain

This course will survey modern tendencies in American higher education in the following areas: Scope and development, objectives, organization, administration, curricula, finance, and faculty and student personnel. It 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.

276 ADMINISTRATIVE PROBLEMS IN TODAY'S EDUCATION. (3) S — Seay

This course had to do with present-day problems of persons in administrative positions in public education. It is designed to be of assistance particularly to superintendents of schools.

301a-b RESEARCH PROBLEMS IN EDUCATIONAL ADMINISTRATION. (3) I, II, S — Seay

An independent research course. The student will confer with the instructor whenever either or both of them deem it advisable. **PREREQUISITE: ONE YEAR OF GRADUATE WORK.**

307a-b RESEARCH PROBLEMS IN SECONDARY EDUCATION. (3) I, II, S — Ligon

Same type of course as Education 301. **PREREQUISITE: ONE YEAR OF GRADUATE WORK.**

308a-b RESEARCH PROBLEMS IN ELEMENTARY EDUCATION. (3) I, II, S — Duncan

Same type of course as Education 301. **PREREQUISITE: ONE YEAR OF GRADUATE WORK.**

321a-b RESEARCH PROBLEMS IN HIGHER EDUCATION. (3) I, II, S — Taylor and Chamberlain

Same type of course as Education 301. **PREREQUISITE: ONE YEAR OF GRADUATE WORK.**

EDUCATIONAL PSYCHOLOGY

Professors Ross and Hammonds

16 EDUCATIONAL PSYCHOLOGY. (3) II — Hammonds

Application of psychology to the problems of learning and teaching vocational agriculture.

118 EDUCATIONAL TESTS AND MEASUREMENTS FOR ELEMENTARY TEACHERS. (2) I, S — Ross

The problems of measurement in the elementary school; formal and informal tests; marking systems, etc. **PREREQUISITE: ONE SEMESTER OF PSYCHOLOGY.**

119 FOUNDATIONS OF ELEMENTARY EDUCATION. (3) II — Ross

The psychology of the child in the primary and intermediate grades. **PREREQUISITE: ONE SEMESTER OF PSYCHOLOGY.**

122 EDUCATIONAL TESTS AND MEASUREMENTS FOR HIGH SCHOOL TEACHERS. (3) I, II, S — 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.

147 FOUNDATIONS OF SECONDARY EDUCATION. (3) I, II, S — Ross

The psychology of the student in junior and senior high school. **PREREQUISITE: ONE SEMESTER OF PSYCHOLOGY.**

152 PROBLEMS IN EDUCATIONAL PSYCHOLOGY. (3) II — Ross

A critical survey of the conflicting schools of psychology, theories of learning, etc. **PREREQUISITE: ONE YEAR OF PSYCHOLOGY.**

216 SEMINAR IN TESTS AND MEASUREMENTS. (3) I, S — Ross

A critical study of certain problems in measurement. Individual work. **PREREQUISITE: EDUCATION 122.**

223 EDUCATIONAL STATISTICS. (3) I, S — Ross

A non-mathematical study of the applications of statistical and graphical methods to educational data.

ELECTRICAL ENGINEERING

Professors Freeman and Bureau, Associate Professor Barnett, and Assistant Professor Doll

11 ELECTRICAL LABORATORY. (1) I, II — Barnett

(For Electrical and Architectural Engineers.) A study of the methods and materials used in connecting electrical apparatus and in the wiring of buildings. Especial attention is given to adequacy, serviceability, safety and cost. Laboratory and supervised problem work, 3 hours a week. **PREREQUISITE: PHYS. 10 OR 1b.**

21 PRINCIPLES OF ELECTRICAL ENGINEERING. (4) I, II, S — Barnett, Doll

(For Electrical Engineers.) A first course in electrical engineering, including a study of the fundamental laws of electric, magnetic and dielectric circuits and of their application to engineering. Recitations, 3 hours; supervised calculations and laboratory, 3 hours a week. **PREREQUISITE OR CONCURRENT: PHYS. 2b.**

101 ELEMENTS OF ELECTRICAL ENGINEERING MACHINERY. (3) I — Bureau

(For Civil, Metallurgical and Mining Engineers.) A study in classroom and laboratory of the more common types of d.c. and a.c. electrical equipment and machines. Recitations, 2 hours a week; laboratory, 3 hours a week. **PREREQUISITE: PHYS. 2b.**

102 ELECTRICAL ENGINEERING MACHINERY. (2) II — Bureau

(For Mining and Metallurgical Engineers.) A study in the classroom of electric power applied to mining machinery and metallurgical processes. Recitations, 2 hours a week. **PREREQUISITE: Elec. Eng. 101.**

105 D.C. CIRCUITS AND MACHINERY. (4) I, II, S — Barnett, Doll

(For Mechanical Engineers and Industrial Chemists.) A study in classroom and laboratory of the fundamental laws of electrical and magnetic circuits with special attention to direct current equipment, such as generators, motors, batteries and control apparatus. Recitations, 3 hours; laboratory, 3 hours a week. **PREREQUISITE: Phys. 2b.**

106 ALTERNATING CURRENTS. (4) I, II, S — Barnett, Doll

(For Mechanical Engineers and Industrial Chemists.) The fundamental theory of alternating current circuits and apparatus. Includes a study of single phase and polyphase generators, motors and transformers, converters, etc. Recitations, 3 hours; laboratory, 3 hours a week. **PREREQUISITES: ELEC. ENG. 105; MATH. 20a.**

107 ELECTRICAL CONTROL. (3) I, II — Bureau

(For Electrical and Mining Engineers.) A study of the field of electrical engineering which is concerned with the control of electric motive equipment. It involves a study of the individual types of control equipment as well as the various circuits with which they are tied together into a unit of automatic functioning equipment. Recitations, 2 hours; laboratory, 3 hours a week. **PREREQUISITE: ELEC. ENG. 105 OR ELEC. ENG. 101.**

108 ENGINEERING ELECTRONICS. (3) I, II Doll
A study of the application of thermionic and light sensitive tubes to industry in non-communication uses such as controlling processes, safe-guarding life and property, etc. Included will be light sensitive tubes in illumination control, smoke, density, recorders, etc., and power rectifiers of various types. The laboratory work will consist of designing, building and studying control circuits. Recitations, 2 hours; laboratory, 3 hours a week. **PREREQUISITE: PHYS. 2b.**

109 ELECTRICAL POWER EQUIPMENT. (4) I, S Freeman
(For Electrical Engineers.) A general study of the operation of the more common types of electrical power equipment. Attention is given to power resources, prime movers, generating equipment, switch gear, transformers, meters, reactors, relays, lightning arrestors and distribution system. Recitations, 4 hours a week. **PREREQUISITE: ELEC. ENG. 106.** (Discontinued after 1939-40.)

110 ELECTRICAL LABORATORY. (2) II Doll
(For Electrical Engineers.) An experimental study of direct current machines. 2 three-hour laboratory periods a week. **PREREQUISITE OR CONCURRENT: ELEC. ENG. 115.**

111a ADVANCED ELECTRICAL LABORATORY. (2) I Bureau
(For Electrical Engineers.) Advanced study of electrical machinery and equipment with special reference to alternating current apparatus. 2 three-hour laboratory periods a week. **PREREQUISITE: ELEC. ENG. 106 OR 116.**

111b ADVANCED ELECTRICAL LABORATORY. (1) II Bureau
(Elective for Electrical Engineers.) Continuation of Elec. Eng. 111a. 1 three-hour laboratory period a week.

115 DIRECT CURRENT MACHINERY. (4) I, II Barnett, Doll
(For Electrical Engineers.) The theoretical principles and operation of direct current machines, including generators, motors, lifting magnets, balances, etc. Recitations, 3 hours; supervised calculations and laboratory, 3 hours a week. **PREREQUISITES: PHYS. 2b; ELEC. ENG. 21; MATH. 20b.**

116 ALTERNATING CURRENT CIRCUITS AND MACHINERY. (4) II, S Barnett, Doll
(For Electrical Engineers.) A study of polyphase circuits and of the simpler forms of alternating current machines. Recitations, 3 hours; supervised calculations and laboratory, 3 hours a week. **PREREQUISITE: ELEC. ENG. 115.** (Not offered till 1939-40.)

117 ALTERNATING CURRENT MACHINERY. (4) I Barnett, Doll
(For Electrical Engineers.) The theory of alternating current machines and their applications in the generation, distribution and utilization of electrical power. Recitations, 3 hours; supervised calculations and laboratory, 3 hours a week. **PREREQUISITE: ELEC. ENG. 116.** (Not offered till 1939-40.)

123 ELECTRICAL EQUIPMENT PROBLEMS. (1.3) I, II, S Bureau
(For Electrical Engineers.) A problem course in miscellaneous design and application of electrical equipment. Economic comparisons as well as engineering considerations are factors studied in making selections in equipment. 4 hours a week. **PREREQUISITE: ELEC. ENG. 106 OR 116.**

124 ELECTRICAL DESIGN. (3) I, II, S — Bureau
(Elective for Electrical Engineers.) A study of several of the more common types of both direct current and alternating current machines such as generators, motors and transformers, culminating in the design calculations for one or more complete machines. 9 hours a week. **PREREQUISITE: ELEC. ENG. 106 OR 116.**

131 COMMUNICATION ENGINEERING. (4) II — Doll
(Elective for Electrical Engineers.) A general survey of the field of electrical communication from the first Bell telephone to the modern dial telephone and the wireless phone; from the first Morse telegraph to the most modern form of automatic recording telegraph and the commercial wireless of today. Recitations, 3 hours; supervised problem work and laboratory, 3 hours a week. **PREREQUISITE: ELEC. ENG. 106 OR 116.**

136 ILLUMINATION ENGINEERING. (4) II — Freeman
Includes a study of light sources and photometry; fundamental principles of illumination as applied to home, public building, factory and commercial lighting; outdoor lighting, including streets and highways. Recitations, 3 hours; supervised problem work and laboratory, 3 hours a week. **PREREQUISITE: PHY. 2b.**

137 ELECTRIC POWER TRANSMISSION AND DISTRIBUTION. (3) I — Freeman
(Elective for Electrical Engineers.) A study of the materials and equipment used and the problems involved in the design, building and operation of transmission lines and distribution systems. Recitations, 3 hours a week. **PREREQUISITE: ELEC. ENG. 106 OR 116.** (Not offered till 1939-40.)

141 ANALYTICAL ELECTRICAL ENGINEERING. (3) I — Bureau
(For Electrical Engineers.) A study of complex notation and its use in the vector analysis of electrical machinery and circuit conditions. Recitations, 3 hours a week. **PREREQUISITE: ELEC. ENG. 106 OR 116.**

151a SEMINAR. (0.5) I — Bureau and others
(For Electrical Engineers.) Round table discussion of modern trends and practices in electrical engineering. Basis of discussion is current literature on electrical subjects. 2 hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

151b SEMINAR. (0.5) II — Bureau and others
(For Electrical Engineers.) Continuation of Elec. Eng. 151a. 2 hours a week.

152a INDEPENDENT PROBLEMS. (2) I, II — Freeman and others
(For Electrical Engineers.) A problem, approved by the Head of the Department, forms the background for the student's original study and research. Only students the character of whose previous work warrants it, will be allowed to take this work. 6 hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

152b INDEPENDENT PROBLEMS. (3) I, II — Freeman and others
Continuation of Elec. Eng. 152a. 9 hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

152c INDEPENDENT PROBLEMS. (4) I, II — Freeman and others
Continuation of Elec. Eng. 152b. 12 hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

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. (4) I Bureau
A study of the theory underlying the characteristics of single phase and polyphase induction motors. Recitation, 3 hours; laboratory, 3 hours a week.

206 ELECTRIC POWER TRANSMISSION. (4) I Barnett
The theory underlying the calculation and operation of long distance transmission circuits. Special attention to relay control. Recitation, 3 hours; laboratory, 3 hours a week.

207 ELECTRIC POWER DISTRIBUTION. (4) II Barnett
A study of the theory underlying the operation and control of various types of distribution circuits. Recitations, 3 hours; laboratory, 3 hours a week.

208 ELECTRIC TRACTION. (4) II Bureau
An advanced study of electric power application to railways, cranes, elevators, etc. Recitations, 3 hours; drawing room, 3 hours a week.

209 TELEPHONE ENGINEERING. (3) I Freeman
An advanced study of the theory and operation of modern telephone exchanges. Recitations, 3 hours a week.

210 SYMMETRICAL COMPONENTS. (4) II Bureau
A study of the symmetrical component method of analyzing unbalanced conditions on transmission lines and its use in solving relay applications. Recitations, 3 hours; laboratory and design, 3 hours a week.

ELEMENTARY EDUCATION

Associate Professors Duncan and Williams, and Miss Adams, Mrs. Haines, and Miss King

20 INDUSTRIAL ARTS FOR ELEMENTARY GRADES. (2) I, S Haines
This is a practical course involving the use of tools and various materials suitable for use in the elementary school. It is intended for grade teachers who wish to make industrial arts an integral part of the elementary school curriculum.

42 ARITHMETIC IN ELEMENTARY GRADES. (3) I, S Duncan
A study of children's interests in, and needs for arithmetic—evaluation of practices and materials; organization of subject matter; activities involving arithmetic; drill; problem solving; diagnosis and remedial instruction and testing.

44 FUNDAMENTALS OF ELEMENTARY EDUCATION. (5) I, II, S Haines
This course is a prerequisite to practice teaching and is to prepare the student to take part in actual classroom teaching. The course is planned:

(1) To give a background for, and an understanding of, the organization and point of view of the modern elementary school.
(2) To help the students by reading and class discussion in directing learning of the skills and knowledge needed by elementary school children.
(3) To help the student evaluate theories and methods of teaching in the light of observation of good teaching.
(4) To help the student to understand the relationship of the home, school and community and to see the need for the cooperation of these agencies for the best development of the child.
(5) To help develop an attitude of industry, open-mindedness, initiative, cooperation and responsibility toward the teaching profession.

110 ADVANCED INDUSTRIAL ARTS. (2) II, S Haines
This course will deal primarily with 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 the construction activities pertaining to the study of records and shelter. Some of the experiences he will receive will be in the fields of book binding, block printing, paper decorating, toy making, elementary woodwork, and interior decorating.

133 DIRECTED TEACHING IN THE ELEMENTARY SCHOOL. (10) I, II, S Duncan and Training Teachers
Supervised teaching in Kindergarten or Grades I to VI. Open only to seniors. The student must spend from 9:00 a. m. until 2:00 p. m. in the classroom for the semester. One hour per day additional (2:00 p. m. to 3:00 p. m.) is spent in conference and discussion with the critic teacher and supervisor. The student may take only two additional courses (3 credits each) this semester and these classes must be taken either the first, seventh, or eighth hours. A student who has had three credits in practice teaching may take this course with reduced hours and reduced credits. This course is designed to give the student experience with and practice in the program for the whole day in a modern elementary school. PREREQUISITE: SENIOR STANDING IN THE ELEMENTARY CURRICULUM.

141 PROBLEMS IN DIAGNOSTIC AND REMEDIAL READING. (3) S Duncan
A laboratory course in problems of prevention, diagnostic and remedial work in reading. An opportunity will be provided to observe demonstrations of the use of instrumentation in diagnosis and correction of reading difficulties and the application of these clinical procedures to problem cases. Two hours lecture and discussion and one hour laboratory.

172 TEACHING READING IN THE ELEMENTARY SCHOOL. (3) I, II, S Duncan
A practical application of principles derived from psychology and research. 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. (3) II, S Duncan
A study of the literature for children from kindergarten to Grade VI. Reading and book reports from various types, folklore, modern fantastic tales, poetry realistic stories, biography, myths and legends. Children's interests at different ages and stages of development; story telling and dramatization.

174 PRE-SCHOOL THEORY AND MANAGEMENT. (4) I, S King

A study of the nature, development, care and training educationally of the pre-school child. Emphasis will be placed on the formation of proper emotional and social habits and standards for right environment set-up. Students will schedule regular periods for observation and assistance in the Kindergarten (by appointment).

176 PRE-SCHOOL ORGANIZATION AND TEACHING. (4) II, S King

A study of the pre-school movement in Europe and America. A study of the organization, equipment, curriculum and methods of pre-school teaching. Students taking this course will schedule regular periods (by appointment) for observation and assistance in the University Kindergarten.

196 SCIENCE IN THE ELEMENTARY SCHOOL. (3) I, S Estelle Adams

This course is planned to give 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, use of illustrative material, excursions, and making bibliographies for teachers and children.

212 THE ELEMENTARY SCHOOL. (3) I, S Duncan

This course is designed to help the superintendent, elementary principal, and elementary supervisor in a better understanding of the modern elementary school. The activity program, objectives, research and study in the skills and content subjects of the elementary curriculum are discussed from the standpoint of supervision.

224a-c ORGANIZATION AND SUPERVISION OF STUDENT TEACHING. (3) I, II, S Williams, Duncan

This course has been planned for students preparing to do critic teaching in the fields of elementary and secondary education. Education 224a is a general course that will include the basic principles underlying the entire program. Education 224b will have to do with specific problems for critic teachers on the secondary level, while Education 224c will deal with problems on the elementary level.

229 THE ELEMENTARY PRINCIPAL. (3) II, S Duncan

This course deals with problems related to the elementary principalship, such as the professional preparation, selection and status of the principal; relation to other administrative officers, supervisors, teachers, pupils and parents; problems of attendance, discipline, health and records; the application of sound principles to the improvement of teaching. Emphasis will be 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 will also be given to problems presented by members of the class as outgrowth of their experiences.

308a-b RESEARCH PROBLEMS IN ELEMENTARY EDUCATION. (3) I, II, S Duncan

An independent research course. The student will confer with the instructor whenever either or both of them deem it advisable
PREREQUISITE: ONE YEAR OF GRADUATE WORK.

ENGINEERING—GENERAL

Dean Graham, Professors Bureau, Carrell, Crouse, Hawkins, Jett, and Nollau, Associate Professors Barnett, Beebe, Emrath, Farris, Horine, May, and Shaver, and Assistant Professors Doll and Tarnopol

Engineering Administration

100a ENGINEERING VALUATIONS AND APPRAISALS. (3) II — Emrath

A study of the methods, procedures and principles involved in engineering analyses as applied to valuation and appraisal; specific problems and assignments to cover the various branches of engineering. Lectures and recitations, 3 hours a week. **PREREQUISITE: COM. 1 OR POL. SCI. 15.**

100b ENGINEERING VALUATIONS AND APPRAISALS. (3) I — Emrath

A continuation of Engineering Administration 100a. Lectures and recitations, 3 hours a week.

Applied Mechanics

1 ANALYTICAL MECHANICS. (4) I, II, S — Hawkins, Farris, Tarnopol

A study of the principles of pure mechanics and the application of these principles to engineering problems in statics and kinetics. Lectures and recitations, 4 hours a week. **PREREQUISITE: PHYS. 2a. PREREQUISITE OR CONCURRENT: MATH. 20b.**

2 MECHANISMS. (2) I, II, S — Jett

Movement of machine parts such as crank and link motions, cams, gears, straight line and quick return motions. Lectures and recitations, 2 hours a week. **PREREQUISITES: PHYS. 10 OR 1a; MATH. 17 AND 18.**

5 SLIDE RULE PRACTICE. (1) I, II, S — May

Lectures relative to the theory of the slide rule and exercises in the computation of numerical problems by means of the slide rule. **PREREQUISITE: MATH. 17 AND 18.**

100 STRENGTH OF MATERIALS. (4) I, II, S — Hawkins, Farris

A study of the physical properties of materials used in engineering machines and structures; the analysis of stress and strain due to bending, torsion, etc., in simple and continuous beams, columns, thin cylinders, springs, etc. Some attention is given to reinforced concrete. Lectures and recitations, 4 hours a week. **PREREQUISITE: APPLIED MECH. 1.**

101 ANALYTICAL MECHANICS. (4) I, II — Hawkins, Farris

A continuation of Applied Mechanics 1, including the solution of engineering problems by means of differential equations. Lectures and recitations, 4 hours a week. **PREREQUISITES: APPLIED MECH. 1 AND 100.**

102 STRENGTH OF MATERIALS. (3) I, II — Hawkins, Farris

A continuation of Applied Mech. 100. Especial attention is given to curved bars, arches, thick cylinders and plates. Lectures and recitations, 3 hours a week. **PREREQUISITE: APPLIED MECH. 101.**

103 ADVANCED APPLIED MECHANICS. (3) I, II Hawkins, Farris
This includes the inertia of moving parts, harmonic analysis, cams, free and forced vibrations and critical speeds. Lectures and recitations, 3 hours a week. **PREREQUISITE: APPLIED MECH. 102.**

Engineering Drawing

***1 ELEMENTARY ENGINEERING DRAWING.**
(2) I, II, S Nollau, Horine
Freehand lettering; exercises in the use of drawing instruments; principles of orthographic, isometric and oblique projections; technical sketching; tracing and reproduction of drawings. 6 hours a week.

***2a MECHANICAL DRAWING.** (1.3) I, II, S Nollau, Horine
For students in Industrial Chemistry. Freehand lettering, exercises in the use and care of drawing instruments, and the principles of oblique and orthographic projection. 4 hours laboratory a week.

***2b MECHANICAL DRAWING.** (1.3) I, II, S Nollau, Horine
Continuation of Drawing 2a. For students in Industrial Chemistry. Principles of oblique and orthographic projection; technical sketching; tracing; blue printing; graphic layouts of laboratory apparatus and industrial problems. 4 hours laboratory a week. **PREREQUISITE: ENG. DRAW. 1 OR 2a.**

***3 DESCRIPTIVE GEOMETRY**
(3) I, II, S Nollau, Horine, Farris
This work includes a study of descriptive geometry as a branch of pure mathematics followed by the application of the principles to engineering drawing. Lectures, 2 hours; drawing room, 6 hours a week.

12 GRAPHICAL COMPUTATIONS.
(2.3) I, II, S Hawkins, Jett, Nollau
Graphic solution of problems in mechanism, construction and use of alignment charts, practice in the use of planimeter and mechanical integrator. Lectures, 2 hours and drafting room, 5 hours a week. **PREREQUISITE OR CONCURRENT: PHYS. 2a, APPLIED MECH. 2.**

***16a FREEHAND LETTERING.** (1.3) I, II, S Nollau
Construction and composition of Roman, English Gothic and Commercial Gothic capitals and lower case letters. 4 hours laboratory a week.

***16b ADVANCED FREEHAND LETTERING.** (1.3) I, II, S Nollau
Continuation of Drawing 16a. Design and composition of letters with special emphasis given to the choice of styles in advertising design. 4 hours laboratory a week.

***17a MECHANICAL DRAWING.** (2) I, II, S Nollau
Special course for non-engineering students, comprising freehand lettering, use and care of drawing instruments, elementary principles of orthographic and single plane projection, topographic mapping, tracing and blueprinting. 6 hours laboratory a week.

***17b MECHANICAL DRAWING.** (2) I, II, S Nollau
Continuation of Drawing 17a. Special problems designed to meet the need of individual students. 6 hours laboratory a week.

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* Courses open to freshmen.

18 ENGINEERING DRAWING. (2) I, II, S — Nollau
Continuation of Eng. Drawing 1. 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. 6 hours a week. **PREREQUISITES: ENG. DRAWING 1 AND 3.**

19 MECHANICAL DRAWING. (1) S — Horine
For sanitary inspectors. Freehand lettering, exercises in the use of simple drawing instruments; principles of orthographic, isometric, and oblique projection; principles and practice in the making of charts and maps; tracing and reproduction of drawings. Drawing room, 10 hours a week for five weeks.

115 PHOTOGRAPHY. (3) II — Nollau
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.

Student Assemblies

***1 INTRODUCTION TO ENGINEERING.** (0.3) I 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.

***2 ENGINEERING PROBLEMS.** (0.7) II Beebe, Bureau, May, 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.) (0.0) I — Barnett, Carrel, Crouse, 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.) (0.0) II — Barnett, Carrel, Crouse, Jett
1 hour a week.

4a CLASS SOCIETY. (JUNIOR.) (0.0) I — Barnett, Carrel, Crouse, Jett
1 hour a week.

4b CLASS SOCIETY. (JUNIOR.) (0.0) II — Barnett, Carrel, Crouse, Jett
1 hour a week.

5a CLASS SOCIETY. (SENIOR.) (0.0) I — Barnett, Carrel, Crouse, Jett
1 hour a week.

5b CLASS SOCIETY. (SENIOR.) (0.0) II — Barnett, Carrel, Crouse, Jett
1 hour a week.

* Courses open to freshmen.

ENGLISH LANGUAGE AND LITERATURE

Professors Dantzler, Farquhar, Ransom (visiting lecturer, summer, 1938), Associate Professors Knight, Brady, Fowler, Hollister (visiting lecturer, summer, 1937), Assistant Professors Sutherland, Yates, Gallaway, Ewing, and Mr. Fithian, Mrs. Smith, Mr. Langford, Mr. Nuckols, Mr. Willis, Miss Shoopman, Mr. Harrison, and Miss Tyree

Requirements for a Major. Prerequisites: English 1a, 1b, 3a, 3b. Required: A minimum of 18 credits of advanced work in English.

Requirements in Field of Concentration. Forty credits in the Field of Literature, Philosophy, and the Arts, including the major work in courses not open to freshmen.

English Language and Rhetoric

***d ENGLISH COMPOSITION.** (0) I, II — Tyree
A course for freshmen who are deficient in English. Students will be assigned to this course upon the basis of tests given in September.

***1a ENGLISH COMPOSITION.** (3) I, II — Staff
A course in English composition for freshmen.

***1b ENGLISH COMPOSITION.** (3) I, II — Staff
A continuation of English 1a.

2a ADVANCED COMPOSITION. (2) 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.**

2b THE SHORT STORY. (2) 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. (2) I, II
Open to students in all colleges. A study of forms of business correspondence and practice in writing such. Given 1936-37. Not offered 1937-38. **PREREQUISITES: ENGLISH 1a, 1b.**

The following "One-Hundred" courses open only to Upper Division and Graduate Students

102 HISTORY OF THE ENGLISH LANGUAGE. (2) I — Dantzler
A survey of the development of the language, based upon Emerson's **History of the English Language**; other readings upon various phases of language development. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

125 PRONUNCIATION OF MODERN ENGLISH. (3) II — Dantzler
A study of present day pronunciation; dialectical peculiarities. Students will become proficient in using a phonetic alphabet. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

* Courses open to freshmen.

English Literature

3a HISTORY OF ENGLISH LITERATURE. (3) I, II — Staff
A survey of English literature from Beowulf to the present. Basic text—**English Masterpieces** (W. W. Norton and Company). Two classics will be read in addition during the semester. **PREREQUISITES: ENGLISH 1a, 1b.**

3b HISTORY OF ENGLISH LITERATURE. (3) I, II — Staff
A continuation of English 3a. The same basic text will be used as in English 3a; two classics will be read during the semester. **PREREQUISITES: ENGLISH 1a, 1b; 3a.**

34a DRAMATIC PRODUCTION. (2) I — Fowler
This is a course designed to promote an appreciation of dramatic literature. It offers laboratory work in dramatic theory and experimentation to prepare teachers to undertake community and high school dramatics and to develop the instinct for self-expression. The Guignol Theatre offers opportunity for acting.

***34b DRAMATIC PRODUCTION.** (2) II — Fowler
This is a continuation of English 34a, which is not prerequisite but desirable.

35 ADVANCED DRAMATIC PRODUCTION. (2) I — Fowler
This is a course which continues the work done in English 34a, 34b. Members of the class will act and direct plays in the Guignol Theatre. **PREREQUISITES: ENGLISH 34a, 34b, AND CONSENT OF INSTRUCTOR.**

37 ADVANCED DRAMATIC PRODUCTION. (2) II — Fowler
This course is a continuation of English 35. Members of the class will write and direct plays in the Guignol Theatre. **PREREQUISITES: ENGLISH 34a, 34b, AND CONSENT OF INSTRUCTOR.**

The following courses open only to Upper Division and Graduate Students

103 ADVANCED OLD ENGLISH. (3) I — Dantzler
PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b. Offered 1938-39.

104 THE SEVENTEENTH CENTURY. (3) II — Gallaway
Cavalier and Puritan Poetry: Milton, Burton, Browne, Bunyan, Walton; Restoration Prose and Poetry. About eight weeks will be given to Milton. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

106 ENGLISH ROMANTICISM. (3) 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. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

107 VICTORIAN POETS. (3) II — 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. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

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* Courses open to freshmen.

108a PRINCIPLES OF LITERARY CRITICISM. (3) I Farquhar
A course designed to show criticism as a growth and development in an historical survey and to give a corpus of opinion about literature.

108b PRINCIPLES OF LITERARY CRITICISM. (3) II Farquhar
A continuation of English 108a, which is not prerequisite although desirable. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

109 SHAKESPEAREAN DRAMA. (3) I Farquhar
An historical course in English dramatic origins; a study of the works of Lyly, Kyd, Greene, Peele, Jonson, and Marlowe. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

110a SHAKESPEARE COMEDY. (3) I Farquhar
Shakespeare's comedies will be studied in detail. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

110b SHAKESPEARE TRAGEDY. (3) II Farquhar
A continuation of English 110a, which is not prerequisite, although desirable. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b. 3a, 3b.**

111a THE ENGLISH NOVEL BEFORE SCOTT. (3) I Gallaway
A survey of the English novel from its beginning to Scott. A critical and appreciative study. Representative novels will be read. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

111b THE ENGLISH NOVEL AFTER SCOTT. (3) II Knight
A continuation of English 111a, although the latter is not prerequisite, it aims to acquaint the student with the development of the novel to and including Stephen Crane; and to assist him in forming theories concerning the art of fiction and appreciation of masterpieces. Eleven novels will be read. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

116 THE CONTEMPORARY DRAMA. (3) II Farquhar
A course designed to show the development and tendencies in Continental, British, and American dramatic literature, 1850 to 1918. Not offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

123a AMERICAN LITERATURE BEFORE 1860. (3) I Knight
A survey course designed to introduce the student to influences in American life and thought as well as to its letters. The Puritan and Colonial writers. An anthology and two complete texts are used. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

123b AMERICAN LITERATURE AFTER 1860. (3) II Knight
A continuation of English 123a, which is not prerequisite. Beginning with the Civil War and with considerable attention to Walt Whitman, Emily Dickinson, and the rise of the short story, the realistic school of fiction, and the various groups of modern poets, the survey ends with a discussion of contemporary novelists, essayists, poets, and dramatists. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

124 THE RENAISSANCE. (3) I Dantzler
A survey 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. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

127a LITERATURE OF THE BIBLE. (3) I — Farquhar
A literary study of the Bible by Brooks. The purpose of the course is to develop an appreciation of literature generally because of the demand that literature identify itself with the highest thought and feeling. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

127b LITERATURE OF THE BIBLE. (3) II — Farquhar
A continuation of English 127a, which is not prerequisite, although desirable. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

130a COMPARATIVE LITERATURE. (3) I — 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. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

130b COMPARATIVE LITERATURE. (3) II — Brady
A continuation of English 130a, which is not prerequisite, although desirable. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

131a-d INDEPENDENT WORK. (2) I, II — Dantzler and others
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. (3) I — Knight
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. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

136 VICTORIAN PROSE. (3) II — Brady
A study of Carlyle, Ruskin, Newman, Spenser, 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.**

143 EDGAR ALLAN POE. (3) S — Farquhar
A comprehensive study of Poe's works, poetry and prose. Primarily for the summer session. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

145 ELIZABETHAN DRAMA, EXCLUSIVE OF SHAKESPEARE. (3) II — Ewing
A survey of English Drama as the title indicates. Especial study of foreign drama upon Elizabethan drama. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

147 AGE OF JOHNSON. (3) II — Gallaway
From the death of Pope to 1798. Johnson and his circle: Burke, Goldsmith, Gray, Walpole, Cowper. The pre-romantic movement. Offered 1938-39. **PREREQUISITES: ENGLISH 152a OR CONSENT OF INSTRUCTOR.**

151 ROBERT BROWNING. (3) II — Dantzler
A study of Robert Browning's poetry. Little will be read other than poetry. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

152 AGE OF POPE. (3) I — Gallaway
Addison and Steele, Swift, Pope, Defoe. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

153 RESTORATION-EIGHTEENTH CENTURY DRAMA. (3) II — Ewing
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 ENGLISH POETRY. (3) I — Farquhar
An examination of the forces which developed to create modern poetry in England and America since 1900. The course to be historical of the movements and currents in their origins and ideas and to be literary and esthetic in an appreciation of form, matter and style. Collateral reading. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

155b CONTEMPORARY ENGLISH POETRY. (3) II — Farquhar
A continuation of English 155a. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b.**

156 EXPRESSIVE READING. (3) S — Hollister
Principles and practice of expressive reading and the oral interpretation of literature. Aimed to develop clearer insight and greater skill in reading aloud and in speaking of memorized literature.

157 TEACHING OF SPEECH AND ORAL ENGLISH. (3) S — Hollister
Discussions dealing with the practical problems in teaching. Intended for teachers and prospective teachers.

The following courses open only to Graduate Students

201a LITERARY CRITICISM. (3) I — Farquhar
A course for graduate students only. Students who contemplate taking this course are strongly urged to take English 108a, 108b. Offered 1938-39.

201b LITERARY CRITICISM. (3) I — **Farquhar**
A continuation of English 201a. Offered 1938-39.

202a STUDIES IN CONTEMPORARY DRAMA. (3) I — Farquhar
A course for graduate students only. Only offered 1938-39.

202b STUDIES IN CONTEMPORARY DRAMA. (3) II — Farquhar
A continuation of English 202a. Not offered 1938-39.

204a BEOWULF. (3) I — **Dantzler**
A linguistic and literary study of **Beowulf.** Some acquaintance with Old English is desirable as a prerequisite. Offered 1938-39.

204b BEOWULF. (3) II — **Dantzler**
A continuation of English 204a. Offered 1938-39. **PREREQUISITES: ENGLISH 1a, 1b; 3a, 3b; 204a.**

205 CHAUCER. (3) II — Dantzler
A course in Chaucer. All the works of Chaucer will be read. Each student will prepare one lead. Offered 1938-39.

206 ALFREDIAN PROSE. (3) I — Dantzler
A course in Old English centering in the works of Alfred. Some knowledge of Old English is desirable, although not required. Offered 1938-39.

207 SPENSER. (3) II — Dantzler
A study of problems in Spenser research. Attention given to bibliographical material. Not offered 1938-39.

208 CARLYLE. (3) I — Brady
A study of Carlyle as essayist, critic, and literary historian. Offered 1938-39.

210a SEMINAR. (3) I — Staff
Studies in research. This course is required of all candidates for the master's degree in English.

210b SEMINAR. (3) II — Staff
A continuation of English 210a.

Public Speaking

***6 THE ESSENTIALS OF SPEECH.** (2) I — Sutherland
The 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. (3) I — 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.

7b PUBLIC SPEAKING. (3) II — Sutherland
A continuation of English 7a, which is not prerequisite, although desirable.

10a PUBLIC SPEAKING. (2) I — 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.

10b PUBLIC SPEAKING. (2) II — Sutherland
A continuation of English 10a. Reading, informal discussion, and argument.

11a ARGUMENT AND DEBATE. (3) 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.

11b ARGUMENTATION AND DEBATE. (3) II — Sutherland
A continuation of English 11a, which is not prerequisite, although desirable.

* Courses open to freshmen.

15a ORATORY. (2) 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. (2) II — Sutherland

A continuation of English 15a, which is not prerequisite, although desirable. **PREREQUISITES: ENGLISH 7a, 7b; OR 10a, 10b.**

20 SPEECH TRAINING. (3) I — 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.

FARM ECONOMICS

Professor Nicholls, Mr. Galloway, and Mr. Oyler

4 AGRICULTURAL ECONOMICS. (3) II — Galloway

Fundamental economic principles involved in the problems of the farmer, including the determination of value, interest, wages and profits; economic motives and ideals; geographic factors; principles of production; proportioning of land, labor and capital; farm credit, land tenure. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITE: ECONOMICS 1.**

10 FARM ACCOUNTING. (3) II — Galloway

Principles of accounting with special reference to their application to the organization and operation of the farm. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITE: F. E. 4.**

107a-b SPECIAL PROBLEMS IN FARM MANAGEMENT. (3.3) I, II — Nicholls

Students enrolling in this course are assigned some special problem, as for example, the cost of producing some class of farm products such as dairy products, crops or livestock, or the problem of profitable farm organization in a specified community.

108 LAND PROBLEMS. (2) I — Nicholls

Land resources and their relation to the food supply; the present and potential supply of land of various grades; rent and its determination; factors determining the valuation of land; land tenure; landlord-tenant relations. Offered in alternative years. Not offered in 1938-39. **PREREQUISITE: F. E. 4.**

109 ADVANCED FARM MANAGEMENT. (2) I — Nicholls

This course consists of a fuller study of the principles of farm management considered in Course 113. A feature of the laboratory work is the visiting of well-organized and successful farms and studying their organization. Offered in alternate years. **PREREQUISITE: F. E. 113.**

113 FARM MANAGEMENT. (3) I — Nicholls

Principles underlying the organization and operation of a farm in such a way as to secure the greatest continuous profit; a study of the experience and methods employed by successful farmers. **PREREQUISITE: F. E. 4.**

120 **RURAL COMMUNITY PROBLEMS.** (3) I Oyler
Fundamental principles underlying the social organization of country life; rural vital statistics; the shifting of the rural population; community hygiene and sanitation; the rural church; the rural school; organization for community betterment; special study by the student of his own community. **PREREQUISITE: ECONOMICS 1.**

121 **SPECIAL PROBLEMS IN RURAL LIFE.** (3) I Oyler
Rural community organization, rural migration, and rural institutions such as the family and the church, are some of the problems that may be selected.

122a-c **RURAL LIFE.** (1, 1, 1) S
Examination of composition of population; cultures; the family; and rural social institutions, particularly in view of recent changes in local and national rural life.

201a-b **RESEARCH IN FARM ECONOMICS.** (3, 3) I, II Nicholls
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.

203a-b **AGRICULTURAL ECONOMICS SEMINAR.** (1, 1) I, II Staff
Discussions and papers on methods, problems, current literature and research in the field of agricultural economics.

FARM ENGINEERING

Professor Kelley and Mr. Young

9 **FARM MOTORS.** (3) II Kelley, Young
A study of the fundamental principles governing the selection, construction, operation, repairing, and testing of tractors and motors adapted for farm use. Lectures and recitations, 2 hours; laboratory, 2 hours.

10 **MECHANICS OF THE FARMSTEAD.** (3) I Kelley, Young
A study of the fundamentals of engineering as applied to agriculture. The course includes the following subjects: Mechanics of materials, transmission of power, farm sanitation equipment, and farm implements. Lecture and recitation, 2 hours; laboratory, 2 hours.

11 **ENGINEERING PRACTICES IN SOIL MANAGEMENT.** (3) II Kelley, Young
Surveying, mapping, and determining areas of farm land; designing farm drainage systems; problems in controlling erosion by terraces and gully structures. Lecture, 1 hour; laboratory, 4 hours.

12 **FARM STRUCTURAL ENGINEERING.** (3) I Young
A combination drawing and shop course in the construction, care and repair of farm buildings and equipment, for students preparing to teach vocational agriculture. Lecture, 1 hour; laboratory, 4 hours a week.

13 **GENERAL FARM SHOP.** (3) II Young
A course in metal work and tools, including plumbing, soldering, hot and cold metal and the repair of farm machinery. Lecture, 1 hour; laboratory, 4 hours a week.

101a-b SPECIAL PROBLEMS. (3, 3) I, II, S Kelley, Young
PREREQUISITE: F. E. 10.

102 DAIRY ENGINEERING. (3) I 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, 2 hours; laboratory, 2 hours. **PREREQUISITE: F. E. 10.**

FORESTRY

Mr. Wiggin

1 OUTLINE OF FORESTRY. (3) I Wiggin
Designed as a general introduction to forestry. A guide to a general understanding of what forestry is, how it is developing, what it is doing and why it is needed. Kentucky's forest and woodlot problems.

101 FARM WOODLOTS. (3) I Wiggin
A course covering those phases of forestry applicable to the silviculture, management and economics of farm woodlots. Silvics of important Kentucky species, woodlot regeneration, protection, improvement, harvesting and wildlife. Structure and uses of wood. Preservation of farm timbers. **PREREQUISITE: JUNIOR STANDING.**

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 NORTH AMERICA. (See Commerce, p. 146.)

GEOLOGY 24a—ELEMENTS OF GEOGRAPHY, GEOLOGY 24b—ELEMENTS OF GEOGRAPHY, AND GEOLOGY 25a—REGIONAL PHYSICAL GEOGRAPHY. (See Geology, p. 176.)

FARM ECONOMICS 108—LAND PROBLEMS. (See Farm Economics, p. 172.)

HISTORY 184—THE GEOGRAPHIC BASIS OF AMERICAN HISTORY. (See History, p. 185.)

GEOLOGY

Professor McFarlan, Associate Professor Robinson, Mr. Averitt, and Mr. Young

Requirements for a Major. Prerequisites: Geology 22a, 22b. Required: Geology 9a, 9b, 26a, 26b, 101a, 101b, 104a, 104b, 106a, 106b, 123a, 123b, 118a, or 118b and 124a, 124b. **Field Work:** An early summer field trip, Geology 118a, or 118b is required of major students for graduation. This covers two 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.

Requirements in the Field of Concentration. Forty credits in the Field of Physical and Biological Science, including the major work in courses not open to freshmen.

***3 ELEMENTARY GEOLOGY FOR AGRICULTURAL STUDENTS.** (3) II
A brief course in general geology consisting chiefly of a study of geologic processes and a brief discussion of historical geology. Two recitations and lectures and one laboratory conference a week.

7 ENGINEERING GEOLOGY. (2) I
The practical application of geology to engineering work. A treatment of metallic and non-metallic mineral resources. Brief outline of historical geology. **PREREQUISITE: GEOLOGY 12.**

9a FIELD GEOLOGY. (2) I Averitt
Topographic mapping. Six hours of field work a week. **PREREQUISITES: GEOLOGY 22a, b; C. E. 12.**

9b FIELD GEOLOGY. (2) II Young
An introduction to field methods involving the identification and tracing of formations, areal mapping and representation of structure by contours. **PREREQUISITES: GEOLOGY 22a, b; 26a, b.**

12 ELEMENTARY GEOLOGY FOR ENGINEERS. (3) II
An introduction to the principles of Geology as a background for the work in Geology 7. Two recitations and one laboratory conference a week.

***14a-d ELEMENTARY FIELD GEOLOGY.** (1)
Visits are made to localities in the vicinity of Lexington, Ky., which illustrate various geologic phenomena.

***22a ELEMENTARY GEOLOGY.** (4) I
A study of the forces and processes which determine the geological features of the earth and which in the past have determined the present conditions. Emphasis is placed on the application of an understanding of these processes to the interpretation of earth history. Three lectures, one laboratory conference per week.

***22b ELEMENTARY GEOLOGY.** (4) II
A continuation of Geology 22a, including an introduction to the study of mineral resources and earth history. Three lectures and one laboratory conference (or one field trip per week for one half semester) per week.

***23a ELEMENTARY FIELD WORK IN REGIONAL GEOLOGY.** (2) S McFarlan and Young
Two weeks in the field in selected areas. The course is offered as a part of the first summer session and is planned for the student with only a year's introductory geology. The party works in conjunction with that of Geology 118a. **PREREQUISITES: GEOLOGY 22a, 22b.**

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* Courses open to freshmen.

***23b ELEMENTARY FIELD WORK IN REGIONAL GEOLOGY.** (2) McFarlan and Young
A course of the same type as 23a, but involving a different area. **PREREQUISITES: GEOLOGY 22a, 22b.**

***24a ELEMENTS OF GEOGRAPHY.** (3) I, S Young
A study of natural environment. Climate and weather. Factors controlling the nature and distribution of climates. weather, and weather forecasting. Climatic regions of the world. Human aspects.

***24b ELEMENTS OF GEOGRAPHY.** (3) I, II, S Young
A study of natural environment. The earth's surface features, their origin and development. Minerals of the earth, their origin and use. Physiographic regions of the different continents. Human aspects. Not available for credit to students who have had Geology 22a.

25a REGIONAL PHYSICAL GEOGRAPHY. (3) II, S Young
A regional study of climatic and physiographic regions in North America. An explanation of the nature and origin of these regions. Human aspects. **PREREQUISITES: GEOLOGY 24a-b (or 22a).**

26a ADVANCED GEOLOGY. (4) I McFarlan and Young
A study of geological history and the interpretation of the geological record. A study of the various steps in the development of North America as it is today. An outline of the development of plant and animal life throughout geological time. Two lectures and two laboratory conferences per week. **PREREQUISITES: GEOLOGY 22a, 22b.**

26b ADVANCED GEOLOGY. (4) II McFarlan and Young
A continuation of 26a treated from a regional point of view. The geological history of selected regions in the United States. Two lectures and two laboratory conferences per week. **PREREQUISITE: GEOLOGY 26a.**

The following courses open only to Upper Division and Graduate Students

101a PALEONTOLOGY. (3) I McFarlan
A study of fossil invertebrates, their morphology, classification, and geological distribution. One lecture, two laboratory periods a week. **PREREQUISITES: GEOLOGY 15a, 15b AND ZOOLOGY 1a, 1b OR A ZOOLOGICAL BACKGROUND.**

101b PALEONTOLOGY. (3) II McFarlan
A continuation of 101a directed toward the study of geological faunas and the determination of their age relationships. One lecture, two laboratory periods a week. **PREREQUISITE: GEOLOGY 101a.**

104a-d ADVANCED FIELD GEOLOGY. (2) I McFarlan
A field course directed to the unraveling of local stratigraphy and structure. Six hours in the field a week. **PREREQUISITE: GEOLOGY 9b.**

105a-d INDEPENDENT WORK IN GEOLOGY. (3)
Directed work in independent investigations. Thesis required.

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* Courses open to freshmen.

106a ECONOMIC GEOLOGY. (3) I — Averitt

Non-metallic mineral deposits. A study of the distribution, origin, mode of occurrence, methods of search for and uses of deposits of economic importance. Two lectures, one laboratory conference per week. **PREREQUISITES: GEOLOGY 15a-b.**

106b ECONOMIC GEOLOGY. (3) II — Averitt

Metallic Mineral Deposits. Same as above but dealing with metalliferous deposits. The economics of various metal industries and methods of treatment of ores will be briefly considered. Two lectures, one laboratory conference per week. **PREREQUISITES: GEOLOGY 15a-b.**

109a MINERALOGY. (2) I — Robinson

This course covers the same subject matter as Geology 123a but less comprehensively. It is designed primarily for students in Industrial Chemistry.

118a-d FIELD WORK IN REGIONAL GEOLOGY. (2) S — McFarlan and Young

Two 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 geological phenomena and problems different from those found locally. The course is offered as a part of the first summer session coming in between Commencement and the opening of the summer term. Required of major students at the end of their Junior year. **PREREQUISITES: GEOLOGY 26a, b.**

120a GEOLOGY OF KENTUCKY. (3) S — 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. (3) S — McFarlan

The mineral resources of the state, their distribution, origin and uses. **NO PREREQUISITE.**

121 ECONOMIC GEOLOGY OF KENTUCKY. (3) II — McFarlan and others

A technical study of the mineral resources of the state, their distribution and availability, geological occurrence, origin, and geological factors determining probable extension of known deposits and the finding of others. **PREREQUISITES: GEOLOGY 101a, b; 106a, b; 104a, b; 109a, b; 122.**

122 PETROLEUM GEOLOGY. (3) II — Robinson

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. The course includes a study of the stratigraphy and structure of the producing fields of the United States. **PREREQUISITE: GEOLOGY 26a, b AND PHYSICS 1a, b.**

123a MINERALOGY. (3) I — Robinson

A laboratory course covering crystallography, and physical mineralogy. The course includes a study of the systems and classes of crystals, their use in mineral identification, and the physical properties of about 100 minerals stressing those characteristics that are important in their identification. One lecture and four hours laboratory per week. **PREREQUISITES: CHEMISTRY 1a-b.**

123b MINERALOGY. (3) II Robinson
A laboratory course covering chemical, descriptive and determinative mineralogy (including blow-pipe analysis). The course includes a study of the origin, occurrence, association and alteration and identification of about 150 minerals. One lecture, four hours laboratory per week. **PREREQUISITE: GEOLOGY 109a.**

124a REGIONAL GEOLOGY. (3) I All
A comprehensive study of the various geological regions of the United States. This course will serve as tutorial work in preparation for the comprehensive examination.

124b REGIONAL GEOLOGY. (3) II
A continuation of 124a.

Courses open only to Graduate Students

207a PETROLOGY: OPTICAL MINERALOGY. (3) I Robinson
A review of the principles of optics as applied to the petrographic microscope. The determination and descriptions of rock-forming minerals with their associations and alteration products. One lecture and four hours laboratory a week. **PREREQUISITES: GEOLOGY 123a-b, PHYSICS 1a-b.**

207b PETROLOGY. (3) II Robinson
The origin, metamorphism and decay of igneous rocks. Practice in the use of the various mineralogical and chemical classifications in use at the present time, and in writing descriptions from thin sections and hand specimens. One lecture and four hours laboratory a week. **PREREQUISITE: GEOLOGY 207a.**

210 STRATIGRAPHIC PALEONTOLOGY. (3) II McFarlan
The course deals with the succession of geological faunas of the different periods as a basis for the correlation and determination of the age relationships of geological formations. One lecture, two laboratory periods per week. **PREREQUISITES: GEOLOGY 101a, b.**

Suggested Courses for Geology Major

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Eng. 1a Eng. Composition	3.	Eng. 1b Eng. Composition	3.
Foreign Language	3.	Foreign Language	3.
Math. 17 College Algebra	3.	Math. 19 Analytic Geom.	3.
Math. 18 Trigonometry	2.	Econ. or Pol. Sci.	3.
Hyg. 1 Personal and Community Health	1.	Geol. 22b Elem. Geol.	4.
Geol. 22a Elem. Geol.	4.		

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Foreign Language	3.	Foreign Language	3.
Econ. or Pol. Sci.	3.	Civil Eng. 12 Plane Survey	2.
Chem. 1a Gen. Inorg. Chem.	5.	Chem. 1b Gen. Inorg. Chem.	5.
Eng. Draw. 17a	2.	Eng. Draw. 17b	2.
Geol. 26a Adv. Geol.	4.	Geol. 26b Adv. Geol.	4.

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Eng. Draw. 3	2.	Zool. 1b Gen. Zool.	4.
Zool. 1a Gen. Zool.	4.	Chem. 8 Quan. Analysis	5.
Chem. 4 Qual. Analysis	4.	Math. 20b Integral Calculus	4.
Math. 20a Differential Calculus	4.	Geol. 9b Field Geol.	2.
Geol. 9a Field Geol.	2.	Geol. 123b Mineralogy	3.
Geol. 123a Mineralogy	3.	Geol. 118a (Summer) Field Work in Regional Geol.	2.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Physics 1a Gen. Physics	5.	Physics 1b Gen. Physics	5.
Zool. 108a Prin. of Zool.	2.	Geol. 101b Paleontology	3.
Geol. 101a Paleontology	3.	Geol. 104b Adv. Field Geol.	2.
Geol. 104a Adv. Field Geol.	2.	Geol. 106b Econ. Geol.	3.
Geol. 106a Econ. Geol.	3.	Geol. 124b Regional Geol.	3.
Geol. 124a Regional Geol.	3.	Geol. 122 Petroleum Geol.	3.

The course as outlined does not constitute a prescribed course but is varied somewhat to fit the need of the student. 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. For Petroleum Geology attention is called to courses available in Petroleum Engineering. For later training in Geophysical methods substitute Physics 2a, b for Chem. 4 and 8.

GERMAN

Professor Bigge, Assistant Professors Hegeman and Whitaker, Mr. Ubben, and Mr. Robinson

Requirements for a Major. Prerequisite Courses: 1a, 1b, 2a, 2b. Required: A minimum of 18 credits of advanced work independent of tutorial work. Major students are required to enroll in tutorial courses. One credit a semester through the junior and senior years, and a final comprehensive examination in German are required.

Requirements in Field of Concentration: Forty credits in the Field of Literature, Philosophy and the Arts, including the major work in courses not open to freshmen.

*1a ELEMENTARY GERMAN. (3) I, II, S — 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. (3) I, II, S — 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. (3) I, II, S — Staff

Graded reader, followed by short stories from representative authors. Practice in writing and speaking German. Special sections are arranged in second year work for students of the physical and biological sciences. PREREQUISITE: GERMAN 1b.

2b INTERMEDIATE GERMAN. (3) I, II, S — Staff

Continuation of German 2a. Selected readings. Grammar review and composition. PREREQUISITE: GERMAN 2a.

3a SELECTED READING. (3) I, II, S — Bigge

Prose and poetry from standard German authors with brief outline of German literature. PREREQUISITE: GERMAN 2b.

3b SELECTED READING. (3) I, II, S — Bigge

Continuation of German 3a. PREREQUISITE: GERMAN 2b.

* Courses open to freshmen.

6a SCIENTIFIC GERMAN. (3) I, II, S — 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. Given 1937-38; offered 1938-39. **PREREQUISITES: 2a AND 2b.**

6b SCIENTIFIC GERMAN. (3) I, II, S — Staff
Continuation of 6a. Given 1937-38; offered 1938-39. **PREREQUISITE: 6a.**

10a GERMAN CONVERSATION AND COMPOSITION. (2) I, II — Staff
This course is designed for students who wish to write and speak simple German. It will be conducted mainly in German. The first semester's work will be closely based upon a textbook, but in the second semester opportunity for the composition of original themes will be given.

10b GERMAN CONVERSATION AND COMPOSITION. (2) I, II — Staff
Continuation of 10a. Given 1937-38; offered 1938-39. **PREREQUISITE: GERMAN 1b OR ITS EQUIVALENT.**

Courses open only to Upper Division and Graduate Students

101a NINETEENTH CENTURY LITERATURE. (3) I, II, S — Whitaker
Studies in German literature of the 19th Century with special emphasis on selected authors. Not given 1937-38; offered 1938-39. **PREREQUISITE: 3b.**

101b NINETEENTH CENTURY LITERATURE. (3) I, II, S — Whitaker
Continuation of Course 101a. Not given 1937-38; offered 1938-39. **PREREQUISITE: 3b.**

102a TWENTIETH CENTURY LITERATURE. (3) — Bigge
Reading discussions and reports. Given 1937-38; offered 1938-39. **PREREQUISITE: 3b.**

102b TWENTIETH CENTURY LITERATURE. (3) — Bigge
Continuation of Course 102a. Given 1937-38; offered 1938-39. **PREREQUISITE: 3b.**

103a LIFE AND WORKS OF GOETHE. (3) I, II — 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.

103b LIFE AND WORKS OF GOETHE. (3) — Hegeman
Continuation of Course 103a.

105a-d INDEPENDENT WORK. (3) I, II, S — Staff
This course is designed for students of particular excellence in the department. Given 1937-38; offered 1938-39.

110a GERMAN LITERATURE IN ENGLISH TRANSLATION. (3) I, II, S — 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. Offered 1938-39.

110b GERMAN LITERATURE IN ENGLISH TRANSLATION. (3) I, II, S — Staff
Continuation of Course 110a. Offered 1938-39.

120a-b JUNIOR TUTORIAL IN GERMAN. (1) I, II — Staff
Given in 1937-38; offered in 1938-39.

130a-b SENIOR TUTORIAL IN GERMAN. (1) I, II — Staff
Given 1937-38; offered 1938-39.

160a LITERARY LANDMARKS OF GERMANY. (3) S — Bigge
This course will run approximately six weeks and will be devoted mainly to directed travel and study in Germany and Austria. It is the purpose of this course to review the noteworthy contributions of German men of letters and to acquaint the student with the actual circumstances calling forth the creation of these literary works. Tours, assigned readings, quizzes, lectures and reports. Not given 1938; offered 1939. **PREREQUISITE: GERMAN 2b.**

160b LITERARY LANDMARKS OF GERMANY. (3) S — Bigge
Continuation of Course 160a. Not given 1938; offered 1939.

The following courses open only to Graduate Students

201a MIDDLE HIGH GERMAN. (3) I, II — 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. Given 2nd semester, 1937-38; offered 1938-39.

201b MIDDLE HIGH GERMAN. (3) I, II — Hegeman
Continuation of Course 201a. Offered 1938-39.

203a GERMAN LITERATURE FROM LUTHER TO LESSING. (3) I, II — 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. Offered 1938-39.

203b GERMAN LITERATURE FROM LUTHER TO LESSING. (3) I, II — Bigge
Continuation of Course 203a.

HISTORY

Professor Tuthill, Associate Professors Knapp and Dupre, and Assistant Professors Hall, Lunde, and Clark

The introductory courses—2a, 2b in British history, and 5a, 5b in American history—will aid the freshman in subsequent courses in English and American history, law, and literatures. History 4a, 4b, also for freshmen, are recommended for a somewhat broader preparation in European civilization, culture, and commerce.

Requirements for a Major. Prerequisite: One year (six hours) in one of the three introductory courses indicated above. **Required:**

A minimum of 20 credits of advanced courses in History, which should include the Senior Seminar.

Requirements in the Field of Concentration. Forty credits in the Field of Social Studies, including the major work, in courses not open to freshmen.

*1a THE ANCIENT WORLD. (3) I, II
An introduction to history and historical study, with training in note-taking, maps and other aids. Given in alternate years.

*1b THE ANCIENT WORLD. (3) I, II
A continuation of History 1a.

*2a HISTORY OF THE BRITISH PEOPLE TO THE RESTORATION. (3) I, II 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. (3) I, II Hall
From the Stuart period to the present. A continuation of *2a.

*4a MODERN EUROPE TO THE FRENCH REVOLUTION. (3) I, II Lunde
A general survey of the rise of modern states of Europe to the French Revolution, with related topics. Text. Class reports.

*4b MODERN EUROPE FROM THE FRENCH REVOLUTION TO THE PRESENT. (3) I, II Lunde
A continuation of Course 4a, treating European conditions from the French Revolution to the present. For freshmen and others offering 4a or equivalent.

*5a HISTORY OF THE UNITED STATES TO 1860. (3) I, II Clark
Beginning about 1750, and tracing the principal features thereof to 1860. Designed especially to meet the requirements of elementary teachers' certificates in Kentucky.

*5b HISTORY OF THE UNITED STATES SINCE 1860. (3) I, II Clark
A continuation of Course 5a, from 1860 to the present.

40 HISTORY OF KENTUCKY. (2) I, II Clark and Tuthill
A general survey of the chief periods of Kentucky's growth and development from 1750 to the present. Not open to freshmen.

Courses Open Only to Upper Division and Graduate Students

100a THE DIPLOMACY AND FOREIGN POLICY OF THE UNITED STATES TO 1860. (3) I Dupre
A survey designed to acquaint the student with the principles of American foreign policy and their historical evolution in practice. PREREQUISITE: COURSE 5a OR EQUIVALENT.

100b THE DIPLOMACY AND FOREIGN POLICY OF THE UNITED STATES SINCE 1860. (3) II Dupre
A continuation of Course 100a. PREREQUISITE: COURSE 5b OR EQUIVALENT.

* Courses open to freshmen.

105 COLONIAL AMERICA. (3) Knapp

A study of the beginnings of the English colonies, 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 controversies arising therefrom. **PREREQUISITE: ONE YEAR OF AMERICAN OR EUROPEAN HISTORY.**

106a COLONIAL LATIN AMERICA. (2) Knapp

A survey of the founding and development of the Latin American Colonies and their struggle for independence. Given 1936-37; 1937-38.

106b LATIN AMERICAN REPUBLICS. (2) Knapp

This course will include a study of the political, economic and social institutions, and problems of the Latin American Republics from attainment of independence to the present. Given 1936-37.

114 THE RENAISSANCE IN THE SOUTH. (3) 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. (3) 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.

116a SENIOR SEMINAR. (1) I Tuthill and Staff

A course for Seniors designed to present the bibliography and literature of selected fields.

116b SENIOR SEMINAR. (1) II Tuthill and Staff

A continuation of 116a.

119a THE FRENCH REVOLUTION AND NAPOLEON. (3) 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 THE NINETEENTH CENTURY. (3) 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 features of European life after 1815; the expansion of Europe in Africa and Asia, and the reactions upon the great states of the world. Given 1936-37; 1937-38.

120 THE TWENTIETH CENTURY. (3) Tuthill

A study of recent and contemporary movements, chiefly in Europe. 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. Reports on current literature and assigned reading on a liberal scale. Given 1936-37.

131a **ENGLISH CONSTITUTIONAL HISTORY TO 1603.** (3) 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. Given 1937-38. **PREREQUISITE: HISTORY 2a OR EQUIVALENT.**

131b **ENGLISH CONSTITUTIONAL HISTORY SINCE 1603.** (3) II Hall
A continuation of Course 131a. The constitutional struggle between the Stuart kings and Parliament; triumph of constitutional mon archy; rise of the Cabinet; effect of the spread of democracy in recent times. Given 1937-38. **PREREQUISITE: HISTORY 2b OR EQUIVALENT.**

135a **THE BRITISH EMPIRE (TO 1860).** (3) Hall
Review of the various elements affecting Great Britain and her Empire between 1783 and 1860; the Industrial Revolution; the French Revolution; Development of British Sea Power. The early growth and development of Canada, Australia, New Zealand, South Africa, and India. Lectures, class discussions, readings, reports. Given 1937-38.

135b **THE BRITISH EMPIRE (SINCE 1860).** (3) Hall
A continuation of 135a. Great Britain and the growth of the Dominions and the Commonwealth since 1860. Particular attention given to the history of Canadian Dominion and the extension of the idea to other portions of the Commonwealth; their relations with the rest of the world. Given 1936-37.

138 **BRITISH SOCIAL HISTORY DURING THE TUDOR PERIOD, 1485-1603.** (2) Hall
A study of British life, manners, customs in towns and country. Particular emphasis will be placed upon the age of Elizabeth, with political events subordinated to social changes. Lectures, discussions, and reports. Given 1936-37; 1937-38. **PREREQUISITE: HISTORY 2a.**

140a-t **INDEPENDENT WORK.** (2) Staff
Under special conditions selected students may investigate special problems, with weekly reports to the instructor.

147 **RECENT HISTORY OF THE UNITED STATES.** (3) 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. Given 1937-38. **PREREQUISITE: ONE YEAR OF AMERICAN HISTORY.**

166 **DIVISION AND REUNION, 1860-1865.** (3) Knapp
An intensive study of sectionalism in the United States from 1850 to 1877. The political, military, economic, industrial, and educational aspects of the period of the Civil War. Emphasis on the problems of the border States. **PREREQUISITE: ONE YEAR OF AMERICAN HISTORY.**

170 **THE ERA OF LOUIS XIV.** (3) Tuthill
A study of the general conditions of Western Europe from 1648 to 1715, particularly of the institutions and power of France under the leadership of Louis XIV, as reflected in the life and culture of Europe and her colonies. Given 1937-38. **PREREQUISITE: ONE YEAR OF EUROPEAN HISTORY.**

171 THE EIGHTEENTH CENTURY IN EUROPE. (2) Lunde
A study of the benevolent despots, their times and circumstances, their significance in Modern Europe. Given 1936-37. PREREQUISITE: 4a OR ITS EQUIVALENT.

175 THE SUCCESSION STATES. (3) I Dupre
A political, economic, social, and cultural study of the nationalities and post-war states formerly a part of the Austro-Hungarian Empire; Austria, Hungary, Czechoslovakia, Jugoslavia, Roumania and Poland; and of their international relations. Given 1937-38.

176 THE THIRD FRENCH REPUBLIC. (3) II 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. Lectures, readings, reports, and discussions. Given 1937-38.

180 HISTORY OF THE NEW SOUTH. (3) Clark
The evolution of southern life and society, agrarian politics, relationships with other sections, industrial growth, and new leadership. PREREQUISITE: HISTORY 5b, OR HISTORY 10b, OR EQUIVALENTS.

184 THE GEOGRAPHIC BASIS OF AMERICAN HISTORY. (2) 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 in the "200" Group

These courses are for graduate students. They are content courses presented by the lecture and discussion method; and as such are distinct in character from the "300" group, which is concerned with problems and the practice of research.

202 THE AMERICAN REVOLUTION. (3) Knapp

247a-d SEMINAR IN RECENT UNITED STATES HISTORY. Knapp
Intensive studies in the political, social, and cultural history of the United States since 1914. Different topics will be stressed in rotation. 2 credits.

280 EUROPEAN HISTORIOGRAPHY. (2) Tuthill

281 AMERICAN HISTORIOGRAPHY. (2) Knapp

282 HISTORICAL CRITICISM. (2) Tuthill

Courses in the "300" Group

Seminars.—Basically research in character. These are not content courses. They provide laboratory 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.

315a-d HENRY CLAY (AND HIS TIMES). (3) Knapp

320a-d ORIGINS OF THE GREAT WAR. (3) Tuthill

331 SEMINAR IN MODERN BRITISH HISTORY. (3) Hall

342 SEMINAR IN KENTUCKY HISTORY. (2) Clark
The development of Kentucky as a Western commonwealth, with emphasis on the economic and political phases from the 18th century to the present time. Writing of papers based on research among documents.

365 THE AMERICAN CIVIL WAR. (3) Knapp

366 RECONSTRUCTION. (3) Knapp

HISTORY OF EDUCATION

Dean Taylor and Professor Patrick

117a HISTORY OF EDUCATION. (3) Patrick
This course is a survey of the history of secondary education from the Greek period to the present time.

117b HISTORY OF EDUCATION. (3) Patrick
A survey of the history of elementary education beginning with Athenian education and closing with present elementary education in America.

121 HISTORY OF EDUCATION IN THE UNITED STATES. (3) Patrick
A course in the history of the development of the public school system in the United States. It is designed to give a background for the appreciation of the aims and purposes of modern education.

219 GREAT EDUCATORS AND THEIR WORK. (3) Patrick
A study of the lives and writings of the world's educators to enable the student to appreciate more fully the ideals, attitudes and contributions to society of the men and women in education who have served best.

220 COMPARATIVE EDUCATION. (3) I, II, S Taylor
A course giving comparison of systems of education.

235 HISTORY OF EDUCATION IN KENTUCKY. (3) Patrick
A course designed to give the student an historical background of education in Kentucky.

237a-b SPECIAL PROBLEMS IN HISTORY OF EDUCATION. (3) Patrick
An independent work course for students in history of education.

HOME ECONOMICS

Professor Erikson, Assistant Professors Barkley, Grundmeier, Deephouse, Mumford, and Seeds, and Miss Latzke, Miss Sandell, and Miss Helton

3 FOOD AND NUTRITION. (4) I, II Erikson
The properties and nutritive values of food and its conversion into the matter and energy of the body. Lecture, 2 hours; laboratory, 4 hours. **PREREQUISITES: CHEM. 7, A. & P. 3.**

6a FOODS. (3) I Barkley
An introduction to the study of food. The course includes a study of the classification and composition of foods; methods of preparation and principles involved. Lecture, 1 hour; laboratory, 4 hours.

6b FOODS. (3) II — Barkley

The selection, purchase and preparation of food in connection with meal planning and service. Lecture, 1 hour; laboratory, 4 hours. **PREREQUISITE: H. E. 6a.**

16 ELEMENTARY NUTRITION. (3) I — 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. It is given in a way that calls for no training in the natural sciences. Lecture, 2 hours; laboratory, 2 hours. Not open to students registered in home economics.

26 TEXTILES. (2) I, II — Latzke

A study of fundamental weaves, yarns, fibers, and finishes with reference to the selection of appropriate fabrics from both economic and artistic viewpoints. Lecture, 1 hour; laboratory, 2 hours.

29 COSTUME DESIGN. (3) I, II — 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. Lecture, 2 hours; laboratory, 2 hours. **PREREQUISITE: ART 30a.**

33 HEALTH OF THE FAMILY. (3) I, II — Erikson

Study of the factors that influence health; the agencies and forces to be utilized for health improvement; applications of modern science to health; prevention of specific diseases; practice in the techniques of home nursing. Lecture, 3 hours.

34 DIETETICS FOR NURSES. (4) I, II — Erikson

Normal nutrition and the modifications of the normal diet in the treatment of disease. The laboratory includes practice in food preparation and the planning and preparation of diets for disease conditions. Lecture, 2 hours; laboratory, 4 hours. **PREREQUISITE: A. & P. 6.**

35 NUTRITION AND PUBLIC HEALTH. (2) II — Grundmeier

Correlation of nutrition and the social and family problems in the field of public health. Emphasis is given to the study and application of principles of good nutrition to maternal, infant and child health. Nutrition of preschool and school children is studied together with problems of the relationships between the teacher, parent and social agencies in the community. Consideration is given to the food budget on different economic levels. Lecture, 2 hours.

41 HOUSING. (3) I — Deephouse

Modern trends in housing. Economics of housing, housing laws, zoning, house plans and equipment. Present day trends in heating, plumbing and lighting for the home. Problems of costs, management, convenience and beauty are stressed. Lecture, 3 hours. **PREREQUISITE: ECON. 1.**

46 CLOTHING. (3) I, II — 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, 1 hour; laboratory, 4 hours. **PREREQUISITE: H. E. 29.**

47 ADVANCED CLOTHING. (3) I, II — Seeds, Latzke
Individuality in costume is emphasized. Costumes are designed, draped and constructed without the use of commercial patterns. Lecture, 1 hour; laboratory, 4 hours. **PREREQUISITE: H. E. 46.**

81 INSTITUTION MARKETING. (3) I — Helton
The economics of food and supplies for institutions. Field trips are made to wholesale houses, distributing centers, food factories. Lecture, 2 hours; laboratory, 2 hours. **PREREQUISITE: ECON. 1.**

82 INSTITUTION FOODS. (4) I, II — Helton
Large quantity food preparation and service. Emphasis is placed on standard methods and cost accounting. Lecture, 2 hours; laboratory, 4 hours. **PREREQUISITE: H. E. 6b.**

104 PROBLEMS IN TEXTILES. (4) II — Latzke
Advanced textiles. Individual term problems. **PREREQUISITES: H. E. 26, ECON. 1.**

105a-b SEMINAR IN NUTRITION. (1, 1) I, II — Erikson
Investigations of recent research on nutrition. Lecture, 1 hour. **PREREQUISITE: SENIOR OR GRADUATE STANDING.**

106a-b SEMINAR IN TEXTILES AND CLOTHING.
(1, 1) I, II — Seeds, Latzke
Investigations of special textile and clothing problems. One hour. **PREREQUISITE: SENIOR OR GRADUATE STANDING.**

109 NUTRITION. (4) II — 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. Lecture, 2 hours; laboratory, 4 hours. **PREREQUISITE: H. E. 124.**

112 PUBLIC SCHOOL NUTRITION. (3) I, II — 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. The laboratory work includes a health class with public school children. Lecture, 2 hours; laboratory, 2 hours. **PREREQUISITE OR PARALLEL: H. E. 124.** With special permission from the head of the department, prerequisites may be waived for advanced students.

115 CHILD CARE AND DEVELOPMENT. (3) I, II — Mumford
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. Lecture, 2 hours; laboratory, 2 hours. **PREREQUISITES: A. & P. 3, PSYCHOLOGY 7.**

116 ADVANCED COSTUME DESIGN. (3) I — Seeds
A Survey of costume throughout the ages showing how the costume of a period mirrors the life of the period. Planning of modern costumes from historic source material. Lecture, 2 hours; laboratory, 2 hours. **PREREQUISITE: H. E. 29.**

117 INTERIOR DECORATION. (3) II — Seeds

A study of the house interior as an appropriate background for the family. Color, line, and texture are considered in the backgrounds, windows, furniture and accessories. Opportunity is given to plan interiors suited to today's needs. Lecture, 2 hours; laboratory, 2 hours. **PREREQUISITES: H. E. 26; ART 30b.**

119a-b EXPERIMENTAL COOKERY. (3, 3) 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. Opportunity is given for group and individual problems depending on the interests of the students. Study of food judging and demonstration may be given. **PREREQUISITES: CHEM. 7, H. E. 6a, OR SPECIAL PERMISSION.**

121a-b SPECIAL PROBLEMS. (2, 2) I, II — Staff

Special problems in undergraduate research.

124 DIETETICS. (4) I, II — Grundmeier

Daily food requirements of human beings at different age levels, emphasis being given to satisfying the divergent needs of families and other groups. Practice is given in normal dietaries for the different ages and different groups. Lecture, 2 hours; laboratory, 4 hours. **PREREQUISITES: H. E. 3, H. E. 6b, A. & P. 3.**

125 CONSUMER PROBLEMS. (3) I, II — Deephouse

A course dealing with the buying problems of the present day consumer. A study of consumer buying and its economic characteristics, an analysis and study of the common problems of the manufacturer, the merchant and the consumer in order to understand better the needs and responsibilities of each group. **PREREQUISITE: ECON. 1.**

126 FAMILY LIVING. (3) I, II — 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 result of such influence on attitudes and behaviors that affect community living. Lecture, 3 hours. **PREREQUISITES: H. E. 41, H. E. 115, ECON. 1, SOC. 1a OR FM. ECON. 120.**

127 ADVANCED CHILD DEVELOPMENT. (3) II — Sandell

Detailed study of special features of child development during the pre-school years. Examples of what is found according to the literature are observed in the nursery 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. Lecture, 1 hour; laboratory, 4 hours. **PREREQUISITE: H. E. 115.**

128 ADVANCED CLOTHING PROBLEMS. (3) I, II — Seeds, 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. Lecture, 1 hour; laboratory, 4 hours. **PREREQUISITE: H. E. 47.**

142 HOME MANAGEMENT. (5) I, II — Deephouse

A study of the problems of family living—the technological phases of management of time, money and materials and the social and cultural training provided by good family living. Emphasis is placed on buying problems, household accounts, leisure and good family relationship. Students live for a stated period in the University Home Management House. Lecture, 2 hours; laboratory, 6 hours. **PREREQUISITE OR PARALLEL: H. E. 124.**

178 INSTITUTION ORGANIZATION AND ADMINISTRATION. (3) II — Helton

Principles of institution organization, types of institution service, modern industrial tendencies, advertisement, personnel and financial control. Lecture, 2 hours; laboratory, 2 hours. **PREREQUISITES: H. E. 81, H. E. 82.**

179a-b INSTITUTION MANAGEMENT. (3, 3) I, II — 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, 4 hours. **PREREQUISITE: H. E. 82.**

180 INSTITUTION EQUIPMENT. (3) I — Helton

Selection, arrangement, cost and care of institution equipment. Problems of lighting, heating, ventilation, refrigeration for institution food preparation and service units. Lecture, 2 hours; laboratory, 2 hours. **PREREQUISITE: H. E. 82.**

201 ADVANCED HOME MANAGEMENT. (3) II — Deephouse

A lecture course affording opportunity for special study of social and economic problems affecting family life. Lecture, 3 hours. **PREREQUISITE: H. E. 142.**

202a-b GRADUATE SEMINAR. (2, 2) I, II — Erikson

HOME ECONOMICS EDUCATION

Professor Parker and Associate Professor Spickard

160 TECHNIQUE OF TEACHING HOME ECONOMICS. (3) I, II — Parker or Spickard

A study of methods of teaching as applied to home economics. **PREREQUISITES: H. E. 26, 6a AND b, 29, 3, 51; ED. 147.**

162 DIRECTED TEACHING IN HOME ECONOMICS. (6) I, II — Parker or Spickard

Practical application of methods in teaching various phases of home economics. **PREREQUISITE: ED. 160.**

164 METHODS OF TEACHING CHILD CARE. (3) S — Parker or Spickard

A critical evaluation of subject matter in child care and methods of presenting it to high school pupils. **PREREQUISITE: H. E. 115 OR EQUIVALENT.**

165a-b PROBLEMS IN VOCATIONAL EDUCATION. (3) II, S — Parker or Spickard

This course deals with the problems involved in teaching vocational homemaking in day, part-time, and evening schools.

178 METHOD OF TEACHING HOME MANAGEMENT AND FAMILY RELATIONS IN JUNIOR AND SENIOR HIGH SCHOOL. (3) S Parker or Spickard

The course deals with the selecting of subject matter and methods suitable for junior and senior high school pupils. PREREQUISITES: H. E. 42 AND EXPERIENCE IN TEACHING.

261 HOME ECONOMICS SUPERVISION. (3) I, II Parker or Spickard

A course planned primarily to help prepare teacher trainers and supervisors of home economics education. PREREQUISITES: ED. 160 AND 162, EXPERIENCE IN TEACHING AND APPROVAL OF INSTRUCTOR.

263 CURRENT PROBLEMS IN HOME ECONOMICS EDUCATION. (3) S Parker or Spickard

A study of some recent developments in the field of home economics education. PREREQUISITES: ED. 160 AND 162; EXPERIENCE IN TEACHING.

264 MODERN TENDENCIES IN HOME ECONOMICS EDUCATION. (3) S Parker

This is 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. (3) S Parker or Spickard

Provision is made in each course for students to make individual investigations and report on special problems in home economics education.

267 DIRECTED SUPERVISION IN HOME ECONOMICS EDUCATION. (3) I, II Parker or Spickard

This course includes 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, and organizing teaching materials. This course may be taken parallel to or following Ed. 261. PREREQUISITES: TWO YEARS' TEACHING EXPERIENCE AND RECOMMENDATION BY THE DEPARTMENT OF HOME ECONOMICS EDUCATION.

268 HOME ECONOMICS CURRICULUM CONSTRUCTION. (3) S Parker or Spickard

A study of the underlying principles of curriculum building for junior and senior high school economics. PREREQUISITES: ED. 160 AND 162.

269 ACHIEVEMENT TESTING IN HOME ECONOMICS. (3) S Parker

This course is 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.

HORTICULTURE

Professors Olney and Elliott, and Assistant Professors Waltman and Emmert

1 GENERAL HORTICULTURE. (3) I, II — Olney
A study of the principles underlying the care and management of horticultural crops, including propagation, nutrition, habits of growth, fruitfulness, pollination, pruning, training, insect and disease control, harvesting and storing. Lecture, 3 hours.

103 POMOLOGY. POME FRUITS. (3) I — Waltman
A course dealing with the theory and practice of commercial apple growing. Adaptation, soil relations, fruitfulness and orchard management problems are studied in detail. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITE: HORTICULTURE 1.**

104 POMOLOGY. STONE FRUITS. (3) I — Waltman
A detailed study of commercial peach, plum and cherry growing. Lectures, 2 hours; laboratory, 2 hours. Given 1938-39. **PREREQUISITE: HORTICULTURE 1.**

105 POMOLOGY. SMALL FRUITS. (2) I — Waltman
A detailed study of the care and management of commercial plantings of strawberries, bush fruits and grapes. Lecture, 1 hour; laboratory, 2 hours, first half; lectures, 2 hours a week, last half. Given 1937-38. Not offered 1938-39. **PREREQUISITE: HORTICULTURE 1.**

106 GREENHOUSE CONSTRUCTION AND MANAGEMENT. (2) I — Emmert
A study of greenhouse construction and management. Lecture, 1 hour; laboratory, 2 hours. Not offered 1938-39.

108 VEGETABLE FORCING. (3) I — Emmert
A study of the culture of vegetable crops under glass. Lecture, 2 hours; laboratory, 2 hours. Offered 1938-39.

110 VEGETABLE GARDENING. (3) I — Emmert
A study of the fundamental principles of vegetable growing, and the home garden. Lectures, 2 hours; laboratory, 2 hours.

111 MARKET GARDENING. (3) I — Emmert
A detailed study of commercial vegetable growing, with special emphasis on crops suited to Kentucky. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITES: HORTICULTURE 108, 110.**

113 LANDSCAPE GARDENING. (3) II — Elliott
A study of lawns, trees and shrubs and their arrangement for home and school yard planting. Lecture, 2 hours; laboratory, 2 hours. **PREREQUISITE: HORT. 1.**

114 ADVANCED LANDSCAPE GARDENING. (3) II — Elliott
A continuation of 113. Special attention is given to design and the use of plant materials. Lectures, 2 hours; laboratory, 2 hours. Given 1938-39.

115a-b SPECIAL PROBLEMS. (3, 3) I, II — Olney and Staff
This course is designed to permit advanced students to make an intensive study of some phase of horticulture in which they are particularly interested. May be taken only with approval of the instructor.

117 FLORICULTURE. (3) II Elliott
A study of the fundamental principles of flower growing under glass and in the garden. Lecture, 2 hours; laboratory, 2 hours. **PREREQUISITE: HORT. 1.**

118 ADVANCED FLORICULTURE. (3) II Elliott
A detailed study of the culture and arrangement of garden flowers for the home grounds. Lecture, 2 hours; laboratory, 2 hours. Not offered 1938-39. **PREREQUISITE: HORTICULTURE 117.**

119 PLANT PROPAGATION. (3) II Elliott
A detailed study of the principles and methods of propagating plants. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITES: BOTANY 1a AND 1b.**

200a-b SEMINAR. (1, 1) I, II Olney and Staff

HYGIENE AND PUBLIC HEALTH

Professor Chambers, Associate Professors Pinney and Griffin, Dr. Thomas and Dr. Doyle, Assistant Professors Heinz, Hamilton and Rood, Miss Davis and Miss Desha

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.

The medical service consists of complete physical examinations of all entering students, the maintenance of a dispensary on the campus for students and faculty, and calls by physicians of the staff to sick students in their rooms.

The department offers courses in general hygiene for students in the various colleges of the University. A full year of work is offered to graduate nurses in preparation for public health nursing positions, and finally work leading to the degree of master of science in public health is offered especially for the preparation of medical officers of health.

Requirements for a Major. Prerequisites: Junior standing; 12 credits in biological sciences. Required: Bacteriology 103. A minimum of 15 credits of advanced work in Hygiene and Public Health.

Requirements in the Field of Concentration. Forty credits in the Field of Biological Sciences and Social Studies (Sociology, Psychology, Political Science), including the major work, in courses not open to freshmen.

***1 PERSONAL AND COMMUNITY HEALTH.** (1) I, II, S Heinz, Hamilton
Lectures and recitation. An introduction to the principles of personal and community health.

***9 HYGIENE FOR TEACHERS.** (2) I, II, S Heinz, Hamilton
This course is designed to meet the state requirements of two credits in Hygiene for the elementary certificate.

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* Courses open to freshmen.

The following courses open only to Upper Division and Graduate Students

100a PUBLIC HEALTH. (3) I, S — Chambers, Heinz
A consideration of the cause, prevalence, transmission and control of preventable diseases. Given 1937-38; offered 1938-39.

100b PUBLIC HEALTH. (3) II, S — Chambers, Heinz
A continuation of 100a. Environmental and organization approach to disease prevention. Given 1937-38; offered 1938-39.

104 MATERNAL AND CHILD HEALTH. (2) II, S — Griffin
Problems in maternal and child health from the standpoint of the public health nurse. Given 1937-38; offered 1938-39.

110 HEALTH EDUCATION AND HEALTH SUPERVISION OF SCHOOLS. (3) II, S — Heinz
A course dealing with principles of health education, and the cooperative nature of school health work thru study of problems in the solution of which contributions are made by parents, school and community. Not given in 1937-38; given 1938-39.

111a-b INDEPENDENT WORK IN HYGIENE AND PUBLIC HEALTH. (3) I, II, S — Staff
Given 1937-38; offered 1938-39.

115 COMMUNICABLE DISEASES. (3) S — Hamilton
A study of communicable diseases with reference to causal agents transmission, and their methods of prevention and control. Given 1938; offered 1939.

118 VITAL STATISTICS. (3) I, S — Heinz
Statistics of population, deaths, births and morbidity; the collection and analysis of vital statistics. Not given 1937-38; offered 1938-39.

120a MENTAL HYGIENE. (3) I, S — Ratliff
An introduction to mental hygiene including a consideration of the cause, treatment and prevention of mental disorders. Given 1937-38; offered 1938-39.

120b MENTAL HYGIENE. (3) II, S — Ratliff
A continuation of Hygiene 120a. Students are given the opportunity to apply to concrete cases the principles and concepts developed in 120a. Given 1937-38; offered 1938-39.

122 SCHOOL AND COMMUNITY HEALTH. (2) I, S — Rood
To develop an idea of the cooperative nature of school health work and the importance of connecting it up with adult work in the community. Not given 1937-38; offered 1938-39.

124a PUBLIC HEALTH NURSING. (3) I, S — Rood
The principles and practices of public health nursing. Given 1937-38; offered 1938-39.

124b PUBLIC HEALTH NURSING. (3) II, S — Rood
Educational interpretations of public health services. A continuation of Hygiene 124a. Given 1937-38; offered 1938-39.

125a COUNTY HEALTH PRACTICE. (2) II, S — Cawood
Lectures and recitations on the purposes, development, practice and techniques of local health work. Not given 1937-38; offered 1938-39.

125b-e COUNTY HEALTH PRACTICE. (3) I, II, S — Cawood, Rood
Nursing practice in the training area under the supervision of trained personnel. Sixteen weeks taken either concurrently or following the formal courses of instruction—by appointment. Given 1937-38; offered 1938-39.

126 CARE AND TREATMENT OF CRIPPLED CHILDREN. (1) II, S — Rood
Intended to give students opportunities to observe the various crippling conditions found in children and to understand underlying causes. Given 1937-38; offered 1938-39.

130 DEFICIENCY DISEASES AND NUTRITION. (2) S — Gambill
Lectures and recitations. A consideration of the physiological action of the more common vitamins and hormones and the clinical and subclinical manifestation of their excess or deficiency. The public health aspects of prevalence and control are emphasized. Not given 1937-38; offered 1938-39.

The following courses are open only to Graduate Students and are given only in the summer school

200 EPIDEMIOLOGY. (3) S — Chambers
The cause, transmission and control of communicable diseases. Given 1938; offered 1939.

203 PUBLIC HEALTH RECORDS. (2) S — Cawood
General principles of recording, filing and use of public health data. Not given 1938; offered 1939.

204 MATERNAL AND CHILD HEALTH. (2) S — Griffin
Lectures and conferences. The principles of prenatal, infant and child care. Given 1938; offered 1939.

212a PUBLIC HEALTH ADMINISTRATION. (3) S — Mustard
The organization and administration of public health. Given 1938; offered 1939.

212b PUBLIC HEALTH ADMINISTRATION. (2) S — Mustard
A continuation of 212a. Not given 1938; offered 1939.

218a VITAL STATISTICS. (3) S — Fertig
Statistics of population, births, deaths, marriage and morbidity. Given 1938; offered 1939.

218b VITAL STATISTICS. (2) S — Fertig
A continuation of 218a. Given 1938; offered 1939.

220 MENTAL HYGIENE. (2) S — Rogers
Lectures and clinics considering the cause, classification, course, treatment and prevention of mental disorders. Given 1938; offered 1939.

225a COUNTY HEALTH PRACTICE. (4) S — Cawood
An internship in actual county health practice.

225b COUNTY HEALTH PRACTICE. (2) S — Cawood
A critical analysis of one service of the Fayette County Health Department.

290 SEMINAR. (1) S — Staff

Summer Schedule of Courses for Nurses*

FIRST SUMMER

(Given every year.)

Hygiene 124a	Public Health Nursing	3 credits
Hygiene 100a	Public Health	3 credits
Psychology SI	Elementary Psychology	2 credits
Hygiene 104	Maternal and Child Health	2 credits
Hygiene 125b	County Health Practice	3 credits

SECOND SUMMER

(Given odd years.)

Hygiene 100b	Public Health	3 credits
Hygiene 124b	Public Health Nursing	3 credits
Hygiene 130	Deficiency Diseases and Nutrition	2 credits
Hygiene 125a	County Health Practice	2 credits
Hygiene 125c or d	County Health Practice	3 credits

THIRD SUMMER

(Given even years.)

Sociology 19	Social Work Information	3 credits
Home Economics 35	Nutrition and Public Health	2 credits
Hygiene 122	School and Community Health	2 credits
Hyigene S120a	Mental Hygiene	2 credits
Hygiene 125e	County Health Practice	3 credits

* This schedule is a summary of courses leading to the certificate in Public Health Nursing which may be taken in successive summer schools covering three eight-week sessions and sixteen weeks of practical work.

Full Year Schedule for Nurses (Certificate)

FIRST SEMESTER

Course		
Hyg. 100a	Public Health	3 credits
Hyg. 124a	Public Health Nursing	3 credits
Psy. I	Elementary Psychology	3 credits
Hyg. 104	Maternal and Child Health	2 credits
Hyg. 130	Deficiency Disease and Nutrition	2 credits
English 7a	Elements of Public Speaking	3 credits
Hyg. 122	School and Community Health	2 credits
	Total	18 credits

SECOND SEMESTER

Course		
Hyg. 100b	Public Health	3 credits
Hyg. 124b	Public Health Nursing	3 credits
Hyg. 120a	Mental Hygiene	3 credits
Hyg. 125a	County Health Practice	2 credits
Soc. 19	Social Work Information	3 credits
H. E. 35	Nutrition and Public Health	2 credits
Hyg. 126	Care and Treatment of Crippled Children	1 credit
	Total	17
*Hyg. 125b-e	County Health Practice (four months following the school year)	12 credits

* Four weeks of field work represent 3 credits. Field courses may be taken at any time of the year or in summer in blocks of four weeks. Hygiene 125c is offered by extension. Prerequisite: Hygiene 125b or equivalent.

INDUSTRIAL EDUCATION

Professor May

70 INDUSTRIAL EDUCATION. (3) I, II, S May

This is an informal course intended to give a working knowledge of the field of trade and industrial education as set up in the Federal and State Vocational Acts, and as they function in a vocational education program.

71a TRADE ANALYSIS TECHNIQUES. (2) I, II, S May
This course is 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. It is a prerequisite to 71b.

71b COURSE CONSTRUCTION. (2) I, II, S May
This is a continuation of 71a and consists of the assembling of the teaching material, that has been discovered in the analysis, into a course of study.

72 SPECIAL METHODS IN TRADE AND INDUSTRIAL EDUCATION. (2) I, II, S May
This course is planned to give the student a working knowledge of the most approved methods in instructional management, including lesson planning, in the field of vocational industrial education.

73 TEACHING RELATED SUBJECTS. (3) I, II, S May
The objective of this course is to acquaint the student with the techniques of handling the job of teaching the related technical subjects in the field of trade and industrial education.

77 SHOP MANAGEMENT PROBLEMS. (2) I, II, S May
This course has to do with industrial education in the school shop. It evaluates all types of activities in connection with this part of the educational program and gives due weight to each factor. Its economic value is of first importance.

78 THE CONFERENCE METHOD OF INSTRUCTION IN INDUSTRIAL EDUCATION. (2) I, II, S May
Mature learners are entitled to a method 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. (2) I, II, S May
In vocational education there is a body 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.

80 PRINCIPLES OF INDUSTRIAL EDUCATION. (2) I, II, S May
This course carefully summarizes the basic principles of industrial education, pulling out from the general principles of education those especially applicable to this specialized field of vocational education. Fundamentally these principles are the foundation of Education 171, The Philosophy of Vocational Education.

81 ANALYSIS OF LEARNING DIFFICULTIES IN INDUSTRIAL EDUCATION. (2) I, II, S May
This course has been planned to meet the needs of teachers of vocational subjects in the field of industrial education. An analysis will be made of the learning difficulties encountered in teaching trade and related subject courses and remedial measures will be studied.

108 COORDINATION TECHNIQUES IN INDUSTRIAL EDUCATION. (2) I, II, S May
This is a course designed to meet the needs of persons functioning as 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. (3) S May
A course designed to give teachers, principals, superintendents and welfare workers a comprehensive view of the factors in vocational guidance, 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. (2) I, II, S May
This course is designed to meet the needs of persons who wish to secure a working knowledge of modern industrial organization, trends in industrial educational policies and the proper approach to and analysis of these problems as they affect the industrial vocational teacher.

170 PART-TIME GENERAL CONTINUATION TEACHER TRAINING. (3) I, II, S May
This is an analysis of the problems of the continuation school as they affect teacher preparation for the part-time program.

171 VOCATIONAL EDUCATION. (2) I, II, S May
This course is 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.

JOURNALISM

Professor Grehan,* Assistant Professors Plummer, McLaughlin, and Portmann, Mr. Tucker, and Mr. Griffin

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 this 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), and *The Kentucky Press* (a monthly publication for the editors of the state press). These and other journalistic activities are used in laboratory work. Material written in the sophomore classes is submitted for publication in local, state, and national newspapers and in periodicals.

Requirements for a Major. Prerequisites: Journalism 1a, 1b, and either 11 or 12. Required: Journalism 104a, 104b, 105, 106, 107, 108, 90a, 90b.

Requirements in the Field of Concentration. Forty credits in the Field of Literature, Philosophy and the Arts, including the major work in courses not open to freshmen.

Comprehensive Examinations. Each major in journalism is

* Died December 11, 1937.

required to pass a final comprehensive examination at the end of the senior year and to enroll in Tutorial Work, 90a and 90b.

The Degree of A. B. in Journalism. Two sequences are offered which, when completed, lead to the degree of A. B. in Journalism. See outline below.

*1a **REPORTING.** (3) I, II, S — McLaughlin and others
A study of the fundamentals of newspaper reporting; typewriting. Not open to juniors and seniors in College of Arts and Sciences. Given 1937-38; offered 1938-39.

*1b **REPORTING.** (3) I, II, S — Tucker and others
Continuation of 1a. Given 1937-38; offered 1938-39. **PREREQUISITE: JOURNALISM 1a.**

11 **ADVANCED REPORTING.** (3) I, II
A study of specialized news reporting with emphasis placed on reporting of public affairs. Lecture, 2 hours; laboratory, 2 hours. Publication of copy is encouraged. Given 1937-38; offered 1938-39. **PREREQUISITES: JOURNALISM 1a-b.**

12 **FEATURE WRITING.** (3) I, II — Tucker
A study of the writing of feature stories for newspapers, trade journals, and other publications. Publication of copy is encouraged. Given 1937-38; offered 1938-39. **PREREQUISITES: JOURNALISM 1a-b.**

21 **ETYMOLOGY.** (3) I, II — Tucker
A study of words and their fundamental values with reference to development of a writing vocabulary. Given 1937-38; offered 1938-39. **PREREQUISITE: SOPHOMORE STANDING.**

Courses open only to Upper Division and Graduate Students

102 **COMMUNITY JOURNALISM.** (3) I, S — Portmann
A study of the problems which confront the community weekly and the small city daily. Given 1937-38; offered 1938-39. **PREREQUISITES: JOURNALISM 1a-b; 11 OR 12.**

103 **NEWSPAPER ADMINISTRATION.** (3) II — Portmann
A study of the business, circulation, advertising, and accounting divisions of the newspaper with special emphasis placed on the community newspaper. Given 1937-38; offered 1938-39. **PREREQUISITES: JOURNALISM 1a-b; 11 OR 12.**

104a **COPYREADING, TYPOGRAPHY.** (3) I — Portmann
No credit for 104a until 104b has been completed. Lecture, 1 hour; laboratory, 4 hours. Majors must take 104 in their junior year. A non-credit, 1-hour laboratory course in linotype and other printing machinery is offered by the superintendent of the printing plant to a selected group of students in 104a. Given 1937-38; offered 1938-39. **PREREQUISITES: JOURNALISM 1a-b; 11 OR 12.**

104b **COPYREADING, TYPOGRAPHY.** (3) II — Portmann
Continuation of 104a. Lecture, 1 hour; laboratory, 4 hours. Given 1937-38; offered 1938-39. **PREREQUISITES: JOURNALISM 1a-b; 11 OR 12; 104a.**

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* Courses open to freshmen.

105 LAW OF THE PRESS. (3) II, S Portmann
A study of the special laws of libel, copyright, regulatory provisions that pertain to the press. Given 1937-38; offered 1938-39. **PREREQUISITES: JOURNALISM 1a-b; 11 OR 12.**

106 ETHICS AND PRINCIPLES OF JOURNALISM. (3) I, S Portmann
A study of the practices and application of the ethics, principles, and standards in modern journalism. Given 1937-38; offered 1938-39. **PREREQUISITES: JOURNALISM 1a-b; 11 OR 12; SENIOR STANDING.**

107 EDITORIAL WRITING. (3) I, II Tucker
A study of editorial writings and of the editorial page and its contents, aims, and results. Publication of copy is encouraged. Given 1937-38; offered 1938-39. **PREREQUISITES: JOURNALISM 1a-b; 11 OR 12; SENIOR STANDING.**

108 HISTORY OF JOURNALISM. (3) II, S Portmann
A study of the rise and development of American journalism and newspapers. Given 1937-38; offered 1938-39. **PREREQUISITES: JOURNALISM 1a-b; 11 OR 12; SENIOR STANDING.**

110 SUPERVISION OF HIGH SCHOOL PUBLICATIONS. (3) S 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. Two hours daily. Given 1937-38; offered 1938-39. **PREREQUISITE: SENIOR STANDING.**

111 VERBAL CRITICISM. (3) I, II Tucker
A study of words and their synonyms with reference to developing accuracy in use of English in journalistic work. Given 1937-38; offered 1938-39. **PREREQUISITE: JUNIOR STANDING.**

112 CRITICAL WRITING FOR THE PRESS. (3) S 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. Given 1938; offered 1939. **PREREQUISITE: JUNIOR STANDING.**

115 ADVERTISING TYPOGRAPHY AND LAYOUT. (3) II Portmann
A study of the principles of typographic families and illustrations, decorations that pertain to modern advertising. Practical work with merchants is included in the latter part of the course. Lecture, 2 hours; laboratory, 2 hours. Given 1937-38; offered 1938-39. **PREREQUISITES: SENIOR STANDING; PSYCHOLOGY 5 OR CONSENT OF INSTRUCTOR.**

118 PUBLICITY FOR SCHOOLS AND SOCIAL SERVICE AGENCIES. (3) S
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. Not given 1938; offered 1939. **PREREQUISITE: JUNIOR STANDING.**

120a SEMINAR IN PUBLIC OPINION. (2) I
A study of the relationship of the press in its several departments to public opinion; free publicity; newspaper campaigns and crusades; propaganda; influence of politics on the press; financial control; and ethics, principles, and standards. Given 1937-38; not offered 1938-39. **PREREQUISITE: SENIOR OR GRADUATE STANDING.**

120b SEMINAR IN PUBLIC OPINION. (2) II
Continuation of 120a. Given 1937-38; not offered 1938-39. **PREREQUISITE: SENIOR OR GRADUATE STANDING.**

125 MAGAZINE ARTICLE WRITING. (3) S Tucker
Lectures, personal conferences, and practice in writing and submitting material for publication in magazines; study of the markets for this material; free-lance writing. Given 1937-38; offered 1938-39. **PREREQUISITE: JUNIOR STANDING.**

90a TUTORIAL WORK IN JOURNALISM. (1) I Staff
Open only to senior majors in the department; required of all majors. **PREREQUISITE: SENIOR STANDING.**

90b TUTORIAL WORK IN JOURNALISM. (1) II Staff
Continuation of 90a.

Outline of Course Leading to Degree A. B. in Journalism, Community Sequence

Students will elect this sequence at the beginning of their sophomore year, and will follow the course as outlined in the class year specified.

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Journ. 1a Reporting	3.	Journ. 1b Reporting	3.
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Mod. For. Lang. French, German, Spanish	3.	Mod. For. Lang. French, German, Spanish	3.
Psych. 2a Gen. Psychology	3.	Psych. 2b Gen. Psychology	3.
Math. 51a or Geol. Astron. or Elementary Geology	3.	Math. 51b or Geol. Astron. or Elementary Geology	3.
Hyg. 1 Personal and Community Health	1.	Mil. Sci. 1b First Year Basic Course, Inf.	1.3
Mil. Sci. 1a First Year Basic Course, Inf.	1.3	Phys. Ed.	.7
Phys. Ed.	.7		
Mat. Lec. Required of all	.3		
	18.3		17.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Journ. 11 Adv. Reporting	3.	Journ. 12 or Journ. 21 Feature Writing or Etymology	3.
Mod. For. Lang. French, German, Spanish	3.	Mod. For. Lang. French, German, Spanish	3.
Biol. Sci. Bact., Bot., Zool. or Physiol.	3.	Biol. Sci. Bact., Bot., Zool. or Physiol.	3.
Pol. Sci. 51 or 15 Amer. Govt. or Prob. of Citizenship	3.	Pol. Sci. 51 or 15 Amer. Govt. or Prob. of Citizenship	3.
Soc. 1a or Eng. 3a Prin. of Soc. or Hist. Eng. Lit.	3.	Soc. 1b or Eng. 3b Prin. of Soc. or Hist. Eng. Lit.	3.
Mil. Sci. 6a Second Year Basic Course	1.5	Mil. Sci. 6b Second Year Basic Course	1.5
Phys. Ed.	.7	Phys. Ed.	.7
	17.2		17.2

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Journ. 104a Copyreading, Etc.	3.	Journ. 104b Copyreading, Etc.	3.
Journ. 105 Law of the Press	3.	Journ. 103 Newspaper Adm.	3.
Journ. 102 Community Journ.	3.	Soc. 116 Rural Social Econ.	3.
Soc. 101 Social Dependence	3.	Soc. 105 Social Systems	2.
Pol. Sci. 52 Munic. Gov.	3.	Pol. Sci. 153 City Admin.	3.
	15.		14.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Journ. 106 Ethics and Prin.	3.	Journ. 107 Editorial Writing	3.
Psych. 5 Advertising and Selling	3.	Journ. 108 Hist. of Journ.	3.
Pol. Sci. 154 County Govt.	3.	Soc. 112 Com. Organization	3.
Journ. 90a Tutorial Work	1.	Pol. Sci. Course above 100	3.
Electives Hist. 110a, Eng. 123a, Journ. 111, Journ. 120a, Pol. Sci., Sociology, Eng. (Numbers over 100)	6.	Journ. 90b Tutorial Work	1.
		Electives Hist. 110b, Eng. 123b, Journ. 111, Journ. 115, Journ. 120b, Pol. Sci., Sociology, Eng. (Numbers over 100)	3.
	16.		16.

Minimum credits required for degree 130.

Outline of Course Leading to Degree A. B. in Journalism, General Sequence

Students should elect this sequence at the beginning of their sophomore year. It can be elected at the beginning of the junior year providing all requirements of the freshman and sophomore years have been met.

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Jour. 1a Reporting	3.	Jour. 1b Reporting	3.
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Mod. For. Lang. French, German, Spanish	3.	Mod. For. Lang. French, German, Spanish	3.
Phys. Sci. Descrip. Astron. or Elem. Geol.	3.	Phys. Sci. Descrip. Astron. or Elem. Geol.	3.
Psych. 2a Gen. Psychology	3.	Psych. 2b Gen. Psychology	3.
Hyg. 1 Personal and Community Health	1.	Mil. Sci. 1b First Year Basic Course, Inf.	1.3
Mil. Sci. 1a First Year Basic Course, Inf.	1.3	Phys. Ed. Freshman Gym.	.7
Phys. Ed. Freshman Gym.	.7		
Mat. Lect. Required of all	.3		
	18.3		17.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Jour. 11 Adv. Reporting	3.	Jour. 12 Feature Writing	3.
Eng. 3a Hist. Eng. Lit.	3.	Eng. 3b Hist. Eng. Lit.	3.
Mod. For. Lang. French, German, Spanish	3.	Mod. For. Lang. French, German, Spanish	3.
Biol. Sci. Bact., Bot., Zool., Physiol.	3. or 4	Biol. Sci. Bact., Bot., Zool., Physiol.	3. or 4
Soc. Sci. Hist. 5a, Pol. Sci. 15 or 51, Sociology 1a	3.	Soc. Sci. Hist. 5b Pol. Sci. 15 or 51, Sociology 1b	3.
Mil. Sci. 6a Second Year Basic Course	1.5	Mil. Sci. Second Year Basic Course	1.5
Phys. Ed. Soph. Gym.	.7	Phys. Ed. Soph. Gym.	.7
	17.2 or 18.2		17.2 or 18.2

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Jour. 104a Copyreading, Etc.	3.	Jour. 104b Copyreading, Etc.	3.
Jour. 102 Community Jour.	3.	Jour. 103 Newspaper Administration	3.
Eng. 123a or 130a Amer. Lit., Comparative Lit.	3.	Eng. 123b or 130b Amer. Lit., Comparative Lit.	3.
Psych. 5 Advertising and Selling	3.	Electives Journ. 111, Journ. 120a, Hist., Eng., Pol. Sci., Soc. (Numbers above 100)	6.
Jour. 105 Law of the Press	3.		
	15.		15.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Journ. 106 Ethics and Prin.	3.	Journ. 108 Hist. of Journ.	3.
Journ. 90a Tutorial Work	1.	Journ. 107 Editorial Writing	3.
Electives Journ. 21, Journ. 120b, Hist., Eng., Pol. Sci., Soc. (Numbers above 100)	11.	Journ. 90b Tutorial Work	1.
		Electives Journ. 111, Journ. 115, Hist., Eng., Pol. Sci., Soc. (Numbers above 100)	8.
	15.		15.

Minimum credits required for degree 130.

LAW

Professors Evans, Eblen, Moreland, Murray, Pittman, Randall, and Roberts, and Mr. Fox

168 ADMINISTRATION OF THE CRIMINAL LAW. (2) II Moreland
The arrest; right to, method of, and use of force in making arrests; police officers; the "third degree"; search and seizure; jurisdiction; venue; extradition, proceedings before magistrate; grand jury; indictment; prosecuting attorney; arraignment; pleas; trial; proceedings subsequent to trial; modes of review; punishment. Special study of the jury. Keedy's Cases.

167 ADMINISTRATIVE LAW. (3) I Pittman
This course deals with the nature and extent of administrative law; the constitutional limitations, procedural and substantive; legal and equitable relief against administrative action with a special emphasis on extraordinary legal remedies. Stason Cases and other materials in administrative law.

164 CONFLICT OF LAWS. (3) II Moreland
Lorenzen's Cases.

161a-b CONSTITUTIONAL LAW. (2) I, II Eblen
Dodd's Cases.

174 CREDIT TRANSACTIONS. (3) I Roberts
Sturges' Cases (2d ed.).

178 CREDITORS' RIGHTS. (3) II Roberts
Hanna's Cases.

154 DAMAGES. (2) S Randall
McCormick's Cases.

121a-b EQUITY I AND II. (3 each) I, II Pittman
Chafee and Simpson's Cases, Vols. 1 and 2; Chafee and Pound Cases on Equitable Relief against Torts.

124 EVIDENCE. (4) II Randall
Hinton's Cases.

173 FEDERAL JURISDICTION AND PROCEDURE. (2) S Randall
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 pleadings and trial practice. Dobie's cases.

142 INDUSTRIAL RELATIONS. (2) S Moreland
Selected Cases.

145 **INSURANCE.** (2) II — Murray
Goble's Cases.

144 **LEGAL BIBLIOGRAPHY.** (No credit.) I — Librarian
Eldean, Finding the Law.

179 **LEGISLATION.** (3) II — Eblen
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. Parkinson's Cases.

169 **LAW OF THE AIR.** (2) I — Randall
The course will deal principally with aircraft law as follows: Proprietary rights in air space at common law, federal and state statutes, tort liability, criminal responsibility, aircraft as common carriers, the rules of the road, international aspects of air law, legislation for future development of air-law. Selected cases and readings.

149 **MUNICIPAL CORPORATIONS.** (2) II — Randall
Tooke's Cases.

123 **NEGOTIABLE INSTRUMENTS.** (3) I — Murray
Britton's Cases on Bills and Notes.

152 **OIL AND GAS.** (2) S — Moreland
Kulp's Cases.

125 **PRACTICE COURT.** (2) I — **Randall**

160a-b **PRIVATE CORPORATIONS I AND II. FIRST SEM.** (2) **SECOND SEM.** (3). — Evans
Frey's Cases.

172 **PROBLEMS OF RESEARCH.** (2) **BY APPOINTMENT** — Staff
This course is reserved for honor students who are preparing to make an independent study of some legal problem under the supervision of some member of the faculty.

122 **PROPERTY III (CONVEYANCING).** (3) I — Roberts
Warren's Cases.

162 **PROPERTY IV (FUTURE INTERESTS).** (3) II — Roberts
Leach's Cases.

150 **PUBLIC UTILITIES.** (3) II — Moreland
Robinson's Cases.

147 **QUASI-CONTRACTS.** (2) I — Murray
Woodruff's Cases.

166 **SALES.** (3) II — Murray
Williston's Cases.

177 **STATUTORY INTERPRETATION.** (2) S — Murray
de Sloovere's Cases.

176 **TRADE REGULATION.** (2) S — Eblen
Oppenheim's Cases.

153 **TAXATION.** (3) I — Eblen
Magill and Maguire's Cases.

120 TRIAL PROCEDURE. (4) I — Randall
Sunderland's Cases.

165 TRUSTS. (4) I — Evans
Scott's Cases.

163 WILLS AND THE ADMINISTRATION OF ESTATES. (3) II — Evans
Costigan's Cases.

Substantially all the courses in the College of Law are accepted as graduate work when taken by students majoring in Political Science, Economics, Sociology, Commerce or other fields in which such courses are recommended by the major professors.

LIBRARY SCIENCE

Professor Semmons, Miss King, Mrs. Wood, Miss Cass, Mrs. Adams

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 a major; 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, as outlined in the "Suggested Curriculum for Teacher Librarians" of the College of Education.

Requirements for a Major. Prerequisites: Senior or graduate standing. Good cultural background, especially in literature, language and the social sciences. Students desiring to enter Library Science courses should consult early in their college course with the Head of the Department concerning preparation for matriculation. Previous experience in library work and facility in the use of the typewriter are considered assets. Required courses: 30 credits or full curriculum advised.

Requirements in Field of Concentration. Forty credits of advanced work in the Field of Literature, Philosophy and the Arts (or acceptable equivalent), including the major work.

General Courses

*25 USE OF THE LIBRARY. (2) I, II
A practical survey of library book resources, tools and services; designed to aid the student in his study, research and recreational reading. Given 1937-38; offered 1938-39.

The following courses open only to Upper Division and Graduate Students

105 READING GUIDANCE. (2) I, II
A study of adolescent reading interests and problems; of the nature and content of books available to young people of the secondary school level; of the tools for book selection; and of methods which may be used by teachers to stimulate and direct the reading of young people. Books to correlate with English, social sciences, science and vocational guidance will be stressed especially. **A non-technical course designed to meet the needs of teachers.** Given 1937-38; offered 1938-39.

* Courses open to freshmen.

107 FUNCTION AND USE OF THE LIBRARY IN THE SCHOOL. (2) I, II

A course open to teachers and students preparing to teach, to familiarize them with the functions and use of the school library in modern schemes of 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 aids and teaching tools, costs and standards for school library service, and administrative problems which necessitate cooperation of school administrators, teachers and school librarians. Opportunity is afforded for the development of individual projects which correlate the library with teaching. Offered 1937-38; 1938-39.

Professional Courses

126 PLACE, FUNCTION, ADMINISTRATION OF THE HIGH SCHOOL LIBRARY. (3) I

A study of the place, function and administration of the library in the modern school and community and of the relationship of the library and librarian to the teachers, pupils and public. Major supplementary topics discussed: 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.** Assigned readings, class discussions, lectures, special reports and projects. Given 1937-38; offered 1938-39.

128 CHILDREN'S LITERATURE. (2) II

A survey of the field of children's literature with a comparative study of representative types of books for children (pre-school to Junior High age). Special study of illustration and physical make-up of books; of editions; of children's magazines and book reviewing periodicals; and of aids in the selection of children's books. Given 1937-38; offered 1938-39.

129a-b CATALOGING AND CLASSIFICATION. (3) I, (2) II

A study of the principles and forms of classification and cataloging as complementary devices of arranging printed material and of providing a key to their nature, location and contents; with special emphasis on their application to the effective administration of the school library and its major function—service to the reader. Practice work under supervision is required in classifying materials by the Dewey Decimal system and in making a shelf list and a dictionary card catalog by the use of the unit card. Given 1937-38; offered 1938-39.

132 LIBRARY WORK WITH CHILDREN. (2) II

The effective organization and administration of library work with children especially in the elementary school. Emphasizes the equipment and vital services of the children's library; the assembly of special materials; reading guidance, including discussions of the librarian's part in a program of remedial reading; story telling and special methods of stimulating children's reading. Given 1937-38; offered 1938-39.

133a-b REFERENCE AND BIBLIOGRAPHY. (3) I, (2) II
A study of the essential reference works, particularly those most valuable in school 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. Given 1937-38; offered 1938-39.

138 METHODS OF TEACHING THE USE OF THE LIBRARY. (2) II
The course emphasizes effective interpretation of the function, facilities and services of the library in the modern school and community. The first half semester is devoted to a study of administrative problems to be considered in formal instruction in the use of the library by librarian or teacher, examination of bibliographies of the field, and of content and teaching methods for various units as adapted to the school levels and particular groups taught. Class members prepare and present actual lessons correlated with the subject curricula of the school. Informal methods of encouraging use of the library, its tools and services, are emphasized the second half semester; especially oral and visual devices (assembly programs, radio, films . . .) and printed aids (news releases, library handbooks, exhibits . . .). Given 1937-38; offered 1938-39. **PREREQUISITE: L. S. 133a.**

139 FIELD WORK. (2) II
Comparable to practice teaching. Supervised practical work in all departments of the school libraries of the University Training School and nearby school systems. Two periods a week of two consecutive hours; supplemented by Seminar discussions. The course is designed to give the librarian in training an appreciation of library work as a whole by affording him opportunity for wide observation, for comparison of libraries and their methods, and for actual practice. Given 1937-38, offered 1938-39. **PREREQUISITES: L. S. 129, 133, 150.**

144 LIBRARY RECORDS AND METHODS. (2) I
A course presenting the fundamental knowledge and techniques necessary to the development of efficient procedures for the acquisition, preparation, care, circulation and use of books and minor materials in the library, with emphasis on the importance to effective library service of the application of the best business methods to these routines, and of careful interpretation of statistics and services to administrators, staff and readers. **CORRELATED WITH L. S. 126.** Assigned readings, class discussion, lectures and demonstrations, special problems and projects. Given 1937-38, offered 1938-39.

150a, b BOOK SELECTION. (3) I, (2) II
A study of principles and standards in the choice of books, periodicals, pamphlets and visual materials for library use. The course includes practical problems in the selection of books; a comparative study of the product of American publishers, editions, series, etc.; critical examination of book reviewing periodicals and aids to book selection; the writing of book notes and reviews; the reading and evaluation of typical books of biography, travel, literature, science, useful and fine arts, and social science. The second semester is devoted to the study of the reading interests of young people of high school age and of the choice of books for them from the point of view of school and individual needs. Given 1937-38; offered 1938-39.

154 SEMINAR. (2) II

A survey of the field of library science through a brief study of the modern library movement 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. General discussion with special reports on assigned topics. Given 1937-38; offered 1938-39. **PREREQUISITES: L. S. 126, 129, 133; 150 DESIRABLE.**

MARKETS AND RURAL FINANCE

Professor H. B. Price, Assistant Professor Card, Mr. Clark, and Mr. Wrather

108 MARKETING. (3) I Price and Wrather

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, 3 hours. **PREREQUISITE: ECONOMICS 1.**

109 COOPERATIVE MARKETING. (3) II Price

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. 108.**

110 ADVANCED MARKETING. (3) I Price

Marketing livestock, dairy products, eggs, and poultry; analysis of local and terminal market organization; factors affecting efficiency of business set-up and financial organization of marketing agencies. Lectures, 3 hours. **PREREQUISITE: M. & R. F. 108.**

111 AGRICULTURAL PRICES. (3) I Card

A study of the factors influencing prices of farm products, price movements and trends, and price relationships. Methods of price comparison, long time price movements and cyclical tendencies are reviewed. Lectures, 3 hours. **PREREQUISITE: FARM ECONOMICS 4.**

112 FARM FINANCE. (3) II 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: FARM ECONOMICS 4.**

113 AGRICULTURAL STATISTICS. (3) I Card

Sources, methods of presentation, and analysis of agricultural statistics with special reference to agricultural census, crop and livestock estimates; collection, tabulation and graphic presentation of data; measure of dispersion, index numbers, trends and correlation. Lectures, 2 hours; laboratory, 2 hours. **PREREQUISITE: ECONOMICS 1.**

131 ADVANCED AGRICULTURAL PRICES. (2) I Card
A review of price theory and statistical method with special reference to research in agricultural prices; analysis of various price studies with reference to the theory upon which they are based, research methods used and reliability of conclusions drawn. Lectures, 2 hours. PREREQUISITES: M. & R. F. 111; 113 OR COMMERCE 107.

132 CURRENT PROBLEMS IN AGRICULTURAL ECONOMICS. (3) II Price
This course emphasizes recent developments in agricultural economics, agricultural marketing, production and farm credits; federal production adjustment programs, organization of agricultural credit, marketing agreements and industrial codes. PREREQUISITE: FARM ECONOMICS 4.

133 AGRICULTURAL POLICY. (3) II 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: FARM ECONOMICS 4.

202a-b SPECIAL PROBLEMS IN MARKETING AND RURAL FINANCE. (3, 3) I, II 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.

203a-b SEMINAR. (1, 1) I, II Staff
Analysis of current problems in the field of marketing and rural finance.

204 RESEARCH IN MARKETING. (2) II Price
Types of research in marketing. Laying out the research project. Analysis of data. PREREQUISITE: M. & R. F. 108.

MATHEMATICS AND ASTRONOMY

Dean Boyd, Professors Latimer,† Rees,‡ and Downing, Associate Professors LeStourgeon and Cohen, Assistant Professors South, Brown, and John, Dr. Pence, Mr. Spragens, Mr. Pell, Mrs. Howard, Mr. Davidson, Mr. Tripp, and Mr. Clatworthy

Mathematics

Requirements for a Major. Prerequisites: Courses 17, 18, 19, 20a. 20b will count on the major if taken in the junior year. Required: A minimum of 18 credits of advanced work in mathematics in the upper division, including courses in the fields of algebra, geometry, analysis and applications. Major students are required also to enroll in tutorial

† On leave second semester 1937-38.
‡ On leave second semester 1937-38; resigned July 1, 1938.

courses, 1 credit a semester through the junior and senior years, and to pass a final comprehensive examination in mathematics.

Requirements in the Field of Concention, Upper Division. Forty credits in the Field of Physical Sciences, including the major work, in courses not open to freshmen.

Requirements for Graduate Work. Graduate students must have had at least 12 credits beyond elementary calculus before counting work toward an advanced degree.

*2 SOLID GEOMETRY. (3) I, II — Staff
For those who have not had the subject in high school and wish to take analytics.

*5 COLLEGE ALGEBRA. (5) I, II — Staff
A course for those who enter with only 1 unit of high school algebra. PREREQUISITE: 1 UNIT HIGH SCHOOL ALGEBRA.

*17 COLLEGE ALGEBRA. (3) I, II — Staff
The usual course leading to further work in mathematics. PREREQUISITE: 1½ UNITS HIGH SCHOOL ALGEBRA.

*18 PLANE TRIGONOMETRY. (2) I, II — Staff
A course covering the essentials. PREREQUISITE: 1½ UNITS HIGH SCHOOL ALGEBRA.

*19 PLANE ANALYTIC GEOMETRY. (3) I, II — Staff
A brief course. PREREQUISITES: MATH. 5 OR 17, 18.

*14 MATHEMATICS OF FINANCE. (5) I, II — Staff
Primarily for Commerce students. PREREQUISITE: MATH. 5 OR 17.

20a DIFFERENTIAL CALCULUS. (4) I, II — Staff
The course covers parts of differential calculus and an introduction to the integral. PREREQUISITE: MATH. 19.

20b INTEGRAL CALCULUS. (4) I, II — Staff
Completion of the course in elementary calculus. Solid analytics will be treated briefly. PREREQUISITES: MATH. 20a, 2.

11 SPHERICAL TRIGONOMETRY. (1) II — Downing
Primarily for Civil Engineers. Two hours a week, second half of semester. PREREQUISITE: MATH. 18.

12 LEAST SQUARES. (1) II — Downing
Primarily for Civil Engineers. Two hours a week, first half of semester. PREREQUISITE: MATH. 19.

16a-d TUTORIAL WORK IN MATHEMATICS. (1) I, II — Senior Staff
Open only to majors in mathematics.

Courses open only to Upper Division and Graduate Students

102 VECTOR ANALYSIS. (3) I — Rees
An elementary course in the algebra and calculus of vectors with numerous applications to geometry and physics. Given 1937-38. PREREQUISITE: MATH. 20b.

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* Courses open to freshmen.

103 THEORY OF EQUATIONS. (3) II — Downing
This course is based on Dickson's First Course in the Theory of Equations, which is used as a text. Given 1937-38. **PREREQUISITE: MATH. 20a.**

105a DIFFERENTIAL EQUATIONS. (3) I — LeStourgeon
A first course in differential equations based on A. Cohen's text. Given 1937-38; offered 1938-39. **PREREQUISITE: MATH. 20b.**

105b DIFFERENTIAL EQUATIONS. (3) II — John
Continuation of 105a with emphasis on partial differential equations, with applications. Offered 1938-9. **PREREQUISITE: MATH. 105a.**

106a ADVANCED CALCULUS. (3) I — Cohen, John
Limits and infinite series. Continuous functions. The definite integral and derivative. Application to power series and Fourier series. Given 1937-38. **PREREQUISITE: MATH. 20b.**

106b ADVANCED CALCULUS. (3) II — Cohen
Continuation of 106a. Functions of several variables. Partial differentiation. Multiple integrals. Green's theorem. Maxima and minima. Given 1937-38. **PREREQUISITE: MATH. 106a OR CONSENT OF INSTRUCTOR.**

107 PROJECTIVE GEOMETY. (3) I — Boyd, Pence
A brief course, based on a text like Dowling's. Offered 1938-39. **PREREQUISITE: MATH. 20a.**

110a-d INDEPENDENT WORK IN MATHEMATICS. (3) I, II — Senior Staff
Limited to upper division and graduate students of high standing. Given 1937-38; offered 1938-39. **PREREQUISITE: MATH. 20b.**

112 SERIES. (3) I — Cohen
Important theorems on limits, properties of infinite series, including differentiation and integration of infinite series, uniform convergence, multiplication of series. Offered 1938-39. **PREREQUISITE: MATH. 20b.**

116 ANALYTIC MECHANICS. (3) II — Downing
Topics included: Composition and resolution of forces; statics of a particle; moments; couples; center of gravity; friction; simple harmonic motion; constrained motion work and energy inertia impulse. Offered 1938-39. **PREREQUISITE: MATH. 20b.**

118 SOLID ANALYTIC GEOMETRY. (3) I — LeStourgeon
Loci of Equations of first and second degree in three variables. Determinates and matrices. Methods and principles of use in various fields of higher mathematics. Offered 1938-39. **PREREQUISITE: MATH. 20b.**

119 MODERN GEOMETRY. (3) II — Boyd
A course covering the ground substantially as presented in Allschiller Court's text. Given 1937-38. **PREREQUISITE: MATH. 20a.**

120 MATHEMATICAL STATISTICS. (3) II — South
Topics considered: Averages, coefficients of dispersion and skewness, graphical representation, Bernoulli's Theorem, curve-fitting, theory of sampling, correlation, and regression lines. Offered 1938-39. **PREREQUISITE: MATH. 20a.**

122 ACTUARIAL MATHEMATICS. (3) II — South
Theory and construction of mortality tables, life annuities, premiums, terminal values, etc. Given 1937-38. **PREREQUISITES: MATH. 14 AND 20a.**

Courses open only to Graduate Students

201a GEOMETRIC TRANSFORMATIONS. (3) I — John
This course covers a large part of Winger's Projective Geometry. Given 1937-38.

202a ALGEBRAIC CURVES. (3) II — Boyd
The classical theory as presented by Salmon, Willeitner or Ganguli. Offered 1938-39.

203 THESIS. (3) I OR II — Senior Staff
Required in addition to 24 credits for master's degree.

204 CALCULUS OF VARIATIONS. (3) I — Downing
Examples illustrating the various types of problems. The differential equation of a curve which minimizes a definite integral. Other properties of a minimizing arc as deduced by Legendre, Weierstras and Jacobi, Isoperimetric problems. Given 1937-38. **PREREQUISITES: MATH. 105a, 106a.**

205 DIFFERENTIAL GEOMETRY. (3) II — John
Introduction study of metric properties of surfaces and twisted curves. Although vector analysis is not required, vector methods will be found of great assistance in the study. Given 1937-38.

207a THEORY OF NUMBERS. (3) I — Latimer
This course covers the material in Chapters 1–5, inclusive, of Dicksons' Introduction to the Theory of Numbers. Given 1937-38.

208 THEORY OF FUNCTIONS OF A REAL VARIABLE. (3) II — Cohen
Theory of the real number systems; elements of point-set theories; measure of sets, study of continuities and discontinuities, and the Reimann and Lebesque theories of integration. Offered 1938-39. **PREREQUISITES: MATH. 105a,106a.**

209 THEORY OF FUNCTIONS OF A COMPLEX VARIABLE. (3) II — LeStourgeon
Introduction to the algebra and calculus of complex numbers and their geometric representation. Conformed transformation. Theory presented mainly from the Cauchy-Riemann viewpoint, with reference to the Weierstrass development. Introduction to Riemann surfaces. Given 1937-38. **PREREQUISITES: MATH. 105a, 106a.**

211 HIGHER ALGEBRA. (3) I — Latimer
This course covers the material in Chapters 2–11 inclusive and Chapter XX in Bocher's "Introduction to Higher Algebra". Offered 1938-39. **PREREQUISITE: MATH. 20a.**

218 ALGEBRAIC NUMBERS. (3) II — Latimer
Introductory course. Offered 1938-39. **PREREQUISITE: CONSENT OF INSTRUCTOR.**

220a-d MATHEMATICS SEMINAR. (2) I AND II — Latimer, Cohen, John
Given 1937-38; offered 1938-39.

221 TENSOR ANALYSIS. (3) I — John
Modern extensions of vector analysis with emphasis on applications to differential geometry. Offered 1938-39.

Astronomy

***51a DESCRIPTIVE ASTRONOMY.** (3) I AND II — Downing, South
An elementary, non-mathematical course.

***51b DESCRIPTIVE ASTRONOMY.** (3) I AND II — Downing, South
Continuation of 51a.

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* Courses open to freshmen.

54 ELEMENTARY OBSERVATIONS IN ASTRONOMY. (2) I Downing

Given 1937-38. PREREQUISITE: MATH. AND ASTRON. 51a, b.

Open only to Graduate Students

251a CELESTIAL MECHANICS. (3) I Downing

Topics included: Keeli linear motion; central forces of various types, potential and attraction of bodies; problem of two bodies; Ivory's theorem; Kepler's equation. Offered 1938-39.

Note.—Other courses such as Fourier's Series, Potential Function, Actuarial Mathematics, second courses in various subjects, Substitution Groups, Algebraic Invariants, Practical Astronomy, Advanced Analytics will be given from time to itme.

MECHANICAL ENGINEERING

Professors West, Meyer and Jett, Associate Professor May and Assistant Professor Spicer

15 ENGINEERING LABORATORY (MACHINE SHOP). (6) S Meyer

Lectures, demonstrations and practical operation of the various machine tools. The building of machines and special equipment will also be included. 44 hours a week for seven weeks.

15a-b ENGINEERING LABORATORY (MACHINE SHOP). (3 EACH) I, II **Meyer**

Same as Mech. Eng. 15 except the work is divided between the two regular semesters. 8 hours a week each, and offered to certain especially selected students.

100a MACHINE DESIGN. (2.3) I, II, S Jett, Meyer

(For Mechanical Engineers.) Design of machine and structural elements. Lecture, 1 hour; drawing room, 6 hours a week. PREREQUISITES: ENG. DRAW. 18, APPLIED MECH. 1. PREREQUISITE OR CONCURRENT: APPLIED MECH. 100.

100b MACHINE DESIGN. (3.3) I, II, S Jett, Meyer

(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, 9 hours a week. PREREQUISITE: MECH. ENG. 100a.

101 MECHANICAL ENGINEERING DESIGN. (3) I, II West, 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, 9 hours a week. PREREQUISITES: MECH. ENG. 104, APPLIED MECH. 100. PREREQUISITE OR CONCURRENT: MECH. ENG. 105, 106b, 109.

103 ELEMENTS OF HEAT-POWER ENGINEERING. (2) I May

Brief general course in heat-power engineering, including elementary principles of thermodynamics and power plant equipment. Intended for Civil Engineers. Recitations, 2 hours a week. PREREQUISITE: PHYS. 2a.

104 **ENGINEERING THERMODYNAMICS.** (4) I, II — Spicer
Covering the fundamental principles of thermodynamics, Carnot cycles, entropy and enthralpy. A study of the thermodynamic equations for gases and vapors, steam power plant cycles reciprocating engines and turbines. Recitations, 4 hours a week. **PREREQUISITES: PHYS. 2a, MATH. 20a.**

105 **STEAM POWER PLANT EQUIPMENT.** (2) I, II — West
Study of the characteristics and use of steam power plant equipment, including steam generators, fuel handling and burning equipment, ash handling, draft producers, dust collectors, smoke abatement, prime movers, generators, air preheaters, economizers, feed water heating and treatment apparatus, pumps, continuous blow down and combustion control apparatus. Recitations, 2 hours a week. **PREREQUISITE: MECH. ENG. 104.**

106a **HEATING, VENTILATING AND AIR CONDITIONING.** (3) II — May
General course open to all engineers. Elementary heating and ventilating calculations and a study of the characteristics of various types of heating and ventilating equipment. Recitations, 3 hours a week. **PREREQUISITE: MECH. ENG. 104 OR MECH. ENG. 103.**

106b **HEATING, VENTILATING AND AIR CONDITIONING.** (2) I — May
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, 2 hours a week. **PREREQUISITE: MECH. ENG. 106a.**

107 **FLOW OF GASES.** (1) I — Spicer
Derivation and use of formulas for the flow of steam and air through pipes and metering devices, using the thermodynamical method of analysis. Recitations, 2 hours a week, one-half of semester. **PREREQUISITE: MECH. ENG. 104 OR MECH. ENG. 103, CIV. ENG. 20.**

108 **INTERNAL COMBUSTION ENGINES.** (3) I, II — Meyer
A study of internal combustion engine cycles and the characteristics and performance of actual engines, valve gears and materials of construction. Recitations, 3 hours a week.

109 **REFRIGERATION.** (3) I, II — May
A study of the thermodynamics of refrigeration cycles, and the characteristics of refrigeration equipment. Recitations, 2 hours a week. **PREREQUISITE: MECH. ENG. 104.**

110 **HEATING AND VENTILATING DESIGN.** (1.3) II — May
Brief course for Architectural Engineers, covering the selection and layout of heating and ventilating equipment. Drawing room, 4 hours a week. **PREREQUISITE OR CONCURRENT: MECH. ENG. 116.**

111 **ENGINEERING REPORTS.** (2) I, II — 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, 2 hours a week.

112 MECHANICAL LABORATORY. (2) I, II West
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. **CONCURRENT: MECH. ENG. 104.**

113 MECHANICAL LABORATORY. (2) I 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.**

116 ELEMENTARY HEATING AND VENTILATING. (3) I, II May
A course involving elementary heating calculations and descriptions of various types of heating and ventilating equipment. Latter part of semester devoted to a discussion of the basic principles of air conditioning. Recitations, 3 hours a week. **PREREQUISITES: PHYS. 1a OR 10, JUNIOR CLASSIFICATION.**

120 INDEPENDENT PROBLEMS. (5) I, II 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, 14 hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

121 MACHINE DESIGN. (2) I, II, S Jett, Meyer
(For Electrical Engineers.) Similar to Mech. Eng. 100a with special attention to the mechanical features of electrical machines. Lecture, 1 hour; drafting room, 5 hours a week. **PREREQUISITE: ENG. DRAW. 18. PREREQUISITE OR CONCURRENT: APPLIED MECH. 100a.**

122a MECHANICAL ENGINEERING SEMINAR. (1) I West 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: JUNIOR CLASSIFICATION.**

122b MECHANICAL ENGINEERING SEMINAR. (1) II West and others
Continuation of Mech. Eng. 122a. 2 hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

Courses open only to Graduate Students

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough 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. (6) I, II Meyer
An advanced course in the essentials of motor vehicle design, construction and operation. Drafting room, laboratory and lectures by appointment.

201b **AUTOMOTIVE ENGINEERING.** (6) I, II — Meyer
Continuation of Mech. Eng. 201a.

202a **POWER PLANT ENGINEERING.** (6) I — West
Advanced work in the design, selection, layout and operation of heat power plant equipment.

202b **POWER PLANT ENGINEERING.** (6) II — West
Continuation of Mech. Eng. 202a.

203a **HEATING, VENTILATING AND AIR CONDITIONING.** (6) I — May
Advanced work in the design, selection, layout and operation of heating, ventilating and air conditioning equipment.

203b **HEATING, VENTILATING AND AIR CONDITIONING.** (6) II — May
Continuation of Mech. Eng. 203a.

204a **ADVANCED MACHINE DESIGN.** (6) I — Meyer, 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.** (6) II — Meyer, Jett
Continuation of Mech. Eng. 204a.

205a-c **POWER PLANT ENGINEERING AND OPERATION.** (14, 16, 16) S, I, II — West
A graduate course in Mechanical Engineering open to six students only. This is a twelve months' course starting about June 1st and includes a summer session of sixteen weeks followed by two regular semesters of eighteen weeks each. Each student will be employed at the University Power Plant as an assistant to the regular experienced plant operating engineers. This employment will be for 24 and 32 hours per alternate weeks for the entire time. Included in this course are studies in power plant operation, fuel and ash handling, furnace and firing equipment, steam generators, prime movers, combustion, draft production and flue gas disposal, lubrication, tests and reports, power plant design, specifications and installation. Lectures, recitations and drafting, 24 hours a week, operation 24 and 32 hours alternate weeks. **PREREQUISITE: A BACHELOR'S DEGREE IN MECHANICAL ENGINEERING, ELECTRICAL ENGINEEERING OR EQUIVALENT.**

MILITARY SCIENCE

Lieutenant Colonel Brewer* and Lieutenant Colonel Donnelly,† Majors Scudder, Triplett, Randolph, Morrow and Barrett, Master Sergeant Short, Staff Sergeants Kinker, Perkins and Hoy, and Sergeant Draper

Reserve Officers' Training Corps

The University of Kentucky maintains an infantry 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

* Transferred to Fort Benjamin Harrison, Indiana, August, 1938.
† Reported May, 1938.

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 for others; the cultivation in the student body of **esprit de corps,** obedience to orders, acceptance of responsibility and avoidance of excuses.

Uniform Equipment. Government uniforms and equipment are furnished the University for issue to students without cost to the individual.

Course. The Military Department offers a progressive course of four years, consisting of two years' basic course and two years' advanced 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. An elective advanced course of two years, including one summer camp, is offered to students who have successfully completed the basic course, and who have been recommended by the President of the University and the Professor of Military Science and Tactics for further training. Recommendations for this course will be limited to those students who have manifested special interest and demonstrated ability during the basic course, and who desire to pursue the course to completion with a view of qualifying for a commission in the Officers' Reserve Corps of the army.

The government offers a very liberal allowance to students enrolling in the advanced course, in the matter of commutation of subsistence. At present the total monetary allowance amounts to about $200.00 for the two years, including the pay while attending camp, and commutation for uniform.

Each student enrolling in the Advanced Course is required to execute the following contract:

"In consideration of commutation of subsistence to be furnished in accordance with law, we hereby agree to continue in the Reserve Officers' Training Corps during the remainder of our course in this or any other institution where such course is offered, to devote five hours a week during such period to the military training prescribed and to pursue the course of camp training during such period as prescribed by the Secretary of War."

The Advanced Course having been elected, its completion becomes a prerequisite for graduation.

Advanced Camps. The summer camp prescribed for Advanced Course students is normally attended between the junior and senior years. The camp course covers a period of six weeks, and opens about June 15. The instruction is largely practical and of interest and benefit.

Transportation to and from camp, together with liberal allowance for meals en route, is paid by the government. Food and clothing are furnished while in attendance, and per diem allowance of seventy cents is paid the student.

*1a FIRST YEAR BASIC COURSE, ROTC.
(1.3) I Scudder, Kinker, Perkins, Hoy
Introductory course in Military Science, covering the following subjects: National Defense Act and Obligations of Citizenship; Military History and Policy; Military Discipline, Courtesies and Customs of the Service; Map Reading; Leadership, Drill and Command; Weapons, Rifle and Rifle Marksmanship. Three hours a week.

*1b FIRST YEAR BASIC COURSE, ROTC.
(1.3) II Scudder, Kinker, Perkins, Hoy
Continuation of introductory course in Military Science, covering the following subjects: Military Sanitation and First Aid; Military Organization; Leadership, Drill and Command. Three hours a week.

*3a FIRST YEAR BASIC COURSE, ROTC. (1.3) I J. Lewis, Kinker
Band. Six hours a week.

*3b FIRST YEAR BASIC COURSE, ROTC. (1.3) II J. Lewis, Kinker
Band. Six hours a week.

4a SECOND YEAR BASIC COURSE, ROTC. (1.5) I J. Lewis, Kinker Band. Six hours a week. PREREQUISITES: MILITARY SCIENCE 3a, 3b.

4b SECOND YEAR BASIC COURSE, ROTC. (1.5) II J. Lewis, Kinker Band. Six hours a week. PREREQUISITES: MILITARY SCIENCE 3a, 3b.

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* Courses open to freshmen.

6a SECOND YEAR BASIC COURSE, ROTC. (1.5) I Morrow, Barrett, Short
Course in Military Science covering the following subjects: Combat Training, Musketry; Scouting and Patrolling; Combat Principles; Leadership. Three hours a week. **PREREQUISITES: MILITARY SCIENCE 1a, 1b.**

6b SECOND YEAR BASIC COURSE, ROTC. (1.5) II Morrow, Barrett, Short
Course in Military Science covering the following subjects: Weapons, Automatic Rifle; Leadership. Three hours a week. **PREREQUISITES: MILITARY SCIENCE 1a, 1b.**

7a FIRST YEAR ADVANCED COURSE, ROTC. (3) I Randolph
Course in Military Science covering the following subjects: Combat Training; Machine Gun; Howitzer Weapons. Five hours a week. **PREREQUISITES: MILITARY SCIENCE 1a, 1b, 6a, 6b.**

7b FIRST YEAR ADVANCED COURSE, ROTC. (3) II Randolph
Course in Military Science covering the following subjects: Pistol; Rifle; Administration; Chemical Warfare; Combat Training; Leadership. Five hours a week. **PREREQUISITES: MILITARY SCIENCE 1a, 1b, 6a, 6b.**

8a SECOND YEAR ADVANCED COURSE, ROTC. (3) I Triplett
Course in Military Science covering the following subjects: Review of Combat Principles; Combat Principles—Rifle Company, Machine Gun Company, and Howitzer Company; Weapons, Tanks; Anti-Tank Defense; Anti-Aircraft Defense; Signal Communications; Combat Intelligence. Five hours a week. **PREREQUISITES: MILITARY SCIENCE 1a, 1b, 6a, 6b, 7a, 7b.**

8b SECOND YEAR ADVANCED COURSE, ROTC. (3) II Triplett
Course in Military Science covering the following subjects: Mechanization; Property Emergency Procurement; Military Law; Military History and Policy; Officers' Reserve Corps Regulations; Leadership. Five hours a week. **PREREQUISITES: MILITARY SCIENCE 1a, 1b, 6a, 6b, 7a, 7b.**

MINING, METALLURGICAL AND PETROLEUM PRODUCTION ENGINEERING

Professor Crouse, Associate Professors Beebe and Emrath, and Assistant Professor Tarnopol

Metallurgical Engineering

26 ENGINEERING METALLURGY. (2) I, II Beebe
(For Civil, Electrical and Mechanical Engineers.) This is 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 a prerequisite to an intelligent use of these materials. Lectures and recitations, 2 hours a week. **PREREQUISITE: CHEM. 2b.**

27 GENERAL METALLURGY. (2) I Beebe
This is an elementary course in general metallurgical principles together with a consideration of fuels, refractories, furnaces, pyrometry and the several alloy types. Lectures and recitations, 2 hours a week. **PREREQUISITE: CHEM. 2b.**

29 METALLURGY OF THE FERROUS METALS. (3) II 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, 3 hours a week. PREREQUISITE: CHEM. 2b.

36 PHYSICAL METALLURGY AND HEAT TREATMENT OF METALS AND ALLOYS. (3) II 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, 2 hours; laboratory, 3 hours a week. PREREQUISITES: PHYS. 2a, MET. 26.

60a-c METALLURGICAL LABORATORY AND SHOP PRACTICE. (6) S Crouse, Beebe, Meyer, Tarnopol
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. One summer course is required and more may be taken. Laboratory and shop, 44 hours a week for seven weeks. PREREQUISITE: JUNIOR CLASSIFICATION.

120 ASSAYING. (2) I 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, 4 hours a week. PREREQUISITES: CHEM. 8, MET. 27.

121 FUEL AND METALLURGICAL LABORATORY. (2) II 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, 4 hours a week. PREREQUISITES: CHEM. 8, MET. 27.

128 METALLURGY OF NON-FERROUS METALS. (3) 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, 3 hours a week. PREREQUISITE: MET. 27.

130 METALLURGICAL CALCULATIONS: GENERAL AND NON-FERROUS. (3) I Crouse
This course comprises a study of the calculations involved in the practical application of the principles of general metallurgy and of the metallurgy of copper, lead, aluminum and other non-ferrous metals. Recitations and problems, 3 hours a week. PREREQUISITES: CHEM. 8, MET. 128.

131 METALLURGICAL CALCULATIONS: FERROUS. (2) II Crouse
This course involves a consideration of the metallurgy of iron and steel from the standpoint of the calculations used in figuring charges, slags, heat efficiencies and similar factors. Recitations and problems, 2 hours a week. PREREQUISITES: MET. 29, MET. 130.

140 THE SCIENCE OF METALS. (3) II Crouse, Tarnopol
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, 3 hours a week. **PREREQUISITES: PHYS. 2b, CHEM. 8, MET. 26 OR 27.**

142 HEAT TREATMENT. (3.3) II Crouse, Beebe, Tarnopol
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, 4 hours a week. **PREREQUISITES: MET. 29, MET. 60.**

150 INDUSTRIAL MINERAL PREPARATION AND USES. (3) II 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.**

160 ORE DRESSING. (3) I Emrath
This course comprises a study of the principles and practice of ore concentration and other processes necessary in the preparation of mineral substances for refining or use. Lectures and recitations, 3 hours a week. **PREREQUISITES: PHYS. 2b, GEOL. 12, MET. 27.**

161 FLOTATION. (2) II Emrath
This course comprises a study of the principles involved in concentration of ores by flotation, with some discussion of the application of these principles in practice, and the preparation of ores for such treatment. Lectures and recitations, 2 hours a week. **PREREQUISITE: MET. 160.**

163 ORE DRESSING LABORATORY. (2.3) II Emrath
This course comprises laboratory investigation and practice in the use and design of the equipment employed in ore dressing, coal dressing and other mineral preparation processes. Lectures and recitations, 1 hour; laboratory, 4 hours a week. **PREREQUISITE: MET. 160.**

164 ELEMENTS OF LOW TEMPERATURE CARBONIZATION. (3) II 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. 2a, CHEM. 8.**

165 METHODS OF PREPARATION AND TREATMENT OF COALS FOR MARKET, FOLLOWING MINING. (3) II Emrath
A study of the principles involved in screening, washing, grading, treatment for ash and dust reduction, etc. Lectures and recitations, 3 hours a week with assigned reference reading. **PREREQUISITE: MET. 160.**

175a SEMINAR. (2) I Crouse, Beebe, Tarnopol
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. 4 hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

175b SEMINAR. (2) II Crouse, Beebe, Tarnopol
A continuation of Metallurgy 175a. 4 hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

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. (6) I, II Crouse, Tarnopol
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, 2 hours; laboratory, 8 hours a week.

207 TECHNOLOGY OF ALLOYS. (6) I, II 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, 2 hours; laboratory, 8 hours a week.

208 ADVANCED METALLOGRAPHY. (6) I, II Crouse, Tarnopol
This course comprises a detailed study of the structure of metals and alloys together with their preparation for study under the microscope. In addition instruction is given in the taking of microphotographs. Reference reading and laboratory work are emphasized. Lectures and recitations, 2 hours; laboratory, 8 hours a week.

209 ADVANCED ORE DRESSING. (6) I, II Emrath
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, 2 hours; laboratory, 8 hours a week.

210 TECHNOLOGY OF LOW TEMPERATURE CARBONIZATION. (6) I, II Crouse
This course comprises a detailed study of the principles and practices 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, 2 hours; laboratory, 8 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. (2) I, II 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, 2 hours a week. **PREREQUISITE: A SUFFICIENT BACKGROUND OF PHYSICS, CHEMISTRY AND GEOLOGY.**

212 OIL SHALE TECHNOLOGY. (6) I, II 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, 2 hours; laboratory, 8 hours a week. PREREQUISITE: SUFFICIENT BACKGROUND IN CHEMISTRY, AND PHYSICS.

Mining Engineering

60a-c MINE SURVEYING AND FIELD PRACTICE IN MINING ENGINEERING. (6) S Emrath
This is a summer course and consists of problems in mine surveying and the practical application of mining principles in the field. The problems given may vary from year to year according to circumstances and the particular field of interest of the student. One summer course is required and more may be taken. Field work, 44 hours a week for seven weeks. PREREQUISITE: SOPHOMORE CLASSIFICATION.

110 MINING OF STRATIFIED MINERAL DEPOSITS. (2) I Emrath
This course comprises a study of the methods used and equipment involved in the mining of coal and other stratified mineral deposits. Lectures and recitations, 2 hours a week.

111 MINE VENTILATION. (3) II Emrath
This course comprises a study of the principles involved in the ventilation of underground mine workings and of the design of mechanical equipment for such purposes. Lectures and recitations, 3 hours a week. PREREQUISITE: PHYS. 2b.

122a THE MINING OF METALLIC MINERAL DEPOSITS. (3) I Emrath
A study of the technical aspects of methods of mining of ore deposits both stratified and unstratified with particular reference to underground mining operations. Lectures and recitations, 3 hours a week.

122b THE MINING OF SURFACE MINERAL DEPOSITS. (3) II Emrath
A study of the technical aspects of methods of mining of ore deposits both stratified and unstratified with particular reference to surface mining operations. Lectures and recitations, 3 hours a week. PREREQUISITE: MIN. 122a.

123a MINING GEOLOGY AND PROSPECTING. (2) I Emrath
A study of the processes of mineral deposition, of the origin of ore deposits and of the mineral deposits in general, particularly as these features of such deposits bear on the technical phases of mining them. Lectures and recitations, 2 hours a week. PREREQUISITES: GEOL. 7, GEOL. 12.

123b MINING GEOLOGY AND PROSPECTING. (3) II Emrath
A continuation of Mining 123a. A study of representative examples of deposits of the industrial metals, minerals and mineral fuels and the technical aspects of methods of systematic search for such deposits. Lectures and recitations, 3 hours a week with assigned reference reading. PREREQUISITE: MIN. 123a.

125 **MANAGEMENT OF COAL MINES.** (2) I Emrath
A study of the economic and technical aspects of coal mine management. Lectures and recitations, 2 hours a week, with assigned reference reading. **PREREQUISITE: SENIOR CLASSIFICATION.**

150 **INDEPENDENT WORK ON MINING PROBLEMS.** (3) II Crouse, Emrath
This course is designed to be elastic enough to allow the individual student to select any feasible mining problem that he may desire. The problem selected must have the approval of the Head of the Department and be under the direct supervision of one of the instructors in the Department. The work will be done primarily outside of the classroom and will be independent in character except for necessary consultations with the instructor in charge. **PREREQUISITE: TO BE DETERMINED IN EACH CASE BY THE HEAD OF THE DEPARTMENT.**

175a **SEMINAR.** (2) I Crouse, Emrath
This course includes general round table discussions of various mining principles and problems, the preparation and delivery of papers and reports on mining subjects, extemporaneous speaking and the briefing of technical books and articles in the current literature. Four hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

175b **SEMINAR.** (2) II Crouse, Emrath
A continuation of Mining 175a. 4 hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

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.** (3) I, II Emrath
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, 3 hours a week.

206 **EXPLOSIVE ENGINEERING.** (2) I, II Emrath
This course comprises a study of the principles involved in the use of explosives in large scale mining and quarrying practice. Lectures and recitations, 2 hours a week.

207 **ADVANCED PROSPECTING.** (2) I, II Emrath
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, 2 hours a week.

208 **COAL DUST INVESTIGATION.** (4) I, II Emrath
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, 12 hours a week.

209 **ADVANCED MINE ENGINEERING.** (7) I, II Emrath
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, 8 hours a week.

Petroleum Production Engineering

101a PETROLEUM LABORATORY. (4.7) II Emrath

A study of the principles involved in the accumulation of petroleum in the reservoir rock materials, in the working of these principles in the establishment of flow, saturation, permeability, and porosity conditions as encountered in production from the reservoir rock materials. Lectures and recitations, 2 hours; laboratory, 8 hours a week. **PREREQUISITE: PHYS. 2b. CONCURRENT: CIV. ENG. 120.**

101b PETROLEUM LABORATORY. (4.7) I Emrath

Continuation of Pet. Eng. 101a. Lectures and recitations, 2 hours; laboratory, 8 hours a week. Reference reading and report required. **PREREQUISITE: PET. ENG. 101a.**

102a OIL PROPERTY DEVELOPMENT. (2) II

A study of the economic and technical circumstances that influence the choice of method of development of a petroleum property for production. Lectures and recitations, 2 hours a week with assigned reference reading. **PREREQUISITE: JUNIOR CLASSIFICATION.**

102b OIL PROPERTY DEVELOPMENT. (2) I

Continuation of Petroleum Engineering 102a. Lectures and recitations, 2 hours a week with assigned reference reading and problems. **PREREQUISITE: PET. ENG. 102a.**

103 PRODUCTION OF GAS AND OIL BY DRILLED WELLS. (3) I

A study of the technical features of various drilling methods, or methods of preparation and equipment of wells for production, etc. Lectures and recitations, 3 hours a week. **PREREQUISITE: JUNIOR CLASSIFICATION.**

104 FIELD STORAGE, PRELIMINARY REFINING AND TRANSPORTATION OF PETROLEUM. (3) II

A study of the technical and economic principles applied in design, layout and construction of tanks, reservoirs, preliminary refining apparatus, pipe lines, etc., for the handling of production from petroleum properties. Lectures and recitations, 3 hours a week with assigned reference reading.

105 DEEP BORE HOLE SURVEYS AND PROBLEMS. (2) II

Lectures and recitations, 2 hours a week. **PREREQUISITE: JUNIOR CLASSIFICATION.**

106 OIL FIELD HYDROLOGY. (3) II

A study of the technical principles involved in describing the effects of water associated with oil and gas deposits in reservoir rocks. Lectures and recitations, 3 hours a week. **PREREQUISITE: PET. ENG. 101b, PET. ENG. 102b.**

120 SEMINAR. (2) II Emrath

This course includes general round table discussions of various petroleum production principles and problems, the preparation and delivery of papers on petroleum subjects, extemporaneous speaking and the briefing of technical books and articles in the current literature. 4 hours a week. **PREREQUISITE: SENIOR CLASSIFICATION.**

MUSIC

Professors Lampert and van de Wall, and Miss Lewis, Mr. Lewis, Mrs. Cullis, Mr. Capurso, Miss Dagley, Mrs. Dantzler, Mr. Richardson, Mrs. Lampert and Miss Mason

The aim of this department is to provide musical leadership in Kentucky of a thoroughly competent character and to provide cultural study for those students who desire it. Various music courses may be taken:

(1) As electives for those majoring in other departments.

(2) As a major in music.

(3) As work to apply on the degree of Bachelor of Science in Music.

Not more than 18 credits in Applied Music may be offered to count toward the A. B. or B. S. degrees in other colleges.

Requirements for a Major. Junior standing. Prerequisites: Music 33a-b, Applied Music 6 credits, Psychology 1 and 7.

Required. A minimum of 15 credits of advanced work in music to be selected from Music 4a-b, 12a-b, 13a-b, 19a-b, 26, 34a-b. Music 42 is required of all music majors, and a comprehensive examination in the senior year.

Requirements in Field of Concentration. Forty credits of advanced work in the field of literature, philosophy, and the arts, including the major work.

All candidates for the B. S. in Music degree are to be required to take part in either orchestra or glee club or both, for the four years, without credit. This also applies to music majors from other colleges.

4a **PUBLIC SCHOOL MUSIC.** (2) I, II, S — M. Lewis
A course in methods in the primary grades.

4b **PUBLIC SCHOOL MUSIC.** (2) I, II, S — M. Lewis
A course in teaching music in the intermediate grades.

*9a **ORGANIZATION AND TRAINING OF MUSICAL GROUPS (STRINGS).** (2) I, S — Lampert
The course is a study of the techniques, organization, instruction and direction of instrumental ensembles.

*9b **ORGANIZATION AND TRAINING OF MUSICAL GROUPS (BRASS).** (2) II, S — J. Lewis
A study of brass instruments and the use of percussion.

9c **ORGANIZATION AND TRAINING OF MUSICAL GROUPS (WOODWINDS).** (2) I, S — J. Lewis
A study of the clarinet, flute, saxaphone, and double reed instruments.

12a **COUNTERPOINT AND COMPOSITION.** (2) I, S — C. Lampert
A study of simple counterpoint in all species of applied counterpoint, including the conduct of single melodic part and the association of two melodic parts. **PREREQUISITES: MUSIC 33a-b, 34a-b.**

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* a and b courses open to freshmen.

12b COUNTERPOINT AND COMPOSITION. (2) II, S — C. Lampert
A continuation of Music 12a, applied counterpoint, including various modes of imitation, the invention and sonata form. **PREREQUISITE: MUSIC 12a.**

13a FORM AND ANALYSIS. (2) I, S — Capurso
A study of the design and harmonic structure of simple and complex forms of music through analyses of standard musical compositions. **PREREQUISITES: MUSIC 33a-b.**

13b FORM AND ANALYSIS. (2) II, S — Capurso
A continuation of Music 13a. **PREREQUISITE: MUSIC 13a.**

14 ORCHESTRATION AND CONDUCTING. (2) II — C. Lampert
Technique and practice of conducting and arranging for orchestra and wind band.

***15a-h PIANO (APPLIED MUSIC).** (3) I, II, S — J. Lampert and Richardson

***16a-h STRINGS (APPLIED MUSIC).** (3) I, II, S — C. Lampert
A study of the violin, viola, and cello.

***17a-h VOICE (APPLIED MUSIC).** (3) I, II, S — Dagley and Danzler

***18a-h ORGAN (APPLIED MUSIC).** (3) I, II, S — Cullis

19a HISTORY AND APPRECIATION OF MUSIC. (3) I, S — Lampert
A general study of the history of musical development, from the standpoint of form.

19b HISTORY AND APPRECIATION OF MUSIC. (3) II, S — Lampert
A continuation of Music 19a.

***22a BAND.** (1.3) I — J. Lewis
For Freshmen (girls and boys) not enrolled in Military Science.

***22b BAND.** (1.3) II — J. Lewis
A continuation of Music 22a.

23a BAND. (1.5) I — J. Lewis
For sophomores (girls and boys) not enrolled in Military Science.

23b BAND. (1.5) II — J. Lewis
A continuation of Music 23a.

26 HIGH SCHOOL METHODS. (2) I, II, S — Mason
A course in methods of teaching music in high school.

28a CONCERT BAND. (1) I — J. Lewis
For juniors.

28b CONCERT BAND. (1) II — J. Lewis
For juniors.

29a CONCERT BAND. (1) I — J. Lewis
For seniors.

29b CONCERT BAND. (1) II — J. Lewis
For seniors.

***31a-h WOODWIND INSTRUMENTS (APPLIED MUSIC).** (3) I, II, S — J. Lewis

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* a and b courses open to freshmen.

*32a-h **BRASS INSTRUMENTS (APPLIED MUSIC).** (3) I, II, S — J. Lewis

*33a **ELEMENTARY HARMONY AND SIGHT READING.** (5) I, S — Capurso
Scale building, melodic and harmonic ear training, triads, and their relation in open and close position, the minor mode, classification of intervals, non-harmonic tones, inversions, the dominant seventh and its inversions, free composition. Drill in notation of music, scale, and interval relations and rhythmic values, and their interpretation vocally.

*33b **ELEMENTARY HARMONY AND SIGHT READING.** (5) II, S — Capurso
Secondary triads, modulation, supertonic seventh, dominant ninth, borrowed chords, free composition. Introduction of chords. **PREREQUISITE: MUSIC 33a.**

34a **ADVANCED HARMONY, DICTATION AND EAR TRAINING.** (5) I — Lewis
Drill in recognition from dictation of rhythms and intervals in a melody, and memorizing of material dictated. A study of secondary seventh harmonies, chords of the ninth, altered chords, augmented sixth chords, and free composition. **PREREQUISITES: MUSIC 33a AND b.**

34b **ADVANCED HARMONY, DICTATION AND EAR TRAINING.** (5) II — Lewis
A continuation of Music 34a with the introduction of simple harmonic material. A study of chords with raised fifths, transition, modulation, modern tendencies, and free composition. **PREREQUISITE: MUSIC 34a.**

*39a-h **GLEE CLUB.** (1) I, II, S — C. Lampert
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.)

*40a-h **ORCHESTRA.** (1) I, II, S — C. Lampert
Students who have demonstrated the required ability are given an opportunity to study standard orchestral literature. Public performances are given at regular intervals.

42 **SEMINAR.** (2) I, II — Staff
A comprehensive study of the literature that has come to us through the Carnegie Grant, together with a thorough study of the great works in music which have been recorded and cannot be presented in any other way.

The following courses open only to Upper Division and Graduate Students

110a-d **INDEPENDENT WORK IN MUSIC.** (2) I, II, S — C. Lampert

133 **FUNCTION OF MUSIC IN EDUCATION.** (3) S — Van de Wall
A non-technical course aiming to orientate the educator and educational administrator on the place and function of music in a comprehensive integrated system of education. The course is designed for administrators, teachers, music supervisors, and students of music. Its aim is to give the students a general background which will enable them to intelligently evaluate and supervise the music program as a part of a general education system.

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*a and b courses open to freshmen.

The following courses for Graduates only

215a-d PIANO (APPLIED MUSIC). (3) I, II S — Lampert and Richardson

216a-d STRINGS (APPLIED MUSIC). (3) I, II, S — C. Lampert

217a-d VOICE (APPLIED MUSIC). (3) I, II, S — Dagley and Dantzler

218a-d ORGAN (APPLIED MUSIC). (3) I, II, S — Cullis

228a-d CONCERT BAND. (1) — J. Lewis

University Orchestra

The University 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.

University Bands

The University bands furnish an opportunity for improvement for those who have previously played the various band instruments as well as an opportunity for those who have not played to learn band instruments. The bands perform together during the football season after which they divide into two groups: the first, the concert band; and the second, the basketball and military band. The bands furnish music for the R. O. T. C. formations as well as for many other campus and civic events. A course in band directing is available to a limited number of the more proficient students.

Outline of Courses Leading to the Degree of B. S. in Music

The object of this course 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 course 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 course 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 detailed knowledge of one particular instrument.

FRESHMAN

Name of Course	1st Sem.	2nd Sem.	Title of Course	No. of Crs.
English	1a	1b	English Composition	6
Music	33a	33b	Elementary Harmony and Sight Reading	10
Music	-----	-----	Applied Music	6
Music	39a-40a	39b-40b	Glee Club or Orchestra	—
M. F. L.	-----	-----	Modern Foreign Language	6
Mat. Lect.	-----	-----	Matriculation Lecture	.3
Hygiene	-----	1	Personal and Com. Health	1
M. S.	1a	1b	Military Science (Men)	2.6
Psychology	1	-----	Elementary Psychology	3
Phy. Ed.	1a	1b	Physical Education	1.4

SOPHOMORE

English	3a	3b	Hist. of Eng. Literature	6
Music	34a	34b	Adv. Harmony, Dict. and Ear Training	10
Music	-----	-----	Applied Music	6
M. F. L. or Soc. Sc.	-----	-----	Mod. For. Lang. or Soc. Sc.	6
Music	39c-40c	39d-40d	Glee Club or Orchestra	—
Mil. Sc.	6a	6b	Military Science (Men)	3
Phy. Ed.	2a	2b	Physical Education	1.4
Psy.	7	-----	Psychology of the Child	3
Elective	-----	-----	(Women Only)	2

JUNIOR

Music	4a	4b	Public School Music	4
Music	13a	13b	Form and Analysis	4
Music	-----	-----	Applied Music	6
Music	19a	19b	History and Appreciation	6
Music	39e-40e	39f-40f	Glee Club or Orchestra	—
Music	9a	9b	Strings and Brasses	4
Education	44	147	Fundamentals of Elementary Education, Fd. of Sec. Ed.	8
Music	-----	26	H. S. Method	2

SENIOR

Music	12a	12b	Counterpoint and Composition	4
Music	9c	-----	Woodwind	3
Music	114a	-----	Orchestration and Conducting	2
Music	-----	-----	Applied Music	6
Music	39g-40g	39h-40h	Glee Club or Orchestra	—
Education	101	-----	School Organization	3
Education	177a	177b	Directed Teaching in Music	6
Music	-----	42	Seminar	2
Elective (Women)	-----	-----	A. & S. Women	2

Minimum credits required for degree 130.7

If Military Science or Physical Education is not taken, equivalent credits must be gained in other subjects. 24 hours of applied music necessary for degree of B. S. in Music.

A Suggested Outline of Courses Leading to the Degree of A. B. with Music Major

REQUIREMENTS FOR JUNIOR YEAR

Music 33a-b	Elementary Harmony and Sight Reading	10 credits
Music	Applied Music	6 credits
Psychology 1	Elementary Psychology	3 credits
Psychology 7	Child Psychology	3 credits

REQUIREMENTS IN FIELD OF CONCENTRATION

A minimum of 15 hours in the field of music from the following courses: Electives of 25 hours in courses not open to freshmen in field of literature, philosophy, and the arts. Total hours in field of concentration 40.

Music 4a-b	Public School Music	4 credits
Music 13a-b	Form and Analysis	4 credits
Music 12a-b	Counterpoint and Composition	4 credits
Music 19a-b	History and Appreciation	6 credits
Music 26	High School Methods	2 credits
Music 34a-b	Adv. Harmony, Dictation and Ear Training	10 credits
*Music 42	Seminar	2 credits

(All music majors must take part in Glee Club or Orchestra without credit, unless excused by the head of the department.)

* All students must take Seminar course to prepare for examination.

Suggested Schedule for Music Majors†

JUNIOR YEAR

Music 4a, 4b	Public School Music	4 credits
Music 13a, 13b	Form and Analysis	4 credits
Music	Applied Music	6 credits
Music 19a, 19b	History and Appreciation	6 credits
Music 39a, b-40a, b	Glee Club or Orchestra	—
Music 26	High School Methods	2 credits
**Education 44, 147	Fd. of El. Ed.; Fd. of Sec. Ed.	6 credits
Elective	(Tch. Seq. in Eng., R. L., or Social Sc.)	6 credits

SENIOR YEAR

Music 12a, 12b	Counterpoint and Composition	4 credits
Music 9c	Woodwind	1 credit
Music	Applied Music	6 credits
Music 39-40	Glee Club or Orchestra	—
**Ed. 101	School Organization	3 credits
Education 177a, b	Directed Teaching in Music	6 credits
Elective	(Tch. Seq. in Eng., R. L., or Social Sc.)	6 credits
Music 42	Seminar (Required of all graduates)	2 credits
Music 14	Conducting and Orchestration	2 credits

† 15 hours to be selected from the following music courses.
** These education courses are required for those students who expect to qualify for a teacher's certificate.

PHILOSOPHY

Professor Kuiper and Assistant

Requirements for a Major. Prerequisites: Junior standing; 6 credits of philosophy. Required: Philosophy 35a, b. A minimum of 15 credits of advanced work in philosophy. Major students are required to enroll in tutorial courses during the senior year and to pass a final comprehensive examination in the department.

Requirements in Field of Concentration. Literature, Philosophy and the Arts; Social Studies. Forty credits are required in one of the two above fields, including the major work, in courses not open to freshmen.

21 INTRODUCTION TO PHILOSOPHY. (3) I, II — Kuiper
An elementary study of the principal types of philosophy, past and present.

31 LOGIC. (3) I — Kuiper
An introductory study of the logical principles underlying valid thinking.

35a TUTORIAL WORK IN PHILOSOPHY. (1) I — Kuiper
Weekly conferences with major students; reports on assigned readings; reading in preparation for the comprehensive examination. Open only to senior majors in Philosophy.

35b TUTORIAL WORK IN PHILOSOPHY. (1) II — Kuiper
Continuation of 35a.

51 ETHICS. (3) I, II — Kuiper
A study of morality and right action, and an introduction to value theory.

Courses open only to Upper Division and Graduate Students

101a HISTORY OF PHILOSOPHY. (3) I — Kuiper
A survey of the philosophical thought of ancient Greece and medieval Christendom.

101b **HISTORY OF PHILOSOPHY.** (3) II — Kuiper
A survey of modern philosophy from the Renaissance to contemporary times.

109a-d **INDEPENDENT WORK IN PHILOSOPHY.** (3) I, II — Kuiper
Open only to students who have distinguished themselves in Philosophy or allied subjects.

120 **GREAT RELIGIONS OF THE WORLD.** (3) II — Kuiper
A study of six religions in relation to the culture in which they arose; Shinto, Hinduism, Buddhism, the religion of ancient Greece, the religion of Israel and Judaism, and Christianity.

Courses open only to Graduate Students

220a-b **RESEARCH IN PHILOSOPHY.** (3) I, II — Kuiper

Note.—Other courses, like Intermediate and Symbolic Logic, Epistemology, and Social Philosophy will be given from time to time.

PHILOSOPHY OF EDUCATION

Dean Taylor, Professors Adams and Patrick, Mr. Clifton, Mr. Starnes, and Mrs. Haines

35 **INTRODUCTION TO EDUCATION.** (3) I, II, S — Adams
This deals with the teacher, the teaching process, the school as a social agency and the philosophy of education.

114 **EDUCATIONAL SOCIOLOGY.** (3) I, S — Patrick
A study in the application of sociological findings to the field of education.

127a **PRINCIPLES OF CURRICULUM CONSTRUCTION (FOR ELEMENTARY TEACHERS).** (3) I, S — Haines
A study of the philosophy and technics of curriculum construction and some practical work in construction. **PREREQUISITES: JUNIOR STANDING.**

175a-f **MODERN EDUCATIONAL PROBLEMS.** (3) S
A brief survey of some of the problems in modern education.

186 **VISUAL TEACHING.** (3) I, S — Clifton or Starnes
A course in methods and technique 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 will also be given to the administration of visual aids in the school.

200 **ADVANCED COURSE IN PHILOSOPHY OF EDUCATION.** (3) I, S — Adams
This is an advanced course dealing with the philosophy underlying the larger educational problems of today. **PREREQUISITE: 12 HOURS IN EDUCATION.**

205 **REVIEW OF CURRENT EDUCATIONAL LITERATURE.** (3) II, S — Adams
An extensive study of current educational literature as found in educational periodicals. **PREREQUISITE: 12 HOURS IN EDUCATION.**

222 METHODOLOGY OF EDUCATIONAL RESEARCH. (3) I, S Taylor
This course is intended to acquaint the student with the various techniques of research and to aid him in methods of attack on his own particular research problems. PREREQUISITE: 12 HOURS IN EDUCATION.

227a PRINCIPLES OF CURRICULUM CONSTRUCTION.
(3) I, S Adams
A survey of modern curriculum making as carried on in progressive city school systems, laboratory schools and state school systems. Also an intensive study of the principles underlying curriculum revision. PREREQUISITE: TEACHING EXPERIENCE AND 12 HOURS IN EDUCATION.

227b TECHNIQUES IN CURRICULUM CONSTRUCTION.
(3) II, S Adams
This course has to do with the techniques being used to determine content of courses of study. PREREQUISITES: TEACHING EXPERIENCE AND 12 HOURS IN EDUCATION.

228a-d SEMINAR IN EDUCATION. (1) I
This course has been planned for graduate students majoring in education, to be given under the direction of the faculty of the College of Education.

230 PROBLEMS OF EDUCATIONAL SOCIOLOGY. (3) II, S Adams
An advanced course in the application of sociology to the educational field. PREREQUISITE: 12 HOURS IN EDUCATION, INCLUDING ED. 114.

240 CHARACTER EDUCATION. (3) S
This course will make an extensive survey of plans and methods of teaching character education in the best public school systems. It will take up such points as the relation between character and conduct, how character is correlated with intrinsic and extrinsic learning, the direct and indirect methods of presentation, and the contribution which other institutions than the school should make to character education.

PHYSICAL EDUCATION

Professors Potter and Stout, Assistant Professors Hansen† and Shively,* Mr. Hackensmith,** Mr. Huddleston, Mr. Karsner, Miss Montgomery and Miss Warren

Requirements for a Major. Prerequisites: Psychology 7; Anatomy and Physiology 4, 5; English 10a, 10b. Required: P. E. 29, 128, 148, 124, 120, 60a and 60b, and 5.6 credits in activity courses. Minimum on Major 15 credits. Major students in the College or Arts and Sciences are required to enroll in tutorial courses during the senior year and to pass a final comprehensive examination in the department.

Requirements in the Field of Concentration. Forty credits in the field of Biological Sciences, including the major work, in courses not open to freshmen.

*Transferred to Department of Athletics, March 1, 1938.
**Acting Head March 1, to July 1, 1938.
† On leave of absence 1938-1939.

Credits in applied Physical Education will not count toward the A. B. or B. S. degree. (P. E. 20 and 36 are applied courses.)

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 "Restricted Physical Activity Classes".

The program of study and activities of the Physical Education Department is threefold in scope. The required 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 recreational work.

For Men

A uniform, consisting of regulation sweat shirt, sweat trousers, white cotton undershirt, gym shorts, and rubber-soled gym shoes, is required of 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 $1.25 per semester is charged each student and includes clean towel service, soap, and locker rental.

Note.—The following courses may be elected to meet the physical education requirements for graduation.

*1a-d **RESTRICTED PHYSICAL ACTIVITY.** (.7) I, II — Potter
Students are assigned to this class on recommendation of the University physician. Special exercise programs, and game activities are taught to meet the individual needs. Two hours per week.

*2 **TAP AND CLOG DANCING.** (.7) I, II — Karsner
Fundamental steps designed for beginners. Students with experience are not admitted to the course. Two hours per week.

*3 **BOXING.** (.7) I, II — Karsner, Huddleston
Fundamentals of boxing. For beginners. Two hours per week.

*4 **HANDBALL.** (.7) I, II — Staff
Fundamentals of handball. For beginners. Two hours per week.

*5 BASKETBALL AND SOFTBALL. (.7) II — Staff
Fundamentals of basketball first half semester; fundamentals of softball second half semester. Two hours per week.

*6 WRESTLING. (.7) I, II — Hackensmith, Huddleston
Fundamentals of wrestling. For beginners. Two hours per week.

*7 GOLF. (.7) II — Staff
Fundamentals of golf. For beginners. Two hours per week.

*8 GROUP GAMES AND CONTESTS. (.7) I — Staff
Low organized games, mass recreational activities and individual contests. Two hours per week.

*10 INDIVIDUAL ATHLETICS. (.7) I, II — Huddleston
Practice in individual athletic events including track, field and gymnasium activities. Two hours per week.

*11 TENNIS. (.7) II — Huddleston
Fundamentals of tennis. For beginners. Two hours per week.

*12 TOUCH FOOTBALL AND VOLLEYBALL. (.7) I — Staff
Fundamentals of touch football first half semester; fundamentals of volleyball second half semester. Two hours per week.

*13 FENCING. (.7) I, II — Hackensmith
Fundamentals of fencing. For beginners. Two hours per week.

*15 APPARATUS AND TUMBLING. (.7) I, II — Hackensmith, Huddleston
Fundamental activities on gymnasium apparatus and tumbling stunts. For beginners. Two hours per week.

*18 ARCHERY AND BADMINTON. (.7) I, II — Karsner
Fundamentals of Archery first half semester, badminton second half. Two hours per week.

The following courses are for students majoring in Physical Education

*20 RHYTHMS, CALISTHENICS, AND GYMNASTIC SKILLS. (4) II — Hackensmith, Karsner
Theory and practice of fundamental rhythms in tap, folk, and ball room dancing. Theory and practice of free exercise in gymnastics. Lecture and practice on the significance of formal gymnastics, order of exercise and the arrangement of lesson plans. Gymnastic stunts and apparatus work adaptable to the elementary and secondary school levels.

*36 FOOTBALL AND BASKETBALL FUNDAMENTALS. (4) I — Staff
Basic fundamentals of football and basketball are studied and practiced. The course includes practice and theory of the games of football and basketball. Individual instruction and practice in the fundamental duties of each playing position. Emphasis is placed on blocking, tackling, punting and passing, in football, and dribbling, shooting, passing, etc., in basketball.

50 TRACK AND FIELD ATHLETICS. (4) II — Staff
Instruction and practice in starting, sprinting, distance running, hurdling, high- and broad-jumping, pole-vaulting, and all track and field athletic events. Eight hours per week. Not offered 1937-38.

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* Courses open to freshmen.

*29 **THEORY AND PRACTICE OF ORGANIZED PLAY.** (2) II Karsner
Active participation in playing and conducting games of all types suitable for playground, community center, gymnasium and rural community use. Four hours per week. **Open to men and women students.**

70 **PRINCIPLES OF ATHLETIC TRAINING AND FIRST AID.** (1) II Karsner
Diagnosis and treatment of injuries common to athletic contests. Theory and practice in massage, taping and bandaging. Two hours per week. Not offered 1938-39. **PREREQUISITE: A. & P. 2a AND 2b.**

The following courses open only to Upper Division and Graduate Students

60a-b **TUTORIAL WORK IN PHYSICAL EDUCATION.** (1) I, II Staff
Required of all students majoring in the department. Preparation for comprehensive examination. Two hours per week. **Open to men and women students.**

128 **PRINCIPLES AND METHODS OF PHYSICAL EDUCATION.** (3) I Potter
Lectures, discussions and preparation of papers covering the objectives of physical education; the educational, health and recreational significances; the content of the school program; types of activities for grade school, high school, and college. **PREREQUISITES: P. E. 20 AND P. E. 29.** Open to men and women **students.**

120 **PHYSICAL DIAGNOSIS AND MEDICAL GYMNASTICS.** (3) I Potter
Theory and practice in physical and health examinations. Study of exercises applicable to weak feet, heart disturbances, constipation, hernia, blood pressure, paralysis, obesity, mal-nutrition, post-operation conditions, and bone and joint abnormalities. **PREREQUISITES: P. E. 20; ANATOMY AND PHYSIOLOGY 4 AND 5. Open to men and women students.**

142 **ADVANCED FOOTBALL.** (2) I Staff
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: P. E. 36 OR TWO YEARS COLLEGE FOOTBALL.**

148 **ORGANIZATION AND ADMINISTRATION OF ATHLETICS.** (3) II Staff
Special emphasis on equipment, care of the gymnasium plant, executive and administrative duties of an athletic director, establishment and enforcement of eligibility rules, making of schedules, selecting a coach, and publicity are studied. **PREREQUISITES: 12 HOURS OF P. E.** and **SENIOR STANDING.**

124 **HISTORY AND PHILOSOPHY OF PHYSICAL EDUCATION.** (2) II Hackensmith
History of Physical Education from the ancient Greeks and Romans, through the Middle Ages and the Modern Era. The philosophy of the German, Swedish and French systems is outlined. Lectures and recitations on present day athletics and physical education in the United States and foreign countries. **Open to men and women students.**

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* **Courses open to freshmen.**

125 ADMINISTRATION AND ORGANIZATION OF MUNICIPAL AND COMMUNITY RECREATION. (3) II — Staff
A study of the principles and procedures in organization methods and administrative policies for supervised children's, youths' and adults' recreation. Observation and study of organized recreational projects in local municipalities and communities. **PREREQUISITES: P. E. 29 or SUFFICIENT EXPERIENCE IN ORGANIZED RECREATIONAL WORK. OPEN TO MEN AND WOMEN STUDENTS.**

150 ORGANIZATION AND SUPERVISION OF INTRAMURAL ATHLETICS. (2) I — Hackensmith
Problems of policy and administration of programs on the elementary, secondary and collegiate levels are considered. Lecture and recitation on the relationship of intramural athletics to the school curriculum and physical education program. **Open to men and women students.**

190 TECHNIQUE IN OFFICIATING ATHLETIC CONTESTS. (3) S — Staff
Methods, procedures and technique in officiating football, basketball, baseball, track and field events and minor sports activities. Offered 1937-38. Not offered 1938-39.

Open to Graduate Students only

200 GRADUATE SEMINAR IN PHYSICAL EDUCATION. (2) I — Hackensmith
Graduate students majoring in physical education who are engaged in writing a thesis should register for this course. **Open to men and women students.**

201 RESEARCH IN PHYSICAL EDUCATION. (5) II — Potter
Theory and practice in research and statistical procedures as applied to the field and problems pertaining to athletics, recreation, intramural and other phases of Physical Education. Lectures and study on the technique and procedure of research. Special problems and the preparation of papers dealing with studies and surveys of Physical Education. **Open to men and women students.**

202 PROBLEMS COURSE IN CONTEMPORARY MOVEMENTS IN PHYSICAL EDUCATION. (3) I — 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.**

203 CURRENT STUDIES IN THE ADMINISTRATION OF PHYSICAL EDUCATION. (2) II — Potter
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.**

204 CURRENT STUDIES IN THE ADMINISTRATION OF ATHLETICS. (2) — 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.**

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 rent fee of $.50 per year is charged each student and includes locker rental and service for the school year. $.25 of this amount is refunded to the student at the end of the year upon returning the padlock to the Physical Education Department.

Note.—The following courses may be elected to meet the physical education requirement for graduation.

*1a-d **RESTRICTED PHYSICAL ACTIVITY.** (.7) I, II — Stout
Students are assigned to this class on recommendation of the University physician. Special exercise programs are prescribed to meet the individual needs. Two hours per week.

*2 **TAP AND CLOG DANCING.** (.7) I, II — Montgomery, Warren
Fundamental steps designed for beginners. Students with experience are not admitted to the course. Two hours per week.

*5 **BASKETBALL AND SOFTBALL.** (.7) I, II — Warren
Fundamentals of basketball first half semester and softball second half. Two hours per week.

*7 **GOLF.** (.7) II — Montgomery
Fundamentals of golf. For beginners. Two hours per week.

*10 **INDIVIDUAL ATHLETICS.** (.7) I, II — Montgomery, Warren
Practice in individual athletic events including track, field and gymnasium activities. Two hours per week.

*11 **TENNIS.** (.7) II — Montgomery, Warren
Fundamentals of tennis. For beginners. Two hours per week.

*13 **FENCING.** (.7) I, II — Warren
Fundamentals of fencing. For beginners. Two hours per week.

*17 **HOCKEY AND VOLLEYBALL.** (.7) I — Warren
Fundamentals of hockey first half semester, volleyball second half. Two hours per week.

*18 **ARCHERY AND BADMINTON.** (.7) I — Montgomery, Warren
Fundamentals of archery first half semester, badminton second half. Two hours per week.

*19 **FOLK DANCING.** (.7) II — Montgomery
Participation in folk dances of various countries. Two hours per week.

*22 **TUMBLING AND STUNTS.** (.7) I, II — Montgomery, Warren
Fundamentals of tumbling and stunts on the apparatus. Two hours per week.

*24 **RHYTHMICAL ACTIVITIES.** (.7) I, II — Montgomery
Fundamental rhythmic movements and natural dance activities. Two hours per week.

*25 **ADVANCED FENCING.** (.7) I, II — Warren
Open to students who have had P. E. 13 or equal experience in fencing.

* Courses open to freshmen.

*27 MODERN DANCE. (.7) I, II — Montgomery
Class work in technique, dance form and rhythmical activities with creation of patterns by class. Two hours per week.

*28 HORSEBACK RIDING. (.7) I, II — Montgomery
Fundamentals of riding. Beginners' and elementary class. Two hours per week.

*30 ADVANCED TAP DANCING. (.7) I, II — Montgomery
Review of fundamental tap steps and terms. Intermediate and advanced steps are given. Students without previous work are not admitted to the course. Two hours per week.

Following courses for students majoring in Physical Education

14 ELEMENTARY PLAYS AND GAMES. (2) II — Montgomery
Pedagogy of organized play and games for the elementary grades. Theory and practice in group games, combative contests and individual athletics. Four hours per week. PREREQUISITE: SOPHOMORE STANDING.

16a-b TRAINING FOR LEADERSHIP IN WOMEN'S ATHLETICS. (2) I, II — Staff
Theory and practice of sports and athletic events for women. Lectures and practice in program construction of athletic events adaptable to girls in the elementary and secondary schools. Practice in the game fundamentals and discussions of rule interpretations of all athletic events adaptable to women. Four hours a week. Not offered 1937-38.

* Courses open to freshmen.

PHYSICS

Professors Webb and Koppius, Associate Professors Hahn, Pardue and Warburton, Assistant Professors Ramsay and Todd, and Instrument Maker Mr. Schneider

Requirements for a Major. Prerequisites: Physics 2a, 2b; Mathematics 17, 18, 19. Required: Mathematics, 20a, 20b. Physics 125c. A minimum of 15 credits of advanced work in Physics. Students majoring in Physics are required to pass a final comprehensive examination in the department.

Requirements in the Field of Concentration. Forty credits in the Field of Physical Sciences, including the major work, in courses not open to freshmen.

*1a GENERAL PHYSICS. (5) I, II, S — Webb, Todd
A general elementary course covering Mechanics, Wave Motion and Heat. Lectures and recitations, four hours; laboratory, two hours.

*1b GENERAL PHYSICS. (5) I, II, S — Webb, Todd
Continuation of Physics 1a, covering Magnetism and Electricity, Sound and Light. Lectures and recitations, four hours; laboratory, two hours. PREREQUISITE: PHYSICS 1a.

* Courses open to freshmen.

2a GENERAL COLLEGE PHYSICS.
(5) I, II, S — Koppius, Pardue, Ramsay
An advanced general course, covering Mechanics, Wave Motion and Heat. Recitations, three hours; laboratory, four hours. **PREREQUISITES: ELEMENTARY PHYSICS; MATHEMATICS.**

2b GENERAL COLLEGE PHYSICS.
(5) I, II, S — Hahn, Pardue, Warburton
An advanced general course, covering Magnetism, Electricity, Sound and Light. Recitations, three hours; laboratory, four hours. **PREREQUISITE: PHYSICS 2a.**

***10 ELEMENTARY EXPERIMENTAL PHYSICS.** (5) I, II — Todd
A course designed for engineering students. Some fifty experiments covering the entire field of physics will be performed by the student. The lectures will stress the basic theory of these experiments. The student is expected to write a complete report on the theory and experimental results obtained in the laboratory. A selected list of problems, based on the experiments, will be solved. This course will not be given in the Summer Session. No student may repeat this course. Lectures and recitations, 3 hours; laboratory, 4 hours.

***51a INTRODUCTION TO PHYSICS.** (3) I, S — Webb, Ramsay
A lecture demonstration course covering the subjects of Mechanics, Wave Motion and Heat.

***51b INTRODUCTION TO PHYSICS.** (3) II, S — Webb, Ramsay
A lecture demonstration course covering the subjects of Magnetism and Electricity, Sound and Light.

Courses open only to Upper Division and Graduate Students

101 THEORY OF HEAT. (5) I, S — Koppius
A lecture and experimental course covering the fundamental principles of Heat. Opportunity is offered to study the gas thermometer, resistance thermometer, radiation pyrometers, calibration of thermocouples, determination of vapor pressures and densities, coefficients of viscosity, freezing and boiling points, latent and specific heats, heats of combustion, thermal conductivities, etc. Lectures and recitations, three hours; laboratory, four hours. **PREREQUISITES: PHYSICS 2b; MATHEMATICS 20b.**
PHYSICS 2b; MATHEMATICS 20b.

102a ELECTRICITY AND MAGNETISM. (5) II, S — Warburton
A course developing the fundamental theory of electricity and magnetism, emphasizing the physical concepts of electrical quantities and applying these to practical problems. The laboratory work is designed both to emphasize the principles covered and to give the student experience in the careful use of electrical measuring instruments. Lectures and recitations, three hours; laboratory, four hours. **PREREQUISITES: PHYSICS 2b. MATHEMATICS 20b.**

103 THEORY OF LIGHT. (5) II, S — Ramsay
A lecture and experimental course covering the general theory of reflection, refraction, diffraction, interference and polarization. Lectures and recitations, three hours; laboratory, four hours. **PREREQUISITES: PHYSICS 2b; MATHEMATICS 20b.**

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*Courses open to freshmen.

104 THEORETICAL MECHANICS. (5) I, S 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, five hours. **PREREQUISITES: PHYSICS 2b; MATHEMATICS 20b.**

108 THEORY OF LIGHT. (3) II, S Ramsay
This course comprises the lectures and recitations of Course 103. **PREREQUISITES: SAME AS FOR COURSE 103.**

111 ELECTRICITY AND MAGNETISM. (3) II, S Warburton
This course comprises the lectures and recitations of Course 102a. **PREREQUISITES: SAME AS COURSE 102a.**

113 FUNDAMENTALS OF RADIO. (3) S 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 1b OR EQUIVALENT.**

114a RADIO COMMUNICATION. (3) I Hahn
A course dealing with the fundamental physical principles of high frequency transmission of intelligence. Topics: Circuit constants at radio frequencies and their measurement; resonant circuits; fundamentals of electronics and measurement of tube characteristics; theory and design of electronic amplifiers and voltmeters. Lectures and recitations, 2 hours; laboratory, 2 hours. **PREREQUISITES: PHYSICS 2b; MATHEMATICS 20b.**

114b RADIO COMMUNICATION. (3) II Hahn
A continuation of 114a. Power amplifiers; vacuum tube oscillators; piezo electric phenomena; detection. modulation; antennas and wave propagation; transmitter and receiver design; television. Lectures and recitations, 2 hours; laboratory, 2 hours.

116a PHYSICAL MANIPULATIONS.
(1) I, S Webb, Koppius, Schneider
A course for those who wish to acquire a technique in various physical manipulations, as for example, glass blowing, and the preparation and use of materials used in physical experiments, photography, etc. Laboratory, two hours. **PREREQUISITE: 10 CREDITS OF PHYSICS OR CHEMISTRY.**

116b PHYSICAL MANIPULATIONS.
(1) II, S Webb, Koppius, Schneider
A continuation of Course 116a. Laboratory, 2 hours. **PREREQUISITE: SAME AS FOR COURSE 116a.**

117 THEORY OF HEAT. (3) I, S Koppius
This course comprises the lectures and recitations of Course 101. **PREREQUISITES: SAME AS FOR COURSE 101.**

119 PRINCIPLES OF X-RAYS. (3) I Hahn
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 2b; MATHEMATICS 20b.**

120 **X-RAY TECHNIQUE.** (2) II — Hahn (Assisted by Hamilton, Department of Hygiene)

An introduction 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, dark room procedure, etc. The second half is devoted to practice in the radiography of the extremities, chest, head, teeth, etc. **PREREQUISITES: PHYSICS 1a AND 1b.**

122 **X-RAY ANALYSIS OF CRYSTALS.** (3) II — 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.**

123 **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: The gas laws for ideal and real gases, specific heat relations, continuity and change of state, vapor and osmotic pressure, equilibrium, solutions, electrical phenomena, radiation, etc. Lectures and recitations, three hours. **PREREQUISITES: PHYSICS 2b; MATHEMATICS 20b.**

125a-d **INDEPENDENT WORK IN PHYSICS.** (3) I, II, S — Staff

151 **INTRODUCTION TO ATOMIC PHYSICS.** (3) II, S — Pardue

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; relativity; astrophysics. **PREREQUISITES: PHYSICS 2b. 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 and Wave Motion, Conduction of Electricity through Gases, Electro-Magnetic Theory of Light, Transient Electric and Vacuum Tube Prenomena, Quantum Theory, Theoretical Physics, Thermodynamics, X-Rays and their applications to Physical Problems, Relativity, Electro-Dynamics.

For the description of these graduate courses see the Graduate School Bulletin.

220c **SEMINAR.** (1) I — Staff

A weekly meeting of the staff and advanced students for presentation and discussion of recent development 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.

220d **SEMINAR.** (1) II — Staff

A continuation of 220c.

226a-b **RESEARCH.** (3) — Staff

227a-b **RESEARCH.** (5) — Staff

Suggested Outline of a Course in the Physical Sciences With Physics as a Major

FRESHMAN YEAR

First Semester	Credits	Second Semester	Credits
Eng. 1a English Comp.	3.	Eng. 1b English Comp.	3.
Phys. 1a Elem. Physics	5.	*Phys. 1b Elem. Physics	5.
Math. 17 College Algebra	3.	*Math. 19 Analytics	3.
Math. 18 Trigonometry	2.	Chem. 2b Gen. Inorg. Chem.	4.
Chem. 2a Gen. Inorg. Chem.	4.	Mil. Sci. 1b First Year Basic Course	1.3
Mil. Sci. 1a First Year Basic Course	1.3	Phys. Ed.	.7
Phys. Ed.	.7	Hyg. 1 Personal and Community Health	1.
	19.0		18.0

SOPHOMORE YEAR

First Semester	Credits	Second Semester	Credits
Phys. 2a Gen. College Phys.	5.	Phys. 2b Gen. College Phys.	5.
Math. 20a Differ. Calculus	4.	Math. 20b Integral Calculus	4.
Mil. Sci. 6a Second Year Basic Course	1.5	Mil. Sci. 6b Second Year Basic Course	1.5
Slide Rule	1.	Chem. 8 Quantita. Analysis	5.
Chem. 4 Qualitative Analysis	4.	Phys. Ed.	.7
Phys. Ed.	.7	Soc. Sci. Elective	3.
Soc. Sci. Elective	3.		19.2
	19.2		

JUNIOR YEAR

First Semester	Credits	Second Semester	Credits
Phys. ( ) "100" Course	5.	Phys. ( ) "100" Course	5.
Math. 102 Vector Analysis	3.	Math. 105a Differ. Equa.	3.
Ger. 1a Elem. German	3.	Ger. 1b Elem. German	3.
Biol. Sci.	4.	Biol. Sci.	4.
Elective	3.	Elective	3.
	18.		18.

SENIOR YEAR

First Semester	Credits	Second Semester	Credits
Phys. ( ) "100" Courses	8.	Phys. ( ) "100" Courses	8.
Ger. 2a Intermed. German	3.	Ger. 2b Intermed. German	3.
Elective	6.	Elective	3.
		Phys. 125c	3.
	17.		17.

Note.—Students wishing to prepare for the teaching of Physics are recommended to make the following substitutions in the above outline.

Sophomore year, replace Social Science Electives by Psychology 2a, and Education 16. Junior and Senior years, elect Education 101, Education 122, and Education 155.

This course conforms with the recommendations of the revised school code of Kentucky, and in addition gives the student a well-rounded foundation for continuing his work toward an advanced degree in Physics.

POLITICAL SCIENCE

President McVey, Professors Vandenbosch and Manning, and Associate Professors Blanding, Shannon and Trimble

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) To 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 pro-

vide 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.

Requirements for a Major. Prerequisites: Political Science 15 and Political Science 51. Required: A minimum of 15 credits in Political Science.

All majors must take at least one course in political theory and constitutional development and in each of two other fields of Political Science, Political Science 180a and 190a, and pass a comprehensive examination in the general field of political science.

Requirements in the Field of Concentration. Forty credits in Field of Social Science, including the major work, in courses not open to freshmen.

*15 PROBLEMS OF CITIZENSHIP. (3) I, II, S — Staff
Public opinion, the newspaper, advertising, the modern economic system, labor problems, unemployment, agriculture, conservation and the race problem.

*51 AMERICAN GOVERNMENT. (3) I, II, S — Staff
A survey course in the structure and operation of the Federal Government.

52 MUNICIPAL GOVERNMENT. (3) I — Manning
An introductory course in the study of the structure and functions of modern city governments.

80 STATE GOVERNMENT. (3) I, II — Manning
A study of the forms and functions of government in operation in the states of the United States.

The following courses open only to Upper Division and Graduate Students

178a-d INDEPENDENT WORK. (1) I, II, S
(Honors Course.) Consent of the department required for admission.

180a-d INDEPENDENT WORK. (3) I, II, S
(Honors Course.) Consent of the department required for admission.

190a SEMINAR IN POLITICAL SCIENCE. (1) I — Vandenbosch
Open to major students.

I. Political Parties and Public Opinion

170 POLITICAL PARTIES. (3) I, S — 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; first-hand studies of the individual's participation in government.

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* Courses open to freshmen.

173 PUBLIC OPINION. (3) II, S — 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. Offered 1938-39.

RELATED COURSES IN OTHER DEPARTMENTS
Psychology 104, Social Psychology

II. Public Administration

154 COUNTY GOVERNMENT. (3) I, S — Manning
A study of the background, the legal status, types and administrative activities of the American County. Special attention is given to the relationship of state and the county. Offered 1938-39.

172 KENTUCKY GOVERNMENT AND CONSTITUTION. (3) S — Manning
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. Offered 1938-39.

174 PUBLIC WELFARE ADMINISTRATION. (3) II — Manning
An intensive study of public welfare agencies of the state and local units, with emphasis on the problems of relief, rehabilitation, public and private control, and unified administration. Offered 1938-39.

177 PRINCIPLES OF PUBLIC ADMINISTRATION. (3) II, S — Manning
A functional study of governmental administration, with emphasis on the theory and practice of administration, the evolution of administrative organization, the staff and line functions of government, including personnel, financial administration, protection of life and property, judicial administration, public health, welfare, education, conservation of natural resources, and regulation of industry. Offered 1938-39.

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
Psychology 112. Personnel Administration
Sociology 107. Community Welfare Work
Sociology 112. Community Organization

III. Theory

171a EARLY POLITICAL THEORY. (3) I — Shannon
The political theories of Plato, Aristotle, Roman Political Thought, Thomas Acquinas, Dante, Machiavelli, Bodin, Grotius, More, Bacon, Harrington, Filmer, Hobbes, Locke, Spinoza, Montesquieu, Rousseau. Offered 1938-39.

171b MODERN POLITICAL THEORY. (3) II, S Shannon
The theories of the American and French Revolutions, the English Utilitarians, Democratic Political Theory, Socialism, Communism. Offered 1938-39.

RELATED COURSES IN OTHER DEPARTMENTS

Philosophy 101a and 101b. History of Philosophy
Philosophy 110b. Making of the Modern Mind

IV. Comparative Government

155a COMPARATIVE GOVERNMENT—PARLIAMENTARY DEMOCRACIES. (3) I, S Trimble
A study of the governments of England, Ireland and the British self-governing dominions. Offered 1938-39.

155b COMPARATIVE GOVERNMENT—CONTEMPORARY DICTATORSHIPS. (3) II, S Trimble
A study of the government of Europe including France and Switzerland and the dictatorships of Italy, Germany and Russia. Offered 1938-39.

168 GOVERNMENTS AND POLITICS OF EASTERN ASIA. (3) 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. Not given 1937-38; offered 1938-39.

V. Public Law

159a AMERICAN CONSTITUTIONAL DEVELOPMENT, 1787-1868. (3) I, S 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. Offered 1938-39.

159b AMERICAN CONSTITUTIONAL DEVELOPMENT. (3) II, S Trimble
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. Offered 1938-39.

176 LEGISLATION. (3) I Manning
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. Offered 1937-38.

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. (3) II — Blanding
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. Offered 1937-38.

150 INTERNATIONAL LAW. (3) II — McVey or Vandenbosch
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. Not given 1937-38; offered 1938-39.

160 AMERICAN FOREIGN RELATIONS. (3) II — Vandenbosch
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. Given 1937-38; not offered 1938-39.

165 WORLD POLITICS. (3) II — Blanding, Vandenbosch
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. Offered 1938-39.

RELATED COURSES IN OTHER DEPARTMENTS

Economics 127. International Economic Policies
History 100a and 100b. The Diplomacy and Foreign Policy of the United States
History 190a and 190b. The Far East
History 119b. The Nineteenth Century
History 120. The Twentieth Century
Law 164. Conflict of Laws

Courses open only to Graduate Students

202 NATIONAL AND REGIONAL PLANNING. (3) I, S — 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. Offered 1938-39.

204 INTERNATIONAL ORGANIZATION AND THE LEAGUE OF NATIONS. (3) II, S — Vandenbosch
Social and economic factors leading to the establishment of international administrative organs, the Mandates System, the International Labor Organization, the League of Nations. Given 1937-38; offered 1938-39

205 FREEDOM OF THE SEAS. (3) II, S — Vandenbosch
Belligerent and neutral rights at sea, violations of maritime law during the World War, neutrality and recent international legislation, current problems and possible solutions. Not given 1937-38; offered 1938-39.

206 SPECIAL PROBLEMS IN PUBLIC ADMINISTRATION.
(3) II Manning
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. Given 1937-38; offered 1938-39.

211 THE CONSTITUTION AND CIVIL RIGHTS. (3) I, S 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. Not given 1937-38; offered 1938-39.

213 FEDERAL CENTRALIZATION. (3) 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. Given 1937-38; offered 1938-39.

215 AMERICAN JUDICIAL ADMINISTRATION. (3)
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. Not offered 1938-39.

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, Municipal Administration, County Government, Public Administration, Accounting, Statistics, Public Finance, Business Law, Personnel Management.

Public Management. Municipal Government, Municipal Administration, State Government, County Government, Public Administration, Personnel Management, 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, Municipal Administration, Accounting, Statistics, Public Finance, Money and Banking, State and Local Taxation, Public Administration, Contracts.

Public Welfare Administration. Social Psychology, Social Systems, Ethics, Criminology, Individual Development, Psychology of the Child, Human Measurements, Abnormal Psychology, Social Dependents, Social Pathology, Immigration, Community, Welfare Work, Community Survey, Community Organization, State Government, Municipal Government, County Government, Statistics, Public Finance, Administration of Justice.

Public Works Administration. Highway Location, Construction and Maintenance, Streets and Pavements, Road Materials, Asphalt Laboratory, Water Supply and Waterworks, Sewers and Sewage Disposal, Sewer Design, Contracts, State and Local Taxation, Public Finance, Accounting.

Public Safety Administration. Criminology, Abnormal Psychology, Personnel Management, Administration of Justice, Constitutional Law, Public Administration, Social Pathology, State Government, Municipal Administration, County Government, Accounting.

PSYCHOLOGY

Professors Miner and White, Associate Professors Dimmick and Asher, Assistant Professors Beaumont and Newbury, Dr. Ratliff, and Dr. Croft

Psychological Service. The Department offers to students and to persons sent by the schools or the social agencies an opportunity to be examined free of charge as to their intellectual capacity, special abilities and talents, educational attainments, commercial and trade skill. Individual examinations for vocational guidance are also made. Prolonged studies of personal adjustment are undertaken when time permits. Parents and business men are invited to make use of this service. Appointments may be made by telephone.

Child Guidance Service. In cooperation with the Junior League of Lexington a special child guidance service has been established at the department with Dr. G. B. Dimmick as director. The Juvenile Court, public schools, Child Welfare and Family Welfare Societies have definitely availed themselves of this service, which is an important adjunct to the class instruction and research work in the field of personality development for both normal and maladjusted children.

Preparation for Vocations. The Department has planned curricula which it recommends to students who desire to prepare for positions in the Departments of Psychology in colleges, for guidance and personnel work in schools, industry or business; for mental hygiene, clinical and personal adjustment work; and for the position of Registrar.

Requirements for a Major. Prerequisite: Psychology 2a and 2b, or Psychology 10, or the equivalent. Required: Fifteen additional credits earned after the sophomore year and elected among other courses in Psychology. Twenty-five other credits in Psychology or in

allied fields of either the Biological or of the Social Sciences in courses not open to freshmen. These courses are to be coordinated toward definite objectives with the approval of the Department.

Students in Education are advised to take Psychology 3, 7, 111, 114, 113, 121, 122, 123; in Commerce, Psychology 5, 111, 112, 104, 3; in the Pre-Medical course, Psychology 3, 7, 111, 122, 123, 114; in the Pre-Law course, Psychology 3, 104, 114; in Social Work, Psychology 3, 7, 104, 111, 114, 122, 123.

*2a GENERAL PSYCHOLOGY. (3) I Staff
This course is advised for any student who wishes to understand the behavior of himself and others. It runs through the year and is intended to train the student to analyze and explain the main human activities so that he will be able better to control them. This is the best introduction to all other courses in the department. Each week two hours recitation and a double period in the laboratory with illustrative experiments for discussion.

*2b GENERAL PSYCHOLOGY. (3) II Staff
A continuation of 2a. PREREQUISITE: PSYCHOLOGY 2a.

*1 ELEMENTARY PSYCHOLOGY. (3) I, II Newbury and Ratliff
The course is intended only for students taking the required curricula in Home Economics, Music, Library Science for Elementary Teachers; or for freshmen and sophomores entering college the second semester who cannot postpone the first course until the next year. A beginning course which presents the fundamental problems of human behavior in the simplest possible manner.

10 INTRODUCTION TO PSYCHOLOGY. (3) I, II Miner and Newbury
A first course which presents the scientific approach to the fundamental problems of explaining the activities of individuals. Open only to juniors and seniors, who are advised, however, to take 2a and 2b.

Psychology 2a and 2b, 1, 10 or the equivalent are prerequisite for all other courses in the Department.

3 INDIVIDUAL DEVELOPMENT. (3) II Newbury
An introduction to the study of individual differences in relation to personality. The problem of types, the subnormal, the genius; the influence of heredity, training, family, physical constitution, sex, race, culture, climate, and rural or city environment upon the development of individuals.

7 PSYCHOLOGY OF THE CHILD. (3) I, II Asher
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.

5 PSYCHOLOGY OF ADVERTISING AND SELLING. (3) I, II Miner and Croft
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.

* Courses open to freshmen.

11 FIELDS OF PSYCHOLOGY. (3) I — Beaumont

A survey of the significant contributions in the following fields of psychology: Social, abnormal, experimental, genetic, animal, tests of abilities, personnel administration, and current systems of psychology. Given 1936-37. Not offered 1937-38.

Courses open only to Upper Division and Graduate Students

104 SOCIAL PSYCHOLOGY. (3) I — Dimmick

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.

107 PSYCHOLOGICAL INTERPRETATION (OF THE UNUSUAL). (3) I — Miner

Unusual human activities and experiences, including hypnotism, thought transference, spirit communications, psycho-therapy, and other sub-conscious phenomena are considered from the point of view of scientific evidence. An attempt is made to understand the conditions for creative work in literature, art and science. Given 1936-37. Not offered 1937-38.

111 MENTAL MEASUREMENTS. (3) II — Asher

An analysis and interpretation of individual and group tests of intelligence, aptitude, skill, and achievement. The history and significance of the testing movement; the construction and evaluation of group tests.

122 PERSONALITY MALADJUSTMENTS. (3) I — Dimmick

The course is intended primarily for social workers, teachers, and others who deal with the common maladjustments which they are able to detect and help. The causes of such disturbances in the home, school or social surroundings will be emphasized. The early symptoms of more grave mental disorders will be treated from the standpoint of mental hygiene. The students will be acquainted with the background of scientific studies which is necessary for the interpretation of problem children and maladjusted adults. Examples of representative cases will supply some training for practical application of the principles discussed.

123 PRACTICE IN TESTING. (3) II — Dimmick

This course trains the student in the techniques of administering, scoring and interpreting group and the individual intelligence and the achievement tests most frequently employed in educational and psychological guidance. Opportunity will also be provided for the diagnosis and evaluation of aptitudes and emotional characteristics as these are related to adjustment problems. The practical rather than the theoretical aspects of diagnostic procedures are emphasized. **PREREQUISITE: PSYCHOLOGY 111 OR ITS EQUIVALENT.**

114 ABNORMAL PSYCHOLOGY. (3) II — 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.

115 **GENETIC PSYCHOLOGY.** (3) II 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.

116 **COMPARATIVE PSYCHOLOGY.** (3) I Newbury
Two hours of lectures, two 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 sub-human species. Relationships to human problems indicated.

110 **EXPERIMENTAL PSYCHOLOGY.** (3) I White
Experimental techniques and their application to present psychological problems. The first part of the course acquaints the student with the standard apparatus in psychological laboratories and with the classical experiments the undertaking of which is important in modern psychology. The second part is a consideration of present psychological problems. The student selects one of these problems for detailed experimentation. Examples of such problems are: change of blood pressure with covert and overt expression of emotion; influence of tension upon perception; sensory discrimination. One hour lecture and four hours laboratory a week.

113 **PSYCHOLOGY OF LEARNING.** (3) II 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 of length, amount and complexity of the material, and of the mode of attack to learning. One hour lecture and four hours laboratory a week.

112 **PERSONNEL ADMINISTRATION.** (3) II Miner and Beaumont
The functions of personnel work in business and industry. The selection and placement of employees, their training, supervision, and motivation; the scientific study of work and fatigue.

121 **STUDENT PERSONNEL.** (3) I Miner, Beaumont and Croft
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.

120a-d **INDEPENDENT WORK IN PSYCHOLOGY.**
(2) I, II Miner and others
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.

Courses open only to Graduate Students

201a **SEMINAR IN PSYCHOLOGY.** (1) I Miner and 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-c, etc. SEMINAR IN PSYCHOLOGY. (1) I, II Miner and the Staff
Continuation of 201a. These numbers are provided for registration in succeeding semesters.

203a PROBLEMS IN PSYCHOLOGY. (2) I Miner and others
Shorter research problems are registered under this number. A minimum of six hours per week is required in consultation with the instructor.

203b-c, etc. PROBLEMS IN PSYCHOLOGY. (2) I, II Miner and others
Continuation of research. These numbers are provided for registration in subsequent semesters.

210a RESEARCH IN PSYCHOLOGY. (3) I Miner and others
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-c, etc. RESEARCH IN PSYCHOLOGY. (3) I, II Miner and others
Continuation of research. These numbers are provided for registration in succeeding semesters.

211 MENTAL WORK AND FATIGUE. (3) I White
A laboratory course. Four hours devoted to experiments and one hour discussion each week. Not given 1937-38; offered 1938-39. PREREQUISITES: AN ADVANCED COURSE IN EXPERIMENTAL PSYCHOLOGY AND ELEMENTARY STATISTICS OR THEIR EQUIVALENT.

212 THE EMOTIONS. (3) I White
A laboratory course. Four hours devoted to experiments and one hour discussion each week. Given in 1937-38; not offered 1938-39. PREREQUISITES: AN ADVANCED COURSE IN EXPERIMENTAL PSYCHOLOGY AND ELEMENTARY STATISTICS OR THEIR EQUIVALENT.

213 THE OBSERVATION PROCESS. (3) II White
A laboratory course. Four hours devoted to experiments and one hour discussion each week. Not offered 1937-38; offered 1938-39. PREREQUISITES: AN ADVANCED COURSE IN EXPERIMENTAL PSYCHOLOGY AND ELEMENTARY STATISTICS OR THEIR EQUIVALENT.

215 PSYCHOMETRICS. (3) I 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.

217 PSYCHOLOGY OF LANGUAGE. (3) II 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. Given 1937-38; not offered 1938-39.

218 SYSTEMATIC PSYCHOLOGY. (3) II Miner
An historical and critical study of fundamental concepts and current schools of psychology with a view to their evaluation.

219 CLINICAL PSYCHOLOGY. (3) II — 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 a background for social work, mental hygiene, and clinical work.

ROMANCE LANGUAGES AND LITERATURES

Professor Ryland, Assistant Professors Holmes, Horsfield,† Schick and Server, and Mr. Hernandez

Requirements for a Major. Prerequisites: For French Romance Languages 1a-b, 2a-b, 6a-b, 3a-b, or 8a-b and 4-b or 5a-b. For Spanish, 1a-b or 4a-b, 5a-b, 7a-b, 9a-b and 10a-b. Required: A minimum of 17 credits of advanced work in Romance Languages; for seniors 80a-b and the Comprehensive Examination at the end of the year.

Requirements in the Field of Concentration. Forty credits in the Field of Literature, Philosophy and the Arts, including the major work, in courses not open to freshmen.

French

*1a ELEMENTARY FRENCH. (3) I, II — Staff

*1b ELEMENTARY FRENCH. (3) I, II — Staff
PREREQUISITES: 1a OR ONE YEAR HIGH SCHOOL FRENCH.

*2a INTERMEDIATE FRENCH. (3) I, II — Staff
PREREQUISITES: 1a-b OR TWO YEARS HIGH SCHOOL FRENCH.

*2b INTERMEDIATE FRENCH. (3) I, II — Staff
PREREQUISITES: 2a OR THREE YEARS HIGH SCHOOL FRENCH.

3a FRENCH CONVERSATION AND COMPOSITION. (2) I — Ryland
PREREQUISITES: 2a-b.

3b FRENCH CONVERSATION AND COMPOSITION. (2) II — Ryland
PREREQUISITES: 2a-b.

6a FRENCH NOVEL AND DRAMA. (3) I — Horsfield
PREREQUISITES: 2a-b OR EQUIVALENT.

6b FRENCH NOVEL AND DRAMA. (3) II
(CONTINUATION OF 6a) — Horsfield

8a FRENCH PHONETICS. (3) I — Schick
A scientific study of French sounds based on the International System of Phonetic Symbols.

8b FRENCH PHONETICS. (3) II
(CONTINUATION OF 8a) — Schick
PREREQUISITE: 8a.

16a CIVILIZATION OF FRANCE, SPAIN, SPANISH-AMERICA AND ITALY. (1) I — Staff
Lectures and correlated readings. Open to all students.

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† On leave 1938-39.
* Courses open to freshmen.

16b CIVILIZATION OF FRANCE, SPAIN, SPANISH-AMERICA AND ITALY. (1) II — Staff
Continuation of 16a.

80a TUTORIAL SEMINAR (FOR THE COMPREHENSIVE EXAMINATION). (1) I — Ryland, Server

80b TUTORIAL SEMINAR (FOR THE COMPREHENSIVE EXAMINATION). (1) II — Ryland, Server

Courses open only to Upper Division and Graduate Students

110a FRENCH LITERATURE OF THE XVII CENTURY. (3) I — Ryland
Not given 1937-38; offered 1938-39.

110b FRENCH LITERATURE OF THE XVII CENTURY. (3) II — Ryland
Not given 1937-38; offered 1938-39.

115a FRENCH LITERATURE OF THE XVIII CENTURY. (3) I — Holmes
Given 1937-38; offered 1938-39.

115b FRENCH LITERATURE OF THE XVIII CENTURY. (3) II — Holmes
Given 1937-38; offered 1938-39.

109a FRENCH LITERATURE OF THE XIX CENTURY. (3) I — Ryland
Given 1937-38; not offered 1938-39.

109b FRENCH LITERATURE OF THE XIX CENTURY. (3) II — Ryland
Given 1937-38; not offered 1938-39.

116a FRENCH LITERATURE OF THE XX CENTURY. (3) I — Horsfield
Given Summer School 1938; not offered 1938-39.

116b FRENCH LITERATURE OF THE XX CENTURY. (3) II — Horsfield
Given Summer School 1938; not offered 1938-39.

113a ADVANCED GRAMMAR, SYNTAX, COMPOSITION. ALSO AN INTRODUCTION TO ETYMOLOGY. (3) I — Ryland
Given 1937-38; not offered 1938-39.

113b ADVANCED GRAMMAR, SYNTAX, COMPOSITION. ALSO AN INTRODUCTION TO ETYMOLOGY. (3) II — Ryland
Given 1937-38; not offered 1938-39.

Courses open to Graduate Students

201a LITERATURE OF THE FRENCH RENAISSANCE. (3) I — Ryland
Given 1937-38; not offered 1938-39.

201b LITERATURE OF THE FRENCH RENAISSANCE. (3) II — Ryland
Given 1937-38; not offered 1938-39.

202a OLD FRENCH. (3) I — Holmes
First semester, a study of the syntax and composition of Old French. Given 1937-38; not offered 1938-39. PREREQUISITES: FOUR YEARS OF MODERN FRENCH AND TWO YEARS OF GERMAN. Recommended: Two years of Latin.

202b OLD FRENCH. READING OF TEXTS IN OLD FRENCH. (3) II — Holmes
Second semester. Given 1937-38; not offered 1938-39.

203a ADVANCED PHONETICS. (3) I — Schick
Offered 1938-39.
PREREQUISITES: FOUR YEARS OF FRENCH AND R. L. 8a-b.

203b ADVANCED PHONETICS. (3) II — Schick
Offered 1938-39.

Spanish

*5a ELEMENTARY SPANISH. (3) I, II — Staff

*5b ELEMENTARY SPANISH. (3) I, II — Staff
PREREQUISITE: 5a OR ONE YEAR OF HIGH SCHOOL SPANISH.

*7a INTERMEDIATE SPANISH. (3) I, II — Staff
PREREQUISITES: 5a-b OR TWO YEARS OF HIGH SCHOOL SPANISH.

*7b INTERMEDIATE SPANISH. (3) I, II — Staff
PREREQUISITES: 7a.

9a SPANISH NOVEL AND DRAMA. (3) I — Server
PREREQUISITES: 7a-b OR FOUR YEARS OF HIGH SCHOOL SPANISH.

9b SPANISH NOVEL AND DRAMA. (3) II — Server

10a SPANISH CONVERSATION AND COMPOSITION. (2) I — Server, Hernandez
PREREQUISITES: 7a-b.

10b SPANISH CONVERSATION AND COMPOSITION. (2) II — Server, Hernandez

Courses open to Upper Division and Graduate Students

104a SPANISH LITERATURE OF THE XVII CENTURY. (3) I — Server
Given 1937-38; not offered 1938-39. PREREQUISITES: 9a-b OR EQUIVALENT.

104b SPANISH LITERATURE OF THE XVII CENTURY. (3) II — Server
Given 1937-38; not offered 1938-39.

112a SPANISH LITERATURE OF THE XIX CENTURY. (3) I — Server
Not given 1937-38; offered 1938-39.

112b SPANISH LITERATURE OF THE XIX CENTURY. (3) II — Server
Not given 1937-38; offered 1938-39.

Italian

*4a ELEMENTARY ITALIAN. (3) I — Schick

*4b ELEMENTARY ITALIAN. (3) II — Schick

15a INTERMEDIATE ITALIAN. (3) I — Schick
PREREQUISITES: 4a-b.

15b INTERMEDIATE ITALIAN. (3) II — Schick

* Courses open to freshmen.

SECONDARY EDUCATION

Professor Ligon, Associate Professors Duncan and Williams, Miss Anderson, Mr. Betz, Mr. Capurso, Mrs. Haines, Mr. Keffer, Mr. Kemper, Miss Mason, Mr. Mitchell, Miss Peck, Miss Shipman, Miss Topham and Miss West

105 FUNDAMENTALS OF SECONDARY EDUCATION. (3) I, II, S — Ligon
Deals with laboratory methods of instruction. Units: Fundamental processes, control, operation, administration.

107 SAFETY EDUCATION. (3) S Mitchell
This course is designed to give teachers the knowledge, techniques, and skills for the teaching of safety education in all its aspects. Particular emphasis will be placed on driver education and the problems related thereto.

111 REMEDIAL READING IN THE SECONDARY SCHOOL. (2) II 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 will be required of all students. The course includes a critical study of the investigations and literature in the field.

123 VOCATIONAL GUIDANCE. (3) S
A course designed to give teachers, principals, superintendents and welfare workers a comprehensive view of the factors in vocational guidance, the agencies contributing to or influencing life choices and an analysis of the human and economic resources of a given civic unit.

142 DIRECTED TEACHING IN ART. (6) I, II, S Haines
This course has been planned for teachers who contemplate becoming supervisors of art in the public schools. PREREQUISITES: EDUCATION (SEE PROFESSIONAL MAJOR) AND 18 HOURS IN ART.

153 DIRECTED TEACHING IN ENGLISH. (6) I, II, S Anderson and Shipman
For seniors. Topics: Course of study, minimum essentials, materials, methods, testing. Part I, languages and composition; Part II, literature. Observation and practice, five hours; conference, two hours. PREREQUISITES: EDUCATION (SEE PROFESSIONAL MAJOR) AND 18 HOURS IN ENGLISH.

154 DIRECTED TEACHING IN FOREIGN LANGUAGES. (6) I, II, S West and Topham
For seniors. Topics: Aims and objectives, course of study, methods, tests, equipment, analysis of textbooks. Observation and practice, five hours; conference, two hours. PREREQUISITES: EDUCATION (SEE PROFESSIONAL MAJOR) AND 18 HOURS IN SUBJECT TO BE TAUGHT.

155 DIRECTED TEACHING IN THE SCIENCES. (6) I, II, S Kemper and Keffer
For seniors. Topics: Aims and objectives, courses of study, methods, tests, equipment. General science, biology, physics, and chemistry. Observation and practice, five hours; conference, two hours. PREREQUISITES: EDUCATION (SEE PROFESSIONAL MAJOR) AND 18 HOURS IN SUBJECT TO BE TAUGHT.

156 DIRECTED TEACHING IN MATHEMATICS. (6) I, II, S Mitchell and Keffer
For seniors. Topics: Course of study, materials, methods, testing. Observation and practice, five hours; conference, two hours. PREREQUISITES: EDUCATION (SEE PROFESSIONAL MAJOR) AND 18 HOURS IN MATHEMATICS.

157 DIRECTED TEACHING IN THE SOCIAL STUDIES.
(6) I, II, S Peck and Shipman
For seniors. Topics Objectives, preparation of the teachers, courses of study, methods, supplementary materials, visual instruction, testing and professional helps. Observation and practice, five hours; conference, two hours. **PREREQUISITES: EDUCATION (SEE PROFESSIONAL MAJOR) AND 18 HOURS IN SUBJECT TO BE TAUGHT.**

169a DIRECTED TEACHING IN PHYSICAL EDUCATION.
(3) I, II, S
This course has been planned for students who desire to become directors of physical education and coaches of athletics in the public schools. **PREREQUISITES: EDUCATION (SEE PROFESSIONAL MAJOR) AND 18 HOURS IN PHYSICAL EDUCATION.**

169b DIRECTED TEACHING IN PHYSICAL EDUCATION. (3) I, II, S
A continuation of Education 169a.

177a DIRECTED TEACHING IN MUSIC.
(3) I, II, S Capurso and Mason
This course has been planned for teachers who contemplate becoming supervisors of music in the public schools. **PREREQUISITES: PSYCHOLOGY 7, EDUCATION 44, 101, 147 AND 18 HOURS IN MUSIC.**

177b DIRECTED TEACHING IN MUSIC.
(3) I, II, S Capurso and Mason
A continuation of Education 177a.

193 DIRECTED TEACHING IN COMMERCIAL SUBJECTS. (6) I, II, S Betz
For seniors. This course will include 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 35, 122, 104, 158a, b AND 18 HOURS IN COMMERCE.**

214 THE SECONDARY SCHOOL. (3) I, S Ligon
This course is 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.

224a-c ORGANIZATION AND SUPERVISION OF STUDENT TEACHING. (3) I, II, S Williams and Duncan
This course has been planned for students preparing to do critic teaching in the fields of elementary and secondary education. Education 224a is a general course that will include the basic principles underlying the entire program. Education 224b will have to do with specific problems for critic teachers on the secondary level while Education 224c will deal with problems on the elementary level.

241 PROBLEMS IN TEACHING THE SOCIAL STUDIES. (3) S Peck
The purpose of this course is to acquaint the teacher with the most approved methods of teaching the social studies. Source materials dealing with the problems of teaching, such as research findings, year books, and periodicals will be investigated and current practices in the best high schools of the country will be stressed.

242 PROBLEMS IN TEACHING ENGLISH. (3) S Anderson

The purpose of this course is to acquaint the teacher with the most approved methods of teaching English. Source materials dealing with the problems of teaching, such as research findings, year books, and periodicals will be investigated and current practices in the best high schools of the country will be stressed.

243 PROBLEMS IN TEACHING MATHEMATICS. (3) S Keffer

The purpose of this course is to acquaint the teacher with the most approved methods of teaching mathematics. Source materials dealing with the problems of teaching, such as research findings, year books, and periodicals will be investigated and current practices in the best high schools of the country will be stressed.

249 EXTRA CURRICULAR ACTIVITIES. (3) S Ligon

Underlying principles, faculty activities, home room activities, student council, clubs, athletics, publications, dramatics, honor societies, commencements. **PREREQUISITE: 12 HOURS IN EDUCATION.**

307 RESEARCH PROBLEMS IN SECONDARY EDUCATION. (3) I, II, S Ligon

This course is designed for students who want to work on special problems. **PREREQUISITE: MASTER'S DEGREE OR EQUIVALENT.**

SOCIAL WORK

Assistant Professor Palmer, Field-Work Supervisors, Assistants

The department of social work offers the following opportunities to students: professional courses on a graduate level accredited by the American Association of Social Workers; a pre-professional major leading to the A. B. degree in the College of Arts and Sciences; orientation courses for students majoring in other fields.

Graduate Work. Prerequisite. Graduate standing and a background in the social sciences. The department offers a graduate curriculum of technical courses approved by the American Association of Social Workers for students interested in social work as a profession.

Undergraduate Major. Prerequisite. Senior standing and a background in the social sciences and biology. Students desiring to major in the department should consult its head early in their college work. Comprehensive examinations are required of all candidates for A. B. degree majoring in the department.

Concentration. Forty credits of advanced work in the field of social studies including courses for the major.

Orientation Courses. The department offers orientation courses for (1) students in other fields who want to prepare for volunteer work with social agencies, (2) persons in allied professions such as nursing, teaching, the ministry, or home demonstration work who desire to cooperate with social workers in problems of mutual interest, (3) undergraduate students who expect to enter professional, graduate training in social work.

Orientation Courses

Open only to Senior and Graduate Students

122 **FIELD OF SOCIAL WORK.** (3) I Palmer
An introduction to the function, method, and philosophy of contemporary social work. The divisions of the field (case work, group work, community organization, institutional work, social action and research), the relationship of social work to the social sciences and allied professions, and the professional status of social work will be considered. The course is offered for students with a layman's interest in social work, pre-professional social work majors, and students in allied professions such as nurses, teachers, ministers, county agents and home demonstration workers who are intereted in cooperating with social workers. May be taken on a graduate level as a technical course.

123 **COMMUNITY RESOURCES.** (2) I
Palmer, agency executives, and assts.
The course is offered to familiarize students with community resources. Observational visits will be made to social agencies and their functions, procedures, and interrelationships will be discussed. Informal resources of typical communities will also be considered.

124 **CASE AIDE TRAINING.** (2) II Palmer
An introduction to the functions of social case work to be taken simultaneously with S. W. 125. The course will be built about the specific problems encountered in the field and attention also will be given toward developing a perspective regarding the scope of social case work and desirable attitudes toward it.

125 **FIELD WORK FOR CASE AIDES.** (3) II Palmer and Supervisors
Qualified, preprofessional majors in social work will be given an opportunity to assist case workers in some of the simpler, more routine aspects of their work. 150 hours to be arranged.

126a-b **INDEPENDENT WORK.** (2) I, II Palmer
Affords opportunity to a student capable of working independently to study some problem of special interest.

127a-b **TUTORIAL WEEKLY CONFERENCES AND DISCUSSIONS.** (1) I, II Palmer
Open only to majors in the department.

213 **INTRODUCTION TO SOCIAL CASE WORK.** (3) I Palmer
A study of generic processes of social case work. Includes a consideration of the different approaches to case work; social diagnosis and treatment; techniques of observation, interviewing, recording, evaluation; professional ethics.

217 **ADVANCED SOCIAL CASE WORK.** (3) II Palmer
An advanced course built around the theoretical aspects of case work problems encountered by the student in field work and supplemented by discussions of other cases. Taken simultaneously with S. W. 220b.

218 **HISTORY OF SOCIAL WORK.** (3) I Palmer
Deals with the evolution of social work and its roots in the changing social order. Important periods in the development of social work are selected for study and emphasis placed on their effect upon contemporary social work.

220a **SUPERVISED FIELD WORK.** (3) I Palmer and Supervisors
150 hours of supervised field work in an accredited agency.

220b SUPERVISED FIELD WORK. (3) II Palmer and Supervisors
150 hours of supervised field work in an accredited agency.

226 SOCIAL LEGISLATION. (3) Palmer
(Not given 1938-39.)

227 PROBLEMS OF RURAL SOCIAL WORK. (3) II
Palmer and Lecturers
Rural needs and social welfare programs to meet them will be studied in selected rural areas and the findings will be related to larger social welfare problems and programs. The relationship of social work programs to other community programs in these areas will also be considered.

SOCIOLOGY

Professor Best and Assistant Professor Caldwell

The courses in Sociology are designed primarily to give students an acquaintance with and fundamental conceptions of the larger social problems of the day. They are prepared with the purpose of making them an elemental part of one's general education. At the same time they are intended to provide a certain preliminary training for students looking to the field of social work, whether as a professional career, or with the expectation to do volunteer work or to participate in the direction of some social service agency. The formal requirements for professional training in social work are set out later.

Requirements for a Major. Prerequisites: Sociology 1a, 1b. Required: A minimum of 15 credits of advanced work in Sociology; Sociology 20a, b; comprehensive examination in senior year.

Requirements in the Field of Concentration. Credits to the number of 40 in the field of social sciences, including the major work, in courses not open to freshmen.

***1a PRINCIPLES OF SOCIOLOGY.** (3) I, II, S Best
An introductory course dealing with the fundamental principles and aims of sociology through a consideration of social origins, social evolution, social progress, and social institutions. Not open to seniors.

***1b PRINCIPLES OF SOCIOLOGY.** (3) I, II Best
An introductory course involving an examination of certain practical, concrete social problems of the present day, such as the family, child welfare, poverty, crime, racial issues, recreational values, community organization, urban and rural trends, housing conditions, population movements, social implications of industrial development, etc. Not open to seniors.

6 AMERICAN IMMIGRANTS AND RACES. (3) II Best
A study of races and peoples in the United States, and of national policies for dealing with the matter, including a special study of the Negro problem.

18 SOCIAL ORIGINS. (3) II Caldwell
A study of the social origin of races, institutions, and cultures, and an analysis of the fundamental trends of social evolution from early primitive times down to the present era.

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* Courses open to freshmen.

19 SOCIAL WORK INFORMATION. (3) I, II — Palmer
An elementary course designed to meet the needs of nurses, teachers, and others who desire an understanding of the elementary principles and practices of social work, and to collaborate to a greater or less extent with social workers; and consisting of lectures, field trips, etc.

20a-b TUTORIAL WORK. (1) I, II — Staff
Conferences, assignment of reading, reports, etc. For Senior Majors.

21 POPULATION MOVEMENTS. (3) II — Caldwell
A study of movements and trends in population, and with respect to race, age, birth-rates, etc.

25 COLLECTIVE BEHAVIOR. (3) I — Caldwell
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 Grmaduate Students

101 SOCIAL DEPENDENCE. (3) II — 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. (3) II — Caldwell
A study of illness and accidents, mortality rates, mental and physical impairment or defectiveness, health insurance, and hospitals and similar institutions and agencies, from a sociological point of view.

103 CRIMINOLOGY. (3) I — 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.

109 THE FAMILY. (3) II — Caldwell
A study of the family both in its historical aspects and in connection with modern life.

110 CHILD WELFARE. (3) I — Caldwell
A study of present social attitudes toward the child and of methods and agencies for its care and protection.

112 COMMUNITY ORGANIZATION. (3) I
A study of the theory and of the practical results of organization among individuals and among different agencies in the community for the advancement of its life.

114a-b INDEPENDENT WORK IN SOCIOLOGY. (1) I, II — Staff
Study of some special topic subject by duly authorized students.

124 METHODS OF SOCIAL INVESTIGATION. (3) I — Caldwell
A study of the several methods of investigation and research employed in the fields of sociology and social work. Two hours lecture; two hours laboratory. Open only to properly qualified students.

Courses open only to Graduate Students

201a SOCIOLOGY SEMINAR. (2) I — Staff
Consideration mainly of methods of research and of current sociological literature.

201b SOCIOLOGY SEMINAR. (2) II — Staff
Continuation of 201a.

205 SOCIAL SYSTEMS. (2) II — Caldwell
A study of the different social systems propounded or attempted in human society from Plato's Republic down to the present.

ZOOLOGY

Professors Funkhouser, Allen and Brauer, Mr. Currie, Mr. Neel, Mr. Newell and Miss Renner

Requirements for a Major. Prerequisites: Zoology 1a and 1b. Required: Zoology 7a and 7b, 106, 108a, 108b, 114a, 114b; passing a comprehensive examination.

Requirements in Field of Concentration. Forty credits in the field of Biological Sciences, including the major work, in courses not open to freshmen.

1a GENERAL ZOOLOGY. (4) I — Funkhouser and others
A general course in zoology consisting of lectures, recitations and laboratory work. The first semester is devoted primarily to the study of invertebrates based on the dissection of types. Given every year

1b GENERAL ZOOLOGY. (4) II — Funkhouser and others
A continuation of Course 1a. The second semester is devoted primarily to a study of the vertebrates. Given every year.

3a GENERAL ENTOMOLOGY. (3) I — Allen
A beginning course in the study of insects. Gross anatomy, morphology and life histories of representatives of the most important orders. Offered 1938-39.

3b GENERAL ENTOMOLOGY. (3) II — Allen
A continuation of Course 3a. Taxonomy and entomotaxy are given special attention during the second semester. Offered 1938-39.

7a COMPARATIVE ANATOMY. (4) I — Allen
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. Comparative organology and physiology of higher phyla. Given every year.

7b COMPARATIVE ANATOMY. (4) II — Allen
Vertebrates. Systematic consideration of classes, orders and some families of Vertebrata. Comparative organology and physiology. Given every year.

9 ANIMAL ECOLOGY AND FIELD BIOLOGY. (3) II — Allen
A general course in ecology with special reference to the zoological aspects of the subject. Offered 1938-39.

10 OUTLINES OF ZOOLOGY. (3) II — Brauer
An elementary course in zoology intended primarily for students of agriculture. Special attention is given to animals of economic importance. Offered 1938-39.

11 NATURE STUDY. (3) S — Allen
A course in general nature study intended primarily for teachers who desire preparation for presenting the subject to elementary students. Intimate studies of local plants and animals based largely on field work. Offered 1938-39.

25 GENERAL ANIMAL BIOLOGY. (3) II — Brauer
A study of the animal and its relation to its biotic and its physical environments. Animal communities succession, behavior, and behavior patterns. Suited for teachers of general science, and biology in secondary schools, and for students of agriculture. Recitation, 2 hours, and laboratory, 1 hour. Offered 1938-39.

Courses open only to Upper Division and Graduate Students

101a HISTOLOGY. (3) I — Brauer
Histology of the tissues. A course in the technique of the preparation of animal tissues for microscopic study. Practice in imbedding, standing, sectioning, mounting and identification of tissues. Given every year. **PREREQUISITES: ZOOLOGY 1a-b.**

101b HISTOLOGY. (3) II — 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. Given every year. **PREREQUISITE: ZOOLOGY 101a.**

102 ORNITHOLOGY. (3) II — Funkhouser or 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. Given every year.

105 MEDICAL ENTOMOLOGY. (3) I — Allen
General parasitology; insects and other forms affecting the health and comfort of man. Identification, anatomy, life history, and etiology of representative species. Methods of control and treatment. For pre-medical and other students interested in public health. Offered 1938-39. **PREREQUISITES: ZOOLOGY 1a, b.**

106 EMBRYOLOGY. (4) II — Brauer
A general course in ontogeny. Studies in maturation, fertilization, cleavage, organogenesis and anomalies of development with laboratory work based on the chick and pig. Given every year. **PREREQUISITES: ZOOLOGY 1a-b; 101a.**

108a PRINCIPLES OF ZOOLOGY. (2) I — Funkhouser
(Evolution.) An advanced lecture course open only to juniors, seniors and graduate students on fundamental principles of biology. The first semester is devoted primarily to the study of organic evolution. Three times a week. Given every year.

108b PRINCIPLES OF ZOOLOGY. (2) II — Funkhouser
(Heredity.) A continuation of Course 108a. The second semester is devoted to the study of heredity, eugenics and animal instincts. Three times a week. Given every year.

110a-d INDEPENDENT WORK. (3) I, II Funkhouser, Allen, Brauer
Special problems for individual students who are capable of pursuing independent investigations. Given every year. **FOR ZOOLOGY MAJORS.**

112 ICHTHYOLOGY. (3) I Allen
Taxonomy of fishes with life-histories and biology of types. Fish structure and physiology. Fish culture and economic ichthyology; care of fishes, acquaria, etc. Offered 1938-39. **PREREQUISITES: ZOOLOGY 1a-b.**

114a ZOOLOGICAL SEMINAR. (1) I 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. Given every year.

114b ZOOLOGICAL SEMINAR. (1) II Staff
A continuation of Course 114a. For students in biological subjects. Given every year.

157a INVERTEBRATE ANATOMY. (4) I Allen
An advanced course on the comparative anatomy of invertebrate animals with special attention paid to phylogeny, organology and taxonomy. Given every year.

157b VETEBRATE ANATOMY. (4) II Allen
A continuation of Course 157a devoted to the Chordata laboratory techniques in vertebrate anatomy. Given every year. **PREREQUISITE: ZOOLOGY 157a.**

160 ONTOGENY. (2) I Brauer
Lectures on theories and philosophies of organismic development. Reports on the literature. Given every year. **PREREQUISITES: ZOOLOGY 1a AND 1b, AND AT LEAST ONE COURSE NUMBERED ABOVE 100.**

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 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 regularly 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 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 extension 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. Staff and library limitations have led the Bureau to confine its work largely to the economic and business problems of federal, state and local governments. Recently, for example, it has done service-research work for such agencies as the Kentucky Legislative Council, Unemployment Compensation Commission, Department of Revenue, numerous city school systems, and the Congressional Special Committee to Investigate Unemployment and Relief.

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 Tennesee Valley Authority, the Works Progress Administration, 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. The fortieth issue of the bulletin appeared in June, 1938.

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 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.

CHILD GUIDANCE SERVICE

The Child Guidance Service offered at the University, through the cooperation of the Lexington Junior League, provides expert psychological diagnosis and recommendations regarding personality difficulties and mental development for children or others brought to it by the schools, welfare organizations, and juvenile court. In this it cooperates with the medical clinics. It also provides clinical training for graduate students. The Mental Hygiene Unit of the U. S. Public Health Service which is located at the University also utilizes the psychological service of the department.

PERSONNEL BUREAU

The University Personnel Bureau 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 Bureau or are sent to it for prolonged guidance concerning their vocational, training, or personal problems. The Bureau 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.

PUBLICITY BUREAU

The Publicity Bureau 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, 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 the Publicity Bureau.

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 the University holds a two-day educational conference. At this conference 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 a variety of sectional meetings their mutual problems. Recently the Kentucky Association of Colleges and Secondary Schools has held its annual meeting at the University in connection with the conference.

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

A University Committee on Public Service Institutes 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, legislators, etc. Since 1935 the institutes for peace officers and firemen have come to be annual affairs. These institutes constitute the first attempt of the University at in-service training.

SCHOOL CONTESTS

The Department of University Extension sponsors the Kentucky Rural School Tournament which meets annually in the fall. It also sponsors the Kentucky High School Forensic League, the Kentucky High School Music Festival, the Kentucky High School Achievement Tests, and the Kentucky High School Tennis Tournament. These events are held on dates in April and May and are preceded by earlier district meetings.

PART V

THE ADMINISTRATIVE AND INSTRUCTIONAL PERSONNEL OF THE UNIVERSITY

BOARD OF TRUSTEES

1938

EX OFFICIO MEMBERS

Albert B. Chandler, Governor
Harry Peters, Superintendent of Public Instruction
Garth Ferguson, Commissioner of Agriculture

FROM THE STATE BOARD OF AGRICULTURE

John Newcomb, Bardstown
H. S. Cleveland, Franklinton
D. D. Stewart, Louisville

MEMBERS AT LARGE

Richard C. Stoll, Lexington, 1942
Robert G. Gordon, Louisville, 1942
*Joe B. Andrews, Newport, 1940
†R. Miller Holland, Owensboro, 1938
†G. C. Wells, Paintsville, 1938
John S. Cooper, Somerset, 1940
Harper Gatton, 1940

ALUMNI MEMBERS

Louis Hillenmeyer, Lexington, 1942
James Park, Lexington, 1940
Marshall Barnes, Beaver Dam, 1944

OFFICERS OF THE BOARD

Albert B. Chandler, Chairman
Richard C. Stoll, Vice Chairman
D. H. Peak, Secretary
John Skain, Treasurer

EXECUTIVE COMMITTEE

Richard C. Stoll, Chairman
Robert G. Gordon
*Joe B. Andrews
James Park
†R. Miller Holland
H. S. Cleveland
D. D. Stewart

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* Resigned March, 1938.
† Term expired 1938.

ADMINISTRATIVE OFFICERS

GENERAL

Frank LeRond McVey, Ph. D., LL. D., L. H. D., President

T. T. Jones, M. A., Ph. D., Dean of Men

Sarah Gibson Blanding, M. A., Dean of Women

David Howard Peak, LL. B., M. A., Business Agent

Leo M. Chamberlain, M. A., Ph. D., Registrar and Secretary of the Senate

Margaret Isadora King, A. B., B. S., Librarian

Maury J. Crutcher, B. M. E., Superintendent of Buildings and Grounds

Jesse E. Adams, M. A., Ph. D., Director of the Summer Session

Louis Clifton, M. A., Director of University Extension

THE COLLEGES

Paul Prentice Boyd, M. A., Ph. D. Dean of the College of Arts and Sciences

Thomas Poe Cooper, B. S., D. Sc., Dean of the College of Agriculture and Director of the Experiment Station

James Hiram Graham, C. E., Dean of the College of Engineering

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

Moses Edward Ligon, M. A., LL. D., Acting Dean of the College of Education, 1937-38

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

ALPHABETICAL LIST OF THE ADMINISTRATIVE, INSTRUCTIONAL, AND EXPERIMENT STATION STAFF*

FRANK LeROND McVEY, Ph. D., LL. D., L. H. D.,
President of the University

Adams, Estelle, M. A., Second Grade, University Elementary School

Adams, Jesse E., M. A., Ph. D., Professor of Philosophy of Education, Head of Department; Director of Summer Session

Allen, Harry Raymond, M. A., Chemist, Experiment Station

Allen, James F., A. B., Instructor in Chemistry

Allen, Richard Sweetnam, M. S., Professor of Anatomy and Physiology, Head of Department

Allen, William Ray, M. A., Ph. D., Professor of Zoology

Anderson, Charles Herbert, Professor of Engineering Design, Emeritus†

Anderson, Elizabeth, B. S., Home Economics, Versailles High School

Anderson, Grace, M. A., English, University High School

Anderson, Walter Sewell, M. A., Professor of Genetics, Emeritus, in charge of Horse Husbandry, Experiment Station

Armstrong, Watson, M. A., Instructor in Agricultural Education

Asher, Eston Jackson, M. A., Associate Professor of Psychology

Averitt, Paul, M. S., Instructor in Geology

Averitt, Saxe Dabney, M. S., Chemist, Experiment Station

Baker, Robert, M. S., Instructor in Chemistry

Baker, W. Maurice, M. A., Teacher Trainer, Distributive Occupations

Barber, Harold, Head Herdsman, Experiment Station

Barkenbus, Charles, Ph. D., Professor of Organic Chemistry

Barkley, Marie Rodes, M. A., Assistant Professor of Home Economics

Barkman, John Orville, B. S., Assistant Professor of Dairy Manufacturers; Field Agent in Manufacturers, Agricultural Extension Division

Barnett, Brinkley, B. M. E., Associate Professor of Electrical Engineering

Barnhart, C. Raymond, M. A., Instructor in Art

Barrett, William S., Major, U. S. Army, Assistant Professor of Military Science

Baute, Edward A., B. S., Field Agent in Poultry Improvement, Experiment Station

Beals, Wendell Everett, M. B. A., C. P. A. Assistant Professor of Accounting

Beard, Rhea, M. S., Fourth Grade, Elementary School

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* A degree is not listed when it is clearly implied by one following.
† Effective Sept. 1, 1938.

*Beatty, Fred B., M. S. in E. E., Assistant Professor of Electrical Engineering

Beaumont, Henry, Ph. D., Assistant Professor of Psychology

Bedford, Matthew Hume, Ph. D., Professor of Physical Chemistry

Beebe, Morris Wilson, M. S., Associate Professor of Metallurgical Engineering

Best, Harry, LL. B., Ph. D., Professor of Sociology, Head of the Department

Betz, Leslie, B. S. in Commerce, M. A., Commercial Subjects, University High School

Bigge, Adolph E., M. A., Ph. D., Professor of German, Head of Department

Blanding, Sarah Gibson, M. A., Dean of Women, Associate Professor of Political Science

Boles, Stanley Atwood, M. A., Associate Professor in Department of Athletics, Ticket Sales Manager

Bondurant, John H., M. S., Assistant in Farm Management, Experiment Station

Bortner, Charles E., M. S., Assistant Agronomist, Experiment Station

†Bosse, Joseph William, A. B. in Ed., Physical Education, University School

Boswell, James M., M. A., Instructor in Mathematics

Boyd, Paul Prentice, M. A., Ph. D., Dean, College of Arts and Sciences, Head of Department of Mathematics and Astronomy, Professor of Mathematics

Boyden, Ruth, M. A., Assistant in Home Economics, Experiment Station

Brady, George K., Ph. D., Associate Professor of English

Brauer, Alfred, M. A., Ph. D., Professor of Zoology

**Brewer, Bruce E., Lieutenant Colonel in U. S. Army, Professor of Military Science and Tactics, Head of Department

Brewer, Lawrence Condit, B. S., Assistant in Short Courses and Exhibits, Agricultural Extension Division

Brooks, Jesse Byron, B. S., Field Agent in Agricultural Engineering, Agricultural Extension Division

Brown, A. J., B. S., Assistant, Department of Markets and Rural Finance

Brown, Henry Corley, B. S., Field Agent in Junior Club Work, Agricultural Extension Division

Brown, Linwood Arnold, Pharm. D., Ph. C., Head Department of Public Service Laboratory, Experiment Station

Brown, Marion C., M. A., Assistant Professor of Mathematics

Brown, Robert L., M. S., Instructor in Chemistry

Bruner, Dorsey William, Ph. D., Assistant Bacteriologist, Department of Animal Pathology, Experiment Station

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* Resigned Jan. 1, 1938.
† Second semester, 1937-38.
**Transferred Aug. 1, 1938.

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.

Burnam, Anita, M. A., Field Agent in 4-H Club Work, Agricultural Extension Division

Byers, George Boyd, M. S., Assistant in Farm Management, Experiment Station

Bywaters, James H., Ph. D., Instructor in Animal Husbandry and Assistant in Animal Husbandry, Experiment Station

Caldwell, Lowry McReynolds, B. S., Assistant Superintendent Western Kentucky Substation

Caldwell, Morris Gilmore, M. A., Ph. D., Assistant Professor of Sociology

Calfee, Robert Klair, B. S., Assistant in Chemistry, Experiment Station

Callihan, Anne Worthington, A. B., Assistant Professor of Art

Capurso, Alexander, B. S. in Music, M. A., Part-Time Instructor in Music; University School

Card, Dana George, M. S., Assistant Professor of Agricultural Economics, Assistant in Markets, Experiment Station

Carpenter, Cecil C., M. S., Ph. D., Associate Professor of Economics

Carrell, William Joseph, C. E., Professor of Structural Engineering

Carter, Lucian Hugh, M. A., Ph. D., Professor of Economics

Caton, Stanley, B. S., Field Agent in Poultry, Agricultural Extension Division

Cass, Norma, A. B., B. S., M. A. in L. S., Part-Time Instructor in Library Science

Cawood, Charles D., M. D., C. P. H., Assistant Professor of Hygiene

Chamberlain, Leo Martin, M. A., Ph. D., Registrar and Professor of Education

Chambers, Alvin Lee, C. E., Assistant Professor of Testing Materials

Chambers, John Sharpe, M. S., M. D., Head Department of Hygiene and Public Health, Director of Dispensary

Cheek, Frank J., Jr., C. E., M. S., Professor of Sanitary Engineering

Clark, Carl M., M. S., Assistant in Markets in the Experiment Station

Clark, Thomas D., M. A., Ph. D., Assistant Professor of History

Clifton, Louis, M. A., Director of University Extension

†Cohen, Leon W., M. A., Ph. D., Professor of Mathematics

Coleman, Evelyn, B. P. E., Hygiene and Physical Education, University School

Conroy, Katherine, M. A., Sixth Grade, University Elementary School

Cooper, Thomas Poe, B. S., D. Sc., Dean College of Agriculture, Director of Experiment Station, Director Agricultural Extension Division

† On leave 1938-39.

Crawford, Albert Byron, M. A., Ph. D., Assistant, Bureau of School Service

Croft, Lysle W., M. A., Ph. D., Assistant Dean, College of Arts and Sciences, Secretary, Personnel Committee

Crouse, Charles Stevens, E. M., Professor of Metallurgy, Head of the Department of Mining and Metallurgical Engineering

Crutcher, Maury Julian, B. M. E., Superintendent of Buildings and Grounds

Cullis, Lela, Instructor in Applied Music (Organ)

Cunov, Harvey Frederick, B. S. C., Assistant Bacteriologist, Public Service Laboratory, Experiment Station

Curnutt, Vivian, M. A., Field Agent in Home Economics, Agricultural Extension Division

Curtis, Henry Ernest, M. S., Head Department of Fertilizer Control, Experiment Station

Dagley, Iva, A. B., Instructor in Applied Music (Voice)

Dantzler, Lehre Livingston, M. A., Litt. D., Professor of Philology, Head of Department of English

Dantzler, Mary, Instructor in Applied Music (Voice)

Davenport, Iris, M. A., Field Agent in Home Economics, Agricultural Extension Division

Davis, Joseph Morton, M. A., Professor of Mathematics, Special Assignment

Deen, Encil, B. S., Seed Inspector, Experiment Station

Deephouse, Laura, M. S., Assistant Professor of Home Economics

Diachun, Stephen, M. S., Assistant in Plant Pathology, Experiment Station

Didlake, Mary Legrand, M. S., Associate Entomologist and Botanist, Experiment Station

Dimmick, Graham B., Ph. D., Associate Professor of Psychology

Dimock, William Wallace, D. V. M., Professor of Veterinary Science; Head Department of Animal Pathology, Experiment Station

Doll, Edward B., M. S. in E. E., Ph. D., Assistant Professor of Electrical Engineering

*Donnelly, Howard, J. D., Lieutenant Colonel Infantry, Professor of Military Science and Tactics, Head of Department

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

Draper, Chester H., Sergeant, Instructor in Military Science

Duncan, May K., M. A., Associate Professor of Elementary Education, Head of Department

Dunn, Marvin, B. S., Laboratory Assistant, University Dispensary

Dupre, T. Huntley, Ph. D., Associate Professor of History

Eblen, Amos Hall, A. B., LL. B., S. J. D., Professor of Law

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* Reported May, 1938.

Edwards, Philip Rarick, Ph. D., Bacteriologist, Department of Animal Pathology, Experiment Station

Elliott, Norris Raymond, B. S., Professor of Landscape Architecture and Floriculture; Field Agent in Horticulture, Agricultural Extension Division

Ely, Fordyce, M. S., Professor of Dairy Husbandry; in charge of Dairying, Experiment Station

Emmert, Emery Myers, M. S., Ph. D., Assistant Professor of Horticulture, Experiment Station

Emrath, Philip Cassily, E. M., Associate Professor of Mining Engineering

Erikson, Statie Estelle, Ph. D., Professor of Home Economics; Head of Department of Home Economics, Experiment Station

Errington, Burnard J., D. V. M., Ph. D., Pathologist, Department of Animal Pathology, Experiment Station

Evans, Alvin E., M. A., Ph. D., J. D., Dean of the College of Law

**Ewing, S. Blaine, M. A., Ph. D., Assistant Professor of English

Fallis, Robert White, Assistant Bacteriologist, Public Service Laboratory, Experiment Station

Farquhar, Edward Franklin, M. A., Professor of Literature

Farrington, Olin, M. S., Administrative Assistant, Agricultural Extension Division

Farris, Elgan Brooks, C. E., Associate Professor of Applied Mechanics

Feltner, James Michael, Field Agent in 4-H Club Work, Extension Division

Fergus, Ernest Newton, Ph. D., Professor of Farm Crops, Agronomist in charge of Pastures and Forage Crops, Experiment Station

Fish, Ernest Ellsworth, M. S., Field Agent in 4-H Club Work, Agricultural Extension Division

Fisk, Edward W., Assistant Professor of Art

Fithian, George White, A. B., Instructor in English

Fitschen, Fred W., Inspector of Feeds and Fertilizers, Experiment Station

Foster, James Douglas, M. S., Inspector in charge of Creamery License Section, Experiment Station

Fowler, Frank Charles, M. A., Associate Professor of English, Director of Guignol Theatre

Fox, Henry J., A. B., LL. M., S. J. D., Instructor in Law

Freeman, Joe Frank, M. S., Assistant Agronomist, Experiment Station

Freeman, William Edwin, A. B., E. E., Assistant Dean of the College of Engineering, Head of Department of Electrical Engineering

Fried, Katherine, Seed Analyst, Experiment Station

Funkhouser, William Delbert, M. A., Ph. D., D. Sc., Professor of Zoology, Professor of Anthropology, Head Department of Zoology, Dean of the Graduate School

Gabbard, James Lawrence, M. S., Instructor in Chemistry

** Resigned July 1, 1938.

Gallaway, William Francis, M. A., Ph. D., Assistant Professor of English

Galloway, Zachary Lee, M. S., Instructor in Farm Economics; Assistant in Farm Management, Experiment Station

Gardner, John, M. A., Field Agent in Horticulture, Agricultural Extension Division

Garman, Harrison, D. Sc., Professor of Entomology, Emeritus

Garrigus, Wesley Patterson, Ph. D., Instructor in Animal Husbandry and Assistant in Animal Husbandry, Experiment Station

**Garris, Sara Gilbert, M. A., Assistant Professor of Library Science

Garside, Matthew Stanley, B. S., Field Agent in Junior 4-H Club Work, Agricultural Extension Division

Gault, Lelah Vaughn, B. S., Assistant Chemist, Experiment Station

Gillig, John T., C. E. in Arch., Associate Professor of Construction Engineering

Gillis, Ezra L, A. B., Director, Bureau of Source Materials in Higher Education, University Library

Good, Edwin Stanton, M. S., Professor of Animal Husbandry, Head Department of Animal Husbandry; Chairman Animal Industry Group, Experiment Station

Good, Richard B., A. B., Part-time Instructor in Economics

*Gorman, Thomas, A. B., LL. B., Assistant Football Coach

Graddy, Ivan Clay, M. S., Assistant State Agent, Agricultural Extension Division

Graham, James Hiram, C. E., Dean of the College of Engineering

*Grant, Russell Porter, B. S., Assistant Varsity Football Coach

Green, Todd Heron, B. S., Assistant Bacteriologist, Public Service Laboratory, Experiment Station

†Grehan, Enoch Bacon, A. B., Professor of Journalism, Head of Department

Griffin, Gerald, A. B., Publicity Agent, Department of Athletics, Part-time Instructor in Journalism

Griffin, Robert J., A. B., M. D., Associate Professor of Hygiene and Physician in Dispensary

Grimmer, Marguerite, M. A., Research Assistant in Mental Hygiene

Grundmeier, Edith, M. S., Assistant Professor of Home Economics

Guy, Hollis Preston, M. A., Assistant Professor of Commerce

Haag, William George, Jr., M. S., Curator, Museum of Anthropology and Archaeology, Instructor in Anthropology and Archaeology

Haak, Pearl, B. S., Assistant State Home Demonstration Agent, Agricultural Extension Division

Hackensmith, Charles William, M. A., Assistant Professor of Physical Education, Supervisor of Intramural Sports, Acting Head of Department, February to July, 1938

Hagman, Ida C., M. A., Extension Specialist in Home Management, Agricultural Extension Division

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* Resigned January 1, 1938.
† Died December 11, 1937.
**Resigned July 1, 1938.

Hahn, Thomas Marshall, M. S., Ph. D., Associate Professor of Physics
Haines, Ruth, M. A., Instructor in Public School Art and Elementary Education
Hall, Ellery Lewis, M. A., Assistant Professor of History
*Hamilton, William Brooks, M. S., Ph. D., Bacteriologist, Assistant Professor of Hygiene
Hammonds, Carsie, M. S., Ph. D., Professor of Agricultural Education, Head of Department
†Hansen, William Howard, A. B., LL. B., Assistant Professor of Physical Education
Harms, Amanda Helen, B. S., Assistant in Animal Nutrition, Experiment Station
Harris, Charles Edgar, B. S., Field Agent in Poultry, Agricultural Extension Division
Harris, George Moreland, M. S., Field Agent in Dairying, Agricultural Extension Division
Haun, Robert D., M. A., C. P. A., Professor of Accounting
Hawkins, Robert Dawson, M. E., Professor of Applied Mechanics
Heflin, Nora Belle, A. B., Fifth Grade, University Elementary School
Hegeman, Daniel V., Ph. D., Assistant Professor of German
Heinz, Wilbur August, M. S., Assistant Professor of Hygiene
Helton, Elizabeth, M. S., Instructor in Home Economics
Hernandez, J. Eduardo, M. S., Ph. D., Instructor in Romance Languages
Hill, Henry Harrington, Ph. D., Lecturer, College of Education
Hilton, E. P., B. S. in Agriculture, Agriculture, Picadome High School
Hoagland, Marjorie F., A. B., Assistant to the Editor, Agricultural Extension Division
Hodgkiss, William Searles, Ph. D., Assistant Chemist, Experiment Station
Holmes, Henry Bert, M. A., Ph. D., Assistant Professor of Romance Languages
Holmes, Sarah Bennett, A. B., Assistant Dean of Women
Horine, John Sherman, M. E., Associate Professor of Engineering Drawing
Horlacher, Levi Jackson, M. S., Professor of Animal Husbandry; Assistant to Dean, College of Agriculture
‡Horsfield, Margaret Bennett, M. A., Diplome d'Etudes Francaises de l'Universite de Montpellier, 1928, Assistant Professor of Romance Languages
Howard, Noel Judson, B. S., Inspector Creamery License Section, Experiment Station
Hoy, Henry S., Staff Sergeant, Instructor in Military Science
Huddleston, Joseph J., A. B., Instructor in Physical Education

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* On leave 1937-38.
† On leave 1937-38, 1938-39.
‡ On leave 1938-39.

Hull, Floyd Edgar, D. V. M., Associate Professor of Veterinary Science; Assistant Veterinarian, Experiment Station

Humphrey, James Ellison, B. S., Field Agent in Poultry, Extension Division

Hunt, Russell Aubrey, M. S., Field Agent in Tobacco, Agricultural Extension Division

Imlay, Florence, M. A., Field Agent in Home Economics, Agricultural Extension Division

Insko, Wyatt Marion, Jr., M. S., Assistant in Poultry, Experiment Station

Jackson, William E., Jr., B. For., F. Engr., Field Agent in Forestry, Extension Division

Jeffrey, Robert N., Ph. D., Plant Physiologist, 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., Research Assistant Entomologist and Botanist, Experiment Station

John, Fritz, Ph. D., Assistant Professor of Mathematics

Johnson, Edwin A., M. A., Field Agent in Markets, Agricultural Extension Division

Johnson, Edward Marshall, M. S., Ph. D., Assistant Plant Pathologist, Experiment Station

Johnson, Hima, M. A., Fourth Grade, University Elementary School

Johnson, James Richard, B. M. E., Professor of Applied Mechanics, Emeritus*

Johnson, Robert Foster, A. B., Assistant, Bureau of School Service

Johnstone, William C., B. S., 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 Anicent Languages, Head of the Department; Dean of Men

Jordon, Joe, A. B., Part-time Instructor in Journalism

Karraker, Perry Elmer, M. A., Professor of Soils; Agronomist in Soil Technology, Experiment Station

Karsner, Milo G., M. A., Instructor in Physical Education

Keffer, Leroy, M. S., Chemistry and Mathematics, University High School

Keller, Wayne Hicks, M. S., Ph. D., Instructor in Chemistry

Kelly, James Byron, B. S. in A. E., B. S. in M. E., Professor of Agricultural Engineering

Kemper, Durbin Collins, M. A., Science, University High School

Kenney, Ralph, B. S., Field Agent in Agronomy, Agricultural Extension Division

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* Effective September 1, 1938.

Kilpatrick, Elmer James, M. S., Assistant State Agent, Agricultural Extension Division

King, Margaret Isadora, A. B., B. S., University Librarian, Part-Time Instructor in Library Science

King, Mildred, M. A., Kindergarten, University Elementary School

Kinker, Elmer O., Staff Sergeant, Instructor in Military Science

Kinney, Edmund J., B. S., Professor of Farm Crops; Agronomist in charge of Tobacco and Cereal Investigations, 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., Associate Professor of English

Koppius, Otto Townsend, Ph. D., Professor of Physics

Krewson, Charles Fleming, M. S., Instructor in Chemistry

Kuiper, John, M. A., Professor of Philosophy of Philosophy, Head of Department

Lacy, Edith, M. A., Field Agent in Home Economics, Agricultural Extension Division

de Lafforest, Marie Antonette, Part-Time Instructor in Romance Languages

Lampert, Mrs. Carl Albert, Instructor in Applied Music (Piano)

Lampert, Carl Albert, B. M., Professor of Music, Head of the Department

Langford, Gerald, M. A., Instructor in English

*Latimer, Claiborne Green, Ph. D., Professor of Mathematics

Latzke, Verna, M. S., Instructor in Home Economics

Lawrence, Armon Jay, M. A., Associate Professor of Commerce and Education and Head of Department of Business Education

LeStourgeon, Flora Elizabeth, Ph. D., Associate Professor of Mathematics

Lewis, Chester Arthur, B. S., Assistant Editor, Agricultural Extension Division

Lewis, John, A. B., B. S. in Music, Instructor in Music, Director University Band

Lewis, Mildred, B. S. in Music, Part-Time Instructor in Music

Lickert, Raymond Henry, B. S., Assistant State Agent, Agricultural Extension Division

Ligon, Moses Edward, M. A., LL. D., Professor of Secondary Education, Head of Department; Director of Placement Bureau; Acting Dean of the College of Education, 1937-38

Link, Harold Forest, M. S., Assistant State Agent, Agricultural Extension Division

Logan, Lulie Elizabeth, A. B., Assistant State Home Demonstration Agent, Agricultural Extension Division

Lowry, Samuel Jechonias, B. S., Superintendent Western Kentucky Experiment Substation

Lunde, Robert Gerhard, M. A., Assistant Professor of History

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* On leave second semester 1937-38.

McBrayer, Paul, A. B., Part-Time Instructor in Department of Athletics, Assistant Basketball Coach
McCarthy, Mary Louise, A. B. in Education, Assistant, University Elementary School
McDaniel, Alice Marrs, A. B., Seed Analyst, Experiment Station
McDaniel, Grace, B. S. in H. E., Home Economics, Bryan Station High School
McFarlan, Arthur Crane, Ph. D., Professor of Geology, Head of the Department
McFarland, Frank T., Ph. D., Professor of Botany, Head of the Department
McHargue, James Spencer, Ph. D., D. Sc., Chemist; Head of Department of Chemistry, Experiment Station
McInteer, Berthus Boston, M. S., Ph. D., Associate Professor of Botany
McIntyre, Robson Duncan, M. S. in Commerce, Professor of Marketing and Salesmanship
McKenney, Garnett Jennings, B. S., Field Agent in Junior 4-H Club Work, Agricultural Extension Division
McKitrick, John Leslie, B. S., Field Agent in Agricultural Engineering and Soil Management, Agricultural Extension Division
McLaughlin, Marguerite, A. B., Assistant Professor of Journalism
Magill, Wilbur William, B. S., Field Agent in Horticulture, Agricultural Extension Division
Mahan, Charles Alfred, M. S., State Agent, Agricultural Extension Division
Mangelsen, Fred, Supervisor of Machine Shop
Mann, Frank, Trainer, Department of Athletics
Manning, John Walker, M. A., Ph. D., Professor of Political Science; Director, Bureau Government Research; Acting Head of Department, First Semester, 1937-38
Martin, James Henderson, Ph. G., Assistant Chemist, Public Service Laboratory, Experiment Station
*Martin, James Walter, M. A., Professor of Economics, Director of Bureau of Business Research
Martin, John, M. S., Instructor in Chemistry
Martin, Joseph Holmes, M. S., Ph. D., Professor of Poultry Husbandry, Experiment Station
Mason, Lela, M. A., Music, University School
Mathews, Robert, Inspector, Feeds and Fertilizer, Experiment Station
Maxson, Ralph Nelson, Ph. D., Professor of Inorganic Chemistry, Head of the Department
Maxwell, E. S., M. D., Part-Time Associate Professor of Bacteriology
May, Augustus Noah, B. S., Professor of Industrial Education, Head of Department; State Supervisor of Trade and Industrial Education
May, James Warren, M. E., Associate Professor of Heating and Ventilating Engineering

* Part-time 1937-38, 1938-39.

May, Martha Adams, A. B. in Ed., Fifth Grade, Elementary School
Meader, Arthur Lloyd, B. A., Assistant Chemist, Public Service Laboratory, Experiment Station
Meece, Leonard E., M. A., Ph. D., Assistant, Bureau of School Service
Melcher, Columbus Rudolph, M. A., LL. B., LL. D., Professor of German Language and Literature, Special Assignment
†Metzger, Herbert J., D. V. M., Assistant Animal Pathologist, Experiment Station
Meyer, A. J., B. S. in M. E., Professor of Aeronautical and Mechanical Engineering
Miller, Fannie Herman, M. A., Speech and Dramatics, University High School
Miller, Harold Franklin, B. S., Assistant in Agronomy, Experiment Station
Miller, Richard Clarence, M. S., Field Agent in Animal Husbandry, Agricultural Extension Division
Miner, James Burt, B. S., LL. B., M. S., Ph. D., Professor of Psychology, Head of the Department; Director of University Personnel Bureau
Mitchell, John Richard, A. B., Assistant Professor of Chemistry
Mitchell, John Stapp, M. A., Mathematics, University High School
Molloy, Jeannette, M. A., Fifth Grade University Elementary School
Monroe, Zelma, A. B., B. S., Assistant State Home Demonstration Agent, Agricultural Extension Division
Montgomery, Mary King, B. S., Instructor in Physical Education
Moore, Henry B., B. S. in Commerce, M. B. A., Associate Professor of Economics
Moreland, Roy, A. B., LL. B., J. D., Professor of Law
**Morrison, Henry Bartlett, M. S., Assistant Professor of Dairying; Assistant in Dairying, Experiment Station
Morrow, Eugene E., A. B., Major U. S. Army, Assistant Professor of Military Science
Morton, Margaret, A. B., Seed Analyst, Experiment Station
Moseley, Frank O'Rear, A. B., 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, A. B., Instructor in Department of Athletics, Assistant Football Coach
Neel, Sam, A. B., Assistant, Bureau of Government Research
Nelson, Vincent E., A. B., Assistant Professor of Geology
Nesius, Ernest J., M. S., Assistant in Farm Management, Experiment Station
Newbury, Edward, M. A., Assistant Professor of Psychology

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* Resigned June 30, 1937.
† Resigned October 1, 1937.
** On leave October 20, 1938-June 26, 1939.

Nicholls, William Durrett, M. S., Ph. D., Professor of Farm Management; Head of 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

Nutter, John William, Superintendent of Dairy Farm, Experiment Station

O'Bannon, Lester S., B. M. E., Research Engineer, Experiment Station

Offutt, E. Bradley, M. A., Assistant Chemist, Experiment Station

Olney, Albert Jackson, M. H., M. S., Professor of Horticllture, Head of the Department, Experiment Station

Oyler, Merton Dale, M. S., Assistant Professor of Rural Life Studies; Assistant in Rural Life Studies Experiment Station

Palmer, Edgar Zavitz, Ph. D., Professor of Economics, Assistant Director of the Bureau of Business Research

Palmer, Vivien Marie, M. A., Ph. D., Assistant Professor of Social Work

*Pardue, Louis Arthur, M. S., Ph. D., Associate Professor of Physics

Parker, Ethel Lee, M. A., Professor of Home Economics, Head of Department

†Patrick, Wellington, M. A., Ph. D., Professor of History of Education

Peak, David Howard, LL. B., M. A., Business Agent

Peck, Anna Browning, M. A., Social Science, University High School

Peck, Joseph Y., Assistant, Johnston Solar Laboratory

Peerson, Nelle, M. A., First Grade, University Elementary School

Pence, Merry Lewis, M. S., Professor of Physics, Special Assignment

Pence, Sallie Elizabeth, M. A., Ph. D., Assistant Professor of Mathematics

Perkins, Fred, Staff Sergeant, Instructor in Military Science and Tactics

Peter, Alfred Meredith, M. S., D. Sc., Professor of Soil Technology, Emeritus

Phillips, Florence, A. B., Technician, Department of Animal Pathology, Experiment Station

Phillippe, Paul M., M. S., Instructor in Agronomy, Experiment Station

*Phillips, Carroll David, M. S., Assistant in Marketing, Experiment Station

Pittman, William H., A. B., LL. B., Professor of Law

‡Pinney, Oliver H., M. D., Associate Professor of Hygiene and Physician in Dispensary (half-time)

*Plummer, Niel, M. A., Assistant Professor of Journalism, Acting Head of Department from December 14, 1937, to July 1, 1938

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* On leave 1938-39.
† On leave 1937-38.
‡ On leave April, 1937-September, 1938.

Polk, Tasker Peter, D. V. S., Field Agent in Veterinary Science, Agricultural Extension Division

Portmann, Victor R., B. J., Assistant Professor of Journalism

**Potter, Merwin Elwood, M. A., Professor of Physical Education, Head of the Department

Poundstone, Bruce, M. S., Field Agent, Farm Management, Agricultural Extension Division

Price, Hugh Bruce, Ph. D., Professor of Agricultural Economics; Head of the Department of Markets and Rural Finance, Experiment Station

Price, Walter Allen, M. S., Professor of Entomology; Head of the Department of Entomology and Botany, Experiment Station

Proctor, Roy Estes, M. S., Field Agent, Farm Management, Agricultural Extension Division

Pryor, Joseph William, M. D., Professor of Anatomy and Physiology, Special Assignment

Ramsay, Bertrand Pettus, M. S., Ph. D., Assistant Professor of Physics

Randall, Frank Hall, LL. B., S. J. D., Professor of Law

Randolph, George N., Major Inf., U. S. Army, Assistant Professor of Military Science

Rannells, Edward Warder, B. A., Professor of Art, Head of the Department

Ratliff, Margaret M., M. A., Ph. D., Instructor in Psychology

*Rees, Elijah Laytham, C. E., M. A., Professor of Mathematics

Rhoads, McHenry, M. A., Ph. M., LL. D., Professor of Education, Emeritus

Rhoads, Wayland, M. S., Field Agent in Animal Husbandry, Agricultural Extension Division

Richardson, John Shelby, Mus. B., Instructor in Applied Music (Piano)

Ringrose, Arthur T., Ph. D., Instructor in Poultry Husbandry

Ritcher, Paul Osborn, M. A., Ph. D., Assistant Entomologist, Experiment Station

Robbins, Earl A., B. S., Agriculture, Bryan Station High School

Roberts, George, M. S., Professor of Agronomy; Assistant Dean, College of Agriculture; Head of the Department of Agronomy, Experiment Station

Roberts, John Bissell, M. S., Assistant in Markets, Experiment Station

Roberts, William Lewis, M. A., J. D., S. J. D., Professor of Law

Robinson, Lewis Cass, M. S., Ph. D., Associate Professor of Geology

Rogers, Lieuen Moss, M. D., Consultant in Mental Hygiene

Rood, Elma, R. N., M. A., Assistant Professor of Hygiene, Lecturer in Public Health Nursing

Rosenberg, James Joseph, B. S., Microscopist in Field Control, Experiment Station

Ross, Clay Campbell, Ph. D., Professor of Educational Psychology, Head of Department

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** On leave 1937-38.
* On leave 1937-38; Resigned July 1, 1938.

Rouse, William Leonard, M. S., Agricultural Conservation Office, Agricultural Adjustment Administration
Rupert, Joe, A. B., Assistant Professor in Department of Athletics, Head Track Coach, Assistant Football Coach
Rupp, Adolph F., M. A., Professor in Department of Athletics, Head Coach of Varsity Basketball
Ryland, Hobart, M. A., Docteur de l'Universite', Professor of Romance Languages, Head of the Department
Sandell, Jean, M. S., Instructor in Home Economics
Saunier, Stephen Thaddeus, Supervisor of Metallurgical Laboratory
Scherago, Morris, B. S., D. V. M., Professor of Bacteriology, Head of the Department
*Schick, Blaine Wilhelm, M. A., Assistant Professor of Romance Languages
Scudder, Irvine C., Major U. S. Army, Assistant Professor of Military Science
Seay, Maurice F., M. A., Professor of Educational Administration, Head of Department; Director, Bureau of School Service
Seeds, Frances, M. S., Assistant Professor of Home Economics
Sellards, Henry Grady, B. S., Field Agent in Animal Husbandry, Agricultural Extension Division
Semmons, Mildred, B. S., M. A. in L. S., Professor of Library Science, Head of the Department
Server, Alberta Wilson, M. A., Diploma de Suficiencia, Centro de Estudios, historicos de Madrid, Assistant Professor of Romance Languages
Shacklette, Hansford T., M. S., Part-Time Instructor in Botany
Shannon, Jasper B., Ph. D., Associate Professor of Political Science
Shaver, Robert Ezekiel, C. E., Associate Professor of Civil Engineering
Shedd, Oliver March, M. S., Research Chemist, Department of Chemistry, Experiment Station
Sherwood, Thomas C., M. A., Ph. D., Associate Professor of Anatomy and Physiology
Shipman, Martha Virginia, M. A., English and Social Science, University High School
Shively, Bernie, M. A., Professor in Department of Athletics, Head of Department; Director of Intercollegiate Athletics†
Short, John Anderson, LL. B., Master Sergt. U. S. Army, Instructor in Military Science
Smith, Cleo Dawson, M. A., Instructor in English
Snodgrass, Grace L., A. B., Librarian, Experiment Station
South, Dudley Eugene, M. A., Assistant Professor of Mathematics and Astronomy
South, Frances, Instructor in Applied Music (Voice)
Spears, Howell Davis, M. S., Chemist, Feed Control, Experiment Station

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* On leave 1937-38.
† Effective February 24, 1938.

Spicer, Robert W., M. E., Assistant Professor of Thermodynamics
Spickard, Ronella, M. S., Associate Professor of Home Economics Education
Starnes, W. Gayle, M. A., Assistant Professor in the Department of University Extension, Assistant Director of University Extension
Stewart, Olus Jesse, M. S., Ph. D., Associate Professor of Chemistry
Stout, Florence Offutt, Professor of Physical Education
†Sullivan, Rodman, M. A., Associate Professor of Economics
Sulzer, Elmer Griffith, A. B., Director of Publicity Bureau
Sutherland, William Robert, A. B., Assistant Professor of English
Tabb, William Roy, B. S. in Agr., Instructor in Agricultural Education
Tarnapol, Lester, M. S., D. Sc. in Met., Assistant Professor of Metallurgy
Taylor, Jessie Terry, Seed Analyst, Experiment Station
**Taylor, William Septimus, M. S., Ph. D., Professor of Education, Dean of the College of Education
Terrell, Daniel Voiers, C. E., Professor of Civil Engineering, Head of the Department
Terrell, Willis Granville, Inspector of Feed and Fertilizer, Experiment Station
Terry, George Silvester, M. A., Bacteriologist, Public Service Laboratory, Experiment Station
Tharp, Max H., B. S., Assistant in Farm Management, Experiment Station
Thomas, Frank Carlton, A. B., M. D., Part-Time Physician, University Dispensary
Thompson, Eugene, A. B., Part-Time Instructor in Romance Languages
Threlkeld, Dorothy, B. S., in H. E., Field Agent in Junior Club Work, Agricultural Extension Division
Thurman, Gordon Owen, Supervisor of Mechanical and Electrical Engineering Laboratories
Tilson, Howard Gilbert, M. S., Nursery Inspector, Experiment Station
Todd, Jarvis, M. A., Assistant Professor of Physics
Tolman, William A., M. A., Assistant Professor of Economics
Topham, Laura, M. A., C. E. F., French, University School, Part-Time Instructor in Romance Languages
Townsend, Lee H., Ph. D., Instructor in Agricultural Entomology
Trimble, Ernest G., Ph. D., Associate Professor of Political Science
Triplett, Austin, Major U. S. Army, Assistant Professor of Military Science
Tucker, Willis C., M. A., Assistant Professor of Journalism; Acting Head of Department for 1938-39
Turner, Job Darbin, B. Ped., LL. B., Head of the Department of Feed Control, Experiment Station
Tuthill, Edward, Ph. D., Professor of History, Head of the Department

† On leave 1938-39.
** On leave 1937-38.

Tuttle, Franklin Elliott, M. A., Ph. D., Professor of Chemistry, Special Assignment

Ubben, John H., A. B., Instructor in German

Valleau, William Dorney, Ph. D., Professor of Plant Pathology; Pathologist, Experiment Station

*Vandenbosch, Amry, Ph. D., Professor of Political Science, Head of Department

Van de Wall, Willem, Mus. D., Professor of Musical Education

Vaughn, Erle Cleveland, A. B., Field Agent in Improved Seed Production, Agricultural Extension Division

Vaughn, Mary Belle, M. S., Home Economics, University High School

Vennes, Leon A., M. S., Field Agent in Markets, Agricultural Extension Division

Vestermark, Seymour D., B. S., M. D., Consultant in Mental Hygiene

Waltman, Clair Smith, M. S., Assistant Professor of Horticulture; Assistant in Horticulture, Experiment Station

*Warburton, F. W., Ph. D., Associate Professor of Physics

Ward, William S., M. A., Instructor in English

Warren, Margaret, A. B., Instructor in Physical Education

Watson, Noel, B. S., Field Agent in Cream Grading, Experiment Station

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; Professor of Archaeology, Head of the Department of Anthropology and Archaeology

Weeks, Martin E., Ph. D., Assistant in Soils, Department of Agronomy, Experiment Station

Welch, Earl George, B. S., Field Agent in Agricultural Engineering, Agricultural Extension Division

Weldon, Myrtle, M. A., State Leader of Home Demonstration Agents, Agricultural Extension Division

West, Mary Lucille, M. A., Languages, University High School

West, Perry, M. E., Professor of Steam and Power Engineering, Head of the Department of Mechanical Engineering

†Whitaker, Paul K., M. A., Assistant Professor of German

White, Martin Marshall, M. A., Ph. D., Professor of Psychology

White, Helen McMichael, B. S., Assistant State Home Demonstration Agent, Agricultural Extension Division

Whitehouse, James William, M. S., State Leader 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., Forester, Robinson Substation

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* On leave first semester 1937-38.
† On leave 1937-38.

Wilford, Edward James, M. S., Associate Professor of Animal Husbandry, in Charge Meats Laboratory; Assistant in Animal Husbandry, Experiment Station

Williams, John Davis, M. A., Associate Professor of Education; Director, University School

Willson, Louise, M. A., Third Grade, University Elementary School

Wilson, William Clark, B. S., Assistant State Agent, Agricultural Extension Division

Wood, Lucy Gragg, A. B., B. S., Librarian, University School; Part-Time Instructor in Library Science

*Woods, Ralph Hicks, M. A., Ph. D., Associate Professor of Agricultural Education

Wrather, Stephen Elvis, M. S., Assistant in Markets, Experiment Station

Wyatt, Charles E., B. S., Assistant in Soil Survey, Experiment Station

†Wynne, Chester Allen, LL. B., Director of Athletics, Head Football Coach

Yates, Lawrence, M. A., Assistant Professor of English

Young, David M., M. S., Assistant Professor of Geology; Curator, Museum

Young, Earl Robert, B. S., Instructor in Agricultural Engineering

Zembrod, Alfred Charles, M. A., Professor of Romance Languages and Literature, Special Assignment

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* On leave 1937-38.
† Resigned March 1, 1938.

ADMINISTRATIVE, SECRETARIAL, AND CLERICAL ORGANIZATION

OFFICE OF THE PRESIDENT

Frank LeRond McVey, Ph. D., LL. D., L. H. D., President of the University
Jane J. Nichols, Secretary
Anne Crenshaw Phelps, A. B., Stenographer

COLLEGE OF ARTS AND SCIENCES

Paul Prentice Boyd, M. A., Ph. D., Dean
Lysle Warrick Croft, M. A., Ph. D., Assistant Dean
Idie Lee Turner, B. S., Secretary
Willena Duncan, Stenographer

Willie Hughes Adams, A. B., Librarian-Secretary-Reviser, Department of Library Science
Greenwood Cocanougher, Secretary, Department of Athletics
Mary Elizabeth Doyle, A. B., Secretary to the Assistant Dean
Mary Dunne, A. B., Secretary, Department of Military Science
Hope Sullivan Haag, Clerk, Department of Geology
Lillian Holmes, A. B., Secretary, Bureau of Government Research
Mildred K. Jones, Part-Time Secretary, Department of Psychology
Judith Key, A. B., Secretary, Department of Psychology
Edith Love, Secretary, Department of Chemistry
W. D. McDaniel, Military Storekeeper
Ellen Minihan, A. B., Secretary, Department of Physics
Ruby H. Murphy, Secretary, Department of Music
Margaret O'Connell, A. B., Secretary, Department of Physical Education
Virginia Robinson, A. B., Part-Time Secretary, Department of Journalism
Alice Vance, A. B., Secretary, Department of English (Part-Time)
Mary Gunn Webb, Secretary, Department of Art (Part-Time)

COLLEGE OF AGRICULTURE, EXPERIMENT STATION AND EXTENSION DIVISION

Thomas Poe Cooper, B. S., D. Sc., Dean and Director
George Roberts, M. S., Assistant Dean
Levi Jackson Horlacher, M. S., Assistant to the Dean
Oleva L. Ginocchio, Secretary to the Dean and Director
Susan Kidd Slaughter, Secretary to the Director of Extension
Elizabeth Sloan, A. B., Stenographer

Clerical Staff, Teaching Division

Sophia Campbell
Mary Lou Guyn

Clerical Staff, Experiment Station

Katherine Bascom
Edna Brumagen, A. B.
Ethel V. T. Caswell
Jessie Frazer Caswell
†Garnett Rainey Chase, A. B.
Alvis Derrickson
Mary Dolan
Katherine E. Fried
Frances Fugazzi
Sarah B. Gentry, A. B.
Lucille Graves
Frances Irvin, A. B.
Nellie Mae Lawrence
Anne McCullough
Mariana Lancaster Banta, A. B.
Fanny Bush Merritt
Margaret G. Morris
Jane Dudley Murray, A. B.
Loula Florence Pharis
Mattie Ramsey
Roxie Robinson Mathews
Betty Roser
Anna Wallis, A. B.
Elizabeth Wyatt

Clerical Staff, Extension Division

Dora Baker
Lucille Bush
Katherine Fried
Adeleen Gilbert
Virginia Hartin
Marietta Gerard Meeks
Hazel Moores
Margaret C. Ryan
Anita Sallee
Viollette Shankland
Virginia Singleton
Mary E. Stilwell
Ethel Adams Warner

COLLEGE OF ENGINEERING

James Hiram Graham, C. E., Dean
William Edwin Freeman, A. B., E. E., Assistant Dean
Ethel Jelley, Secretary
Martha Barton, Clerk
Elise Adele Bureau, A. B., B. S. in M. E., Clerk, Administrative Offices
Cecil McConathy, Clerk
Beatrice R. Skidmore, Clerk, Administrative Offices

COLLEGE OF LAW

Alvin E. Evans, M. A., Ph. D., J. D., Dean
Dorothy Salmon, B. S., Secretary

COLLEGE OF EDUCATION

William Septimus Taylor, M. A., Ph. D., Dean
Lucy Blakemore Gardner, M. A., Secretary
Anne Lewis Wilson, B. S. in Com., Stenographer

† Resigned June 1, 1938.

Cassie Pace Bobbitt, Secretary, Bureau of School Service
Sara Catherine Bolling, A. B., Office of Director of University School
Cynthia Dagley, Department of Distributive Occupations and Industrial Education
Kadell Dorn, Department of Elementary Education
Mae Fawbush, Bureau of School Service
Katherine Hammack, A. B., Secretary, Placement Bureau
Willa Belle Hamilton, B. S., Department of Home Economics Education
Mary Kerr, A. B., Secretary, Office of Director of University School
Ruthe Evelyn Maxedon, A. B., Stenographer, Bureau of School Service
Mary Kerr, A. B., Secretary, Office of Director of University School
Marie Dickerson Stephenson, Secretary, Department of Vocational Education

COLLEGE OF COMMERCE

Edward Wiest, M. A., Ph. D., Dean
Jane Earle Middelton, A. B., Secretary

Virginia Dibler Thorn, A. B., Bureau of Business Research

THE SUMMER SESSION

Jesse E. Adams, M. A., Ph. D., Director
Billy Whitlow, A. B., Secretary of the Summer Session and of the Departments of Educational Psychology and Philosophy of Education
Edna Kirk Bosse, Clerk

DEPARTMENT OF UNIVERSITY EXTENSION

Louis Clifton, M. A., Director
W. Gayle Starnes, M. A., Assistant Director
Maude Ward Lafferty, Secretary, Division of Women's Club Work
Mildred Lewis, B. S. in Music, Instructor in Music
Effie Cox Starns, M. A., Instructor
Bethel Lipps, Secretary
Beatrice Jacobs, Secretary
Eva F. Downing, A. B., Secretary
Mary Rees Land, A. B., Secretary

OFFICE OF DEAN OF MEN

Theodore Tolman Jones, M. A., Ph. D., Dean of Men
Bess Parry, A. B., Secretary

OFFICE OF DEAN OF WOMEN

Sarah Gibson Blanding, M. A., Dean
Sarah Bennett Holmes, A. B., Assistant Dean
Anita Gardner, Secretary

OFFICE OF THE BUSINESS AGENT

David Howard Peak, LL. B., M. A., Business Agent
Linn Hemingway McCain, Accountant
Minnie Pherigo, Order Clerk
*Mabel Lewis Hanks, Assistant Accountant
Ruth Earnest, Voucher Clerk
Emma G. Merrell, Ledger Clerk
Margaret Lewis, Cashier
Virginia Baxter Earnest, Clerk
Coleman Smith, B. S. in Com., Assistant Accountant
Frances Brack, Clerk

OFFICE OF THE REGISTRAR

Leo M. Chamberlain, M. A., Ph. D., Registrar
Maple Moores, Assistant Registrar
Dorothy Linville, A. B., in charge of admissions
Jessie Wilson, M. A., in charge of recording
Bessie O. Cleveland, Transcript Clerk
Ruth Trumbo, Clerk and Stenographer
Sarah Utterback, M. A., Recording Clerk
Bessie Clay Farris, A. B., Clerk and Stenographer
Lucille Newton, A. B., Clerk

OFFICE OF SUPERINTENDENT OF BUILDINGS AND GROUNDS

Maury Julian Crutcher, B. M. E., Superintendent
Thomas D. Boyd, B. S., Assistant Superintendent
Laura Shade, Secretary
Claude Dickerson, Steamfitting and Plumbing Foreman
G. C. Jones, Carpenter Foreman
L. D. Kitchen, Electrician
Howard Jones, Custodian, Men's Gymnasium
John Heckler, Supervisor of Janitors
Julius Rominger, Gardner and Labor Foreman
H. O. Bradshaw, Truck Driver and Mechanic

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* On leave March 1-September 1, 1938.

LIBRARIES

Margaret Isadora King, A. B., B. S., University Librarian
Bessie M. Boughton, A. B., B. S. in L. S., First Assistant Cataloger
Jacqueline Page Bull, A. B., Assistant Reference Librarian
Norma Beatrice Cass, M. A. in L. S., Reference Librarian
Daisy T. Croft, A. B., Head of Circulation Department
Margaret Durham, B. S., Secretary,
Mary Eliabeth Hanson, A. B., B. S. in L. S., Periodical Librarian
Margery P. Hornsby, B. L. E., A. B., Head, Order Department
Catherine Lynn Katterjohn, A. B., B. S. in L. S., Assistant Cataloger
Maona ~~Fern~~ Shinkle, A. B., Assistant Cataloger
Ellen B. Stutsman, A. B., Head Cataloger
*Mary Honey Sullivan, B. S. in Com., Assistant Order Department
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
Clara W. White, Librarian in charge of Educational Collection
Annette Zink Davis, A. B., LL. B., Law Librarian
Grace L. Snodgrass, A. B., Librarian, Experiment Station
Lucy Gragg Wood, A. B., B. S., Librarian Training School Library
~~Mildred Robards, A. B., LL. B., Acting Law Librarian First Semester, 1937-38~~

UNIVERSITY DISPENSARY

John S. Chambers, M. S., M. D., Director
*Oliver H. Pinney, M. D., Associate Director
F. C. Thomas, A. B., M. D., Physician
George Fergison Doyle, A. B., M. D., F. A. C. S., Physician
Robert J. Griffin, A. B., M. D., Associate Professor
Wilbur A. Heinz, M. S., Assistant Professor
Elma Rood, R. N., M. A., Assistant Professor of Hygiene and Public Health and Director of Public Health Nursing
†Elizabeth Desha, Registered Nurse
Lillie Davis, Registered Nurse
W. Brooks Hamilton, M. S., Ph. D., Bacteriologist and Assistant Professor
Katherine W. Owens, Secretary

STENOGRAPHIC BUREAU

Mary Johnson, Head
Mabel Thacker Allen, Stenographer
Jessie Lee Jones, Stenographer
‡Mildred Morris, A. B., Stenographer
**Katherine W. Winfree, Mimeograph Operator

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* On leave, April, 1937-September, 1938.
† Resigned July 1, 1938.
‡ Resigned March 1, 1938.
** Resigned June 30, 1938.

POST OFFICE

Carrie Bean, Postmaster
Eloise Gray Webb, Assistant Postmaster

CAMPUS BOOK STORE

James E. Morris, A. B., Manager
Lloyd Q. Mautz, Assistant Manager
Bess Dudley Mayes, Secretary
Elizabeth Moores, Clerk

UNIVERSITY Y. M. C. A.

Bart Nixon Peak, A. B., LL. B., Secretary
Martha Huber, Assistant

UNIVERSITY Y. W. C. A.

Elizabeth Cowan, M. A., Secretary

RESIDENCE HALLS

†Marylee Collins, B. S., Social Director of Residence Halls for Women
Eda M. Giles, Manager of Residence Halls for Women
Margaret Chenault Crutcher, Men's Residence Halls
Ethel R. Lebus, Student Union Building
Jeannette Scudder, B. S., Social Director for 1938-39
Jennie B. Clay, Postmistress

ALUMNI ASSOCIATION

Robert K. Salyers, A. B., Secretary
Ethel Smoot Rix, A. B. in Ed., Assistant Secretary

PUBLICITY BUREAU

Elmer G. Sulzer, A. B., Director
Helen King, A. B., Assistant
Lucile Thornton, A. B., Assistant

BUREAU OF SOURCE MATERIALS IN HIGHER EDUCATION

Ezra L Gillis, A. B., Director
Mary Hester Cooper, M. A., Assistant

---

† Resigned August 1, 1938.

MENTAL HYGIENE SURVEY

(U. S. Public Health Service)

Lieuen Moss Rogers, M. D., Consultant in Mental Hygiene
Seymour D. Vestermark, B. S., M. D., Consultant in Mental Hygiene
Charles Limburg, M. A., Research Assistant
Marguerite Grimmer, M. A., Research Assistant
Celeste Everley, Stenographer
Mildred Lebzelter, Stenographer

KENTUCKY KERNEL

James S. Shropshire, B. S. in Agr., Director of Student Publications

STUDENT UNION BUILDING

James S. Shropshire, B. S. in Agr., Director
Felix Murray, B. S. in Com., Assistant to the Director
Ethel R. LeBus, Hostess

FACULTY ORGANIZATIONS AND COMMITTEES

THE UNIVERSITY SENATE

The Senate consists of the President, the Deans of the various Colleges, the Registrar, the Director of University Extension, the Dean of Men, the Dean of Women, Professors, Associate Professors, Assistant Professors, the Business Agent, and the Librarian.

THE UNIVERSITY COUNCIL

The Council consists of the President (Chairman), the Deans of the Colleges, the Dean of the Graduate School, the Dean of Men, the Dean of Women, the Registrar (Secretary ex officio) together with four members elected by the University Senate.

THE ASSEMBLY

The University Assembly consists of all officers of instruction of the rank of instructor and above, the Directors of Divisions and Stations, those engaged in state service work under the direction of the President, the Registrar, the Librarian, the Business Agent, and such other administrative officers as shall be designated by the President or Senate or Trustees. It meets near the beginning of each semester, at the call of the President, or at any time upon the written request of ten members. The Assembly may formulate its attitude upon any matter affecting the institution and may make recommendation to the Senate, the Board of Trustees, the President, or the Council.

BOARD OF CONTROL—RESIDENCE HALLS FOR WOMEN

Dean Sarah Blanding (Chairman), Mrs. P. P. Boyd, Mrs. Charles J. Smith.

COMMITTEES OF THE SENATE*

1. **Accredited Relations**
   P. P. Boyd, Leo M. Chamberlain, Alvin Evans, W. D. Funkhouser, W. S. Taylor, Edward Wiest.

2. **Advisory Athletic Council**
   W. D. Funkhouser, Frank Murray, Marcus Redwine, D. V. Terrell, J. D. Williams, 2 Student Members.

3. **Auditing Committee for Student Enterprises**
   H. H. Downing, H. E. Curtis, Robert Haun, D. H. Peak.

* The President is an ex officio member of all committees. In each case the name of the chairman is listed first.

4. **Commencement Exercises**
   A. E. Bigge, Brinkley Barnett, Sarah G. Blanding, B. E. Brewer, Leo M. Chamberlain, Mrs. J. S. Chambers, Mrs. C. S. Crouse, Eda M. Giles, Flora LeStourgeon, R. D. McIntyre, J. Holmes Martin, A. J. Olney, E. W. Rannells.

5. **Curriculum Committee**
   Ernest G. Trimble, J. E. Adams, Adolph Bigge, W. E. Freeman, John Kuiper, E. G. Palmer, L. A. Pardue, William H. Pittman, R. H. Weaver.

6. **Extension Committee**
   Maurice Seay, Louis Clifton, T. H. Dupre, A. H. Eblen.

7. **Grants in Aid**
   D. V. Terrell, S. A. Boles, T. T. Jones, Bernie Shively.

8. **Library**
   George K. Brady, T. D. Clark, C. S. Crouse, John Kuiper, J. W. Martin, Edward Tuthill.

9. **Music**
   W. E. Freeman, R. D. Haun, John Kuiper, C. A. Lampert, John Lewis, Mildred Lewis, R. D. McIntyre, Edward Wiest.

10. **Publication of Monographs**
    Edward Wiest, E. F. Farquhar, A. C. McFarlan, George Roberts.

11. **Rules**
    P. P. Boyd, Sarah G. Blanding, Leo M. Chamberlain, W. E. Freeman, L. J. Horlacher, Frank H. Randall, W. S. Taylor, Edward Wiest.

12. **Scholarship and Attendance**
    P. P. Boyd, Sarah G. Blanding, Leo M. Chamberlain, Alvin E. Evans, W. E. Freeman, L. J. Horlacher, T. T. Jones, W. S. Taylor, Edward Wiest.

13. **Student Social Affairs**
    T. T. Jones, Sarah G. Blanding, B. E. Brewer, Marylee Collins, A. J. Olney.

14. **Student Welfare**
    M. E. Potter, J. S. Chambers, Sarah G. Blanding, Elizabeth Cowan, C. S. Crouse, T. Huntley Dupre, T. T. Jones, Margaret Ratliff.

15. **Personnel Research**
    J. B. Miner, Sarah G. Blanding, Paul P. Boyd, Leo M. Chamberlain, Lysle W. Croft, Ezra L Gillis, C. C. Ross, Edward Wiest.

PART VI

STATISTICAL SUMMARY

DISTRIBUTION OF ENROLLMENT FOR THE YEAR ENDING JUNE 30, 1938

(Including the Summer Session of 1937)

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates													802	522	802	522	1323
Seniors	149	126	91	78	78	1	48	1	68	207	119	27			553	440	993
Juniors	209	158	85	58	92		50	1	27	138	136	42			599	397	996
Sophomores	237	192	101	47	125		47				132	41			642	280	922
Freshmen	315	178	116	48	122	1					152	34			705	261	966
Specials	40	160	11	18	2		3		4	20	3	1			63	199	262
Auditors	6	90					1		3	2			12	4	22	96	118
Transients	19	91	2	21	1		2		4	12	1	1	3	3	32	128	160
Total	975	995	406	270	420	2	151	2	106	379	543	146	817	529	3418	2323	5741

All duplicates have been excluded.

DISTRIBUTION OF ENROLLMENT FOR THE FIRST AND SECOND SEMESTERS OF 1937-38
BY COLLEGES, CLASSES AND SEX

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates													232	161	232	161	393
Seniors	117	102	77	67	71	1	43	1	42	96	108	23			458	290	748
Juniors	198	134	81	52	92		43	1	24	62	131	38			569	287	856
Sophomores	232	178	97	46	125		41				129	39			624	263	887
Freshmen	311	162	112	48	121	1					152	34			696	245	941
Specials	5	34	1		1				1	2	3	1			11	37	48
Auditors	3	74	1												4	74	78
Transients		66		17							1				1	83	84
Total	866	750	369	230	410	2	127	2	67	160	524	135	232	161	2595	1440	4035

All duplicates have been excluded.

DISTRIBUTION OF ENROLLMENT FOR THE SECOND SEMESTER 1937-38
BY COLLEGES, CLASSES AND SEX

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates	____	____	____	____	____	____	____	____	____	____	____	____	178	110	178	110	288
Seniors	107	94	71	63	69	1	33	1	36	85	103	21	____	____	419	265	684
Juniors	180	122	75	47	88	____	41	1	21	58	119	33	____	____	524	261	785
Sophomores	207	161	87	46	112	____	38	____	____	____	122	39	____	____	566	246	812
Freshmen	266	147	86	43	101	____	____	____	____	____	125	32	____	____	578	222	800
Specials	4	18	1	____	____	____	____	____	____	1	2	1	____	____	7	20	27
Auditors	____	62	1	____	____	____	____	____	____	____	____	____	____	____	1	62	63
Transients	____	64	____	16	____	____	____	____	____	____	1	____	____	____	1	80	81
Total	764	668	321	215	370	1	112	2	57	144	472	126	178	110	2274	1266	3540

DISTRIBUTION OF ENROLLMENT FOR THE FIRST SEMESTER 1937-38
BY COLLEGES, CLASSES AND SEX

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates	----	----	----	----	----	----	----	----	----	----	----	----	167	116	167	116	283
Seniors	115	99	56	51	54	1	36	1	31	66	97	22	----	----	389	240	629
Juniors	154	116	74	47	91	----	40	1	17	43	114	30	----	----	490	237	727
Sophomores	227	168	86	54	129	----	35	----	----	----	126	45	----	----	603	267	870
Freshmen	297	157	114	50	128	1	----	----	----	----	149	28	----	----	688	236	924
Specials	2	28	2	----	1	----	----	----	1	1	4	1	----	----	10	30	40
Auditors	4	22	----	----	----	----	----	----	----	----	----	----	----	----	4	22	26
Transients	----	49	----	1	----	----	----	----	----	----	1	----	----	----	1	50	51
Total	799	639	332	203	403	2	111	2	49	110	491	126	167	116	2352	1198	3550

DISTRIBUTION OF ENROLLMENT FOR THE SUMMER SESSION OF 1937
BY COLLEGES, CLASSES AND SEX

First and Second Terms

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	645	406	645	406	1051
Seniors	65	51	24	37	7	.....	21	1	38	151	28	7	.....	.....	183	247	430
Juniors	47	41	21	21	23	.....	21	.....	9	89	31	10	.....	.....	152	161	313
Sophomores	37	23	5	7	18	.....	14	.....	.....	.....	8	5	.....	.....	82	35	117
Freshmen	11	19	7	.....	8	.....	.....	.....	.....	.....	2	.....	.....	.....	28	19	47
Specials	35	120	10	18	1	.....	3	.....	3	18	1	1	.....	.....	53	157	210
Auditors	4	27	.....	.....	.....	.....	1	.....	3	3	.....	.....	12	5	20	35	55
Transients	19	26	2	4	1	.....	3	.....	4	12	1	.....	3	3	33	45	78
Total	218	307	69	87	58	.....	63	1	57	273	71	23	660	414	1196	1105	2301

All duplicates have been excluded.

DISTRIBUTION OF ENROLLMENT FOR THE SECOND TERM OF THE SUMMER SESSION OF 1937
BY COLLEGES, CLASSES AND SEX

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates													267	176	267	176	443
Seniors	44	27	9	17	3		16	1	22	79	20	4			114	128	242
Juniors	27	19	13	7	18		17		3	34	19	3			97	63	160
Sophomores	17	13	2	5	8		9				4	1			40	19	59
Freshmen	8	11	2		4						1				15	11	26
Specials	31	94	2	14			1		2	5	1	1			37	114	151
Auditors	2	23							2	1					4	24	28
Transients	10	15		1	1		2		2	1	1				16	17	33
Total	139	202	28	44	34		45	1	31	120	46	9	267	176	590	552	1142

DISTRIBUTION OF ENROLLMENT FOR THE FIRST TERM OF THE SUMMER SESSION OF 1937
BY COLLEGES, CLASSES AND SEX

STUDENTS	Arts and Sciences		Agriculture		Engineering		Law		Education		Commerce		Graduate		Total		Grand Totals
	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	M.	W.	
Graduates	----	----	----	----	----	----	----	----	----	----	----	----	553	308	553	308	861
Seniors	51	45	21	33	6	----	14	----	33	138	18	6	----	----	143	222	365
Juniors	40	31	17	20	11	----	20	1	7	86	27	13	----	----	122	151	273
Sophomores	33	20	5	7	19	----	13	----	----	----	7	4	----	----	77	31	108
Freshmen	6	14	7	----	6	----	----	----	----	----	2	----	----	----	21	14	35
Specials	23	50	9	4	1	----	3	----	2	13	1	----	----	----	39	67	106
Auditors	2	4	----	----	----	----	1	----	1	2	----	----	13	5	17	11	28
Transients	16	17	2	3	1	----	2	----	2	12	1	1	3	3	27	36	63
Total	171	181	61	67	44	----	53	1	45	251	56	24	569	316	999	840	1839

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