Bulletin of the

UNIVERSITY OF KENTUCKY

GENERAL CATALOG

1946-47

Announcements

1947-48

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Vol. 39 MAY No. 5

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1947

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

From the State Board of Agriculture

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Eldred E. Adams, Louisa, 1952
Robert Tway, Louisville, 1948

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Richard C. Stoll, Lexington, 1948
R. P. Hobson, Louisville, 1948

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Richard C. Stoll, Chairman
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John C. Everett
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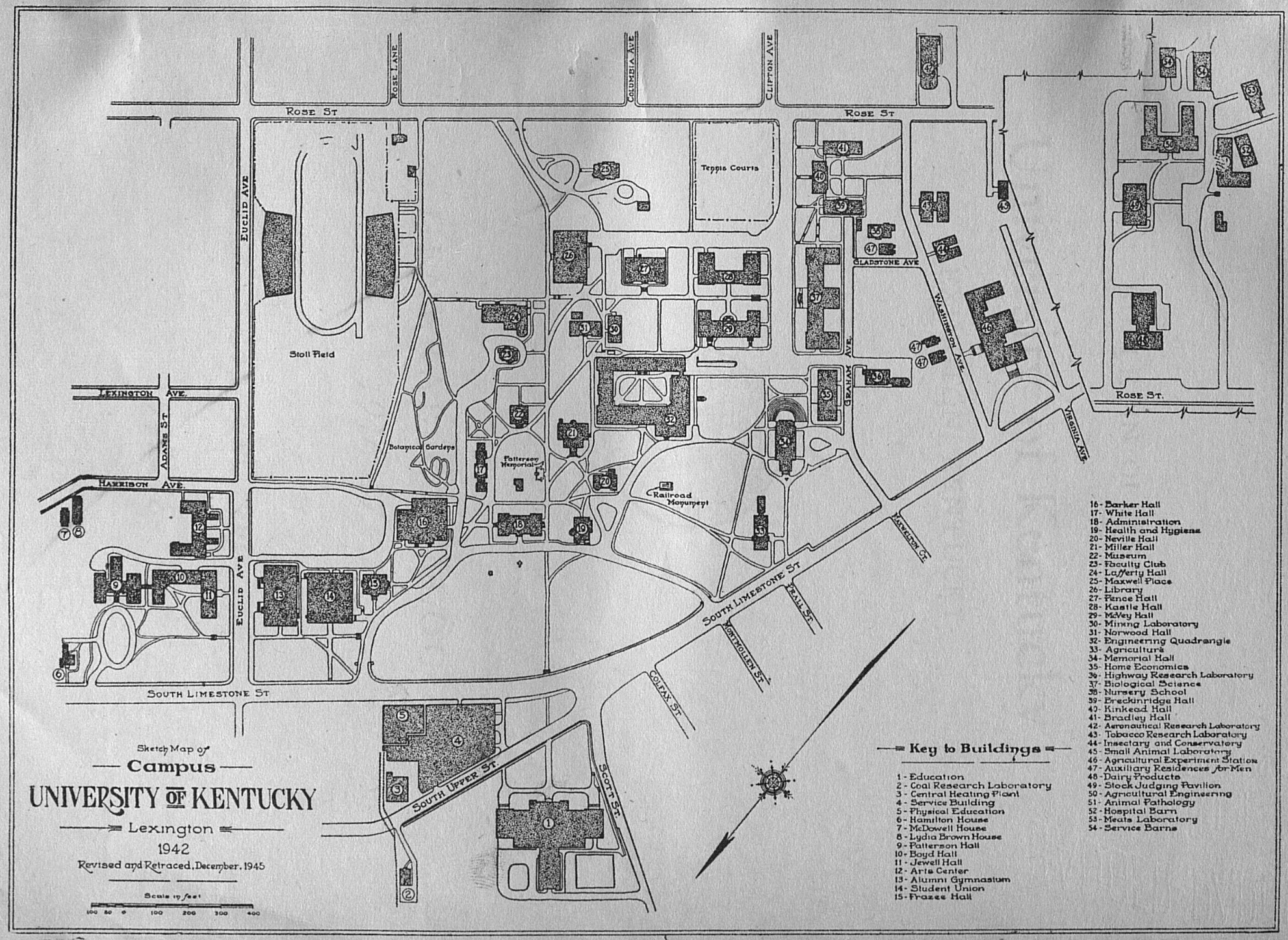
Sketch Map of
Campus
UNIVERSITY OF KENTUCKY
Lexington
1942
Revised and Retraced, December, 1945
Scale in feet
100 50 0 100 200 300 400
Key to Buildings
1 - Education
2 - Coal Research Laboratory
3 - Central Heating Plant
4 - Service Building
5 - Physical Education
6 - Hamilton House
7 - McDowell House
8 - Lydia Brown House
9 - Patterson Hall
10 - Boyd Hall
11 - Jewell Hall
12 - Arts Center
13 - Alumni Gymnasium
14 - Student Union
15 - Frazee Hall
16 - Barker Hall
17 - White Hall
18 - Administration
19 - Health and Hygiene
20 - Neville Hall
21 - Miller Hall
22 - Museum
23 - Faculty Club
24 - Lafferty Hall
25 - Maxwell Place
26 - Library
27 - Fence Hall
28 - Kastle Hall
29 - McVey Hall
30 - Mining Laboratory
31 - Norwood Hall
32 - Engineering Quadrangle
33 - Agriculture
34 - Memorial Hall
35 - Home Economics
36 - Highway Research Laboratory
37 - Biological Science
38 - Nursery School
39 - Breckinridge Hall
40 - Kinkead Hall
41 - Bradley Hall
42 - Aeronautical Research Laboratory
43 - Tobacco Research Laboratory
44 - Insectary and Conservatory
45 - Small Animal Laboratory
46 - Agricultural Experiment Station
47 - Auxiliary Residences for Men
48 - Dairy Products
49 - Stock Judging Pavilion
50 - Agricultural Engineering
51 - Animal Pathology
52 - Hospital Barn
53 - Meats Laboratory
54 - Service Barns
Rose St
Rose Lane
Columbia Ave
Clifton Ave
Euclid Ave
Lexington Ave
Adams St
Harrison Ave
South Limestone St
South Upper St
Scott St
Colfax St
Montmollen St
Frall St
Maxwelton Ct
Gladstone Ave
Graham Ave
Washington Ave
Virginia Ave
Stoll Field
Botanical Gardens
Patterson Memorial
Railroad Monument
Tennis Courts

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BULLETIN OF THE

University of Kentucky

LEXINGTON, KENTUCKY

GENERAL CATALOG

1946-47

Announcements

1947-48

Univ.—1

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Sarah Bennett Holmes, M. A., Dean of Women

Frank D. Peterson, A. B., University Comptroller

Margaret Isadora King, A. B., B. S., Librarian

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William Septimus Taylor, M. A., Ph. D., LL.D., Dean of the College of Education

Edward Wiest, M. A., Ph. D., Dean of the College of Commerce

Earl Platt Slone, Ph. G., B. S., Dean of the College of Pharmacy

William Delbert Funkhouser, M. A., Ph. D., D. Sc., Dean of the Graduate School

PUBLICATIONS AND SOURCES OF INFORMATION

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

Bulletin of General Information	Registrar's Office
General Catalog	Registrar's Office
Summer Quarter Bulletin	Registrar's Office
Law Bulletin	College of Law or Registrar's Office
Graduate Bulletin	Graduate School or Registrar's Office
Commerce Bulletin	College of Commerce or Registrar's Office
Agriculture and Home Economics Bulletin	College of Agriculture and Home Economics or Registrar's Office
Pharmacy Bulletin	College of Pharmacy, Louisville 2, Kentucky or Registrar's Office, University of Kentucky, Lexington, Ky.

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

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

Summer Quarter	Registrar
Class extension and correspondence study	Director of University Extension
Agricultural extension	Director of Agricultural Extension
Information for Veterans	Registrar or University Personnel Office
Campus View Books	Director of Public Relations

CALENDAR

1947

July

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August

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1948

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August

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October

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November

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December

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PROPOSED UNIVERSITY CALENDAR
1947-48

1947 **Fall Quarter**

September 24–26	Wednesday, 8:00 a. m. to Friday, 5:00 p. m.—Classification tests, physical examinations, and advisory conferences for all new students.
September 25, 26	Thursday and Friday—Registration and classification of former students according to an alphabetical schedule.
September 27	Saturday—Registration and classification of new students.
September 29	Monday—Class work begins.
October 2	Thursday—Last date on which one may enter an organized class.
October 20	Monday—Last date on which one may drop a course without a grade.
October 23, 24	Thursday and Friday—Period for filing applications for degrees.
November 27	Thursday—Thanksgiving holiday.
December 15–17	Monday through Wednesday—Examinations for the Fall Quarter.
December 17	Wednesday 6:00 p. m. Quarter ends.

1948 **Winter Quarter**

January 2	Friday, 8:00 a. m.—Classification tests, physical examinations, and advisory conferences for all new students.
January 3	Saturday—Registration and classification of new students.
January 5, 6	Monday and Tuesday—Registration and classification of new and former students according to an alphabetical schedule.
January 7	Wednesday—Class work begins.
January 10	Saturday—Last date on which one may enter an organized class.
January 26	Monday—Last date on which one may drop a course without a grade.
January 30, 31	Friday and Saturday—Period for filing applications for degrees.
March 15–17	Monday through Wednesday—Examinations for the Winter Quarter.
March 17	Wednesday—6:00 p. m. Quarter ends.

1948	Spring Quarter
March 19	Friday—Classification tests, physical examinations, and advisory conferences for all new students.
March 20	Saturday—Registration and classification of new students.
March 22, 23	Monday and Tuesday—Registration and classification of new and former students according to an alphabetical schedule.
March 24	Wednesday—Class work begins.
March 27	Saturday—Last date on which one may enter an organized class.
April 12	Monday—Last date on which one may drop a course without a grade.
April 16, 17	Friday and Saturday—Period for filing applications for degrees.
May 30	Sunday—Baccalaureate Services.
June 3–5	Thursday through Saturday—Examinations for the Spring Quarter.
June 4	Friday—Eighty-first Annual Commencement.
June 5	Saturday—6:00 p. m.—Quarter ends.
June 7–12	Monday through Saturday—4-H Club Week.

REGISTRATION SCHEDULES FOR 1947–48

FALL QUARTER

September, 1947

September 24–26 Wednesday, 8:00 a. m. to Friday, 5:00 p. m.—All freshmen and all other new students will report in Memorial Hall for classification tests, physical examinations, and advisory conferences. All new students, with the exception of those enrolling in the Graduate School, must complete the tests and examinations before they will be permitted to register. Students who report for the tests later than 8:00 a. m. Thursday may not be able to complete them before the registration period, and their registration will thus be delayed.

September 25, 26 Thursday and Friday—Registration and classification of former students, according to the following alphabetical schedule:

Thursday Forenoon

8:00 to 8:50—A through B
9:00 to 9:50—C
10:00 to 10:50—D through F
11:00 to 11:50—G

Thursday Afternoon

1:30 to 2:20—H through J
2:30 to 3:20—K through L
3:30 to 4:20—Miscellaneous A through L

Friday Forenoon

8:00 to 8:50—M
9:00 to 9:50—N through R
10:00 to 10:50—S
11:00 to 11:50—T through V

Friday Afternoon

1:30 to 2:20—W through Z
2:30 to 4:20—Miscellaneous A through Z

September 27 Saturday—Registration and classification of new students

September 29 Monday—Class work begins

WINTER QUARTER

January, 1948

January 2 Friday, 8:00 a. m.—Classification tests, physical examinations, and advisory conferences, for new students. All freshmen and all other new students, except those enrolling in the Graduate School, must have the tests and examinations completed before they will be permitted to register. All new students should report first to Memorial Hall.

January 3 Saturday—Registration and classification of new students.

January 5, 6 Monday and Tuesday—Registration and classification of new and former students according to the following alphabetical schedule:

Monday Forenoon

8:00 to 8:50—M
9:00 to 9:50—N through R
10:00 to 10:50—S
11:00 to 11:50—T through V

Monday Afternoon

1:30 to 2:20—W through Z
2:30 to 3:20—A through B
3:30 to 4:20—Miscellaneous M through Z and A through B

Tuesday Forenoon

8:00 to 8:50—C
9:00 to 9:50—D through F
10:00 to 10:50—G
11:00 to 11:50—H through J

Tuesday Afternoon

1:30 to 2:20—K through L
2:30 to 4:20—Miscellaneous A through Z

January 7 Wednesday—Class work begins

SPRING QUARTER

March, 1948

March 19 Friday—Classification tests, physical examinations, and advisory conferences for new students. All freshmen and all other new students, except those enrolling in the Graduate School, must have the tests and examinations completed before they will be permitted to register. All new students should report first to Memorial Hall.

March 20 Saturday—Registration and classification of new students.

March 22, 23 Monday and Tuesday—Registration and classification of new and former students according to the following alphabetical schedule:

Monday Forenoon

8:00 to 8:50—W through Z
9:00 to 9:50—T through V
10:00 to 10:50—S
11:00 to 11:50—N through R

Monday Afternoon

1:30 to 2:20—M
2:30 to 3:20—K through L
3:30 to 4:20—Miscellaneous K through Z

Tuesday Forenoon

8:00 to 8:50—H through J
9:00 to 9:50—G
10:00 to 10:50—D through F
11:00 to 11:50—C

Tuesday Afternoon

1:30 to 2:20—A through B
2:30 to 4:20—Miscellaneous A through Z

March 24 Wednesday—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 75,000 population. It is a state supported institution operated under the direction of a board of trustees of fifteen members. The membership of this board includes the Governor, the Superintendent of Public Instruction, and the Commissioner of Agriculture, ex officio, and twelve members appointed by the Governor, three of whom are alumni of the University and three, members of the State Board of Agriculture. The University is one of a number of institutions known as land-grant colleges, which were established by the Morrill Act of 1862 and which have continued to receive federal assistance under the provisions of this and subsequent laws relating to the teaching of agriculture and the mechanic arts and the provision of agricultural experiment stations and extension services in agriculture and home economics.

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

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

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

the Department of University Extension, the Department of Public Relations, the Engineering Experiment Station, the Bureau of Curriculum Research, the Child Guidance Service, and the Industrial Psychological Service.

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

ADMISSION TO THE UNIVERSITY

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

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

Admission to the Freshman Class

Applicants who are graduates of accredited high schools will be admitted to the University on certificate, provided they have at least fifteen units of acceptable high school work. A unit represents the study of any subject for a school year of at least thirty-

two weeks, with five recitation periods a week, each of at least forty-five minutes in length, or the equivalent thereof. Double periods are required in shop, drawing, typewriting, and all other courses requiring no out-of-class preparation. One unit is the minimum credit accepted in any foreign language, and one-half unit the minimum in any other subject.

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

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

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

Admission to Advanced Standing

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

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

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

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

Non-Resident Students. A non-resident who applies for admission with advanced standing must in all cases have maintained a standing of 1.0 in all previous college work. In other respects, the requirements and conditions of transfer are the same as for resident students.

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

Admission as a Special Student

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

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

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

A special student is eligible to take any course for which he has satisfied the prerequisites except one numbered 200 or above.

Admission as an Auditor

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

Admission to Colleges and Schools

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

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

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* An exception to the age requirement may be made in the case of a veteran of World War II who has demonstrated, through tests and personal interviews, his ability to do the work desired.

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

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

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

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

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

College of Pharmacy. Admission to the freshman class of this college is governed by the general admission requirements of the University outlined on the preceding pages. Those students who are to be transferred from the Lexington campus to Louisville for the professional courses will be selected from the highest ranking students who have completed the freshman year at the University of Kentucky or elsewhere.

The Graduate School. A student may be admitted to the Graduate school upon evidence of having completed the requirements for graduation from a fully accredited institution of higher learning and an official transcript of undergraduate courses, together

with a written application. These should be sent to the Registrar's Office. The application form may be obtained from that office. However, such admission does not obligate the University to accept all credit granted by the undergraduate school. When full credit is not granted, the student will be required to do more than the normal amount of work to complete a graduate degree. Applications from graduates of institutions not fully accredited will be individually evaluated. However, a student from such a school is 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 table on page 21** gives the schedule of regular fees per quarter and term. Checks are accepted by the University in payment of fees, room rent, and board, if they are made out for the exact amount due. That is, no money is returned on a check. In transmitting funds to students, drafts, money orders, and certified checks should be used. **All checks should be made payable to "University of Kentucky." All fees should be paid at registration and not sent in advance. For the fees indicated the full-time student receives: class instruction, health and infirmary service, admission to athletic contests and to convocations, use of the Library and Student Union building, a discount on admissions to the Guignol Theatre, and a subscription to "The Kentucky Kernel," the student newspaper. The University reserves the right to change the amount of any fee at any time.**

Initial Expenses

The undergraduate resident student enrolling in the University for the first time should be prepared to meet initial expenses about as follows:

Item	Women Students	Men Students
General Deposit	$ 6.00	$ 6.00
Fees for Quarter	37.50	37.50
Military Deposit		10.00
Room and Board in Residence Halls	120.00	
Room in Residence Halls		40.00
Books and Supplies	20.00	20.00
	$173.50	$108.50

The initial expense for men is less because it does not include the cost of food. Men students eat at the University cafeteria and

pay for their meals as served. This fact should be kept in mind in estimating initial costs. To the above amounts there should be added an item of perhaps $30.00 for incidental expenses. The non-resident student should be prepared to pay an additional fee of $20.00.

Fees for Graduation and Special Privileges

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

Late Registration. Students entering the University after the regular registration periods will be charged an additional fee of $3.00 for the first day, $4.00 for the second day, and $5.00 for any day thereafter. No exceptions to this charge will be granted.

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

SPECIAL COURSE FEES

Students who enroll in the following courses will be charged extra fees as indicated:

Animal Industry:	$35.00	for Animal Industry 102
Applied Music:	15.00	per quarter for one half-hour lesson per week
	30.00	per quarter for two half-hour lessons per week
	45.00	per quarter for three half-hour lessons per week
	4.00	per quarter for rental of a practice room for Voice or Piano, or for any instrument other than organ
	12.00	per quarter for rental of organ for one half-hour's practice daily
	24.00	per quarter for rental of organ for one hour's practice daily
	2.50	per quarter for rental of University owned instruments for Music 7, 8, or 9
	4.00	per quarter for rental of University owned instruments for private practice for participation in the Symphony Orchestra or Bands

	10.00 per quarter for each student in Applied Music who is not regularly enrolled as a University student, in addition to the usual charge for individual lessons
Engineering Activities:	1.00 per quarter, charged all students enrolling in the College of Engineering
English:	.03 per day for books obtained from English rental library for English 1a and 1b
	2.50 voice recording fee for students in English 6 or English 38
Geology:	40.00 for summer field work in Geology 23a, 23b, or 118a-i
	3.50 for field work in Geology 10a, 10b, 14b, 14c, or 107a-i
	3.00 for field work in Geology 14a
	2.00 for field work in Geology 10c
	.50 for field work in Geology 50a, 50b, 50c, 3, 12a, 30a, 30b, or 30c
Physical Education:	1.50 per quarter for locker fee for Activity Course
	3.00 to 3.50 per quarter for Bowling
	20.00 to 28.00 per quarter for Horseback Riding
	6.00 to 8.00 per quarter for Golf
Psychology:	75.00 per quarter for Clinical Psychology, in addition to the regular incidental fees

Deposit for Military Uniform

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

Fees for Correspondence and Extension Courses

The fee for correspondence courses is $3.50 per quarter hour and for extension classes, $4.00 per quarter hour.

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

SCHEDULE OF FEES PER QUARTER

Classification	Resident Students				Non-Resident Students			
	General Deposit	Registration and Incidental Fee	Health Service Fee	Total	General Deposit	Registration and Incidental Fee	Health Service Fee	Total
Full-Time Students:								
All Colleges except Law	$6.00*	$35.00	$2.50	$43.50	$6.00*	$72.50	$2.50	$81.00
College of Law	6.00*	38.00	2.50	46.50	6.00*	75.50	2.50	84.00
Part-Time Students:		Per Quarter Hour				Per Quarter Hour		
All Undergraduate Colleges except Law	6.00*	$3.00	2.50†		6.00*	6.25	2.50†	
College of Law	6.00*	4.50	2.50†		6.00*	7.00	2.50†	
Graduate School	6.00*	4.00	2.50†		6.00*	8.50	2.50†	
Auditors:								
In lecture and recitation courses		2.00				2.00		
In studio and laboratory courses		3.00				3.00		

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

† Not charged an auditor or a student taking fewer than nine quarter hours.

Definition of Residence for Payment of Fees

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

Refund of Fees

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

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

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

Living Expenses

The cost of room and board in the residence halls for women is $360 a year (fall, winter, and spring quarters). Rooms in the men's residence halls range in price from $30 to $40 a quarter and board may be obtained in the University cafeteria for a minimum of $10 per week.

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

for law and engineering students the cost of books and supplies may be greater than the estimate shown.

Items of Expense	Resident Students	Non-Resident Students
Fees	$112.50	$225.00
Board and Room	360.00	360.00
Laundry and Cleaning	30.00	30.00
Books and Supplies	55.00	55.00
Incidentals	60.00	60.00
Totals	$617.50	$730.00

RESIDENCE HALLS FOR WOMEN

The University of Kentucky maintains three large residence halls for women which house approximately 550 students. Three small residence units are maintained for 100 additional women. The residence halls are all under the supervision of the Dean of Women and the Director of Residence Halls, assisted by a head resident in each unit.

All freshman women are required to live in the residence halls unless residing with relatives in town. After the freshman year, students may reside in sorority houses, and upperclassmen may secure permission from the Office of the Dean of Women to live in town. Unmarried women are not permitted to live in apartments. No married or graduate students may live in the halls at the present time.

Application blanks for reservations in the residence halls must be secured from and should be returned to the Office of the Dean of Women as soon as possible No reservation will be made until the application is returned with a deposit of $10. While halls are assigned according to classification, all preference in placement is determined by the date of application and deposit. This deposit is refunded at the end of the year less any charges for damage to the room or loss of the room key. **A room reservation may be cancelled with the deposit refunded if notification of the cancellation is received by the Dean of Women thirty days previous to the first day of registration; after that date the deposit is forfeited. Admission to the University by the Registrar's office does not constitute an application for admission to the residence halls, and does not reserve a room. Likewise, an application for a room does not constitute an application for admission.**

Meals for all the women in the residence halls are served in the joint dining rooms of Jewell and Boyd Halls, and are under the direction of trained dieticians. One resident nurse maintains office hours in the infirmary office, and is available at all times for emergency calls. An infirmary is maintained on the campus on a twenty-four hour basis.

The cost of room and board in all residence units is $360 a year, payable at the rate of $120 at the beginning of each quarter. The University reserves the right to change these rates. Checks should be made payable to the University of Kentucky. No refunds on room and board will be made for temporary absence from the residence halls.

A student withdrawing from the halls during the first eight weeks of the quarter will receive a refund on board and room deducted at the rate of twelve per cent a week for the time the room was held. A student is considered as living in the halls until she officially wthdraws in the Office of the Dean of Women.

The University maintains one cooperative house accommodating approximately 20 women students. Application for a reservation in a cooperative house should be made to the Office of the Dean of Women. Applicants are selected by the Cooperative House Committee on the basis of scholastic records and recommendations. A high scholastic average must be maintained to continue residence in a cooperative house.

During the Summer Quarter all facilities of the residence halls including meal service are available to summer school students. Rates for the Summer Quarter are the same as for the regular quarter.

RESIDENCE HALLS FOR MEN

The University operates three residence halls for men and a fourth hall is now under construction. These halls are reserved for freshmen to the extent that this group utilizes the space.

As a part of its emergency housing program, the University has erected twelve officer-type barracks designed to house approximately 500 single men. It has also established two housing projects for married veterans, known as Cooperstown and Shawneetown. These two projects accommodate about 500 veterans and their families.

All civilian freshmen are required, by order of the Board of Trustees, to live in the halls unless excused by the Dean of Men. The Office of the Dean of Men maintains a list of outside rooms that are available to students and will furnish a list to any one interested.

To reserve a room in the halls or barracks it is necessary to send a deposit of ten dollars to the Office of the Dean of Men. This deposit will be returned if notice of cancellation is given ten days before the opening of the quarter.

Prices per quarter for rooms in the men's halls range from $30.00 to $40.00, depending upon the type of accommodation. Prices of rooms in the barracks are $30.00 to $36.00 per quarter. Rental rates in Cooperstown and Shawneetown are established under

regulations of the Federal Public Housing Authority and range from $22.50 to $41.00 per month.

The University reserves the right to alter the charge for rooms in all residence halls at any time.

Rent for all rooms is payable at the time of registration for the full quarter. Residents of Cooperstown and Shawneetown pay rents monthly.

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 always be found for all who need such help. It is advised that no student attempt entire self-support, and **all new students are urged to come prepared to meet their expenses in full for at least one quarter.** The student who is to be partially self-supporting should seek advice in adjusting his study load to the end that his employment will not prevent him from obtaining the largest benefit from his courses.

Loan Funds, Scholarships, and Fellowships. To a limited extent financial assistance is rendered worthy students through loan funds and through scholarships and fellowships. In some cases aid of this kind is limited to students enrolled in particular colleges or departments. In other cases the loan or scholarship is available to any student qualifying. There are likewise a number of prizes and awards offered to students who do exceptional work, usually in a particular department or college. Inquiries concerning loans, scholarships, and other awards should be addressed to the Registrar's office.

SPECIAL SERVICES FOR THE STUDENT

The Dean of Men and the Dean of Women

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

University Personnel Services

The University Personnel Office is under the supervision of a Director of Personnel and carries on its functions through a trained staff. The Director of Personnel has an advisory committee con-

sisting of the Deans of the various colleges, the Deans of Men and Women, and the Assistant Registrar.

University Testing Center. The University Personnel Office acts as a testing center for the University in administering various types of tests used by the faculty and staff.

Psychological Tests. All placement and classification tests administered to new students are given under the supervision of the University Personnel Office. For the year 1946-47, the tests given were as follows: The Kentucky General Scholastic Ability Test, The Kentucky English Test, and The Kentucky Mathematics Test. Each student is also required to fill in a Personal History Blank. The tests are used primarily as an aid in determining the student's college, the particular courses or sections, the total academic load, and the vocational objective.

Kentucky Testing Center. The University Personnel Office operates a Testing Center for the State Department of Education in giving the General Education Development Tests, high school and college level (for veterans).

Graduate Record Examinations. The University Personnel Office is authorized by The Graduate Record Office as a Testing Center for the Graduate Record Examinations.

Counseling. The University Personnel Office offers guidance based on scientific procedures in three main areas: educational counseling—help in selecting the proper courses of study, in improving reading ability and in establishing effective study methods; vocational counseling—determining the profession or job for which the student is best fitted; and personal counseling—developing an effective personality, overcoming worries, nervousness, and other problems.

The required Freshman Placement and Classification examinations and aptitude and achievement tests usually provide the starting point of such counseling.

Additional psychological tests of special aptitudes, interests, and personality may be suggested by trained staff members who interpret the results of such tests to the students in one or more private interviews. Students who wish to avail themselves of these counseling services can make an appointment in the Personnel Office, Room 9, Administration Building.

Academic Probation. Students placed upon academic probation by the Registrar, the Deans of the Colleges of Arts and Sciences, Agriculture and Home Economics, Engineering, Law, Education, and Commerce are under the supervision of the University Personnel Office. The Director of Personnel is also secretary of the Scholarship and Attendance Committee.

Veterans. The University Personnel Office is the university center for veterans. Veterans who are receiving federal assistance through the Veterans' Administration are cleared officially through this office. Here the veteran can make application for federal benefits, secure information about the G. I. Bill and receive general guidance with respect to vocational opportunities, courses of study, etc. In order to purchase books under Public Law 346 or 16 the veteran must receive official approval of his list of books from the University Personnel Office.

During periods of registration, veterans are processed as a part of the regular registration procedure. The University Personnel Office will have booths in the registration line for this purpose.

University Health Service

The University recognizes a special obligation in the health of the students. To meet this obligation it maintains the University Health Service to promote student health and to provide medical care particularly for students away from home.

The service consists of an out-patient clinic for ambulatory patients and for the preventive and corrective work, and a forty bed infirmary for the more acutely ill. X-ray and clinical laboratory services are provided.

Major surgical cases, after conference with parents or home physicians, may be referred to local surgeons and taken to local hospitals or, if the condition permits, may be taken to their surgeons. Serious or chronic conditions requiring long periods of hospitalization should be removed by parents or home physicians to other hospitals.

The cost of the service is covered by a special fee of $2.50, paid by the student at the beginning of each quarter.

THE UNIVERSITY AND THE VETERAN

The following paragraphs summarize the policies respecting the veteran who wishes to begin or to continue his education at the University. Additional information may be obtained by writing the Registrar. Initial correspondence with respect to entering the University should be similarly addressed as should requests for catalogs and bulletins.

Where the Veteran Should Report

On arrival at the University the veteran should report to the University Personnel Office, which is located in Room 9 in the basement of the Administration Building. This office has been designated the receiving center for all veterans wishing to enter or reenter the University of Kentucky. Here the applicant will be given information about applying for federal assistance, and general guidance with respect to vocational opportunities, courses of

study, etc. From this office he will be referred for further assistance to other persons as the individual case requires. Generally speaking, the division of functions will be as follows:

University Personnel Office: Federal assistance and initial vocational and educational guidance.

Registrar's Office: Admission, advanced credit from other colleges or for training received while in military service, fees, and registration.

Dean of Men or Dean of Women: Room and board, and counseling on personal problems.

The Deans of Colleges and Department Heads: Academic counseling and preparation of the student's schedule.

What the Veteran Should Bring With Him

The following items should be available when the veteran arrives at the University. It will facilitate matters greatly if transcripts are sent several weeks in advance.

1. A certified copy of his discharge or release from the armed forces.
2. An official transcript of his high school credits. (This applies to those who have not previously been in college.)
3. An official transcript from each college or university previously attended, including those at which he participated in the Army Specialized Training Program, the Navy V-12 Program, or other college training program.
4. Official information (as detailed as possible) about any specialized military training for which he wishes to seek college credit. Such information may be covered in a Separation Form, letters from military authorities, a report from the Armed Forces Institute, or on USAFI Form No. 47 (Revised).
5. A Certificate of Eligibility and Entitlement, Public Law 346, or a letter indicating eligibility under Public Law 16. (No payment for subsistence may be made until a certificate has been filed with the University. The veteran should obtain his certificate from the Veterans Administration as soon as possible after discharge from military service.)
6. Sufficient funds to provide subsistance for at least a month.

Credit for Training Taken While in Military Service

With the exceptions noted below respecting physical education and military science, the University of Kentucky does not grant blanket credit for military service. Any other credit allowed will

be granted on the basis of demonstrated proficiency in a particular subject or subjects.

The Army Specialized Training Program. This program was offered at the University of Kentucky and all courses have been evaluated in terms of equivalent University courses and have been assigned credit values. Credit from other accredited institutions for courses taken in the ASTP will be accepted on transfer, provided that the amount in any particular course does not exceed the amount allowed by the University of Kentucky.

The Engineers' Specialist School. This school was operated at the University of Kentucky from September, 1942, to September, 1943, as a branch of the Engineers' School at Fort Belvoir, Virginia. Course equivalents have been determined and credit values have been assigned.

Civilian Pilot Training and War Training Service. These two programs were offered at the University of Kentucky under the auspices of the Civil Aeronautics authority. A small amount of credit has been assigned to each.

ESMWT Courses. Defense and war training courses in engineering, science, and management were offered at the University of Kentucky without credit. No credit is to be allowed for these courses.

Courses Taken at Other Institutions. As indicated above, the veteran may transfer to the University of Kentucky credit earned in military training courses at other institutions, provided that for any course offered at the University of Kentucky the credit will not be in excess of that allowed here. Credit for training programs not offered at the University of Kentucky (Navy V-12, etc.) will be accepted on transfer from other fully accredited institutions. Generally speaking, the amount allowed will be that recommended by the other institution. However, the University reserves the right to re-evaluate such credits, particularly when the amount assigned varies greatly from general practice.

Credit in Military Science. Any veteran who has had three months or more of military service may receive credit for the University's two-year elementary course in Military Science, or such part of it as he has not already completed.

Credit for Other Types of Military Training. Credit for specialized training taken in other than accredited educational institutions will be allowed only on the basis of demonstrated proficiency in a particular subject or subjects. In evaluating such training, the University of Kentucky will depend largely on **The Guide to the Evaluation of Educational Experiences in the Armed Forces** of the American Council on Education, and on proficiency examinations.

The procedure for applying for credit for military training taken in other than accredited colleges and universities is as follows. Army, Navy, Marine Corps, or Coast Guard Personnel **still on active duty** should apply directly to the University of Kentucky, using USAFI Form No. 47 (Revised). This form wlll be widely distributed through military channels, and made available to men and women in service both in the United States and in overseas theatres of operation. It may also be obtained by writing the Armed Forces Institute, Madison 3, Wisconsin.

The Veteran of World War II **no longer on active duty** may apply by writing directly to the University inclosing with his letter a certified copy of the official Separation Form used by the branch of the service in which he served.

The mere filing of an application will not, of course, insure that any credit will be allowed. Generally speaking, credit will be granted only when there is clear evidence of proficiency in a specific subject or subjects ordinarily included in college or university curricula. The applicant may be asked to establish proficiency in a particular subjeet or his general educational level by taking examinations. These examinations may be those of the Armed Forces Institute or they may be examinations prepared at the University.

Applications for Benefits Under Public Laws 16 and 346

Under Public Law 16, provision has been made for vocational education or training to overcome handicaps suffered as a result of service-connected disability. In order to qualify for such rehabilitation aid, the veteran must have sustained an injury or other disability which will qualify him for a pension. A veteran who is interested in applying for such training should seek information from the nearest regional office of the Veterans Administration, and obtain a letter indicating eligibility.

Public Law 346 (GI Bill) provides educational benefits for all veterans properly discharged and with a minimum period of service. Information about Public Law 346 may be obtained from any office of the Veterans Administration or from any university or college. Applications for aid under Public Law 346 are made by the veteran on a special form (Form 1950) prepared by the Veterans Administration. This application form may be obtained from the veterans facility nearest the veteran's residence, or it may be obtained from the institution which he plans to attend.

Veterans who are interested in attending the University under Public Law 346 should inquire at the University for the form or secure it from a veterans facility. The application may be filed with the regional office of the Veterans Administration where the veteran's C-folder is located or with the regional office of the Veterans Administration in the state in which the institution he has

selected is located. The office of the Veterans Administration for Kentucky is located in Lexington. Upon receipt of the application the Veterans Administration will determine the period of training to which the veteran is entitled, and will furnish him with a Certificate of Eligibility and Entitlement. A copy of the certificate presented by the veteran to the University of Kentucky will authorize that institution to register him under the provisions of the act.

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.

Rules Affecting the Student

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

Committee on Scholarship and Attendance. This committee considers cases of students delinquent in studies or attendance referred to it by the deans of the colleges, appeals for reinstatement of students dropped for unsatisfactory work, and other related matters.

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

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

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

In all cases a correspondence course shall be considered as carried during the quarter or term during which the last assign-

ment is completed, and it shall be counted as a part of the load of that quarter or term.

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

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

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

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

Poor Work in English. Any instructor who finds the written work of any student seriously defective in its English is expected to report the case, together with specimen papers, to a committee consisting of the dean of the student's college and the Head of the Department of English, who shall have power to require additional work in composition without credit.

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

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

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

A Law student is classified as a second year student when he has completed 36 or more hours and as a third year student when

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

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

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

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

Not more than eighteen quarter hours of extension work done by a student during one calendar year will be accepted by the University unless it may be definitely shown that the work has been done under conditions where the student has been engaged in full-time study and has not been otherwise employed. This includes extension work done in other institutions.

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

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

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

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

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

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

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

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

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

A—Exceptionally high quality, valued at 3 points for each quarter hour.

B—Good, valued at 2 points for each quarter hour.

C—Fair, valued at 1 point for each quarter hour.

D—Unsatisfactory, indicates a deficiency and gives no points but gives credit for graduation if with such credits the student's standing is 1 or more.

E—Failure, valued at 0 quarter hours and 0 points.

I—Incomplete.

X—Absent from examination.

WP—Withdrew, passing.

WF—Withdrew, failing.

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

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

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

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

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

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

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

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

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

Requirements for Graduation

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

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

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

Regardless of the length of time the student has attended the University, a minimum of forty-five of the last fifty-four quarter

hours presented for the degree must be completed in residence at the University. With respect to graduation requirements for ex-service men or women, the rule requiring the final year of residence may be waived for former students, provided that the total previous residence credit has been not less than forty-five quarter hours.

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

The Graduate School. For the requirements for graduate degrees see the statement of the Graduate School, page 131.

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

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

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

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

A Second Bachelor's or Master's Degree

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

OPPORTUNITIES OUTSIDE THE CLASSROOM

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

Special Cultural Opportunities

Convocations. All-University convocations are held in Memorial Hall. At these convocations students and faculty are given opportunity to hear able speakers discuss a variety of current problems. From January, 1946, through December, 1946, the following speakers were presented: William A. Benfield, Vice-President of the Presbyterian Theological Seminary, Louisville, Kentucky; Sarah G. Blanding, President-elect of Vassar College; H. Fred Willkie, Vice-Chairman of the Committee for Kentucky; A. M. Harding, President of the University of Arkansas; Frederick Moore Vinson, Chief Justice of the U. S. Supreme Court; William R. Moody, Bishop of the Diocese of Lexington; Thomas C. McCarty, Dean of Villa Madonna College; Herman Lee Donovan, President of the University of Kentucky; E. Stanley Jones, Evangelist; Erika Mann, Author, Foreign Correspondent, and Radio News Analyst; Edwin Mims, Emeritus Professor of English, Vanderbilt University; and Paul Appleby, Assistant Director, U. S. Bureau of the Budget.

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 1946-47 follows:

Sunday Musicales

October 13—
Marcel Dupre, Organist, Paris, France—Management of Bernard LaBerge, Inc.

October 27—
Robert Kuhlman, Baritone, University of Kentucky

November 10—
Marjorie Garrigue, Pianist, Cincinnati College of Music

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

January 26—
Aimo Kiviniemi, Tenor, University of Kentucky

February 2—
Program by University Chapters of Phi Beta and Phi Mu Alpha, Honorary Music and Dramatics Fraternities

February 9—
University Women's Glee Club, Mildred S. Lewis, Director

February 16—
Tivis Wicker, Baritone, Columbia Concerts

February 23—
University Men's Glee Club, Aimo Kiviniemi, Director

March 2—
Paul Makovsky, Violinist, Columbia Concerts

March 9—
Ford Montgomery and Robert Morgan, Duo-pianists, University of Kentucky

March 16—
Carolyn Long, Soprano, Columbia Concerts

March 30—
University Mixed Chorus and Orchestra, (Oratorio to be selected), Alexander Capurso, Director; Mildred S. Lewis and Aimo Kiviniemi, Associate Directors

June 1—
University Baccalaureate Service

Thursday Night Spring Series

April 10—
University Concert Band, Frank J. Prindl, Director

April 17—
Vilem Sokol, Violinist, University of Kentucky

April 24—
University Symphony Orchestra, Alexander Capurso, 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 regularly at which matters of college interest are discussed. The various departments bring special lecturers to the University. The Art Department introduces not only to its students, but also to the whole University, exhibits of great paintings, of etchings, and of drawings. The Music Department sponsors a philharmonic orchestra, a University band, a men's glee club and a women's glee club, all of which give concerts and furnish music for convocations. The Y.M.C.A. sponsors a series of forums and informal discussions in the Student Union, the men's dormitories, and in the various fraternities. The Cosmopolitan Club, composed of students born in foreign countries and some from the United States, studies through the various departments and activities of the University the social, political, and cultural life of foreign countries. Departmental clubs add effectively to the cultural life of the University.

Each year the Guignol Theatre presents a series of plays in which students, faculty, and others interested in dramatics may participate. Regular radio programs are broadcast daily, except Saturday and Sunday and special broadcasts are given frequently. These radio programs are participated in by students and faculty members. They originate in the University Studios in Lexington and are broadcast through the facilities of the University's new FM

Station WBKY, 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 full-time secretary. Frequently great spiritual leaders are brought to the University to speak to students. Through these resident secretaries and visiting ministers opportunity is given the students to consult with sympathetic and able persons.

Since the University and its staff are interested in the best all-round development of the student, every encouragement is given him to maintain high moral and spiritual standards. The vitality of religious life on the campus of the University of Kentucky is evidenced by the Pitkin Club, an organization of students, now limited to eighty-five. There are active student denominational groups and Sunday School classes for students in the respective churches. Students also meet weekly for religious discussions by the Inter-faith Council, which includes representatives of the church groups, a Newman Club and a Hillel Foundation, and by other religious groups sponsored by the Y.W.C.A. and Y.M.C.A.

Student Activities

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

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

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

Honor Societies

Alpha Lambda Delta (Freshman women)
Alpha Zeta (Agriculture — men)
Beta Gamma Sigma (Commerce)
Kappa Delta Pi (Education)
Order of the Coif (Law)
Phi Beta Kappa (Arts and Sciences)
Phi Eta Sigma (Freshman men)
Tau Beta Pi (Engineering)

Leadership Societies

Cwens (Sophomore women)
Mortar Board (Senior women)
Omicron Delta Kappa (Senior men)
Lamp and Cross (Senior men)
Lances (Junior men)
Keys (Sophomore men)

Recognition Societies

Chi Delta Phi (Literary—women)
Phi Alpha Theta (History)
Phi Upsilon Omicron (Home Economics)
Pi Mu Epsilon (Mathematics)
Pi Sigma Alpha (Political Science)
Sigma Gamma Epsilon (Geology)
Sigma Pi Sigma (Physics)
Theta Sigma Phi (Journalism)

Professional Societies

Alpha Chi Sigma (Chemistry)
Block and Bridle (Animal Husbandry)
Pershing Rifles (Military)
Phi Alpha Delta (Law)
Phi Beta (Music-Speech-Art —women)
Phi Delta Kappa (Education —men)
Phi Delta Phi (Law)
Phi Mu Alpha (Music—men)
Scabbard and Blade (Military)

Clubs and Societies

Accounting Club
Agronomy Club
Alma Magna Mater
American Chemical Society
American Institute of Electrical Engineers
American Institute of Mining and Metallurgical Engineers
American Society of Civil Engineers
American Society of Mechanical Engineers

Art Club
Association of Independent Students
Ateneo Castellano
Aviation Club
Bacteriological Society
Baptist Student Union
Business Education Club
Canterbury Club
College Chamber of Commerce
Cosmopolitan Club
Cub Club
Dairy Club
Delta Pi Epsilon (Business Education)
Dutch Lunch Club
Future Teachers of America
German Club
Graduate Club
Home Economics Club
Hort Club
International-Relations Club
K-Club
League of Women Voters
Le Cercle Francais
Newman Club
Outing Club
Pan-Politikon
Patterson Literary Society
Phalanx Fraternity
Philosophy Club
Pitkin Club
Poultry Club
Press Club
Pryor Pre-medical Society
Secretarial Club
Tau Sigma—(Dance)
University 4-H Club
Veterans' Club
White Mathematics Club

Administrative and Service Organizations

Agricultural Council
Debate and Oratory Groups
Guignol
House President's Council
Inter-Fraternity Council
Men's Glee Club
Student Bar Association
Student Government Association
Student Union Board
Suky
University Choristers
University of Kentucky Band
University of Kentucky Orchestra
University of Kentucky Troupers
Women's Administrative Council
Women's Athletics Association
Women's Glee Club
Women's Panhellenic Association
Y. M. C. A.
Y. W. C. A.

The Alumni Association

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

coming in the fall. It seeks to establish alumni groups both in Kentucky and in larger cities throughout the country in order that alumni may come in contact with each other.

The Alumni Office is located in the Student Union Building, and alumni, students, and friends of the University are welcome at all times. The annual business session of the Association is held during commencement and the Executive Committee meets on the second Monday of each month except during June, July, and August. By legislative act alumni representation has been secured on the Board of Trustees so that they may have a direct influence in the administrative affairs of the University. The officers for 1946-47 are as follows: President, Chauncey E. Forgey, ex; Vice-President and Treasurer, James S. Shropshire, '29; Executive Secretary, Helen G. King, '25; and Assistant Secretary, Jeanette Graves, '43.

THE FACILITIES OF THE UNIVERSITY

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

Administration Building. In this building are located the offices of the President, the Vice President, the Dean of the University, the Dean of the College of Arts and Sciences, the Dean of Men, the Dean of Women, the Comptroller, the Registrar, the Department of Public Relations, and the University Personnel Service, the last including the University Veterans Service. The building also houses the Geological Museum and the departments of Ancient Languages and Political Science. The offices of the Department of Maintenance and Operations are temporarily located here.

Aeronautical Research Laboratory. This laboratory is designed for aeroplane motor testing. The laboratory is operated by the College of Engineering.

Agriculture Building. The offices of the Assistant Dean of the College of Agriculture and Home Economics are located in this building. The remainder of the building furnishes classroom and laboratory space for the departments of Agricultural Entomology, Agronomy, Farm Economics, Horticulture, and Markets and Rural Finance.

Agricultural Engineering Building. The shops, laboratories, and class rooms for farm engineering are located in this building.

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 finance, fertilizer, feed, and seed control, and agricultural extension. The public service laboratories are also located in the Experiment Station.

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

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

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

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

Boyd Hall. This is a residence hall for women.

Bradley Hall. This is a residence hall for men.

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

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

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

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

operated by the Department of Mining and Metallurgical Engineering.

Dairy Products Building. The sections of Animal Husbandry, Creamery License, Dairy, and Poultry are located in this building. It also houses the herd book room, the incubation laboratory, and laboratories for dairy manufacturing.

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

Engineering Quadrangle. This quadrangle, made up of several rather distinct units, houses the offices of the Dean of the College of Engineering, the Engineering Library and 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.

Hamilton House. This is the University's cooperative house for women students.

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

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

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

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

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

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

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

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

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

Library. The University Library, including departmental collections, contains approximately 383,000 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 and the Bureau of Source Materials in Higher Education.

Lydia Brown House. This is a residence hall for women.

McDowell House. This is a residence hall for women.

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

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

Meats Laboratory. In this building are housed modern freezer lockers, facilities for slaughtering and curing meats, and the retail sales room.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Additional permanent buildings include the cooperative houses for women students, the horticultural greenhouses, residences, barns and storage buildings. Emergency structures include the Cooperstown and Shawneetown projects, which provide housing for approximately 500 married veterans, and 15 barracks, designed to house about 500 single students.

PART II

EDUCATIONAL OPPORTUNITIES AT THE UNIVERSITY OF KENTUCKY

DEGREES AND CURRICULA

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

College of Arts and Sciences

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

College of Agriculture and Home Economics

Bachelor of Science in Agriculture
Bachelor of Science in Home Economics

College of Engineering

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

College of Law

Bachelor of Laws

College of Education

Bachelor of Arts in Education

College of Commerce

Bachelor of Science in Commerce

College of Pharmacy

Bachelor of Science in Pharmacy

Graduate School

Master of Arts
Master of Arts in Education
Master of Science
Master of Science in Agriculture
Master of Science in Civil Engineering
Master of Science in Education
Master of Science in Electrical Engineering
Master of Science in Home Economics
Master of Science in Mechanical Engineering
Master of Science in Metallurgical Engineering
Master of Science in Mining Engineering
Master of Science in Public Health
Civil Engineer (C. E.)
Electrical Engineer (E. E.)
Mechanical Engineer (M. E.)
Metallurgical Engineer (Met. E.)
Mining Engineer (E. M.)
Doctor of Philosophy (Ph. D.)
Doctor of Education (Ed. 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 many possibilities for specialization and the pursuit of particular interests. These may be outlined as follows:

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

College of Agriculture and Home Economics. Students in agriculture have twelve options: agricultural education; agricultural entomology; agricultural extension; agronomy; animal husbandry; dairying; farm economics and rural sociology; general agriculture; horticulture; markets and rural finance; poultry; and science applied to agriculture. There is also a short non-degree program in practical agriculture. Students in home economics have six options: child development and family living; clothing, textiles, and related art; general home economics; home economics education; home economics extension; institutional economics and dietetics.

College of Engineering. In the College of Engineering the student may pursue any one of the following curricula: a general curriculum in civil engineering, a civil engineering curriculum with emphasis on sanitary engineering, a civil engineering curriculum with emphasis on architectural engineering, an electrical engineering curriculum with emphasis on communication engineering, an electrical engineering curriculum with emphasis on electrical power engineering, a general curriculum in mechanical engineering, a mechanical engineering curriculum with emphasis on aeronautical engineering, a curriculum in metallurgical engineering, and a curriculum in mining engineering.

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

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

College of Commerce. The programs of study in the College of Commerce include a general-business curriculum, a business-management curriculum, an industrial-administration curriculum, a marketing and advertising curriculum, a commerce-law curriculum, and a secretarial curriculum. The large amount of elective work allowed in some of the curricula makes it possible to combine a business program with other professional fields or with groups of liberal arts courses.

College of Pharmacy. In the College of Pharmacy a four-year curriculum is offered, leading to the degree of Bachelor of Science in Pharmacy. The first year of the curriculum is given on the Lexington Campus of the University, as a part of the program of the College of Arts and Sciences.

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

DEGREES AND CURRICULA IN THE COLLEGE OF ARTS AND SCIENCES

Paul Prentice Boyd, M. A., Ph. D., LL. D., Dean
Martin Marshall White, 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 interests and powers, in order that he may lead a happy and useful life and contribute his share of leadership in social, intellectual, economic, and political advancement.

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

The distinctive character of the College is that it insists on an acquaintanceship with the main fields of intellectual interest and, in addition, as deep a knowledge as possible in the time allotted in some one special field. While all students are trained along lines useful in various vocations, the College emphasizes preparation **for** vocations rather than **in** them by the building of a well-rounded life, rich in interest, resourceful, capable of continuous growth and of 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, Bacteriology, Botany, Chemistry, English Language and Literature, Geography, 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, Radio Arts, Romance Languages and Literatures, Social Work, Sociology, and Zoology. These twenty-seven departments have been grouped into four divisions: Literature, Philosophy, and the Arts; Social Studies; Physical Sciences; and Biological Sciences.

Admission. Requirements for admission to the College of Arts and Sciences, as a freshman, or with advanced standing, or as a

special student, are the same as those outlined on preceding pages for the University. The College, however, recommends strongly that the student present for admission two units of mathematics.

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

The adviser makes out the student's course of study on the basis of information supplied by the Dean's office and by the advisee. He must be consulted before any changes are made in the schedule of classes the student is taking. The adviser in general holds personal conferences with each advisee, and makes recommendations to the proper university official with reference to living conditions, class schedules, etc. A freshman may upon the recommendation of the adviser be permitted to carry above a normal academic load.

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

Probation Students. Students placed on academic probation by the Dean of the college are under the special supervision of the Director of the Personnel Office. The parent is notified at the beginning of the probation period. At mid-quarter a report of the student's progress is sent home. During the quarter the student is interviewed and every attempt is made to determine his difficulty. The student is placed in special help classes if it seems to be desirable. The attitude of the college toward probation students is that they need assistance and with the cooperation of the parents the college attempts to fulfill this need.

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

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

1. General cultural courses with majors and concentration fields, leading to the degree of A. B. or B. S.

2. Professional courses leading to special degrees in industrial chemistry, in journalism, in library science, in music, and in medical technology.

3. Professional courses in which the general requirements for the A. B. and B. S. degrees are fulfilled.

4. Preprofessional courses meeting the requirements for admission to professional schools.

5. Combined courses, by means of which students may save a year or more in gaining both the A. B. or B. S. and a degree in law, medicine, or dentistry.

6. Graduate courses leading to the master's and the doctor's degrees in the graduate school.

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

THE DEGREE OF BACHELOR OF ARTS

For the degree of Bachelor of Arts the student is required to gain a total of 192 quarter hours and 192 points,* that is, a standing of 1.0; and in the departments of Anatomy and Physiology, Ancient Languages, Art, Botany, Economics, Geology, German, Journalism, Mathematics and Astronomy, Music, Philosophy, Physical Education, Physics, Political Science, Romance Languages, Social Work, Sociology, and Zoology, pass a final comprehensive examination on his major subject. The detailed conditions are as follows:

THE LOWER DIVISION

General Requirements

Freshman Orientation, first quarter, freshman year, 1 quarter hour.

English, first, second, and third quarters, freshman year, 9 quarter hours.

Foreign Languages until proficiency examination is passed on 10 quarter hours.

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

General Hygiene, first, second, or third quarter, freshman year, 2 quarter hours.

Physical Education, freshman and sophomore years. Students required to take physical education will enroll each quarter

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

until the physical fitness standard is completed. This requirement may be satisfied in one or more quarters.

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

Group Requirements

Humanities, freshman or sophomore year, 8 to 10 quarter hours.
(Literature, Art, Music, Philosophy.)

Social Studies, freshman or sophomore year, 8 to 10 quarter hours.
(Geography, History, Political Science, Sociology.)

Physical Sciences, freshman or sophomore year, 8 to 10 quarter hours.
(Astronomy, Chemistry, Geology, Mathematics, Physics.)

Biological Sciences, freshman or sophomore year, 8 to 10 quarter hours.
(Anthropology, Bacteriology, Botany, Physiology, Psychology, Zoology.)

Ways in Which the Group Requirements May Be Satisfied

1. **The Humanities.** All lower division students will be required to complete a series of three introductory courses in the Humanities (for a total of nine quarter hours), to be chosen in any combination of three from the following courses, except that one, and not more than two, shall be selected from the literature courses: (Each of these courses will carry three quarter hours).

   English A, Introduction to Humanities Through English Literature; Romance Language A, Introduction to Humanities Through Romance Literature; German A, Introduction to Humanities Through German Literature; Philosophy A, Introduction to Humanities Through Philosophy; Music A, Introduction to Humanities Through Music; and Art A, Introduction to Humanities Through Art.

2. **The Social Studies.** The student is permitted to choose one of the following sequences, to satisfy the group requirement in the social studies: (Each sequence will carry ten quarter hours).

   History 10a, b, or Political Science 10a, b, American Civilization; History 8a, b, or Political Science 8a, b, European Civilization; Sociology 3a, b, or Geography 3a, b, Societies Around the World.

3. **The Biological Sciences.** Those students who, upon entering the University, state that they expect to elect a science curriculum shall satisfy the biological group requirement

of the lower division by any general course or courses in one of the departments of the biological group. Other students shall satisfy the group requirements in the biological sciences by taking any two of the following courses: Anatomy and Physiology 2; Anthropology 1 or 2; Botany 25; Psychology 1; Zoology 25.

4. **The Physical Sciences.** Students will be permitted to take work in either one or two departments in order to satisfy the physical science group requirement. The student may choose eight or more hours from the following courses: Astronomy 51a, b; Chemistry 1a, b, 4a, b, Geology 50a, b, c, (50a is prerequisite for 50b or c), 14a, b, c (in connection with 50a, b, c), 3, 30a, b, c, 52; Mathematics 5a, b (only one counted on group), 17, 3, 19; Physics 1a, b, c, 3a, b, c, 51, 52, 53 (51 is prerequisite for 52 or 53).

Freshman Core Curriculum	Qtr. Hrs.
Orientation	1
General Hygiene	2
Military Science (men)	6
Physical Education	0
English	9
Humanities, or Social Studies	8–10
Physical or Biological Sciences	8–10
Foreign Languages or free electives	10

Total number of quarter hours required in Lower Division: 96
The normal load per quarter is 16 quarter hours

Rules and Procedures

1. Superior Students: Entering freshmen, in the upper twenty-five per cent of the classification scale, as determined by University of Kentucky classification tests, may substitute other courses in the groups for those courses which are set up especially to satisfy group requirements. Other students, in the top twenty-five per cent of the classification scale of the University of Kentucky classification tests, with a standing of 2, may be granted the same privilege.
2. The requirements in whole or in part for English, for General Hygiene, and for any of the Groups under Section II, may be satisfied without credit by passing a departmental proficiency examination.
3. A student deficient in English, as indicated by the freshman tests, will be required to pass English D (with no credit) in his first quarter, and the regular freshman English course in his second, third, and fourth quarters, or whenever he has satisfactorily removed the deficiency.

4. **A student deficient in mathematics, as indicated by the freshman tests, will be required to pass Mathematics D (with no credit).**

UPPER DIVISION

Junior and Senior Years

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

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

Generically Related Fields

The college recognizes four general fields of generically related subject matter

1. **Literature, Philosophy, and the Arts**
   This field includes Ancient Languages and Literatures, Art, English Language and Literature, German Language and Literature, Journalism, Library Science, Music, Philosophy, and Romance Languages and Literatures.
2. **Social Studies**
   This field includes Anthropology, Archaeology, Commerce, Economics, Education, Geography, History, Law, Philosophy, Political Science, Psychology (social phases), Social Work, and Sociology.
3. **Physical Sciences**
   This field includes Chemistry, Engineering, Geology, Mathematics, Astronomy, Military Science, and Physics.
4. **Biological Sciences**
   This field includes Anatomy, Physiology, Agriculture (biological phases), Bacteriology, Botany, Chemistry (biological phases), Hygiene, Public Health, Physical Education, Psychology (biological phases), and Zoology.

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

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

The dean and head of the major department will appoint an advisor 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 quarter of the sophomore year, the student's program of concentration is to be worked out for the entire two years by the student and his adviser, and when approved by adviser and dean is filed in the dean's office and constitutes a part of the student's requirements for graduation. Alterations in this plan may later be made if they are approved by the adviser and the dean.

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

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

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

Topically Related Fields

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

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

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

Tutorial Work and Comprehensive Examinations

Students majoring in the departments of Anatomy and Physiology, Ancient Languages, Art, Botany, Economics, Geology, German, Journalism, Mathematics and Astronomy, Music, Philosophy, Physical Education, Physics, Political Science, Romance Languages, Social Work, Sociology, and Zoology will be required to schedule tutorial or seminar courses as specified by their major departments and to take final comprehensive examinations covering their major work. Passing the comprehensive examinations is a prerequisite for graduation for major students in these departments. If a student fails to graduate because of failure in this examination, he may be given another examination when his major department is satisfied that he has made sufficient additional preparation.

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

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

Independent Work Courses

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

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

Credit for Beginning Foreign Languages

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

Classification in Foreign Languages

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

Electives in Other Colleges

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

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

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

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

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

Residence Requirements

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

Extension and Special Examination

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

THE DEGREE OF BACHELOR OF SCIENCE

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

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

A student may combine his courses in Arts and Sciences and Law or Medicine or Dentistry, gaining the A. B. or B. S. degree

after three years in this college and one or more years in the professional school.

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

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

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

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

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

PRE-MEDICAL COURSES

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

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

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

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

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

Recommended Courses Preparatory to the Study of Medicine*

First Quarter	Qtr. Hrs.	Second Quarter	Qtr. Hrs.	Third Quarter	Qtr. Hrs.
Orientation A Required of all	1	Chem. 1b General Chem.	5	English 1c English Comp.	3
Chem. 1a General Chem.	5	Zool. 1b General Zoology	4	Chem. 4 Qualitative Analysis	6
Zool. 1a General Zoology	4	English 1b English Comp.	3	Zool. 1c General Zoology	4
English 1a English Comp.	3	Mil. Sci. 1b First Year Elem. Course, Infantry	2	Mil. Sci. 1c First Year Elem. Course, Infantry	2
Mil. Sci. 1a First Year Elem. Course, Infantry	2	** Phys. Ed.		** Phys. Ed.	
** Phys. Ed.					

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

Two years of Foreign Language in college are recommended, or the equivalent in high school, although a few medical schools require none or only one year. If the student is a candidate for the A.B. or B.S., he will be required to pass a proficiency examination on 10 qtr. hrs. of a foreign language.

Math. 17 and 3 are advised and should be taken sometime during the freshman year.

** Students required to take physical education will enroll each quarter until the physical fitness standard is completed. This requirement may be satisfied in one or more quarters.

SOPHOMORE YEAR

Fourth Quarter	Qtr. Hrs.	Fifth Quarter	Qtr. Hrs.	Sixth Quarter	Qtr. Hrs.
German or French	4 or 5	German or French	4 or 5	German or French	4
†* Chem. 30a Organic Chem. or †Chem. 21a Quantitative Analysis	5 or 4	†*Chem. 30b Organic Chem. or †Chem. 21b Quantitative Analysis	5 or 4	*Chem. 30c Organic Chem. or Chem. 21c or A Group Requirement	5 or 4 or 5
Physics 1a General Physics	5	Physics 1b General Physics	5	Physics 1c General Physics	5
Mil. Sci. 6a Second Yr. Elem. Course, Infantry	2	Mil. Sci. 6b Second Yr. Elem. Course, Infantry	2	Mil. Sci. 1c Second Yr. Elem. Course, Infantry	2
** Phys. Ed.		** Phys. Ed.		** Phys. Ed.	

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

† Choice depending on length of preparatory course desired.

** Students required to take physical education will enroll each quarter until the physical fitness standard is completed. This requirement may be satisfied in one or more quarters.

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 year's Pre-Medical Course. This course more than meets the pre-dental requirements which have been specified by the Dental Education Council of America. With the two years' course, entrance may be gained to all Class A dental schools with the exception of a very few which require three years of preparatory work.

PRE-LAW COURSES

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

ANATOMY AND PHYSIOLOGY

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

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

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

Suggested Courses for a Major in Anatomy and Physiology

JUNIOR YEAR

First Quarter	Qtr. Hrs.	Second Quarter	Qtr. Hrs.	Third Quarter	Qtr. Hrs.
Psych. 1 Intro. to Psychology	6	Soc. Sci., Hist., Pol. Sci., Sociology, or Geog.	4	Soc. Sci., Hist., Pol. Sci., Sociology, or Geog.	4
Chem. 130a Organic Chemistry	5	Psych. Elective	4	Chem. 130c Organic Chemistry	5
Zool. 101a Histology	4	Chem. 130b Organic Chemistry	5	Zoology 106 Embryology	6
Anat. & Phys. 105 Architecture of Human Skeleton	5	Anat. & Phys. 106 Intro. to Endocrinology	4		

SENIOR YEAR*

Fourth Quarter	Qtr. Hrs.	Fifth Quarter	Qtr. Hrs.	Sixth Quarter	Qtr. Hrs.
Anat. & Phys. 116a Seminar (Tutorial)	1	Anat. & Phys. 116b Seminar (Tutorial)	1	Anat. & Phys. 116c Seminar (Tutorial)	1
Anat. & Phys. 108a Adv. Phys.	4	Anat. & Phys. 108b Adv. Phys.	4	Anat. & Phys. 108c Adv. Phys.	4
Chem. 140a Physical Chem.	4	Chem. 140b Physical Chem.	4	Bact. 52, Prin. of Bacteriology	6
English 3a Hist. of Eng. Lit.	3	English 3b Hist. of Eng. Lit.	3	Hyg. 1, Personal and Community Health	2
Elective modern lang., social subject, or botany	4	Elective (Cont. elective subj.)	4	Elective (Cont. elective subj.)	4
				English 3c, Hist. of Eng. Lit.	3

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

BACTERIOLOGY

The Degree of B. S. in Medical Technology

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 curriculum in Medical Technology. The curriculum in Medical Technology is prescribed throughout and leads to the degree of Bachelor of Science in Medical Technology. This course is designed to prepare men and women for positions in hospital laboratories, physicians' and surgeons' clinics, and federal, state, and municipal public health laboratories, and to fit the especially adapted student for either commercial or research laboratory work in bacteriology. It also meets all the requirements of the United States Civil Service Commission for the rank of Junior Bacteriologist.

The University of Kentucky, in affiliation with the Good Samaritan Hospital, is registered, through the Department of Bacteriology, as an approved school for the training of medical technologists by the Board of Registry of the American Society of Clinical Pathologists, and by the Council on Medical Education and Hospitals of the American Medical Association.

Graduates of this course who may desire to enter medical school will have all the requirements of the American Medical Association and the Association of American Medical Colleges for entrance to all Class A medical schools, provided they take two years of foreign language.

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

FRESHMAN YEAR

First Quarter	Qtr. Hrs.	Second Quarter	Qtr. Hrs.	Third Quarter	Qtr. Hrs.
Orientation	1	English 1b	3	Chem. 20	6
Chem. 1a	5	Chem. 1b	5	English 1c	3
English 1a	3	Zool. 1b	4	Zool. 1c	4
Bact. 2a	6	Bact. 2b	6	†P. E.	
†P. E.		†P. E.		Mil. Sc. 1c (Men)	2
Mil. Sc. 1a (Men)	2	Mil. Sc. 1b (Men)	2	* Humanities (women)	3
*Humanities (women)	3				
Women 18 Men 17		Women 18 Men 20		Women 16 Men 15	

SOPHOMORE YEAR

Fourth Quarter		Fifth Quarter		Sixth Quarter	
Chem. 21a	4	Chem. 21b	4	Zool. 7c	6
Bact. 56a	4	Bact. 56b	4	Bact. 57a	4
Zool. 1a	4	** For. Lang.	5	A. & P. 1b	4
** For. Lang.	5	or		*Humanities (women)	3
†P. E.		Mil. Sc. 2b (Men)	2	Mil. Sc. 2c (Men)	2
Mil. Sc. 2a (Men)	2	A. & P. 1a	4	†P. E.	
		†P. E.			
Women 18 Men 19		Women 18 Men 19		Women 17 Men 16	

JUNIOR YEAR

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

SENIOR YEAR

Tenth Quarter		Eleventh Quarter		Twelfth Quarter	
Chem. 130a	5	Chem. 130b	5	Chem. 130c	5
‡Social Sci. Elective	3 to 5	For. Lang., Math., Phil., Psych. or Social Sci.		Bact. 111	6
Bact. 120a	6	‡Elective	3 to 5	Bact. 120c	5
Bact. 150a	1	Bact. 120b	4	Bact. 150c	1
		Bact. 150b	1		
		Physics 120	3		
	15 to 17		16 to 18		17

Minimum quarter hours required for degree, 204.

* It is recommended that the first quarter be taken in Art or Music and the second quarter in English Literature.

** Both quarters must be taken in the same Language.

‡ Social Science electives are to be chosen from courses designated by the Department of Bacteriology.

† Students required to take physical education will enroll each quarter until the physical fitness standard is completed.

CHEMISTRY

The Department of Chemistry provides an opportunity for students to gain a Bachelor's degree with Chemistry as a major and a Bachelor of Science in Industrial Chemistry degree. The curriculum in Industrial Chemistry is a prescribed course, the purpose of which is to train persons who desire to follow Chemistry as a profession in the chemical industries or to pursue advanced training in graduate schools. For those persons who are desirous of combining training in Chemistry (a) with library techniques to become librarians in the scientific libraries, (b) with commerce subjects to become technical salesmen or secretaries for scientific or industrial laboratories, (c) with home economics subjects to obtain a background for work in the field of foods, textiles, etc., or (d) with other combinations, an opportunity to develop such programs is afforded under the Topical Field offered by the College of Arts and Sciences.

The Degree of B. S. in Industrial Chemistry

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

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

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

FRESHMAN YEAR

First Quarter	Qtr. Hrs.
Orientation	1
Military Science 1a	2
*Physical Education	
English 1a	3
Mathematics 17 (College Algebra)	5
Chemistry 1a (General)	5
Hygiene 1	2
	18

Second Quarter	
Military Science 1b	2
*Physical Education	
English 1b	3
Mathematics 3 (Trigonometry)	5
Chemistry 1b (General)	5
Engineering Drawing 1a	2
	17

Third Quarter	Qtr. Hrs.
English 1c	3
Military Science 1c	2
*Physical Education	
German 1a	5
Mathematics 19 (Analytic Geometry)	5
Chemistry 20 (Qualitative Analysis)	6
	21

* Students required to take physical education will enroll each quarter until the physical fitness standard is completed.

SOPHOMORE YEAR

Fourth Quarter	Qtr. Hrs.
Military Science 6a	2
** Physical Education 1	
Chemistry 21a (Quantitative Analysis)	4
Mathematics 20a (Diff. Calculus)	5
German 1b	5
Physics 3a	6
	22

Fifth Quarter	
Military Science 6b	2
**Physical Education	
Chemistry 21b	4
Mathematics 20b (Int. Calculus)	5
German 2a	4
Physics 3b	6
	21

Sixth Quarter	
Military Science 6c	2
**Physical Education	
Chemistry 21c	5
Mathematics 25 or 105 (Dif. Equations)	4
German 2b	4
Physics 3c	6
	21

JUNIOR YEAR

Seventh Quarter	Qtr. Hrs.
Chem. 130a (Organic)	5
Chem. 140a (Physical)	5
*Biological Science	4
†Elective, Humanities	5
	19

Eighth Quarter	
Chem. 130b (Organic)	5
Chem. 140b (Physical)	5
*Biological Science	4
†Elective, Humanities	5
	19

Ninth Quarter	
Chem. 130c (Organic)	5
Chem. 140c (Physical)	5
Commerce 1 (Principles of Economics)	5
English 6 (Public Speaking)	3
	18

SENIOR YEAR

Tenth Quarter	
Chem. 133a (Qualitative Organic)	5
Chem. 160 (Comprehensive Survey of Chemi. Mfg. Processes)	3
Chem. 141 (Intermediate Physical)	4
Chem. 181 (Chemical Literature)	1
‡Chem. 188a (Seminar)	0
English 30 (Business Eng.)	3
†Elective, Humanities	5
	21

Eleventh Quarter	
Chem. 121 (Semimicro Quantitative Anal.)	4
Chem. 161 (Industrial Chemical Calculations)	4
Chem. 110a (Advanced Inorganic)	3
Chem. 111 (Synthetic Inorganic)	2
‡Chemistry 188b (Seminar)	1
†Elective, Humanities	5
	19

Twelfth Quarter	Qtr. Hrs.
Chem. 120	5
Chem. 110b (Advanced Inorganic)	3
Chem. (elective)	2-4
Electives (Physics or Mathematics)	4
Chem. 188c (Seminar)	1
	15-17

Minimum quarter hours for degree, 237.

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

† The electives are to be chosen from courses designated by the Department of Chemistry. A student who is planning on graduate work must select 10 hours of this requirement in French.

‡ Chemistry 188a-c (Undergraduate Seminar). Each senior is required to present a minimum of three reports to the student-faculty group for each quarter hour of credit earned. Attendance at the seminar for two quarters is required before the first quarter hour of credit is earned.

** Students required to take physical education will enroll each quarter until the physical fitness standard is completed.

GEOLOGY

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

List of Courses for Professional Training in Geology

	Qtr. Hrs.
FRESHMAN YEAR	
*Geology 50a, b—Outlines of Geology	8
SOPHOMORE YEAR	
Geology 30a, b, c—General Geology	15
Geology 10a, b, c—Field Geology	9
JUNIOR YEAR	
Geology 31a, b—Lab. Work in Regional Historical Geology	4
Geology 107a, b, c—Advanced Field Geology	9
Geology 123a, b—Mineralogy	8
Geology 106a—Economic Geology	4
Geology 118—Field Work in Regional Geology (Summer)	3
SENIOR YEAR	
Geology 106b—Economic Geology	4
Geology 101a, b—Paleontology	8
Geology 124a, b, c—Regional Geology	9
Geology 107d, e, f—Adv. Field Geology	9
Geology 125—Methods of Subsurface Correlation	4
Geology 122—Petroleum Geology	4
Geology 126a, b, c—Seminar	3

ALLIED SCIENCES, ETC.

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

* A sophomore may enter Geol. 30a, b, c without taking 50a, b.

The suggested courses do not constitute a prescribed curriculum. It is planned, however, to give the necessary background for professional work. For a less professional major, courses in other fields may be substituted except for those prerequisite to required courses in Geology. For mineral resource work attention is called to courses in Mining and Metallurgy. For paleontological work take Zoology 7a, b, c. For Petroleum Geology attention is called to courses available in Petroleum Engineering. For later training in Geo-physical methods substitute Physics 3a, b, c, for Chemistry 20 and 21a, b, c.

HYGIENE AND PUBLIC HEALTH

The functions of the department are threefold; namely, medical service to the students, teaching, and research. In the performance of each of these functions primary emphasis is placed upon the prevention of disease and the promotion of health.

The medical service consists of complete physical examinations of all entering students, the maintenance of a Student Health Service on the campus, and calls by physicians of the staff to boarding and rooming students who are ill in their rooms.

The department offers courses in health open to students in the various colleges of the University. A full year of work is offered to graduate nurses in preparation for public health nursing. Also, courses leading to the degree of Master of Science in Public Health are offered especially for the preparation of medical officers of health.

JOURNALISM

The department has a library containing the latest works on journalism, leading daily and weekly newspapers, periodicals, and other publications. It is supplied with standard equipment to print and to publish a modern community newspaper and to provide high-grade commercial job printing for the campus. In the equipment is a type laboratory for instruction in typography, make-up, and the mechanics of publishing and advertising.

Correlated with the work of this department are a committee on student publications, a campus bulletin, **The Kentucky Kernel** (student newspaper), **The Kentuckian** (student yearbook), **The Kentucky Press** (a monthly publication for the editors of the state press) and **The KHSPA News** (a publication for high school editors.) These and other journalistic activities are used in laboratory work. Material written in the advanced classes is submitted for publication in local, state, and national newspapers and in periodicals.

The Degree of A. B. In Journalism

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

Curricula Leading to the Degree of A. B. in Journalism
Pre-Journalism Curriculum

General Editorial Sequence, Community-Publishing Sequence, and Advertising Sequence.

FRESHMAN YEAR		SOPHOMORE YEAR	
Courses	Qtr. Hrs.	Courses	Qtr. Hrs.
Journalism 2	3	Journalism 21, 22	8
English 1a, 1b, 1c	9	English 3a, 3b, 3c	9
Humanities	9	Modern Foreign Language	10
Social Studies	10	Economics 1	5
Psychology 1	6	Biological Science	4-5
Physical Science	4	Physical Science	4
Orientation	1	*Physical Education	
Hygiene	2	Military Science (men)	6
*Physical Education			
Military Science (men)	6		
	50		46-47

Women must elect 12 quarter hours in English or the social studies in lieu of military science.

General Editorial Sequence

JUNIOR YEAR		SENIOR YEAR	
		Courses	
Journalism 100a, 100b	6	Journalism 105	3
Journalism 101a, 101b	6	Journalism 106	4
Journalism 107	3	Journalism 108	4
Journalism 109a, 109b	4	Journalism 123a, 123b	6
Social Studies electives	10	Journalism 127	3
English electives	5	Social Studies electives	10
General electives	15	General electives	17
	49		47

Minimum required for the degree, 198 quarter hours.

Community-Publishing Sequence

JUNIOR YEAR		SENIOR YEAR	
Courses		Courses	
Journalism 100a, 100b	6	Journalism 103	4
Journalism 101a, 101b	6	Journalism 105	3
Journalism 107	3	Journalism 106	4
Journalism 109a, 109b	4	Journalism 108	4
Journalism 102	4	Journalism 123a, 123b	6
Journalism 114	4	Social Studies electives	10
Social Studies electives	10	General electives	16
English electives	5		
General electives	7-10		47
	49-52		

Minimum required for the degree, 198 quarter hours.

Advertising Sequence

JUNIOR YEAR		SENIOR YEAR	
Courses		Courses	
Journalism 100a	3	Journalism 103	4
Journalism 101a	3	Journalism 105	3
Journalism 109a	2	Journalism 106	4
Journalism 111	4	Journalism 108	4
Journalism 114	4	Journalism 115	4
Art 29 (Advertising Art)	3	Journalism 123a, 123b	6
Commerce electives	7-10	Commerce electives	8-10
General electives	20	General electives	17
	46-49		50-52

Minimum required for the degree, 198 quarter hours.

Radio-Journalism Sequence

JUNIOR YEAR		SENIOR YEAR	
Courses		Courses	
Journalism 100a, 100b	6	Journalism 150	3
Journalism 101a	3	Journalism 105	3
Journalism 114	4	Journalism 123a	3
Political Science 173	5	Journalism 127	3
Speech, English elect.	10	Psychology 104	4
Radio-Arts electives	8-10	Speech, English elect.	10
General electives	15	Radio-Arts electives	8-10
		General electives	15
	51-53		49-51

* Students required to take physical education will enroll each quarter until the physical fitness standard is completed.

LIBRARY SCIENCE

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

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

Professional courses on the senior or graduate level are designed primarily for majors in the department, but non-majors may be admitted on approval of the Head of the Department.

Among general courses available to non-majors is included an orientation course in the use of the library for students in the lower division, and two semi-professional courses for prospective teachers. An independent work course is available to students who want to study some phase of library science related to their majors, fields of concentration, or theses.

Courses recommended for teacher-librarians: High schools with enrollment of 100 or less, 9 quarter hours in courses 110, 127, and 145; High schools with enrollment of 100 to 200 students, 18 quarter hours in courses 110, 127, 128, 129a, 133a, and 145.

Requirements for the Degree of Bachelor of Science In Library Science

Prerequisites: A Bachelor's degree from an approved college or university. Undergraduate preparation should emphasize academic rather than professional courses, with emphasis on literature, languages, and the social sciences. Previous experience in library work and facility in the use of the typewriter are considered assets.
Required courses: The full professional curriculum of 45 quarter hours.

MILITARY SCIENCE AND THE RESERVE OFFICERS' TRAINING CORPS

The University of Kentucky maintains a Unit of the Senior division of the Reserve Officers' Training Corps in conformity with the provisions of the National Defense Act of 1916, as amended.

Object. The object of the Reserve Officers' Training Corps is to provide systematic military training at civil educational institutions for the purpose of qualifying selected students of such institutions as reserve officers in the military forces of the United States. This object is attained by employing methods which fit men physically, mentally, and morally for pursuits of peace as well as for duties as leaders in the defensive forces of the nation in an emergency.

Educational Aim. The course of study is designed to give to the student a training which will be as valuable to him in his industrial or professional career as it would be should the nation call upon him to act as a leader in its defense forces.

General Policy. The policy adopted by the War Department to carry out the provisions of the act of Congress of June 3, 1916, as amended, is to qualify students for positions of leadership in time of national emergency and to inculcate in them a respect for all lawful authority, and to teach the fundamentals of the military profession.

The primary purpose of all training is the development of character, leadership, and good citizenship; character through high standards of honor and integrity, leadership through the acquisition and use of knowledge, good citizenship through the idea of service as the real measurement of accomplishment and success.

Discipline of Body and Mind. The following characteristics of an officer and a gentleman will be insisted upon: Neatness in dress, the cultivation of the manners and habits of a gentleman, a dignified and military bearing, devotion to duty and consideration of others; the cultivation in the student body of **esprit de corps**, obedience to orders, acceptance of responsibility, and avoidance of excuses.

Uniform Equipment. Government uniforms and equipment are furnished the University for issue to students without cost to the individual. Each student is required to make a deposit of $10.00 with the Comptroller of the University to cover the cost of any lost or damaged articles. If no clothing is lost or damaged, the entire sum is refunded to the student when he completes the course or leaves school. Advanced enrollees receive an allowance covering the cost of an officer's like uniform. This uniform is worn during the advanced course, and is suitable for wear after graduation, provided the enrollee takes care of same.

Subsistence. Advanced course ROTC enrollees receive an allowance for subsistence in lieu of rations. In 1946 this amounted to sixty-six cents ($.66) per day.

Elementary Course. The military department offers a two years' elementary course. The elementary 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 elementary course is a prerequisite for graduation in every course in the University.

Advanced Course (Infantry, Signal Corps, and Air Force). The elective advanced course of two years, including one summer camp, is offered to students who have successfully completed the elementary 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 elementary course, and who desire to pursue the course to completion, with a view to qualifying for a commission in the Officers' Reserve Corps of the army.

MUSIC

The aim of this department is to develop a high standard of professional and vocational leadership for the state of Kentucky as well as to provide opportunities for cultural experiences in music for the university student. Various music courses may be taken:

(1) As work to apply on the degree of Bachelor of Arts in Music (see p. 75)

(2) As work to apply on the degree of Bachelor of Arts with a major in music.

(3) As elective for those majoring in other departments.

Not more than 27 quarter hours in **Applied Music** may be offered to count toward the A. B. or B. S. degree in other colleges.

University Bands

The University bands furnish an opportunity for improvement for those who have previously played the various band instruments. **The marching band** performs during the football and basketball season and furnishes music for the ROTC spring parades. The **concert band** appears for concerts on campus and in the community. A course in **band directing** is available to a limited number of the more proficient students.

University Vocal Ensembles

Glee Clubs. The University Women's and Men's Glee Clubs are open to all students interested in choral activity, subject to eligibility rulings, and admitted by permission of the director. These organizations appear at many university and community functions during the year including Sunday Afternoon Musicales, out-of-town appearances, and radio programs.

Choristers. This organization is composed of a selected group of students and performs both sacred and secular music.

Mixed Chorus. This organization is composed of the combined Men's and Women's Glee Clubs the second and third quarters of each year and provides University students an opportunity to study and perform major cantatas and oratorios, such as the Elijah, Messiah, St. Matthew's Passion, etc.

University Orchestras

The **University Philharmonic Orchestra** is a student organization assisted by members of the faculty and citizens of the community. The orchestra appears regularly in concerts. In the college community it is making itself a decisive factor in raising the musical tone of the student body. Admission by consultation with the director.

The **University Little Symphony Orchestra** is an organization composed of selected advanced instrumentalists interested in the study and performance of works primarily written for the little symphony.

Chamber Music

Chamber Music ensembles, such as string trios and quartets, brass sextets, and woodwind ensembles are organized each year to provide additional opportunities in music for those instrumental students who desire this type of activity.

Participation In Musical Organizations

No student is allowed to participate in orchestra, glee clubs, or other musical organizations unless he has met all eligibility requirements for extra-curricular activities.

Special Fees

Special fees for applied music, practice room, organ rental, and instrumental methods classes are listed on page 19.

The Degree of A. B. In Music

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

Curriculum Leading to the Degree of A. B. in Music or A. B. with a Music Major

In order that all students majoring in music in the College of Arts and Sciences may have an opportunity to undertake a uniform basic course of study before choosing definitely the program they desire to pursue, the Freshman and Sophomore years of all music curricula are identical.

Note: For special fees for Applied Music see p. 19.

FRESHMAN YEAR		SOPHOMORE YEAR	
First Quarter	Qtr. Hrs.	First Quarter	Qtr. Hrs.
Music (Applied a)	3	Music (Applied d)	3
Music 39a or 40a	*	Music 33a	4
Humanities (Music A)	3	Music 39d or 40d	*
English 1a	3	Physical Science	4-5
Foreign Language	5	Military Science 4a	2
Military Science 3a	2	*Physical Education	
*Physical Education		Social Science	4
Orientation	1		
	Women 15 Men 17		Women 16 Men 18
Second Quarter		Second Quarter	
Music (Applied b)	3	Music (Applied e)	3
Music 12a	3	Music 33b	4
Music 39b or 40b	*	Music 39e or 40e	*
Humanities (Philosophy A)	3	Physical Science	4-5
English 1b	3	Military Science 4b	2
Foreign Language	5	*Physical Education	
Military Science 3b	2	Biological Science	5
*Physical Education		Physical Science	5
	Women 17 Men 19		Women 19 Men 17
Third Quarter		Third Quarter	
Music (Applied c)	3	Music (Applied f)	3
Music 12b	3	Music 33c	4
Music 39c or 40c	*	Music 39f or 40f	*
Humanities (English A)	3	Biological Science	4-5
English 1c	3	Military Science 4c	2
Hygiene 9	3	*Physical Education	
Military Science 3c	2	Elective (Women)	4
*Physical Education			
	Women 15 Men 17		Women 15 Men 13

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

General Supervision Sequence

JUNIOR YEAR		SENIOR YEAR	
First Quarter	Qtr. Hrs.	First Quarter	Qtr. Hrs.
Music 4a	3	Music 19a	4
Music 7	3	Music (Applied j)	3
Music 34a	4	Music 29a, 39j, or 40j	1
Music (Applied g)	3	Education 105	4
Music 28a, 39g, or 40g	1	Education 177a	3
Education 16	5	English elective	5
	19		20
Second Quarter		Second Quarter	
Music 4b	3	Music 13a	3
Music 8	3	Music 19b	4
Music 34b	4	Music (Applied k)	3
Music (Applied h)	3	Music 29b, 39k, or 40k	1
Music 28b, 39h, or 40h	1	Music 114a	3
Education 101	4	Education 177b	3
		Elective (Women)	4
	18	Women 21 Men 17	
Third Quarter		Third Quarter	
Music 26	3	Music 13b	3
Music 9	3	Music 42	1
Music 34c	4	Music (Applied L)	3
Music (Applied i)	3	Music 29c, 39L, or 40L	1
Music 28c, 39i, or 40i	1	Music 114b	3
Education C44	4	Education 177c	3
		Elective (Women)	4
	18	Women 18 Men 14	

Total Number of Quarter Hours Required for a Degree 210

Instrumental Supervision Sequence

JUNIOR YEAR		SENIOR YEAR	
First Quarter	Qtr. Hrs.	First Quarter	Qtr. Hrs.
Music 7	3	Music 19a	4
Music 34a	4	Music (Applied j)	3
Music (Applied g)	3	Music 29a or 40j	1
Music 28a, or 40g	1	Education 105	4
Education 16	5	Education 177a	3
English elective	5		
	21		15
Second Quarter		Second Quarter	
Music 8	3	Music 19b	4
Music 34b	4	Music (Applied k)	3
Music (Applied h)	3	Music 29b or 40k	1
Music 28b, or 40h	1	Music 13a	3
Education 101	4	Music 114a	3
		Education 177b	3
	15		17
Third Quarter		Third Quarter	
Music 9	3	Music 42	1
Music 34c	4	Music (Applied L)	3
Music (Applied i)	3	Music 29c or 40L	1
Music 28c, or 40i	1	Music 13b	3
Education C44	4	Music 114b	3
Elective (Women)	4	Education 177c	3
		Elective (Women)	4
Men 15 Women 19		Men 14 Women 18	

Total Number of Quarter Hours Required for a Degree 201

Vocal Supervision Sequence

JUNIOR YEAR	Qtr. Hrs.	SENIOR YEAR	Qtr. Hrs.
First Quarter		First Quarter	
Music 4a	3	Music 19a	4
Music 34a	4	Music (Applied j)	3
Music (Applied g)	3	Music 39j	1
Music 39g	1	Education 105	4
Education 16	5	Education 177a	3
	16		15
Second Quarter		Second Quarter	
Music 4b	3	Music 19b	4
Music 34b	4	Music (Applied k)	3
Music (Applied h)	3	Music 39k	1
Music 39h	1	Music 13a	3
Education 101	4	Music 115	3
		Education 177b	3
	15		17
Third Quarter		Third Quarter	
Music 26	3	Music 42	1
Music 34c	4	Music (Applied L)	3
Music (Applied i)	3	Music 39L	1
Music 39i	1	Music 13b	3
Education C44	4	Education 177c	3
Elective (Women)	4	English elective	5
		Elective (Women)	4
Men 15 Women 19		Men 16 Women 20	

Total Number of Quarter Hours Required for a Degree 211

PHYSICAL EDUCATION

Upon entrance every student is given a medical examination by the Department of Hygiene and Public Health. The results of the examination are furnished to the Department of Physical Education and modification in the form of exercise is made accordingly. Assignment to a special class for those who have poor body mechanics or physical disabilities is made by the Department of Physical Education.

All students who enroll for the first time and who have passed the medical examination are required to classify in Physical Education 1. In this course men students will be tested as to their physical fitness, general motor capacity and ability, and sports knowledge and participation. Women students are tested as to their posture, general motor capacity and ability, and sports knowledge and participation. As a result of the testing program a student may be:

a. Considered as having completed his or her requirement in physical education.

b. Assigned to take additional work the subsequent quarters to make up deficiencies.

1. Men students with a Physical Fitness Index below 100 will be assigned to physical education classes the subsequent quarter or quarters which have as their specific

purpose the raising of the P.F.I. to the norm for Kentucky men.

2. Women students ranked in the lower levels of the Iowa Posture Test will be assigned to posture classes the subsequent quarter or quarters until they reach a level of good body mechanics satisfactory to the Department.
3. The general motor capacity and ability test have value only for diagnostic and counselling purposes.
4. The sport knowledge and participation tests are required of both men and women. Students lacking in the knowledge and skills of sports activities will be required to classify the subsequent quarter or quarters for physical education classes which provide intensive instruction in sports of recreational value. When the student has gained sufficient knowledge and skill in sports activities satisfactory to the Department, this phase of the requirement shall be completed.
5. The student who has deficiencies in the P.F.I. or the Iowa Posture Test and sports knowledge and participation shall be obligated to meet the first before he or she becomes eligible to complete the requirements in sport knowledge and participation.

Another phase of the Department's activities 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 phase of the Department's functions is the Teacher Training Program which provides opportunity for students to prepare themselves to teach physical education, coach athletic teams, and train for leadership in municipal or community recreation work.

For teacher certification requirements, check with Dean of the Arts and Sciences College and Head of Department of Physical Education.

A uniform is required for all students. The cost of this ranges from $2.50 to $5.00, according to the quality of suit purchased. A locker fee of $1.50 per quarter is charged each student and includes clean towel service, soap, and locker rental. Each student must furnish a padlock for his locker.

POLITICAL SCIENCE

The courses and facilities of the Department of Political Science are designed to serve a number of purposes. Among these purposes are: (1) To provide orientation and training in the problems of citizenship for undergraduate students. (2) Provide further

special background for students majoring in journalism or preparing for admission to professional courses such as law. (3) To train social science teachers for the primary and secondary school. (4) To provide special training for students preparing for governmental or quasi-governmental work conducted by non-governmental agencies. (5) To provide research training in the problems of government.

Public Service Courses

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

Students interested in entering the Federal Civil Service through the usual channel of the Junior Professional Assistant examinations offered by the U. S. Civil Service Commission will find a variety of types of specialized preparation acceptable. One major part of the Junior Professional Assistant examination, however, is based on general training and knowledge. For this general part of the Junior Professional Assistant examination, a broad background in political science and the related social sciences will be helpful. For those desiring to prepare for specialized fields in the public service in federal, state or local government, combinations of courses across departmental lines can be arranged to supply the technical training desired.

Suggested Courses for Preparing for Public Service

For persons interested in preparing for the various branches of government service, the following courses of study are suggested:

Consular and Diplomatic Service. Comparative Government, International Law, American Constitutional Development, American Foreign Relations, Economic Geography, Transportation, Public Finance, Statistics, International Economic Policies, Diplomacy and the Foreign Policy of the United States, American History, Modern European History, Contracts, Conflict of Laws.

Financial Administration. Municipal Government, Public Administration, Regulation of Public Utilities, Accounting, Statistics, Public Finance, Money and Banking, Business Law, Auditing, Corporation Finance, Cost Accounting, State and Local Taxation, Income Tax Procedure, Business Law, and Personnel Management.

Public Management. Municipal Government, State Government, Public Administration, Industrial Relations, Industrial or Employment Psychology, Office Management, Public Welfare Administration, Statistics, Accounting, Public Finance, State and Local

Taxation, Legislation, Social Systems, American Constitutional Development, Highway Location, Construction, and Maintenance, Streets and Pavements, Water Supply and Waterworks, and Sewers and Sewage Disposal.

Public Recording. State Governments, Municipal Government, Accounting, Statistics, Public Finance, Money and Banking, State and Local Taxation, Public Administration, Contracts, Auditing, and Cost Accounting.

Public Welfare Administration. Social Psychology, Social Systems, Ethics, Criminology, Individual Development, Psychology of the Child, Human Measurements, Abnormal Psychology, Social Dependence, Social Pathology, Community Welfare Work, Community Organization, State Government, Municipal Government, Statistics, Public Finance, Administration of Justice, Public Administration, and Population Problems.

Public Works Administration. Highway Location, Construction and Maintenance, Streets and Pavements, Highway Materials, Water Supply and Waterworks, Sewers and Sewage Disposal, Design of Waterworks and Sewers, Contracts, State and Local Taxation, Public Finance, Accounting, and Public Administration.

Public Safety Administration. Criminology, Abnormal Psychology, Personnel Management, Administration of Justice, American Constitutional Development, Constitutional Law, Public Administration, Social Pathology, State Government, Accounting, and Community Organization.

PSYCHOLOGY

For information regarding the Industrial Psychological, Child Guidance, Mental Hygiene, and Educational Testing Services, see "Special Services of the University," (University catalog).

Pre-Educational students are advised to take Individual Differences, Child Psychology, Psychology of Learning, Practice in Testing: Intelligence Tests, Practice in Testing: Personality Tests, and Mental Hygiene.

Pre-Medical students are advised to take Individual Differences, Practice in Testing: Personality Tests, Experimental Psychology: The Senses, Animal Behavior, Mental Hygiene, and Abnormal Psychology.

Pre-Law students are advised to take Applied Psychology, Social Psychology and Abnormal Psychology.

Students of Industrial Personnel are advised to take Individual Differences, Practice in Testing: Intelligence Tests, Practice in Testing: Personality Tests, Practice in Testing: Trade Tests, Industrial Psychology, Employment Psychology, Psychology of Learning, and Mental Hygiene.

Students interested in Social Work are advised to take Individual Differences, Practice in Testing: Intelligence Tests, Mental Hygiene, and Abnormal Psychology.

Students interested in going into Mental Hygiene work are advised to take Individual Differences, Mental Hygiene, Abnormal Psychology, Psychology of Learning, Employment Psychology, Practice in Testing: Intelligence Tests, and Practice in Testing: Personality Tests.

Students interested in Commerce are advised to take Individual Differences, Psychology of Advertising, and Selling, Practice in Testing: Trade Tests, Industrial Psychology, and Employment Psychology.

Industrial Psychology

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

SOCIAL WORK

This department offers a two year course, beginning with the junior year, leading to an A. B. degree with a major in Social Work. This prepares students for placement in social service positions at the junior professional level and serves as a sound basis for further graduate training in the department or in graduate professional schools. Courses are also open to upper division students interested in social welfare or preparing to work in related fields such as medicine, law, nursing, home demonstration or the ministry. Students are advised to consult with the department early in planning for specialization.

The Department of Social Work offers three types of preparation: orientation courses for students interested in social welfare; a pre-professional major for those preparing for or desiring placement in social services on the junior professional level for graduate training; and a graduate curriculum for those wishing further professional training in the field of social 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 are offered in the College of Agriculture and Home Economics. Students who complete this work ordinarily gain credit for it in civil hospitals

to which they are admitted. No general statement can be made as to this, however. The student should take the question up with the hospital schools under consideration. For further information consult the Head of the Department of Hygiene and Public Health.

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

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.

DEGREES AND CURRICULA IN THE COLLEGE OF AGRICULTURE AND HOME ECONOMICS

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INTRODUCTORY STATEMENT

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

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

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

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

Buildings and Equipment. Adequate, modern buildings and equipment are essential for good instruction in agriculture and home economics. In addition to the general University buildings the College of Agriculture and Home Economics has several buildings devoted specifically to the work of the various departments. The Agriculture Building houses the office of the dean, the department of horticulture with its student laboratories, class rooms for farm economics and marketing, and laboratories for the use of students in crops, soils, and agricultural entomology. The Dairy Building has modern, well-equipped laboratories for work in dairy manufacturing, incubation, and genetics. The Stock Judging Pavilion has classrooms and an arena for livestock judging and other phases of work in animal industry. The Agricultural Engineering Building has shops and laboratories for tractors, stationary engines, and machinery, as well as a commodious drawing room. The Animal Pathology Building has classrooms and laboratories of the most modern type for the study of animal diseases. The Tobacco Laboratory is well equipped for the study of plant diseases. In the Meats Laboratory are modern freezer lockers, and rooms for slaughtering, cutting, and curing meat. The Experiment Station Building contains no classrooms, but offices of many of the members of the staff are located there.

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

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

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

REQUIREMENTS FOR GRADUATION IN AGRICULTURE

To receive the degree of Bachelor of Science in Agriculture, a student must complete 204 quarter hours and 204 quality points. These hours are classified as follows:

Prescribed subjects, non-agriculture	59 hours
Prescribed subjects, agriculture	48 hours
Electives required in agriculture	45 hours
Electives required in social studies, humanities, foreign language, or mathematics	10 hours
Free electives	42 hours
Total	204 hours

The twelve-quarter plan of study enables a student to obtain a broad education and pursue some specialization in a chosen field of agriculture. Courses of instruction in technical agriculture are given by the departments of Agricultural Entomology, Agronomy (including Farm Engineering), Animal Industry, Animal Pathology, Farm Economics (including Rural Sociology), Horticulture (including Forestry), and Markets and Rural Finance. In addition students in agriculture receive instruction in English, economics, bacteriology, botany, chemistry, geology, physics, and zoology. A liberal system of electives permits students to choose courses in the social and physical sciences, education, and other fields of interest.

To complete the requirements for a degree in twelve quarters a student must earn an average of 17 hours per quarter. A schedule of 19 hours is the maximum load for a student whose standing the preceding quarter was between 1 and 2. A student who makes a standing of 2 or more in any quarter may carry up to 22 hours

the following quarter. Special permission by the Dean is required for a schedule of more than 22 hours. A student whose record enables him to carry 21 hours per quarter can earn a degree in ten quarters.

Farm experience or practical experience in the option selected by the student is required for graduation. Students entering with less than two units of mathematics must make up the defiiciency during the first year. Students who present no entrance units in physics are required to take nine quarter hours of college physics. Transfer students are required to take a minimum of 52 quarter hours of agriculture in the University.

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

Curriculum Leading To The Degree of Bachelor of Science in Agriculture

First Quarter	Qtr. Hrs.	Second Quarter	Qtr. Hrs.
Agron. 1 Elem. Farm Crops	5	A. I. 1 Farm Livestock Prod.	5
A. I. 21 Farm Dairying	4	Bot. 1b Genl. Botany	4
Assem. 1 Freshman Assembly	1	[3] Eng. 1a English Composition	3
Bot. 1a Genl. Botany	4	Hort. 1 General Horticulture	3
[1] Mathematics	---	M. S. 1b First Yr. Elem.	2
M. S. 1a First Yr. Elem.	2		
[2] Physical Education			
	16		17
Third Quarter		**Fourth Quarter**	
A. I. 41 Farm Poultry Prod.	4	Chem. 1a Genl. Inorganic	5
Eng. 1b English Composition	3	Econ. 1 Prin. of Economics	5
Geol. 3 Elem. Geology	4	Fm. Eng. 1 Mech. of the Farmstead	4
Zool. 25 Genl. Animal Biology	5	M. S. 6a Second Yr. Elem.	2
M. S. 1c First Yr. Elem.	2		
	18		16

[1] Students deficient in mathematics, as indicated by the freshman tests, are required to pass Mathematics D (with no credit). Students entering with less than two high school units of mathematics are required to make up the deficiency during the freshman year.

[2] No credit is granted for physical education. Students must meet the physical fitness standard prescribed by the faculty.

[3] The requirement in whole or in part for English 1a, b, c, may be satisfied without credit by passing a departmental proficiency examination. Students deficient in English, as indicated by the freshman tests, are required to pass English D (with no credit) before taking English 1a.

Fifth Quarter	Qtr. Hrs.	Sixth Quarter[4]	Qtr. Hrs.
Chem. 1b Genl. Inorganic	5	Agron. 10 Soils	5
Eng. 1c English Composition	3	A. I. 81 Prin. Animal Nutrition	4
Fm. Ec. 1 Agricul. Economics	5	Bact. 52 Genl. Bacteriology	6
M. S. 6b Second Yr. Elem.	2	M. S. 6c Second Yr. Elem.	2
Electives	3		
	18		17

[4] Before the end of the sixth quarter the student selects an option and is assigned to an adviser. The options are as follows: (1) Agricultural Education, (2) Agricultural Entomology, (3) Agricultural Extension, (4) Agronomy, (5) Animal Husbandry, (6) Dairying, (7) Farm Economics and Rural Sociology, (8) General Agriculture, (9) Horticulture, (10) Markets and Rural Finance, (11) Poultry, (12) Science Applied to Agriculture.

To meet the requirements of the Kentucky State Plan for Vocational Education a student must choose his electives to include courses distributed approximately as follows: Agricultural entomology, 6 hours; animal industry, 14 hours; crops, 8 hours; education, 22 hours; including 18 hours in secondary agricultural education; farm shop, 9 hours; fruits, 3 hours; gardening, 4 hours; soils, 6 hours.

SEVENTH TO THE TWELFTH QUARTERS

[1] Farm Ec. 110 Farm Management	4
M. & R. F. 100 Marketing	4
[1] Physics 51, 52, 53 Introduction to Physics	9
[2] Electives in agriculture	46
Electives in social studies, humanities, language, or mathematics	10
Free electives	29
	102
Minimum hours required for graduation	204

[1] Required of students who had no physics in high school. Others may elect these courses.

[2] Transfer students are required to take a minimum of 52 quarter hours of agriculture in the University.

CHANGES IN CURRICULUM

The curriculum as outlined is primarily for the student desiring a general course of study. In order that the student may prepare specifically for a definite option or field of specialization which requires a certain sequence of courses, he may postpone required courses or make substitutions for them if these changes are recommended by the adviser and are approved in accordance with the University rules.

FACULTY ADVISERS

Upon entering the College each freshman is assigned to a faculty adviser. It is the function of this faculty member to serve as a friendly, personal counselor to the student, to confer with the student concerning his schedule, and to make to the Dean recommendations concerning schedules.

OPTIONS

The following options or fields of interest are available to students in agriculture: (1) Agricultural Education, (2) Agricultural Entomology, (3) Agricultural Extension, (4) Agronomy, (5) Animal Husbandry, (6) Dairying, (7) Farm Economics and Rural Sociology, (8) General Agriculture, (9) Horticulture, (10) Markets and Rural Finance, (11) Poultry, (12) Science Applied to Agriculture.

An option consists of a minimum of 21 quarter hours of courses not open to freshmen. The student normally selects his option during the last quarter of the sophomore year, though the choice may be made earlier. A transfer student who has completed 6 or more quarters selects an option when he first registers in the College. When the option is selected, the Dean appoints a professor to serve as the student's adviser. The adviser recommends the schedule for each quarter and confers with the student concerning selection of courses, occupation after graduation, and similar problems. Descriptions of the options follow.

AGRICULTURAL EDUCATION

This option is designed primarily to prepare students to teach agriculture in public high schools under the provisions of the Federal Vocational Education Acts. The University of Kentucky has been designated as the institution in the state to educate teachers for this work. Students who select this option must have had farm experience. In addition to the required courses in the curriculum, students must take farm structural engineering, farm shop, electives in all departments of agriculture, and 21 hours in education, as prescribed in the state plans for vocational education. Three of these courses in education (practice teaching, educational psychology, and evening school and part-time courses) make up a complete schedule for one quarter.

The following electives are suggested: Agricultural Entomology, 1, 102; Agronomy 11, 12, 23, 104, 105; Animal Industry 2, 3, 23, 61, 101, 103, 104, 105, 106, 121, 141; Animal Pathology 102; Farm Economics 101, 115; Farm Engineering 104, 105; Forestry 1; Horticulture 10, 103, 110, 120; Markets and Rural Finance 101, 110, 140; Rural Sociology 101; English 6; Journalism 22.

AGRICULTURAL ENTOMOLOGY

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

AGRICULTURAL EXTENSION

Students preparing to be county agricultural or county club agents should elect courses in all agricultural departments, including Agricultural Extension 101. Other courses suggested are Commerce 3; English 7a, 30; History 10a, 40; Journalism 22; Mathematics 3, 17; Philosophy 21; Political Science 15; Psychology 1; and courses in games and recreation. Work in the radio studios is recommended.

AGRONOMY

Courses in agronomy comprise those in forage crops, cereals, tobacco, plant breeding, plant diseases, soil classification, soil properties, soil conservation, and interpretation of experimental results. Students selecting this option should elect certain courses in chemistry, botany, genetics, mathematics, physics, and geology, depending upon their individual field of interest. The agronomy option prepares students for the important work of soil conservation.

ANIMAL HUSBANDRY

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

DAIRYING

Courses in dairying place special emphasis on technical subject matter as a supplement to practical experience in either dairy production or dairy manufacturing. In this option instruction is offered in breeding, selection, feeding, and management of dairy cattle. Specialized instruction is offered in dairy bacteriology and its relationship to processing market milk, butter, cheese, and ice cream. Students choosing this option should complete the required courses in general chemistry and bacteriology as early as possible and should take organic chemistry.

FARM ECONOMICS AND RURAL SOCIOLOGY

Courses in this option deal with the economics of production in agriculture, including farm costs and accounting; farm management and the factors underlying profitable farming; land economics, land values and land appraisal; the human and community problems of

farm life, population, rural leadership, social attitudes, and social change. Students selecting this option should have a broad training in social and physical sciences, and should elect such courses as history, political science, philosophy, psychology, mathematics, statistics, and accounting.

GENERAL AGRICULTURE

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

HORTICULTURE

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

Curriculum in Ornamental Horticulture

FIRST QUARTER	Qtr. Hrs.	SECOND QUARTER	Qtr. Hrs.
Art 61a—Drawing	4	Art 61b—Drawing	4
Bot. 1a—Genl. Botany	4	Bot. 1b—Genl. Botany	4
Eng. 1a—English Composition	3	Eng. 1b—English Composition	3
Eng. Dr. 17a—Mech. Drawing	2	Math. 3—Trigonometry	5
M. S. 1a—First Year Elem.	2	or	
Assembly 1—Fresh.	1	Math. 17—Algebra	5
		M. S. 1b—First Year Elem.	2
	16		18
THIRD QUARTER		**FOURTH QUARTER**	
Agr. Ent. 1—Agr. Entomology	4	Art 63a—Drawing	4
Bot. 1c—Genl. Botany	4	Chem. 1a—Genl. Chem.	5
Eng. 1c—Eng. Composition	3	Agr. 23—Plant Pathology	6
M. S. 1c—First Year Elem.	2	M. S. 6a—Second Year Elem.	2
Elective	3		
	16		17
FIFTH QUARTER		**SIXTH QUARTER**	
Chem. 1b—General Chem.	5	Agron. 10—Soils	5
Econ. 1—Princ. of Economics	5	Geol. 3—Elem. Geology	4
Hort. 1—General Horticulture	3	M. S. 6c—Second Yr. Elem.	2
M. S. 6b—Second Year Elem.	2	Electives	7
Electives	3		
	18		18

SEVENTH TO TWELFTH QUARTERS

Agr. Ent. 103—Economic Entomology	4
Agron. 12—Soil Conservation	3
Fm. Eng. 105—Eng. Practices in Soil Management	4
Hort. 120—Landscape Gardening	3
Hort. 121—Adv. Landscape Gardening	3
Hort. 122—Floriculture	2
Hort. 123—Plant Propagation	3
Hort. 124a-b—Special Problems in Ornamental Hort.	6
Electives	73

Minimum hours required for graduation—204.

MARKETS AND RURAL FINANCE

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

POULTRY

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

SCIENCE APPLIED TO AGRICULTURE

Students interested in preparing themselves for scientific careers in agriculture should elect the option in agricultural science. In preparation for this option, basic courses in science and mathematics, such as bacteriology, botany, chemistry, geology, physics, zoology, algebra, and trigonometry should be scheduled in the freshman and sophomore years. Properly selected electives in the four-year curriculum prepare the student for graduate work leading to the master's or doctor's degree.

PRE-AGRICULTURAL ENGINEERING

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

PRE-FORESTRY WORK

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

PRE-THEOLOGICAL MAJOR FOR THE RURAL MINISTRY

Many leaders in the work of the rural town and country ministry are today suggesting that some of the men who plan to enter this field of service should consider attending a college of agricul-

ture in which a strong curriculum in rural social science is available, as an undergraduate preparation for seminary training. A student planning to enter a theological seminary and enrolling in a regular curriculum of the College of Agriculture and Home Economics may select from the general University offering a suitable group of courses in philosophy, English literature, and ancient languages. The student planning to elect this major is advised to acquaint himself with the specific requirements of the theological seminary of his choice.

PRE-VETERINARY WORK

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

TWO-YEAR PROGRAMS IN AGRICULTURE

For high school graduates who plan to study agriculture in college as preparation for farming, but whose time is limited, a six-quarter program is provided. In this program subjects may be elected to provide general or special information concerning any phase of agriculture. Two-year programs in certain fields are provided for veterans. These include livestock, poultry, dairying, farm management, market management, fruits and vegetables, etc. The following regulations govern these programs:

1. Students must meet the University entrance requirements as either regular or special students.
2. Students may enter at the beginning of any quarter.
3. When students register for the first time, they must state that they plan to follow this program.
4. All subjects in agriculture and in other colleges numbered 1 to 99 are open to students in this program. By special permission other courses may be scheduled.
5. Students may transfer to the degree curriculum at any time. However, courses in the 100 series, or courses taken without the designated prerequisites may not be counted toward a degree unless validated by special examination.
6. Upon the completion of 6 quarters of residence (these need not be consecutive), 105 quarter hours and 105 grade points, the student will be awarded a certificate in agriculture.

SHORT COURSES

Short courses, conferences, and workshops, ranging in duration from one day to several weeks are held for those interested in various phases of agriculture. The short courses planned for 1947 include courses for dairy fieldmen, machinery repairmen, sheep shearers, and poultrymen. Special short courses, five to ten weeks in length, are offered for veterans and farmers.

FARM AND HOME CONVENTION

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

GRADUATE WORK

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

REQUIREMENTS FOR GRADUATION IN HOME ECONOMICS

To receive the degree of Bachelor of Science in Home Economics, a student must complete 204 quarter hours and 204 points. These hours are classified as follows:

Prescribed subjects, non-home economics	69 hours
Prescribed subjects, home economics	70 hours
Electives required in home economics	17 hours
Free electives	48 hours
Total	204 hours

Home economics in the University of Kentucky has for its purpose the education of students for home and family living to the end that worthy home membership may be a dynamic factor in social progress. The curriculum includes courses in art, physical sciences, social sciences, and Home Economics. Thus it provides a liberal scientific and technical education. The program is sufficiently flexible to meet the requirements for both the bachelor of science and the master of science degrees in home economics with special emphasis on the following fields of interest:

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

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

To complete the requirements for a degree in twelve quarters a student must earn 17 or more hours per quarter. A schedule of 19 hours is the maximum load for a student whose standing the preceding quarter was between 1 and 2. A student who makes a standing of 2 or more in any quarter may carry up to 22 hours the following quarter. Special permission of the Dean is required for a schedule of more than 22 hours. Transfer students are required to take a minimum of 25 quarter hours of home economics in the University.

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

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

FIRST QUARTER	Qtr. Hrs.	SECOND QUARTER	Qtr. Hrs.
Art 30a Introd. to Art	2	Art 30b Introd. to Art	2
Assem. 1 Freshman Assembly	1	Eng. 1b English Composition	3
[1] Eng. 1a English Composition	3	H. E. 6 Foods	4
H. E. 5 Foods	5	H. E. 26 Costume Design	4
H. E. 25 Textiles	3	[4] Electives	5
[2] Mathematics	---		
[3] Physical Education	---		
Electives	3		
	17		18
THIRD QUARTER		**FOURTH QUARTER**	
Art 30c Introd. to Art	2	Chem. 1a Genl. Inorganic	5
Eng. 1c English Composition	3	Econ. 1 Prin. of Economics	5
H. E. 27 Clothing	5	H. E. 51 Health of the Family	4
Psy. 1 Elem. Psychology	6	Phys. 51 Introd. to Physics	3
	16		17

[1] The requirement in whole or in part for English 1a, b, c, may be satisfied without credit by passing a departmental proficiency examination. Students deficient in English, as indicated by the freshman tests, are required to pass English D (with no credit) before taking English 1a.

[2] Students deficient in mathematics, as indicated by the Freshman tests, are required to pass Mathematics D (with no credit). Students entering with less than two high school units of mathematics are required to make up the deficiency during the freshman year.

[3] No credit is granted for physical education. Students must meet the physical fitness standard prescribed by the faculty.

[4] Transfer students are required to take a minimum of 25 quarter hours of home economics in the University.

FIFTH QUARTER	Qtr. Hrs.
Chem. 1b Genl. Inorganic	5
Eng. 6 Essen. of Speech	3
or	
Journ. 10a Survey of Journalism	4
Phys. 52 Introd. to Physics	3
Psy. 7 Child Psychology	4
Electives	2 or 3
	18

[5] SIXTH QUARTER	Qtr. Hrs.
A. & P. 3 Physiology	5
Chem. 37 Organic Chemistry	6
H. E. 61 Housing	4
H. E. 71 Survey of Home Econ.	1
	16

SEVENTH QUARTER	
Eng. 3a English Literature	3
H. E. 11 Food and Nutrition	6
H. E. 72 Professional Problems	1
H. E. 129 Interior Decoration	4
Electives	3
	17

EIGHTH QUARTER	
H. E. 102 Dietetics	6
H. E. 161 Consumer Problems	4
H. E. 162a Home Management Lec.	4
Electives	3
	17

NINTH QUARTER	
H. E. 152 Child Care & Devlop.	5
H. E. 162b Home Management Lab.	5
Electives	7
	17

TENTH QUARTER	
H. E. 127 Adv. Clothing	4
R. S. 101 Rural Sociology	3
or	
Soc. 1 Introd. Sociology	5
Electives	8 or 10
	17

ELEVENTH QUARTER	
Electives	17

TWELFTH QUARTER	
Electives	17

Minimum hours required for graduation—204.

[5] Before the end of the sixth quarter the student selects an option and is assigned to an adviser.

FACULTY ADVISERS

When a freshman first registers in the College, she is assigned to a faculty adviser. It is the function of the faculty member to serve as a friendly, personal counselor to the student, and to help the student to arrange her schedule.

During or before the last quarter of the sophomore year, each student selects one of the six options offered by the College, which should be followed during the remainder of the college course. When the option is selected, the Dean appoints a professor to serve as the student's adviser during the junior and senior years. A transfer student who has completed six or more quarters selects an option when she first registers in the College.

OPTIONS

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

CHILD DEVELOPMENT AND FAMILY LIVING

This option prepares students for future specialization in the field of child development and family living. The following electives are suggested: Advanced child development, family living,

mental measurements, practice in testing, experimental child study, the family, and child welfare. Through affiliation with the Merrill-Palmer School, Detroit, Michigan, two senior students with special interest in child development may be selected each quarter to attend that school. This privilege gives increased opportunity to study certain aspects of child life.

CLOTHING, TEXTILES, AND RELATED ART

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

GENERAL HOME ECONOMICS

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

HOME ECONOMICS EDUCATION

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

HOME ECONOMICS EXTENSION

Students preparing to be home demonstration agents or county club agents should take a general program in home economics. In addition to courses elected in home economics, it is recommended that the following courses be included: Agricultural Extension 101, English 30, History 40, Journalism 22, Political Science 15 and courses in games and recreation. Work in the radio studios is recommended.

INSTITUTION ECONOMICS AND DIETETICS

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

OTHER PROGRAMS

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

GRADUATE WORK

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

DEGREES AND CURRICULA IN THE COLLEGE OF ENGINEERING

Daniel Voiers Terrell, C. E., Dean

INTRODUCTORY STATEMENT

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

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

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

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

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

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

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

Bachelor of Science in Electrical Engineering
- Option 1—Electrical Engineering with Special Emphasis on Communication Engineering
- Option 2—Electrical Engineering with Special Emphasis on Electrical Power Engineering

Bachelor of Science in Mechanical Engineering
Option 1—General Mechanical Engineering
Option 2—Mechanical Engineering with Special Emphasis on Aeronautical Engineering
Bachelor of Science in Metallurgical Engineering
Bachelor of Science in Mining Engineering

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

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

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

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

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

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

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

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

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

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

Three-Year Curricula. In order to meet the urgent demand of industry for trained engineers the outlines which follow are arranged so that the requirements for any one of the engineering degrees may be completed in three years of four quarters each. Students who wish to follow this program are advised to start at the beginning of the Summer Quarter and plan to attend college continuously for twelve quarters.

OUTLINE OF THE FIRST TWO QUARTERS OF ALL ENGINEERING CURRICULA

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

FIRST QUARTER	Qtr. Hrs.	SECOND QUARTER	Qtr. Hrs.
Assem. 1a—Introduction to Engineering	1	Assem. 1b—Introduction to Engineering	0
Chem. 2a—General Chemistry	5	Chem. 2b—General Chemistry	5
English 1a—English Composition	3	English 1b—English Composition	3
Eng. Draw. 1a—Elementary Engineering Drawing	3	Eng. Draw. 1b—Descriptive Geometry	3
Math. 17—College Algebra	5	Math. 3—Plane Trigonometry	5
Military Science 1a	2	Military Science 1b	2
Physical Education		Physical Education	
	19		18

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

For First Two Quarters, see above.

THIRD QUARTER	Qtr. Hrs.	FOURTH QUARTER	Qtr. Hrs.
Assem. 2—Engineering Problems	1	Assem. 3a—Class Society	0
Math. 19—Plane and Solid Analytic Geometry	5	Math. 20a—Differential Calculus	5
English 1c—English Composition	3	Physics 3a—General College Physics	6
*Psychology 1—Introduction to Psychology	6	Civ. Eng. 18—Mapping and Topographic Drawing	3
Military Science 1c	2	Civ. Eng. 12—Plane Surveying	4
Physical Education		Military Science 6a	2
	17		20
FIFTH QUARTER		**SIXTH QUARTER**	
Assem. 3b—Class Society	0	Assem. 3c—Class Society	0
Civ. Eng. 16a—Route Surveying	4	*Geography 1a—Elements of Geography	4
Physics 3b—General College Physics	6	Applied Mech. 3—Statics	5
*English 30—Business English	3	Physics 3c—General College Physics	6
Math. 20b—Integral Calculus	5	Military Science 6c	2
Military Science 6b	2		
	20		17

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

OPTION ONE

General Civil Engineering

SEVENTH QUARTER
(Summer)

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

NINTH QUARTER

	Qtr. Hrs.
Assem. 4b—Class Society	0
Civ. Eng. 107—Soil Mechanics	5
Civ. Eng. 171b—Theory of Structures	3
Applied Mech. 4—Dynamics	3
Civ. Eng. 114—Advanced Surveying	4
Civ. Eng. 31—Highway Location, Const. and Maintenance	3
Civ. Eng. 81—Testing Materials	2
	20

ELEVENTH QUARTER

	Qtr. Hrs.
Assem. 5b—Class Society	0
*Economics 1—Principles of Economics	5
Geology 12b—Elementary Geology for Engineers	3
San. Eng. 151—Water Supply and Waterworks	3
San. Eng. 152—Sewers and Sewage Disposal	3
San. Eng. 153—Design of Waterworks and Sewers	2
Mech. Eng. 103—Elements of Heat-Power Engineering	3
	19

EIGHTH QUARTER

	Qtr. Hrs.
Assem. 4a—Class Society	0
Applied Mech. 100—Strength of Materials	5
Civ. Eng. 49—Railroad Const. and Maintenance	3
Civ. Eng. 171a—Theory of Structures	5
*History 30—Rise of American Nationality	5
Civ. Eng. 174—Graphic Solutions	3
	21

TENTH QUARTER

Assem. 5a—Class Society	0
Civ. Eng. 173a—Steel Structures	4
*Political Science 15—Problems of Citizenship	5
Geology 12a—Elementary Geology for Engineers	4
Civ. Eng. 23—Seminar	1
Civ. Eng. 110a—Reinforced Concrete	6
	20

TWELFTH QUARTER

Assem. 5c—Class Society	0
Civ. Eng. 173b—Steel Structures	3
*Arch. Eng. 7—Building Construction	1
Civ. Eng. 32—Streets and Pavements	3
Civ. Eng. 37—Highway Materials	2
Civ. Eng. 110b—Reinforced Concrete	5
*Engr. Adm. 102—Engineering Administration	4
*San. Eng. 156—Water and Sewer Plant Operation	2
	20

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

OPTION TWO

Sanitary Engineering

First Six Quarters Same as Option One.

SEVENTH QUARTER
(Summer)

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

EIGHTH QUARTER	Qtr. Hrs.
Assem. 4a—Class Society	0
Applied Mech. 100—Strength of Materials	5
Bacteriology 52—Principles of Bacteriology	6
Chem. 20—Qualitative Analysis	6
Civ. Eng. 81—Testing Materials	2
Civ. Eng. 23—Seminar	1
	20

NINTH QUARTER	
Assem. 4b—Class Society	0
Bacteriology 57a—Bacteriology of Water and Sewage	4
Chem. 21a—Quantitative Analysis	4
Civ. Eng. 171a—Theory of Structures	5
Bacteriology 104—Applied Bacteriology	3
*Political Science 15—Problems of Citizenship	5
	21

TENTH QUARTER	
Assem. 5a—Class Society	0
Civ. Eng. 174—Graphic Solutions	3
*Engr. Adm. 102—Engineering Administration	4
*Mech. Eng. 103—Elements of Heat-Power Engineering	3
Civ. Eng. 110a—Reinforced Concrete	6
*Geology 12a—Elementary Geology	4
	20

ELEVENTH QUARTER	
Assem. 5b—Class Society	0
Zoology 1a—General Zoology	4
*History 30—Rise of American Nationality	5
San. Eng. 151—Water Supply and Waterworks	3
San. Eng. 152—Sewers and Sewage Disposal	3
San. Eng. 158—Sanitary Engineering Design	4
	19

TWELFTH QUARTER	
Assem. 5c—Class Society	0
Zoology 1b—General Zoology	4
Chem. 30a—Organic Chemistry	5
Hygiene 100a—Public Health	4
San. Eng. 156—Water and Sewer Plant Operation	2
San. Eng. 182—Sanitation	3
	18

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

OPTION THREE

Architectural Engineering

First Six Quarters Same as Option One.

SEVENTH QUARTER
(Summer)

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

EIGHTH QUARTER	Qtr. Hrs.
Assem. 5a—Class Society	0
Applied Mech. 100—Strength of Materials	5
Art 30a—Introduction to Art	2
Civ. Eng. 171a—Theory of Structures	5
Civ. Eng. 174—Graphic Solutions	3
*History 30—Rise of American Nationality	5
	20

NINTH QUARTER

Assem. 4b—Class Society	0
Arch. Eng. 1—Architectural Rendering	3
Art 30b—Introduction to Art	2
Civ. Eng. 81—Testing Materials	2
Civ. Eng. 173a—Steel Structures	4
*Art 61a—Elementary Drawing	4
*Civ. Eng. 107—Soil Mechanics	5
	20

TENTH QUARTER

Assem. 5a—Class Society	0
Civ. Eng. 23—Seminar	1
Arch. Eng. 3—Sanitation, Acoustics, Fire Prevention	4
Arch. Eng. 4a—Architectural Design	4
Mech. Eng. 103—Elements of Heat-Power Engineering	3
*Art 61b—Elementary Drawing	4
*Geology 12a—Elementary Geology	4
	20

ELEVENTH QUARTER

Assem. 5b—Class Society	0
Arch. Eng. 4b—Architectural Design	4
Civ. Eng. 110a—Reinforced Concrete	6
*Mech. Eng. 116—Elementary Heating, Ventil. and Air Conditioning	4
*Mech. Eng. 110—Heating and Ventilating Design	2
*Political Science 15—Problems of Citizenship	5
	21

TWELFTH QUARTER

Assem. 5c—Class Society	0
Arch. Eng. 5—Building Equipment	3
Arch. Eng. 7—Building Construction	1
*Eng. Adm. 102—Engineering Administration	4
*Elec. Eng. 136—Illumination Engineering	4
*Arch. Eng. 6—Independent Problems	6
	18

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

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

For First Two Quarters, see page 100.

THIRD QUARTER	Qtr. Hrs.
Assem. 2—Engineering Problems	1
*Pol. Sci. 15—Problems of Citizenship	5
Eng. Draw. 18—Advanced Engineering Drawing	3
Math. 19—Plane and Solid Analytic Geometry	5
English 1c—English Composition	3
Military Science 1c	2
Physical Education	
	19

FOURTH QUARTER	Qtr. Hrs.
Assem. 3a—Class Society	0
Civ. Eng. 12—Plane Surveying	4
Met. Eng. 26—Engineering Metallurgy	3
Math. 20a—Differential Calculus	5
Physics 3a—General College Physics	6
Military Science 6a	2
	20

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

SIXTH QUARTER	
Assem. 3c—Class Society	0
Elec. Eng. 21—Principles of Electrical Engineering	6
Physics 3c—General College Physics	6
*Psychology 1—Introduction to Psychology	6
Military Science 6c	2
	20

SEVENTH QUARTER	
Assem. 4a—Class Society	0
Applied Mech. 3—Statics	5
Elec. Eng. 115—D. C. Machinery	4
Elec. Eng. 114—A. C. Circuits	6
*R. L. 5a—Elementary Spanish	5
	20

EIGHTH QUARTER	
Assem. 4b—Class Society	0
Applied Mech. 100—Strength of Materials	5
Elec. Eng. 116 A. C. Machinery	5
Elec. Eng. 110a—Electrical Laboratory	1
Math. 105a—Differential Equations	3
*R. L. 5b—Elementary Spanish	5
	19

NINTH QUARTER	Qtr. Hrs.
Assem. 4c—Class Society	0
Elec. Eng. 107—Electrical Control	4
Elec. Eng. 161—Radio Engineering	4
Elec. Eng. 110b—Electrical Laboratory	1
Elec. Eng. 120—Electric Circuit Analysis	3
Mech. Eng. 104a—Engineering Thermodynamics	4
Civ. Eng. 81—Testing Materials	2
	18

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

OPTION ONE

Communication Engineering

TENTH QUARTER	Qtr. Hrs.
Assem. 5a—Class Society	0
Applied Mech. 4—Dynamics	3
*History 30—Rise of American Nationality	5
Mech. Eng. 112a—Mechanical Laboratory	2
Elec. Eng. 135—Electrical Networks	4
Elec. Eng. 151a—Seminar	1
†Elec. Eng. 162—Radio Engineering—Receivers	4
	19

ELEVENTH QUARTER	Qtr. Hrs.
Assem. 5b—Class Society	0
*English 30—Business English	3
*Mech. Eng. 108—Internal Combustion Engines	5
Elec. Eng. 151b—Seminar	1
Elec. Eng. 108—Electronic Controls	4
†Elec. Eng. 163—Radio Engineering—Transmitters	4
	17

TWELFTH QUARTER	Qtr. Hrs.
Assem. 5c—Class Society	0
Civ. Eng. 120—Hydraulics	3
Civ. Eng. 123—Hydraulics Laboratory	2
Eng. Adm. 102—Engineering Administration	4
Elec. Eng. 151c—Seminar	1
†Elec. Eng. 164—Radio Engineering—High Frequency Phenomena	5
†Elec. Eng. 165—Radio Engineering—Fundamentals of Electric Waves	3
	18

OPTION TWO

Electrical Power Engineering

First Nine Quarters Same as Option One.

TENTH QUARTER	Qtr. Hrs.
Assem. 5a—Class Society	0
Applied Mech. 4—Dynamics	3
*History 30—Rise of American Nationality	5
Mech. Eng. 112a—Mechanical Laboratory	2
Elec. Eng. 135—Electrical Networks	4
Elec. Eng. 151a—Seminar	1
Mech. Eng. 112a—Mechanical Laboratory	2
Elec. Eng. 151a—Seminar	1
†Elec. Eng. 124a-b—Electrical Design	4
	22

ELEVENTH QUARTER	Qtr. Hrs.
Assem. 5b—Class Society	0
*English 30—Business English	3
*Mech. Eng. 108—Internal Combustion Engines	5
Elec. Eng. 151b—Seminar	1
Elec. Eng. 108—Electronic Controls	4
†Elec. Eng. 136—Illumination Engineering	4
	17

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

† Other Electrical Engineering courses or related courses in Physics may be substituted with the approval of the Department.

TWELFTH QUARTER	Qtr. Hrs.
Assem. 5c—Class Society	0
Civ. Eng. 120—Hydraulics	3
Civ. Eng. 123—Hydraulics Laboratory	2
Eng. Adm. 102—Engineering Administration	4
Elec. Eng. 151c—Seminar	1
†Elec. Eng. 117—Advanced A. C. Machinery	5
†Elec. Eng. 123—Electrical Equipment Problems	3
	18

† Other Electrical Engineering courses or related courses in Physics may be substituted with the approval of the Department.

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

For First Two Quarters, see page 100.

THIRD QUARTER	Qtr. Hrs.
Assem. 2—Engineering Problems	1
English 1c—English Composition	3
*Psychology 1—Introduction to Psychology	6
Math. 19—Plane and Solid Analytic Geometry	5
Eng. Draw. 18—Advanced Engineering Drawing	3
Military Science 1c	2
Physical Education	
	20

FOURTH QUARTER	Qtr. Hrs.
Assem. 3a—Class Society	0
*Journalism 21—Etymology	4
Civ. Eng. 12—Plane Surveying	4
Math. 20a—Differential Calculus	5
Physics 3a—General College Physics	6
Military Science 6a	2
	21

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

SIXTH QUARTER	
Assem. 3c—Class Society	0
Applied Mech. 3—Statics	5
Math. C105a—Differential Equations	3
*History 30—Rise of American Nationality	5
Physics 3c—General College Physics	6
Military Science 6c	2
	21

SEVENTH QUARTER	
Assem. 4a—Class Society	0
Applied Mech. 100—Strength of Materials	5
Applied Mech. 4—Dynamics	3
Civil Eng. 81—Testing Materials	2
Mech. Eng. 104a—Engineering Thermodynamics	3
Mech. Eng. 112a—Mechanical Laboratory	2
Met. Eng. 37—Adaptive Metallurgy for Engineers	5
	20

EIGHTH QUARTER	
Assem. 4b—Class Society	0
Applied Mech. 106—Advanced Strength of Materials	5
Elec. Eng. 105—D. C. Circuits and Machinery	6
Mech. Eng. 15a—Manufacturing Processes	3
Mech. Eng. 104b—Engineering Thermodynamics	3
Mech. Eng. 129—Elementary Heat Transfer	4
	21

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

NINTH QUARTER	Qtr. Hrs.
Assem. 4c—Class Society	0
Elec. Eng. 106—A. C. Circuits and Machinery	6
Mech. Eng. 100a—Machine Design	4
Mech. Eng. 15b—Manufacturing Processes	3
Mech. Eng. 104c—Engineering Thermodynamics	3
Mech. Eng. 107—Fluid Mechanics	4
	20

OPTION ONE

General Mechanical Engineering

TENTH QUARTER	Qtr. Hrs.
Assem. 5a—Class Society	0
Mech. Eng. 105—Steam Power Plant Equipment	4
Mech. Eng. 100b—Machine Design	4
Mech. Eng. 112b—Mechanical Laboratory	2
Mech. Eng. 122a—Seminar	1
Mech. Eng. 109—Refrigeration	5
*Commerce 9—Business Organization	4
	20

ELEVENTH QUARTER	Qtr. Hrs.
Assem. 5b—Class Society	0
Applied Mech. 107—Mechanical Vibrations	5
Mech. Eng. 108—Internal Combustion Engines	5
Mech. Eng. 113a—Mechanical Laboratory	2
Mech. Eng. 122b—Seminar	1
Mech. Eng. 114a—Air Conditioning, Heating and Ventilating	5
*English 30—Business English	3
	21

TWELFTH QUARTER	Qtr. Hrs.
Assem. 5c—Class Society	0
Eng. Adm. 102—Engineering Administration	4
Mech. Eng. 113b—Mechanical Laboratory	2
Mech. Eng. 114b—Air Conditioning, Heating and Ventilating	4
*Pol. Sci. 15—Problems of Citizenship	5
*Commerce 1—Principles of Economics	5
	20

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

OPTION TWO

Aeronautical Engineering

First Nine Quarters same as in Option One.

TENTH QUARTER	Qtr. Hrs.
Assem. 5a—Class Society	0
Mech. Eng. 130a—Applied Aerodynamics	3
Mech. Eng. 100b—Machine Design	4
Mech. Eng. 112b—Mechanical Laboratory	2
Mech. Eng. 122a—Seminar	1
Mech. Eng. 131a—Airplane Design	3
*Commerce 9—Business Organization	4
*English 30—Business English	3
	20

ELEVENTH QUARTER	Qtr. Hrs.
Assem. 5b—Class Society	0
Applied Mech. 107—Mechanical Vibrations	5
Mech. Eng. 108—Internal Combustion Engines	5
Mech. Eng. 113a—Mechanical Laboratory	2
Mech. Eng. 122b—Seminar	1
Mech. Eng. 130b—Applied Aerodynamics	3
Mech. Eng. 131b—Airplane Design	3
	19

TWELFTH QUARTER	Qtr. Hrs.
Assem. 5c—Class Society	0
Eng. Adm. 102—Engineering Administration	4
Mech. Eng. 113b—Mechanical Laboratory	2
Mech. Eng. 132—Aeronautical Laboratory	3
Mech. Eng. 131c—Airplane Design	3
*Pol. Sci. 15—Problems of Citizenship	5
*Commerce 1—Principles of Economics	5
	22

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

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

For First Two Quarters, see page 100.

THIRD QUARTER	Qtr. Hrs.
Assem. 2—Engineering Problems	1
Chem. 20—Qualitative Analysis	6
English 1c—English Composition	3
Math. 19—Plane and Solid Analytic Geometry	5
Met. Eng. 27—General Metallurgy	3
Military Science 1c	2
Physical Education	
	20

FOURTH QUARTER	Qtr. Hrs.
Assem. 3a—Class Society	0
Chem. 21a—Quantitative Analysis	4
Math. 20a—Differential Calculus	5
Physics 3a—General College Physics	6
Met. Eng. 29—Metallurgy of the Ferrous Metals	4
Military Science 6a	2
	21

FIFTH QUARTER	Qtr. Hrs.
Assem. 3b—Class Society	0
Chem. 21b—Quantitative Analysis	4
Math. 20b—Integral Calculus	5
Physics 3b—General College Physics	6
Met. Eng. 128—Metallurgy of Non-Ferrous Metals	4
Military Science 6b	2
	21

SIXTH QUARTER	Qtr. Hrs.
Assem. 3c—Class Society	0
Chem. 140a—Physical Chemistry	5
Physics 3c—General College Physics	6
Economics 1—Principles of Economics	5
Military Science 6c	2
	18

SEVENTH QUARTER	
Assem. 4a—Class Society	0
Chem. 140b—Physical Chemistry	5
Eng. Draw. 115—Photography	4
Physics 117—Theory of Heat	3
Elec. Eng. 101—Fundamentals of Electrical Machinery	4
*German 1a—Elementary German	5
	21

EIGHTH QUARTER	
Assem. 4b—Class Society	0
Applied Mech. 3—Statics	5
Chem. 140c—Physical Chemistry	5
Physics 123a—Principles of Thermodynamics	3
Elec. Eng. 102—Electrical Machinery	3
*German 1b—Elementary German	5
	21

NINTH QUARTER	
Assem. 4c—Class Society	0
Applied Mech. 100—Strength of Materials	5
Physics 119—Principles of X-Rays	4
Physics 123b—Principles of Thermodynamics	3
Met. Eng. 140—The Science of Metals	4
*German 2a—Intermediate German	4
	20

TENTH QUARTER	
Assem. 5a—Class Society	0
Met. Eng. 142a—Heat Treatment	3
Met. Eng. 143a—Physics of Metals	4
Met. Eng. 166a—Extractive Metallurgy	5
Met. Eng. 175a—Seminar	1
Commerce 109a—Business Law	4
*German 2b—Intermediate German	4
	21

ELEVENTH QUARTER	
Assem. 5b—Class Society	0
Met. Eng. 132a—Metallurgical Calculations	4
Met. Eng. 142b—Heat Treatment	3
Met. Eng. 143b—Physics of Metals	4
Met. Eng. 166b—Extractive Metallurgy	4
Met. Eng. 175b—Seminar	1
Commerce 109b—Business Law	4
	20

TWELFTH QUARTER	
Assem. 5c—Class Society	0
Met. Eng. 121—Fuel and Metallurgical Laboratory	2
Met. Eng. 132b—Metallurgical Calculations	4
Met. Eng. 141—Alloy Steels	3
Met. Eng. 150—Industrial Mineral Preparation and Uses	3
Met. Eng. 167—Extractive Metallurgy Plant Practice	2
Met. Eng. 175c—Seminar	1
Eng. Adm. 102—Engineering Administration	4
	19

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

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

For First Two Quarters, see page 100.

THIRD QUARTER	Qtr. Hrs.
Assem. 2—Engineering Problems	1
Chem. 20—Qualitative Analysis	6
English 1c—English Composition	3
Math. 19—Plane and Solid Analytic Geometry	5
Met. Eng. 26—Engineering Metallurgy	3
Military Science 1c	2
Physical Education	
	20

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

FIFTH QUARTER	
Assem. 3b—Class Society	0
Chem. 21b—Quantitative Analysis	4
Math. 20b—Integral Calculus	5
Physics 3b—General College Physics	6
Geology 12a—Elementary Geology for Engineers	4
Military Science 6b	2
	21

SIXTH QUARTER	
Assem. 3c—Class Society	0
Applied Mech. 3—Statics	5
Geology 12b—Elementary Geology for Engineers	3
Geology 123a—Mineralogy	4
Physics 3c—General College Physics	6
Military Science 6c	2
	20

SEVENTH QUARTER	
Assem. 4a—Class Society	0
Applied Mech. 100—Strength of Materials	5
Geology 123b—Mineralogy	4
Civ. Eng. 171a—Theory of Structures	5
*R. L. 5a—Elementary Spanish	5
	19

EIGHTH QUARTER	
Assem. 4b—Class Society	0
Civ. Eng. 174—Graphic Solutions	3
Economics 1—Principles of Economics	5
*R. L. 5b—Elementary Spanish	5
Min. Eng. 126a—Development of Mines	5
	18

NINTH QUARTER (Summer)	
FIRST HALF Surveying Camp	
Min. Eng. 160—Mine Surveying and Field Practice in Mining Engineering	10
SECOND HALF	
Assem. 4c—Class Society	0
Civ. Eng. 81—Testing Materials	2
Civ. Eng. 120—Hydraulics	3
Civ. Eng. 123—Hydraulics Laboratory	2
Min. Eng. 126b—Development of Mines	3
	20

TENTH QUARTER	
Assem. 5a—Class Society	0
Elec. Eng. 101—Fundamentals of Electrical Machinery	4
Mech. Eng. 103—Elements of Heat-Power Engineering	3
Met. Eng. 166a—Extractive Metallurgy	5
Min. Eng. 129a—Mine Ventilation and Drainage	4
Min. Eng. 175a—Seminar	1
*R. L. 7a—Intermediate Spanish	4
	21

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

ELEVENTH QUARTER	Qtr. Hrs.
Assem. 5c—Class Society	0
Met. Eng. 150—Industrial Mineral Preparation and Uses	3
Met. Eng. 167—Extractive Metallurgy Plant Practice	2
Min. Eng. 127b—Mining Underground	3
Min. Eng. 128—Mining at the Surface	3
Min. Eng. 130—Mine Administration	5
Min. Eng. 175c—Seminar	1
Economics 102—Labor Problems	4
	21

TWELFTH QUARTER	Qtr. Hrs.
Assem. 5b—Class Society	0
Elec. Eng. 102—Electrical Machinery	3
Met. Eng. 166b—Extractive Metallurgy	4
Min. Eng. 127a—Mining Underground	4
Min. Eng. 129b—Mine Ventilation and Drainage	3
Min. Eng. 175b—Seminar	1
*R. L. 7b—Intermediate Spanish	4
	19

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

DEGREES AND CURRICULA IN THE COLLEGE OF LAW

Alvin E. Evans, M.A., Ph.D., J. D., Dean

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

ORDER OF THE COIF

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

THE KENTUCKY LAW JOURNAL

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

THE LIBRARY

The law library contains some thirty-one thousand volumes, and includes all the published reports of the courts of last resort and the side bar reports of every state in the Union, and also the

reports of the District of Columbia and Alaska; the United States Supreme Court Reports; the Federal Reports, together with the Reports of the Court of Claims, the Interstate Commerce Commission, the Federal Trade Commission, the N.L.R.B., the S.E.C. and the F.C.C. and the Court of Customs and Patent Appeals; the Philippine Reports; the Hawaiian Reports; the Puerto Rican Reports; the Canal Zone Reports; the English Reports; the Canadian Reports; the Irish Reports; the Australian and New Zealand Reports; a set of the Law Journal and a set of the Law Times and Times Law, and Journal of Comparative Legislation. Some four thousand treatises and textbooks are found in the library as well as the English Statutes, the Canadian Statutes, the Federal Statutes and the Statutes of all of the American states. Likewise, it contains the American digests, including American Digest System, the digests of Kentucky and New York, a number of English digests including the English and Empire Digest, and the entire Shepard's Citator. Effort is now being made as well to extend the library facilities in the direction of treatises on jurisprudence, Roman Law, and the history and philosophy of the law and legislation. The Library receives regularly some one hundred legal periodicals, 12 of which are from foreign countries, and has in excess of 1,500 bound volumes of legal periodicals.

One of the most valuable recent additions to the Library is a large number of volumes and periodicals from the private library of Professor Albert Kocourek, formerly of the Northwestern University Law School. This library is largely in the field of legal history, legal philosophy, and Roman law.

THE FACULTY

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

THE LAW BUILDING

In order to accommodate the growing student body and the increasing library, an adequate building has been constructed on the campus and is now occupied by the law school. It is built of red pressed brick, glass brick being used in part for two sides of the reading room. The building is modern in architecture, being constructed on modified classical lines. It contains nine offices, three classrooms, a court room, a stack room for reports, a grill

room for treatises, a lounging room, and a study room. Various other rooms are provided, such as an office for the Kentucky Law Journal. The building occupies a beautiful location, being across the walk and to the west of the main library.

ADMISSIONS

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

Pre-Law Work. In order to meet the two years of college credit required for entrance, no special course is prescribed except nine quarter hours in English. See statement, p. 17. The credits obtained in the two years of college work that are required must be completed in residence and must be sufficient to entitle the holder to admission to the junior class in the College of Arts and Sciences of the University of Kentucky. The pre-law work may be taken at the University of Kentucky or at any standard university or college. Students who expect to study law are advised to lay special emphasis on courses in English, economics, and accounting. Those who would like special advice concerning their work are invited to communicate with the Dean.

In the case of veterans of the present war who have received an honorable discharge from the service, the residence requirement has been temporarily somewhat relaxed. Such applicants may be admitted if they have completed at least one academic year of study in residence and present a total of ninety quarter hours of college work. Veterans may present a total of 12 quarter hours in military training. In this event, however, no other non-theory courses will be allowed.

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

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

work therein; and two years later, upon completing the two remaining years in law, he will be granted the degree of LL. B., thus obtaining both degrees in six years.

FIRST YEAR SUBJECTS

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

SECOND YEAR SUBJECTS

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

THIRD YEAR SUBJECTS

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

SUMMER QUARTER

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

DEGREES AND CURRICULA IN THE COLLEGE OF EDUCATION

William Septimus Taylor, M. S., Ph. D., LL. D., Dean

The College of Education was established by the University to provide for the education of teachers, administrators, and other school personnel. The curricula of the College give each student an opportunity to equip himself for the kind of educational work in which he is interested.

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

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

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

TEACHERS' CERTIFICATES

The University of Kentucky offers curricula for all certificates issued by the State Department of Education on the basis of four years of college education. The College of Education offers programs to prepare teachers of elementary, junior high, and senior high schools; attendance officers, helping teachers, supervisors, teacher-librarians, elementary principals, high school principals, city superintendents, county superintendents, critic teachers, and other administrative, supervisory, and instructional personnel of schools.

ADMISSION

To be admitted to the College of Education a freshman must rank in the upper three-fourths on the University placement tests. He must possess a healthy body, free from major physical defects. A student transferring to the College of Education from another college on the campus or from another institution must have a standing of at least 1.0 (an average of C on all previous college work). This standing must be maintained if the student is to remain in the College of Education. Any student in another college of the University who wishes to enroll in professional educational courses must have a standing of 1.0.

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

A student is not permitted to enroll for student teaching unless he is classified as a senior or graduate student and can meet the departmental requirements for student teaching. A thorough physical examination by University physicians is required at some time in the quarter prior to the student's enrollment in student teaching. Candidates for student teaching are requested to file their applications the quarter before they plan to do their student teaching.

REQUIREMENTS FOR GRADUATION

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

ELEMENTARY EDUCATION

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

1. **General Requirements:**
   a. **English,** 16 quarter hours, including Oral and Written Composition and History of English Literature
   b. **Science,** 16 quarter hours, including Heredity
   c. **Social Sciences,** 32 quarter hours, including United States History, Kentucky History, Problems of Citizenship, Principles of Sociology, and Principles of Geography
   d. **Fine Arts,** 12 quarter hours, including Public School Art, Elective in Art, and Public School Music
   e. **Psychology,** 10 quarter hours

f. **Elementary Nutrition,** 4 quarter hours

g. **Health and Physical Education,** 11 quarter hours

2. **Professional Preparation.** Forty-six quarter hours, including Fundamentals of Elementary Education, Children's Literature, Teaching Arithmetic, Teaching Science, Teaching Reading, Industrial Arts, and Student Teaching

3. **Electives.** Forty-five quarter hours

SECONDARY EDUCATION

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

1. **General Requirements.** English, 16 quarter hours; Psychology, 8; Physical Education, 3; Military Science, 12.

2. **Teaching Fields.** Two majors of 36 quarter hours each, or one major of 36 quarter hours and two minors of 24 quarter hours each, or 72 quarter hours in an area of concentration.

3. **Professional Preparation.*** Education 35, Introduction to Education, 2 quarter hours; Education 16, Educational Psychology, 5; Education 101, School Organization, 4; Education 105, Fundamentals of Secondary Education, 4; and Student Teaching, 12.

4. **Core Curriculum.** At least 40 quarter hours must be submitted from the following fields: Fine Arts; Foreign Languages; Health, Physical Education, and Safety; Mathematics; Philosophy and Psychology; Sciences; Social Sciences; and Vocational Subjects. Candidates may present either three or four fields, with at least 8 quarter hours in each field. Fields selected under the core curriculum must be other than those presented as major and minor fields.

VOCATIONAL EDUCATION

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

Students who complete the work for a bachelor's degree in agriculture and who present 21 quarter hours in education as pre-

* Music, and art majors should substitute Education C44, Fundamentals of Elementary Education for Education 35. Physical Education majors should substitute P. E. 129, Physical Education in the Secondary School, for Education 35. Business Education majors should substitute Education 104, Foundations of Business Education, and Education 158a and b, Teaching Secretarial Subjects and Accounting, for Education 101 and Education 105.
Student teaching in above fields is 9 quarter hours.

scribed in the state plan for vocational education will be entitled to a state certificate to teach vocational agriculture in the public schools of Kentucky.

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

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

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

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

EDUCATIONAL ADMINISTRATION AND SUPERVISION

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

Students who wish to qualify for certificates in Administration and Supervision issued by the State Department of Education are required to take Education 202, Local School Administration, Education 225a, or b, Supervision of Instruction; Education 229, The Elementary Principal; and Education 232, High School Administration. Students who wish to qualify for the Attendance Officers' Certificate are required to take Education 198, The Administration of Pupil Personnel.

GRADUATE CURRICULA LEADING TO THE MASTER'S DEGREE

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

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

Curriculum Pursued	Committee
Administration	Seay, Duncan, Ligon, and Meece
Agricultural Education	Hammonds, Tabb, and Wall
Business Education	Lawrence and Taylor
Critic Teaching	Ginger, Duncan, and Taylor
Elementary Education	Duncan, Ginger, Haines, Hartford, and Ross
Higher Education	Ross, Hartford, and Taylor
Home Economics Education	Parker and Sneed
Industrial Education	Hankins, Baker, and Crumpton
Music Education	Capurso, Lewis, and Ross
Physical Education	Potter, Hackensmith, and Taylor
Secondary Education	Ligon, Clifton, Hartford, and Ross

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

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

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

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

By permission of the Dean of the Graduate School and the Dean of the College of Education, a student may present additional credits in lieu of a thesis. For these students the following requirements apply:

1. A minimum of 54 quarter hours of graduate work must be completed.
2. At least 27 quarter hours of graduate work must be in education.
3. At least 27 quarter hours must be in courses numbered 200 or higher.
4. At least 48 weeks must be spent in residence at the University of Kentucky as a graduate student.
5. At least one-half of the credit and residence requirements must be met while the student is in full residence at the University of Kentucky.
6. The total number of credits presented in education, undergraduate and graduate, must be at least 45 quarter hours.
7. A standing of 2.0 (an average of B) must be made on all graduate work.

THE DOCTORAL DEGREE

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

DEGREES AND CURRICULA IN THE COLLEGE OF COMMERCE

Edward Wiest, M. A., Ph. D., Dean

INTRODUCTORY STATEMENT

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

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

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

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

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

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

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

Student Organization and Placement Activities. The Commerce Employment Association is a militant organization and operates under the supervision of a permanent secretary who is a member of the faculty. Its chief purpose is to find employment for graduates and better positions for alumni. It has been very successful.

The College Chamber of Commerce provides opportunity for planning and discussing community programs and in addition sponsors social activities. Its meetings are open to all Commerce students. The Accounting Club and the Secretarial Club foster the discussion of problems related to the fields of accounting and secretarial practice and also sponsor social activities.

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

REQUIREMENTS FOR GRADUATION

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

GENERAL-BUSINESS CURRICULUM

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

FRESHMAN AND SOPHOMORE YEARS

	Qtr. Hrs.
English 1a, b, and c, English Composition	9
Mathematics 17, College Algebra	5
Economics 2, Economic History of Europe	4
Psychology 1, Introduction to Psychology	6
Commerce 9, Business Organization	4
Hygiene 1, Personal and Community Health	2
Economics 3, Econ. Hist. of U. S., or	
Econ. 4, Resources and Industries, or Econ. Geography	4
Mathematics 15, Mathematics of Finance	4
Economics 1, Principles of Economics	5
Commerce 7a and 7b, Principles of Accounting	10
Political Science 51, American Government	5
History 4b, Modern Europe Since the French Revolution	5
Biological or Physical Science	8-15
Commerce 10, Principles of Marketing	5
Military Science 1a, b, c, and 6a, b, c, 1st and 2nd. Yr. Elem.	12
Physical Education	0
Elective	8
	96

JUNIOR AND SENIOR YEARS

English 30, Business English	3
A course in Statistics	4 or 3
Commerce 117, Corporation Finance	4
Economics 105, Money and Banking	4
Commerce 109a, and b, Business Law	8
Economics 104, Public Finance	4
Commerce 137, Problems in Management; or Commerce 138, Investigation of Business Problems	4
Elective from Advertising, Salesmanship or Marketing	3 or 4
Elective from Social Science	4
Electives including three Economics and Commerce courses	58
Total Quarter Hours—192	96

BUSINESS-MANAGEMENT CURRICULUM

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

FRESHMAN AND SOPHOMORE YEARS

	Qtr. Hrs.
Same as General-Business Curriculum	96

JUNIOR AND SENIOR YEARS

Eng. 30, Business English	3
A course in Statistics	4 or 3
Commerce 117, Corporation Finance	4
Economics 102, Labor Problems	4

	Qtr. Hrs.
Commerce 118, Cost Accounting	4
Economics 105, Money and Banking	4
Commerce 119, Retail Merchandising; or Commerce 135, Adv. Marketing; or Commerce 136, Sales Management	3-4
Commerce 131, Investments; or Commerce 154, Urban Real Estate	4
Psychology 106, Industrial Psychology	4
Economics 104, Public Finance	4
Commerce 109a, and b, Business Law	8
Commerce 137, Problems in Management	4
Commerce 143, Life Insurance; or Commerce 144, Property and Casualty Insurance	4
Commerce 145, Office Management	4
Commerce 155, Industrial Relations	4
Electives including 16 quarter hours in Economics and Commerce	34
	96

Suggested Electives:

Economics 103, Transportation
Economics 130, Labor Legislation
Political Science 177a, Principles of Public Administration
Psychology 8, Individual Differences

Total Quarter Hours—192

INDUSTRIAL-ADMINISTRATION CURRICULUM

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

FRESHMAN AND SOPHOMORE YEARS

	Qtr. Hrs.
English 1a, b, and c, English Composition	9
Economics 2, Economic History of Europe	4
Mathematics 17, College Algebra	5
Mathematics 3, Plane Trigonometry	5
Chemistry 1a and b, General Chemistry	10
Commerce 9, Business Organization	4
Mathematics 19, Plane Analytics	5
Hygiene 1, Personal and Community Health	2
Economics 1, Principles of Economics	5
Commerce 7a and b, Principles of Accounting	10
Economics 4, Resources and Industries	4
Political Science 51, American Government	5
Physics 1a, b, and c, or 3a, b, and c, General Physics	15-18
Chemistry 20, Qualitative Analysis	6
Engineering Drawing 1a, Mechanical Drawing	3
Military Science 1a, b, and c and 6a, b, and c, 1st and 2nd Yr. Elem.	12
Physical Education	0
Electives	6
	110

JUNIOR AND SENIOR YEARS

	Qtr. Hrs.
A course in Statistics	4
Psychology 1, Introduction to Psychology	6
History 4b, Modern Europe Since the French Revolution	5
Commerce 10, Marketing or Commerce 11, Salesmanship	3-5
Economics 103, Transportation	4
Commerce 117, Corporation Finance	4
Commerce 118, Cost Accounting	4
Psychology 106, Industrial Psychology	4
English 30, Business English	3
Economics 105, Money and Banking	4
Commerce 109a and b, Business Law	8
Economics 102, Labor Problems, or 130 Labor Legislation	4
Economics 126, Economics of Public Utilities	4
Economics 104, Public Finance	4
Commerce 137, Problems in Management	4
Commerce 155, Industrial Relations	4
Elective in Commerce	4
*Electives in Physics, Geology, Chemistry, or theoretical courses in Engineering	33
	106

Total Quarter Hours—216

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

MARKETING AND ADVERTISING CURRICULUM

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

FRESHMAN AND SOPHOMORE YEARS

	Qtr. Hrs.
Same as General Business Curriculum	96

JUNIOR AND SENIOR YEARS

A course in Statistics	4 or 3
Commerce 117, Corporation Finance	4
Journalism 21, Etymology, or elective in English	4
English 30, Business English	3
Commerce 20, Principles of Advertising	4
Commerce 11, Salesmanship	3
Economics 105, Money and Banking	4
Commerce 135, Advanced Marketing	3
Commerce 119, Retail Merchandising	4
Commerce 136, Sales Management	3
Commerce 109a and b, Business Law	8
Economics 104, Public Finance	4
Commerce 140, Advertising Campaigns	3
Commerce 149, Market Analysis	4
Electives including two courses from the suggested list	41
	96

Suggested Electives:

Journalism 114, Newspaper Advertising and Promotion
Journalism 115, Advertising Typography and Layout
Art 29, Advertising Art
Markets and Rural Finance 101, Cooperative Marketing, or other Agricultural Marketing course
Psychology 2, Applied Psychology, or some specialized Psychology course
Commerce 137, Problems in Management
Commerce 143 Life Insurance
Commerce 144, Property and Casualty Insurance
Economics 153, Economics of Consumption
Commerce 154, Urban Real Estate

Total Quarter Hours—192

COMMERCE-LAW CURRICULUM

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

The Commerce-Law Curriculum is intended for students who wish to complete the requirements for the two degrees of Bachelor of Science in Commerce and Bachelor of Law 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. In order to qualify for the two degrees under this program the requirements of the first three years must be completed before entering the College of Law.

	Qtr. Hrs.
FRESHMAN AND SOPHOMORE YEARS	
Required Courses of General-Business Curriculum and Political Science 80, State Government	96
JUNIOR YEAR	
A course in Statistics	4 or 3
English 30, Business English	3
Economics 102, Labor Problems	4
Commerce 117, Corporation Finance	4
Economics 105, Money and Banking	4
Economics 104, Public Finance	4
Philosophy or Logic	4
Elective in Sociology, Economics, or Commerce	4
Electives including 12 quarter hours in Economics and Commerce	22
	53
SENIOR YEAR	
Property I and II	6
Pleading I and II	6
Contracts I and II	9
Torts I, II, and III	9
Domestic Relations	3
Criminal Law and Procedure	6
Agency	3
Legal Bibliography	1
	43

Total Quarter Hours—192

SECRETARIAL CURRICULUM

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

While the curriculum is designed primarily for the training of office workers, opportunity is provided also for the training of

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

FRESHMAN AND SOPHOMORE YEARS

	Qtr. Hrs.
English 1a, b, and c, English Composition	9
Economics 2, Economic History of Europe	4
Commerce 13a and b, Secretarial Practice, Shorthand	8
Commerce 17a and b, Secretarial Practice, Typewriting	6
Foreign Language, or Mathematics 17, College Algebra	5
Commerce 9, Business Organization	4
Foreign Language, or Mathematics 15, Mathematics of Finance	4-5
Economics 3, Economic History of U. S., or	
Econ. 4, Resources and Industries, or Econ. Geog.	4
Hygiene 1, Personal and Community Health	2
History 4b, Modern Europe Since the French Revolution	5
Economics 1, Principles of Economics	5
Commerce 7a and b, Principles of Accounting	10
Commerce 14a and b, Advanced Secretarial Practice	8
Political Science 51, American Government	5
Military Science 1a, b, and c, and 6a, b, and c, 1st and 2nd Yr. Elem.	12
Physical Education	0
Elective	5
	96

JUNIOR AND SENIOR YEARS

Commerce 10, Principles of Marketing	5
Biological or Physical Science	8
Psychology I, Introduction to Psychology	6
Commerce 117, Corporation Finance	4
Commerce 151, Secretarial Statistics	4
English 30, Business English	3
Economics 105, Money and Banking	4
Philosophy 21, Introduction to Philosophy, or 51, Ethics	4
Commerce 18, Filing	2
Commerce 6, Secretarial Accounting	3
Commerce 11, Salesmanship	3
Commerce 109a, Business Law	4
Economics 104, Public Finance, or Commerce 109b, Business Law	4
Commerce 101, Secretarial Office Practice	2
Commerce 156, Business Reports	3
Commerce 19, Office Appliances	2
Commerce 145, Office Management	4
Electives	31
	96

Total Quarter Hours—192

A MAJOR IN ECONOMICS

Courses classified under the general head of economics are definitely social science subjects. This fact is recognized by the College of Arts and Sciences which makes provision for students enrolled in that College to Major in Economics. Students enrolled in the College of Commerce desiring to major in Economics should pursue the General Business Curriculum and take as electives courses listed under the head of economics. The electives should include the following courses: 110, Business Cycles; 115,

Value and Distribution Theory; 125, Evolution of Economics Institutions; 127, International Economic Policies; 152, Income and Wealth; 153, The Economics of Consumption.

SPECIALIZATION IN ACCOUNTING

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

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

SPECIALIZATION IN STATISTICS

Students planning to prepare for statistical research should pursue the General Business Curriculum and elect advanced courses in mathematics and advanced work in statistics offered by the College of Commerce and by the Department of Mathematics in the College of Arts and Sciences. The advanced courses dealing with method and theory offered by the College of Commerce are: 142, Index Numbers; 150, Business Statistics; 158, Administrative Research Problems; and 210, Research Statistics.

PREPARATION FOR PUBLIC SERVICE

In view of the increased demands from federal, state and local governments for experts in public finance, accounting, marketing, statistics and personnel management, students should consider the possibility of preparing for public service careers. In addition to some concentration in a field of economics or business administration preparation for government service should include certain courses in Political Science, especially Political Science 177a and b, Principles of Public Administration. Interest in personnel management logically calls for the inclusion of certain courses in Psychology. Preparation for foreign service should include various courses in economics, political science, and history, dealing with international relations. Foreign languages are indispensable. Faculty advice should be sought in formulating a satisfactory program.

OTHER COMBINATIONS

In addition to fields of specialization and combinations of subject matter outlined above, students pursuing the General-Business and Secretarial Curricula can utilize their electives so as to combine a business-training program with other fields of study. Following are some suggestions: (1) Agriculture, (2) Journalism, (3) Courses in Chemistry, Zoology, Physiology and Bacteriology in preparation for medical-secretarial positions, (4) Social Welfare Work, (5) any Liberal Arts group. Students interested in such programs should seek faculty advice concerning the courses that will best meet their needs.

SPECIAL PROGRAMS FOR WAR VETERANS

War veterans who have ability to do creditable work in the field of business administration but who are not in position to complete a four-year curriculum, should confer with the Director of the University Personnel Office and the Dean of the College of Commerce concerning a program that will best prepare them for the careers they wish to pursue. Groups of courses can be recommended which represent the essential elements of preparation for such vocations as accounting, salesmanship, advertising, secretarial, clerical and statistical work, and for the operation of such businesses as merchandising, insurance, real estate, and banking. For example a one or two-year curriculum for small merchants could include such courses as business organization, principles of accounting, principles of marketing, principles of economics, applied economics, salesmanship, retail merchandising, principles of advertising, corporation finance, et cetera.

GRADUATE PROGRAM

For a statement of departmental requirements for the degrees of Master of Arts and Doctor of Philosophy in economics and commerce the student is referred to the Bulletin of the Graduate School.

COLLEGE OF PHARMACY

Earl Platt Slone, Ph. G., B. S., Dean

On July 1, 1947, the Louisville College of Pharmacy will become a part of the University of Kentucky and will be known as the College of Pharmacy of the University of Kentucky. The College of Pharmacy was established by an act of the Legislature February 6, 1873. The college will continue to operate for the next several years at its present location, First and Chestnut Streets, Louisville 2, Kentucky. The freshman year of the curriculum in Pharmacy, however, will be given at the Lexington campus of the University of Kentucky, as a part of the program of the College of Arts and Sciences. Those who transfer to Louisville for the professional courses will be selected from the highest ranking applicants who have completed the freshman year at the University or elsewhere.

A bulletin of the College of Pharmacy is now in preparation and will be available for distribution about August 1. Persons interested in applying for admission to the freshman class should write the University for a bulletin of General Information. All requests for information and all applications for admission should be directed to the Registrar, University of Kentucky, Lexington 29, Kentucky. Application blanks will be furnished upon request.

DEGREES AND REQUIREMENTS IN THE GRADUATE SCHOOL

William Delbert Funkhouser, M.A., Ph.D., D. Sc., Dean

INTRODUCTORY STATEMENT

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

The following advanced degrees are conferred by the University:

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

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

ADMISSION TO GRADUATE STANDING

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

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

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

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

REGISTRATION

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

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

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

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

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

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

FEES

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

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

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

A student, 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 a candidate for the degree of Master of Arts or Master of Science.

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

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

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

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

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

Transfer of Credits. No transferred credits are accepted toward the Master of Arts or Master of Science degree. All work for these

degrees must be done at the University of Kentucky. However, a student is not asked to repeat a course which he has satisfactorily completed at another institution.

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

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

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

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

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

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

1. Thirty-six quarter hours in graduate courses, exclusive of the thesis, with an average standing of 2.0, or better; one academic year (36 weeks) in residence, and an acceptable thesis. No course completed with a grade below C may be counted.
2. At the option of the department (not of the student), the master's degree in education may be granted for the completion of 54 quarter hours in graduate courses with an average standing of 2.0 or better, 48 weeks in residence, and no requirement of a thesis.

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

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

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

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

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

REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN PUBLIC HEALTH

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

1. Thirty-six quarter hours in graduate courses with an average standing of 2.0 or better and with no grade below C
2. Thirty-six weeks in residence
3. An acceptable thesis
4. The passing of a final comprehensive examination

There is no language requirement for this degree.

REQUIREMENTS FOR ADVANCED DEGREES IN ENGINEERING

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

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

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

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

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

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

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

A thesis is required of each candidate. It may be in the field of research, design, invention, or engineering processes and methods. It must contain some original thought and be the product of the individual submitting it. Quotations and references with the proper credit may be used. In general, the thesis should be of such a nature that it will be of value to the engineering profession.

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

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

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

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

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

Requirements for Applicant

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

In order to be accepted as an applicant for the degree of Doctor of Philosophy, the student must present evidence that he has completed an undergraduate curriculum 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 com-

mittee 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 satisfied the language requirements, passed the qualifying examinations, and made formal application to be so enrolled.

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

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

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

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

Requirements for Candidates

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

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

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

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

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

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

Printing of Dissertation. One hundred printed copies of the dissertation must be presented to the University within one year from the time when the degree is conferred. Not later than one week before the conferring of the degree the candidate must deposit with the Comptroller of the University the sum of $50.00, this amount to be returned if the printed copies are received within the time specified. The University does not obligate itself to publish the thesis, but if in the judgment of the Graduate Com-

mittee the thesis or an abstract of same should be published, the University reserves the privilege of so doing.

Or

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

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

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

Final Examination. After the acceptance of the dissertation by the special committee and the Dean of the Graduate School, the candidate shall be given 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 has been spent in residence after the student has been accepted as a candidate for the degree.

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

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

REQUIREMENTS FOR THE DEGREE DOCTOR OF EDUCATION

The requirements for the degree of Doctor of Education are exactly the same as those for the degree of Doctor of Philosophy with the following exceptions:

1. No languages are required for the Ed. D. Degree.
2. A total of 108 quarter hours are required of which at least one-third and not more than one-half must be in departments outside the College of Education.

FELLOWSHIPS AND SCHOLARSHIPS

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

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

Four fellowships with a stipend of $500.00 each
Fifteen scholarships with a stipend of $400.00 each.

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

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

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

GRADUATE ASSISTANTSHIPS IN THE RESIDENCE HALLS FOR WOMEN

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

GRADUATE STUDENTS NOT CANDIDATES FOR DEGREES

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

Any course of study announced for advanced undergraduates and graduates is open for election by such students upon the same

conditions that are imposed upon those who are candidates for degrees.

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

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

DEPARTMENT OF UNIVERSITY EXTENSION

Louis Clifton, M. A., Director

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

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

*1. A Bureau of Correspondence and Class Study.—Offering college courses in Botany, Economics, Education, English, French, Geography, German, Greek, Italian, Latin, Hygiene, Mathematics, Philosophy, Political Science, Psychology, Sociology, and Spanish; courses in high school subjects; and a course in Citizenship for Aliens.

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.

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

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

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

7. University of Kentucky Press.—The Department of University Extension acts as the distributor for the publications of the University of Kentucky Press. A list of these publications will be sent on request.

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* Separate bulletins for each of these bureaus are available.

PART III

STATEMENT OF COURSES OFFERED AT THE UNIVERSITY

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

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

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COLLEGE OF ARTS AND SCIENCES

AGRICULTURE

A student in the College of Arts and Sciences may elect toward the A.B. and B.S. degree a total of 45 quarter hours from other colleges of the University.

ANATOMY AND PHYSIOLOGY

Richard Sweetnam Allen, James William Archdeacon
Constance Larson Cole, and Mary Purcell Wiedeman

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

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

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

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

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

***2 ELEMENTARY ANATOMY AND PHYSIOLOGY.**
(5) I, II, III, IV Allen and Cole
The course is designed to present to the student who has no scientific background a thorough survey of the arrangement and general functions of the various systems that make up the human body. Lecture, three hours; recitation, one hour; and demonstration, one hour.

3 PHYSIOLOGY. (5) I, III Cole and Wiedeman
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, struc-

ture, and functions. Other systems of the body which are closely allied to the digestive system are also surveyed. Such are the circulatory, respiratory, and excretory. The latter are studied only in so far as they are related to the principal subject of the course. Lectures and recitations, three hours; laboratory, four hours. **Prerequisite: Chemistry 1a and 1b or the equivalent; Chemistry 37.**

4 ELEMENTARY ANATOMY. (5) I Cole and Wiedeman
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, three hours; laboratory, four hours. **Prerequisite: Sophomore standing.**

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

5a GENERAL ANATOMY AND PHYSIOLOGY FOR NURSES. (4) I, III Wiedeman and Cole
The subject is designed to meet the requirements of those who are in training, and includes a general survey of the following: physico-chemical phenomena of protoplasm; general structure of the body; osteology; myology; the nervous system and special senses. Lectures and recitations, three hours; laboratory, two hours. **Prerequisite or concurrent: General Chemistry.**

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

103a-d INDEPENDENT WORK IN ANATOMY. (4 ea.) I, II Staff
The pursuit of some advanced problems in anatomy under the direct supervision of the instructor. Discussion period, one hour; laboratory six hours. **Prerequisite: A. & P. 1a and 1b or the equivalent.**

104a-e INDEPENDENT WORK IN PHYSIOLOGY. (4 ea.) I, II Staff
A study of some advanced problem in physiology under the direct supervision of the instructor. Discussion period, one hour; laboratory, six hours. **Prerequisite: A. & P. 1a and 1b or equivalent; Chemistry 1a and 1b.**

105 ARCHITECTURE OF THE HUMAN SKELETON. (5) I, IV Allen and Cole
This course is designed for the student who anticipates further advanced study in anatomy and physiology, for students of anthropology, for students in art, and for those who are preparing for

the study of medicine. The study begins with the development of the skeleton joints. This is followed by the process of ossification and the histology of bones. Each bone is studied in detail; organized demonstrations are given with architecture and function being stressed. Variations in the skeleton are considered. When possible, the bone is compared with that of the lower vertebrates. The physiology of the bone, joint, and muscular relations is studied in detail. Lecture and recitation, two hours; laboratory, six hours. **Prerequisite: Junior standing.**

106 INTRODUCTION TO ENDOCRINOLOGY.
(4) II, IV Allen and Archdeacon
An introductory study of the glands of internal secretion or endocrine glands in which the general development, anatomical location and structure, and fundamental functions of the organs will be presented. The purpose of the course is to give a general knowledge that will be of value, not only to the student of anatomy and physiology and related subjects but also, to those of educational and sociological interest. Lecture and recitation, four hours **Prerequisite: A. & P. 1a and 1b or the equivalent; Zoology 7b; Chemistry 1a and 1b; and the Instructor's consent.**

107 ADVANCED ANATOMY. (5) III, IV Allen
An introduction to the anatomy and physiology of the nervous system. The aim of the course is to provide an introductory laboratory course on the form, structure, and functional arrangements of the nervous system for students of biology, physiology, psychology, and those preparing for the study of medicine . The work of the course includes a careful study of the nervous systems of vertebrates. The simpler types of nervous system are compared with that of man. The development of the various reflexes is considered. The relation of the structure of the nervous system to psychological reactions is studied. Lecture and recitation, three hours; laboratory, four hours. **Prerequisite: A. & P. 1a and 1b or the equivalent.**

108a ADVANCED PHYSIOLOGY.
(4) I Allen, Cole, and Wiedeman
The course is designed for students who anticipate further advanced study in physiology and also, for those who are preparing for the study of medicine. In this part of the course, the nervous system is to be considered in its entirety. It will include the structures and functions of the spinal cord, the medulla oblongata, the cerebellum, the cerebrum, and the autonomic system. The course will close with an intensive study of the special sense organs. Lecture and recitation, two hours; laboratory, four hours. **Prerequisite: A. & P. 1a and 1b; Chemistry 1a and 1b; Physics 1a, 1b, and 1c.**

108b ADVANCED PHYSIOLOGY.
(4) II Archdeacon, Cole, and Wiedeman
This is a continuation of 108a. The course is opened with the consideration of muscle-physiology which will include both skeletal and smooth muscle tissue. Graphic records which show the character of the contraction of each type of muscle are to be made. This will be followed by observing the various factors that alter the character of the contraction. Experiments are also performed to demonstrate that muscle is a thermogenic and an electrogenic organ. In addition to the muscle-study, the circulatory system and the respiratory system are to be thoroughly surveyed. In each case, much time is given to the consideration of the mechanics,

nervous regulation, and functional peculiarities. Lecture and recitation, two hours; laboratory, four hours. **Prerequisite: Same as for A. & P. 108a.**

108c ADVANCED PHYSIOLOGY.
(4) III Allen, Archdeacon, Cole, and Wiedeman
This division is a continuation of the preceding, 108a and 108b. It is concerned with a careful study of each of the following: The gastro-intestinal tract with its secretory organs; the processes of digestion, absorption, excretion, and heat production; voice and the production of speech. Lecture and recitation, two hours; laboratory, four hours. **Prerequisite: Same as for A. & P. 108b.**

109 APPLICATION OF PHYSICAL PRINCIPLES TO THE HUMAN BODY. (4) II, IV Archdeacon
This course is especially designed for students in anatomy and physiology or the natural sciences. Students of the physical sciences as well as others will, likewise, find the course to be of practical and cultural value. The course is opened by thoroughly acquainting the student with the various physical phenomena that are to be considered. This will be followed by applying the same to the physiological processes of the body, which will include stress and strain with respect to the bones of the skeleton, types of levers involved in joint action, permeability, calorimetry, mechanics of circulation and temperature regulation, mechanics of vision, mechanics of hearing, mechanics of speech or voice. Lecture and recitation, three hours; laboratory, two hours. **Prerequisite: A. & P. 1a and 1b; Physics 1a, 1b, and 1c; Chemistry 1a and 1b.**

116a-c SEMINAR IN ANATOMY AND PHYSIOLOGY. (1 ea.) I Staff
All students who are majoring in the Department are required to take this course. At each meeting of the seminar, an assigned scientific article of physiological or anatomical subject matter will be reviewed thoroughly by a member of the seminar and then discussed by the seminar in general. In addition to the foregoing, each member of the seminar will be required to follow closely the current publications bearing upon the subjects of the class and present brief reports of such articles which are of interest. One two-hour discussion period a week. Open only to Seniors and Graduates. **Prerequisite: A. & P. 1a and 1b or the equivalent.**

201a-i RESEARCH IN PHYSIOLOGY. (6, 6) I, IV Allen
The pursuit of an assigned problem in which the student will have the opportunity to demonstrate his or her originality. Conference and laboratory, twelve hours. **Prerequisite: A. & P. 1a and 1b or the equivalent; Chemistry 130a, 130b, and 130c or the equivalent; Physical Chemistry desirable; Physics, one year.**

ANCIENT LANGUAGES AND LITERATURES

Jonah W. D. Skiles and Assistant

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

Requirements in the Field of Concentration: 60 quarter hours of advanced work in the field of Literature, Philosophy, and the Arts during the junior and senior years, including the major work.

Requirements for a Major. Prerequisites: First two years of college Latin. **Required:** A minimum of 22 quarter hours of ad-

vanced work in Ancient Languages; Tutorial Work; comprehensive examination in the senior year.

Note.—No credit given when work done in high school is repeated. One year of high school language is considered the equivalent of one quarter of University work.

Latin

***1a BEGINNING LATIN. (3) I**
First 35 lessons in Bennett's First Year Latin.

***1b BEGINNING LATIN (Continuation). (3) II**
Lessons 36-72 in Bennett's First Year Latin.

***2 CAESAR AND SELECTIONS. (3) III**
The equivalent of three books of Caesar. **Prerequisite: A. L. 1. a-b.**

***3 CICERO AND SELECTIONS. (3) I**
The equivalent of three orations of Cicero. **Prerequisite: A. L. 2.**

***4a VERGIL. (3) II**
(Books I, II of Æneid.) **Prerequisite: A. L. 2 or 3.**

***4b VERGIL (Continuation). (3) III**
(Books IV, VI of Æneid)

***5 LIVY. (3) I**
(Book I and Selections.) **Prerequisite: A. L. 3 or 4.**

***6a HORACE. (3) II**
(First three books of Odes.) **Prerequisite: A. L. 4 or 5.**

***6b HORACE (Continuation). (3) III**
(Book four of Odes: Satires: Epistles.)

7 TACITUS. (3) I
(Germania, Agricola, Selections.) **Prerequisite: A. L. 5 or 6a and b.**

8a PLINY'S LETTERS. (3) II
(First five books.) **Prerequisite: A. L. 5 or 6a and b.**

8b PLINY'S LETTERS (Continuation). (3) III
(Last five books; and one play of Terence.)

16a, b TUTORIAL WORK IN ANCIENT LANGUAGES. (1, 1) II

109a-c LATIN LITERATURE. (3 ea.) I
(Selections from various authors.) **Prerequisite: A. L. 7 or 8a and b.**

110a-c LATIN LITERATURE. (3 ea.) I
Prerequisite: A. L. 7 or 8a and b.

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

114a, b INTERMEDIATE LATIN COMPOSITION. (1, 1) I
The course will begin with easy passages in connected discourses and will proceed to more difficult selection. **Prerequisite: A. L. 5.**

120 SURVEY OF GREEK CIVILIZATION. (3) I
History, Public and Private Life, Archaelogy. **Prerequisite: Junior standing.**

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* Open to Freshmen.

121 SURVEY OF ROMAN CIVILIZATION. (3) I
(Continuation of 120.) **Prerequisite: Junior standing.**

150a TEACHER'S COURSE IN LATIN. (3) IV
A hasty review of Bennett's Beginners' Book, and the reading of selections from the last three books of Caesar. Discussion of the principles of teaching Latin, stressing the connection between Latin and English, the merits of the different texts, etc. Given only in summer school. Based on first year's work. **Prerequisite: Junior standing.**

150b TEACHER'S COURSE IN LATIN. (Continuation). (3) IV
This course will follow closely the recommendations of the Classical League Investigating Committee. A considerable amount of easy Latin will be read, taken from several authors. Discussion of Latin exhibits and other means of arousing interest in the work. Given only in summer school. Based on second year work. **Prerequisite: A. L. 2 or 150a.**

151a-e INDEPENDENT WORK IN ANCIENT LANGUAGES. (3 ea.) I, II, III, IV
These are courses in individual work. The work assigned will depend upon the needs of the student. **Prerequisite: A. L. 5.**

201a LATIN PASTORAL POETRY. (3) II
This course is based mainly on Vergil's Eclogues and Georgics. The development of the author's talent will be noted and his models traced. In addition, one or two dramas will be read or selections from Lucretius. Given on demand. **Prerequisite: A. L. 109a or equivalent.**

201b LATIN ELEGIAC POETRY. (3) III
Selections from Catullus, Tibullus, Propertius and Ovid will be read. The change in the subject matter of the Elegy will be noted. Scanning. Mythological references studied. Given on demand. **Prerequisite: A. L. 109a or equivalent.**

Greek

***51a, b BEGINNING GREEK. (3, 3) I**
First 30 lessons in Benner & Smyth's Beginning Greek.

122a GREEK LITERATURE IN ENGLISH TRANSLATION. (3) II
Epic and lyric poetry. **Prerequisite: Junior standing.**

122b GREEK LITERATURE IN ENGLISH TRANSLATION. (3) III Jones
Drama, oratory, history, and philosophy. **Prerequisite: Junior standing.**

149 EASY SELECTED READING FROM GREEK AUTHORS. (3) III
Prerequisite: A. L. 51.

152 ANABASIS. (3) I
Given on demand. Prerequisite: A. L. 51 a, b.

153 HOMER. SELECTIONS. (3) I
The Iliad, books I-VI. The Homeric question, life in the Homeric age, Mycenean antiquities, recent discoveries, will receive due attention. Scanning. Given on demand. **Prerequisite: A. L. 149.**

154 PLATO. SELECTIONS. (3) II
The Apology and Crito, selections from the Phaedo. The relation of Plato to Socrates, Socrates as a moral teacher, his methods of

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* Open to Freshmen.

investigation will be discussed. Given on demand. **Prerequisite: A. L. 149.**

155 HERODOTUS. SELECTIONS. (3) III
Books VI-VII. This course will include a rapid survey of Greek history from the Ionic Revolt to the end of the Persian Wars. Given on demand. **Prerequisite: A. L. 149.**

ANTHROPOLOGY

William Snyder Webb, William Delbert Funkhouser, William George Haag, Jr., and Charles E. Snow

***1 GENERAL ANTHROPOLOGY. (4) I, III** Snow
An outline of physical Anthropology dealing with the biological aspects of man. Lectures on man's origin and development, the primates, races, and growth.

***2 GENERAL ANTHROPOLOGY. (4) II, IV** Snow
An outline of the cultural aspects of man. A worldwide study of man's archaeological remains throughout the ages, and the arts, industries, social organization, languages, and religious beliefs of selected primitive human groups.

101 PRINCIPLES OF ANTHROPOLOGY. (3) III, IV Funkhouser
Fundamental principles of anthropology; relationships of physical anthropology, anthropometry, ethnology, ethnography and archaeology; anthropology of the New World, North American prehistory; ancient human occupation in the Mississippi Valley; outline of man's prehistoric past in Kentucky; anthropoligical past in Kentucky; anthropological studies of Kentucky materials.

102 KENTUCKY ARCHAEOLOGY. (3)
A rapid survey of the more important prehistoric cultures found in North America and the sequence of cultures found in Kentucky to the time of the white settlers. 3 hours per week.

103a-d INDEPENDENT WORK IN ANTHROPOLOGY AND ARCHAEOLOGY. (3 ea.) Staff

105 ETHNOLOGY. (3) I Funkhouser
A lecture course on the Living Races of Man. The supposed origin and known migrations of the present ethnological groups; their relationships, geographical distribution, cultures, and religion. Lectures, 3 hours.

106 ETHNOLOGY OF EUROPE. (3) II Funkhouser
A study of the origins and migrations of the ethnological groups of Europe. The influence of Hamitic, Ligurian, Iberian, and Pelasgian stocks on prehistoric civilizations; the effect of the migration of the Indo-Iranian Division; the contribution of the Semites to early European cultures; the contrast between the Aryans and Nordics in racial characters with particular attention given to the Q-Kelts, P-Kelts, Slavs, and Anglo-Saxons. Lecture, three hours.

107 ETHNOLOGY OF THE NEW WORLD. (3) III Funkhouser
A study of the origins and migrations of the ethnological groups of the new world.
(This is an expansion of A. & A. 105 and 106 into a third quarter's work.)

108 THE DEVELOPMENT OF CULTURE. (3) Haag
A study of the origin of human culture and of the history of human cultural behavior. The course will contain a study of the origin and development of primitive behavior along cultural lines. It will not be presented as a series of studies of static culture but rather to show the flow of culture from basic human beginnings to present day civilization.

****110a-c FIELD WORK IN ARCHAEOLOGY. (4)**
This course is designed for students specializing in Archaeology and wishing to attain a knowledge of the laboratory practice conducted in the field.

115 NORTH AMERICAN ARCHAEOLOGY. (4) Haag
A study of the origin and growth of prehistoric American Indian cultures north of Mexico as revealed by archaeological data. Lectures and selected readings for paper preparations, three hours.

125 PHYSICAL ANTHROPOLOGY. (4) I, III Snow
A detailed course treating man as a biological organism. Lectures on measuring techniques, the primates, fossil man, races, racial admixture, growth, dentition, and osteopathology. Lecture, three hours, and laboratory, two hours. **Prerequisite: Anthropology 1 or four hours in any other biological science.**
Given from time to time:

103a-d INDEPENDENT WORK IN ANTHROPOLOGY AND ARCHAEOLOGY. (3 each)

104 HUMAN ORIGINS. (3)

110a-c FIELD WORK IN ARCHAEOLOGY. (4 each)

120 MUSEUM METHODS IN ANTHROPOLOGY. (3)

150a-d SEMINAR. (1 each)

ART

Edward Warder Rannells, Clifford Amyx, C. Raymond Barnhart, and Anne Worthington Callihan

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

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

Requirements for a major. Prerequisites: Art 61a, 61b (drawing), 62 (design), 35, and 36 (history of art). **Required:** a minimum of 34 quarter hours—16 in studio courses, 16 in history of art, plus the senior seminar and comprehensive examination in the senior year.

These requirements insure the necessary balance of theory and practice in the study of art. The department is housed in a

* Open to Freshmen.
** Excavations will be conducted throughout summer months on prehistoric earth mounds, earthworks, and village sites. Field techniques in photography, cataloguing, and preparation of specimens for museum study will be included.

modern building with special equipment. Studios for the practical work are designed to meet exacting professional standards. An excellent art library adjoins the class rooms. There are extensive collections of photographs, color reproductions, and related art reference materials. An exhibition gallery provides for the study of original works of art.

***A AN INTRODUCTION TO THE HUMANITIES THROUGH THE STUDY OF ART. (3) I, II, III, IV** Rannells and Amyx
An introduction to the Humanities through the study of the visual arts in relation to western culture. Illustrated lectures and discussions, with required reading from the literature of art history and criticism. Intensive critical study of selected masterworks. Special attention is given to the periods from the Renaissance to modern times. Designed to satisfy one of the Lower Division requirements in the Humanities.

***30a INTRODUCTION TO ART. (2) I, II, III** Calihan
Elementary principles, theory of color, essentials of design ,and forms of art. Given in illustrated lectures with assigned problems, notebooks, and reports. Not open to students who have had Art 10a.

***30b INTRODUCTION TO ART. (2) II, III** Callihan
The plastic arts; an introductory survey and interpretation of architecture, sculpture, and design. Illustrated lectures, study of original works of art, library references, and notebooks and reports.

***30c INTRODUCTION TO ART. (2) I, III** Callihan
Painting and the decorative arts; a survey of masterpieces in painting and major styles in decoration. Illustrated lectures, study of original works of art, library references, and notebooks and reports.

Drawing and Painting

***61a ELEMENTARY DRAWING. (4) I, II, III, IV** Barnhart
Training of vision and development of skill through drawing from natural forms. Nine studio hours and weekly problems.

***61b ELEMENTARY DRAWING. (4) III, IV** Barnhart
Continuation of 61a. Analytical study of form and space; introductory problems in composition. Nine studio hours and weekly problems. **Prerequisite: 61a.**

63a ADVANCED DRAWING. (4) I, IV Amyx and Barnhart
Analysis of composition in black and white. Comparative study of actual and pictorial space. Twelve studio hours a week. **Prerequisite: 61b.**

65a-c PAINTING. (4 ea.) II, III, IV Amyx and Barnhart
Technical instruction in oil and water color. Introduction to the study of pictorial composition; still life, landscape, and figure. Twelve studio hours a week. **Prerequisite: 61b or 63a, at option of instructor.**

116a-c PRINT MAKING. (4 ea.) I, II, III Amyx
Etching, lithography, woodcut, stencil (color). Technical instruction in executing original compositions in graphic mediums. Open only to advanced students upon approval of instructor.

* Open to Freshmen.

117a-f INDEPENDENT WORK: PAINTING; PRINTMAKING. (4 ea.) Staff
Individual research and experimental work in technical and theoretical problems of drawing and painting, printmaking, etc. Each quarter's work is subject to review by the staff. Open only to advanced students upon approval of department head.

165a-c ADVANCED PAINTING. (4 ea.) I, II, III, IV Amyx
Preparation of grounds for panel pictures; gesso, chalk, half-chalk, and oil grounds. Execution of pictures in tempera, and oil and mixed techniques. Twelve studio hours a week. **Prerequisite: 63a and 65c.**

Design

***62 BASIC DESIGN. (4) II, IV** Barnhart
The relation of materials and processes to art concepts. Exploratory construction in wood, clay, metal, paper, etc. Nine studio hours and weekly problems. **Prerequisite: 61a or equivalent.**

64a, b INTERMEDIATE DESIGN. (4, 4) II, III, IV Barnhart
Problems in creative construction adapted to the individual. Modeling, carving, and making objects of use. Eight studio hours and weekly problems. **Prerequisite: 61b and 62.**

66a, b DESIGN IN DECORATION. (4, 4) I, II, III Callihan
Problems in the use of color; projects in textile design, costume, interior decoration, etc., adapted to the individual. Given as research or studio work. **Prerequisite: 61b and 62.**

29 ART IN ADVERTISING. (3) III Barnhart
Art principles in advertising. Six studio hours and weekly problems. **Prerequisite: 61a and 62, or junior standing in Journalism or Commerce.**

68a GRAPHIC DESIGN. (4) II Barnhart
Design in printing, lettering, illustration. Basic work; research and studio problems. Eight studio hours and weekly problems. Admission on approval of instructor.

68b GRAPHIC DESIGN. (4) III Barnhart
Continuation of 68a. Individual problems in publications, poster design, and display. Attention given to campus problems. Eight studio hours and weekly problems.

119a-f INDEPENDENT WORK: DESIGN, CONSTRUCTION. (4 ea.) Staff
Individual research and experimental work in technical and theoretical problems of design in materials, design for decoration, interior design, industrial design, commercial design, construction, color, and light. Each quarter's work is subject to review by the staff. Open only to advanced students upon approval of department head.

History of Art

35 ANCIENT ART. (3) II Callihan
The arts in the ancient cultures of the Mediterranean and west-Asian worlds, from old Egypt and Chaldea through Greek and Roman times to Byzantium in the sixth century A. D. Emphasis on Classic art. Illustrated lectures, conferences, and reports.

36 MEDIEVAL ART. (3) III Callihan
The arts in relation to the Byzantine and Islamic cultures in the near East, and to the Latin and Germanic cultures in the West,

* Open to Freshmen.

during the early middle ages; and of Gothic art in France and northern Europe through the fifteenth century. Emphasis on Christian art. Illustrated lectures, conferences, and reports.

46 **THE DECORATIVE ARTS. (3) III** Callihan
A survey of the decorative arts; a comparative study of the treatment of interiors, of furniture, textiles, ceramics, etc., with special reference to the major styles in decoration as developed in France and England during the eighteenth and early nineteenth centuries. An illustrated and documented course; lectures and reports.

121a-f **INDEPENDENT WORK: HISTORY AND CRITICISM. (4 ea.)** Staff
Individual research, study, and critical writing in the history and criticism of art. Studies in collaboration with other humanistic disciplines. Each quarter's work is subject to review by the staff. Open only to advanced students upon approval of department head.

138 **THE NORTHERN RENAISSANCE. (3) III** Rannells
The arts of Northern Europe through the sixteenth century; Flemish, French, German and English Schools. The Northern art forms; analyses of style; study of individual masters. Illustrated lectures and reports.

140 **RENAISSANCE ART. (4) I** Rannells
The arts of humanism in Renaissance Italy through the sixteenth century. Renaissance "form"; analyses of style; study of individual masters. Illustrated lectures and reports.

141 **BAROQUE ART. (4) II** Rannells
The arts of the Reformation and the Counter-Reformation in Europe through the seventeenth century. Baroque "space"; analyses of style; study of individual masters. Illustrated lectures and reports.

142 **MODERT ART. (4) I** Rannells
The arts in Europe and America through the eighteenth and nineteenth centuries. Consideration of social changes and scientific developments in relation to art; history and aesthetics; style revivals; individual artists. Illustrated lectures and reports.

143 **CONTEMPORARY ART. (4) II** Rannells
Studies in the arts of the twentieth century. Surveys and analyses. The relation of art to contemporary life. Space and time in modern art. The evolution of modern forms in architecture, sculpture, painting, and design; developments in photography, the cinema, city planning, etc. Individual artists and their work. Lectures, conferences, and reports. **Prerequisite: 142.**

147 **ART IN AMERICA. (4) IV** Rannells
American architecture, sculpture, painting, illustration, handicrafts, etc., from colonial times to the present. Illustrated lectures and critical reports. **Prerequisite: 142.**

151 **CRITICISM OF ART. (4) III** Amyx and Rannells
Analyses, interpretations, and evaluations. Specific arts, periods of arts and styles of art are examined in the light of historical modes of criticism. Problems in criticism of contemporary art. Discussions and reports. For advanced students. **Prerequisite: Advanced studio courses and 142 and 143.**

160a-c **SEMINAR IN ART. (1 ea.) I, II, III** Staff
Current problems in art; correlation of theory and practice; reports. Required of all seniors majoring in art in preparation for the comprehensive examination.

Art in Education

10a PUBLIC SCHOOL ART. (3) I, III, IV Callihan
A study of essentials in art; definitions, initial concepts, principles, techniques; elementary skills through practice in design, drawing, and lettering. Forms of art; analysis and interpretation on an elementary level. Bibliographies and teaching materials. For students in elementary education. Lectures, six studio hours and weekly problems. Not open to students who have had Art 30a.

10b PUBLIC SCHOOL ART. (3) I, II, III, IV Haines
Application of art essentials to class room activities in preparation for teaching art in the elementary grades. Units in art: design, color, drawing, lettering, etc. Units in collaboration with other studies: posters, charts, programs, etc. Exploration of materials, tools, and processes. Bibliographies and teaching materials. For students in elementary education. Given in the University Training School. Lectures, six studio hours and weekly problems. **Prerequisite: 10a.**

157 ART IN SECONDARY SCHOOLS. (4) IV Rannells
Art for teachers in the secondary schools. Problems of definition and interpretation; evaluation of visual training; the correlation of art with other subjects. Sources for art; original works, facsimile reproductions, art literature, etc. Lectures, conferences, and reports.

NOTE: Other courses, such as Mural Painting (167a-c), and individual work in Modeling, Carving, Illustration, Industrial Design, Interior Decoration, etc., are given from time to time. Independent Work courses (117a-f, 119a-f, and 121a-f) provide for the advanced student of special interests and abilities—generally those seeking help on self-planned problems.

BACTERIOLOGY

Morris Scherago, Ogden Frazelle Edwards, Lura Claude Harrison, Margaret Hotchkiss, James Charles Humphries, Elmer Stephen Maxwell, Mary Muedeking, Ralph Holder Weaver, and Assistants

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

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

Requirements for a Major. Prerequisites: Chemistry 1a and b; Bact. 2b or 52, and 104. **Required:** Three quarter hours in Seminar and a minimum of 20 additional quarter hours of advanced work in Bacteriology, including Bact. 125a and 125b.

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.

Course 52 or 102 may be taken to fulfill the requirement of students in the College of Agriculture and Home Economics, and by premedical students.

***2a ELEMENTARY MICROBIOLOGY.**
(6) I, II, IV Weaver and Muedeking
A study of the fundamental nature of bacteria and other micro-organisms, special attention being given to morphology. This course is recommended for Bacteriology majors and for those taking Bacteriology to fulfill a biological science requirement, and should be followed by 2b. **No prerequisites.** Lecture and recitation, three hours; laboratory, six hours.

***2b ELEMENTARY MICROBIOLOGY.**
(6) II, III, IV Weaver and Muedeking
Continuation of Course 2a. A cultural study of bacteria. Microbial physiology. A discussion of the relationship of micro-organisms to soil fertility, foods, industrial fermentations, disease, etc. Lecture and recitation, three hours; laboratory six hours. **Prerequisite: Bacteriology 2a.**

***6a, b BACTERIOLOGY AND PATHOLOGY FOR NURSES.**
(4, 4) I, II, III, IV Scherago and Hotchkiss
A study of the characteristics and habits of micro-organisms and of their relation to medicine, surgery, and public health. The causes of disease, the nature of disease processes, the securing and preserving of specimens for the laboratory. Lecture and recitation, two hours; laboratory, four hours, for each course.

52 PRINCIPLES OF BACTERIOLOGY.
(6) I, II, III Scherago and others
An alternative course for students who do not have the prerequisites for 102. Lecture and recitation, three hours; laboratory, six hours. **Prerequisite or concurrent: Chem. 1b.**

56a BACTERIOLOGY OF FOODS. (For Sophomores.)
(4) I. IV Weaver and Muedeking
Relation of micro-organisms to food production and handling; food preservation. Microbiology of fermentation products, canned foods, eggs, tomato products, meat and meat products, fish and shellfish, etc. Standard methods of bacterial analysis as used in official food and public health laboratories. Food poisoning. Lecture and recitation, two hours; laboratory, four hours. **Prerequisite: Bacteriology 52 or 102; or 2b and Chem. 1b.**

56b BACTERIOLOGY OF FOODS. (For Sophomores.)
(4) II. IV Weaver and Muedeking
Microbiology of milk and milk products. Standard methods of bacterial analysis as used in official food and public health laboratories. Lecture and recitation, two hours; laboratory, four hours. **Prerequisite: Bacteriology 52 or 102; or 2b and Chemistry 1b.**

57a BACTERIOLOGY OF WATER AND SEWAGE.
(For Sophomores.) (4) III, IV Weaver and Muedeking
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. Lecture and recitation, two hours; laboratory, four hours. **Prerequisite: Bacteriology 102 or 52; or 2b and Chemistry 1b.**

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* Open to Freshmen.

57b BACTERIOLOGY OF WATER AND SEWAGE.
(2) III, IV Weaver and Edwards

A course in the bacteriological analysis of water and sewage to supplement Course 57a. Microspical examination of water. Tests necessary for the operation of water works and sewage treatment plants. B.O.D. test, etc. Laboratory, four hours. **Prerequisite: Preceded or accompanied by Bacteriology 57a.**

102 GENERAL BACTERIOLOGY. (6) I, II, III, IV Scherago and others

Observation and cultivation of bacteria and related micro-organisms; study of their morphology, classification, physiology, relation to certain fermentations, to food, to soil fertility, and to disease. Lecture and recitation, three hours; laboratory, six hours. **Prerequisite: Chemistry 1b.**

103 PATHOGENIC BACTERIOLOGY.
(6) I, IV Scherago, Humphries, and Edwards

A study of human and animal pathogenic micro-organisms, especially their morphological, cultural, and pathogenic properties. Lecture and recitation, three hours; laboratory, six hours. **Prerequisite: Bacteriology 102 or 52; or 2b and Chemistry 1b.**

104 APPLIED BACTERIOLOGY.
(3) I, II, III, IV Hotchkiss and others

A course in bacteriological analysis to supplement Courses 52 and 102. Laboratory six hours. **Prerequisite: Bacteriology 102 or 52; or 2b and Chemistry 1b.**

110a LABORATORY DIAGNOSIS. (3) I, IV Hotchkiss

Laboratory methods employed in diagnostic and public health laboratories. Designed primarily for medical technology students. Examination of sputum and urine. Laboratory, six hours. **Prerequisite: preceded or accompanied by Bacteriology 103.**

110b LABORATORY DIAGNOSIS. (3) II, IV Hotchkiss

Continuation of 110a. Examination of stomach and intestinal contents and blood. Laboratory, six hours. **Prerequisite: same as for 110a.**

110c LABORATORY DIAGNOSIS. (3) III, IV Hotchkiss

Continuation of 110b. Laboratory diagnosis of parasitism; laboratory methods used in diagnosis of gonorrhea, typhoid fever, diptheria, syphilis, etc. Laboratory, six hours. **Prerequisite: preceded or accompanied by Bacteriology 125b.**

111 GENERAL PATHOLOGY.
(6) III, IV Maxwell, Scherago, and Hotchkiss

The effects of disease on the organs and tissues of the human body will be studied at autopsies and by the examination of fresh and museum specimens as well as histological sections. Degenerations, infiltrations, regenerations, inflammations, disturbances of the circulation, infectious granulomata, neoplasms, etc., will be studied. Lecture and recitation, three hours; laboratory six hours. **Prerequisite: Anatomy and Physiology 1a-b; Zoology 7c, 101b, and 106; Bacteriology 103, and consent of head of department.**

115a-f INDEPENDENT WORK. (4 ea.) I, II, III, IV Staff

Students will be assigned special problems in laboratory work and reference reading. Laboratory, eight hours. **Prerequisite: any bacteriology course above 2b.**

†120a-c **HOSPITAL LABORATORY PRACTICE.**
(6, 4, 5) I, II, III, IV Maxwell, Harrison, and others
Students will be required to carry out, under supervision, the laboratory work in one of the hospitals in Lexington. Laboratory, eighteen hours, twelve hours, and fifteen hours, respectively. **Prerequisite: Bacteriology 110a, 110b, and 110c; consent of head of department.**

125a **IMMUNOLOGY AND SEROLOGY.**
(5) I, IV Scherago, Humphries, and Edwards
The theories and mechanism of infection and immunity; the preparation, standardization, and uses of vaccines, toxins, antibodies, and other biological products related to the diagnosis, prevention, and treatment of specific infectious diseases; agglutination; complement fixation, etc. Lectures and recitations, two hours; laboratory, six hours. **Prerequisite: Bacteriology 103.**

125b **IMMUNOLOGY AND SEROLOGY.**
(3) III, IV Scherago, Hotchkiss, and Humphries
Continuation of 125a. Antigenic analysis; serology of syphilis; hypersensitiveness. Lecture one hour; laboratory, four hours. **Prerequisite: Bacteriology 125a.**

150a-f **SEMINAR. (1 ea.) I, II, III** Staff
Review of current literature in bacteriology; presentation of papers on work in progress in the department or on assigned topics; reports on meetings of national bacteriological societies. Required of all seniors. Two hours.

201a-f **RESEARCH IN BACTERIOLOGY.**
(5 ea.) I, II, III, IV Senior Staff
Laboratory, ten hours.

203a, b **PUBLIC HEALTH BACTERIOLOGY.**
(5, 5) IV Scherago and others
This course considers the public health aspects of bacteriology including the etiology, epidemiology, immunology, and laboratory diagnosis of infectious diseases; the bacteriology of air, water, and sewage; food poisoning; the production, standardization, and practical applications of biological products used in the diagnosis, treatment, and prevention of infectious diseases; the standardization of disinfectants. Lectures and recitations, two hours; laboratory, six hours. **Prerequisites: open only to physicians and health officers or those with equivalent training.**

206a **BACTERIOLOGY OF FOODS. (4) I, IV** Weaver and Humphries
Relation of micro-organisms to food production and handling; food preservation. Microbiology of fermentation products, canned foods, eggs, tomato products, meat and meat products, fish and shellfish, etc. Standard methods of bacterial analysis as used in official food and public health laboratories. Food poisoning. Lecture and recitation, two hours; laboratory, four hours. **Prerequisite: Bacteriology 2b or 52; Chemistry 21b.**

206b **BACTERIOLOGY OF FOODS. (4) II, IV** Weaver and Humphries
Microbiology of milk and milk products. Standard methods of bacterial analysis as used in official food and public health laboratories. Lecture and recitation, two hours; laboratory, four hours. **Prerequisite: Bacteriology 2b or 52 or 102; Chemistry 21b.**

† Credit for the third quarter of hospital practice will be allowed only after the student has passed the examination of the Board of Registry of the American Society of Clinical Pathologists.

207 BACTERIOLOGY OF WATER AND SEWAGE.
(6) III, IV Weaver and Humphries
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. Lecture and recitation, two hours; laboratory, eight hours. **Prerequisite: Bacteriology 2b, or 52, or 102; Chemistry 21b.**

250a-i SEMINAR. (1 ea.) I, II, III Staff
Review of current literature in bacteriology; presentation of papers on work in progress in the department or on assigned topics; reports on meetings of national bacteriological societies. Required of all graduate students. Two hours.

BOTANY

Herbert Parkes Riley, Frank T. McFarland,
and Berthus Boston McInteer.

UPPER DIVISION REQUIREMENTS—Junior and Senior Years

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

Requirements for a Major. Prerequisites: Botany 1a and 1b or 8a and 8b. **Required:** A minimum of 30 quarter hours of advanced work in Botany and the passing of a comprehensive examination covering chiefly the fields of morphology, taxonomy, and physiology.

***1a GENERAL BOTANY. (4) I, II, III** Staff
Plant cells and tissues; the structure and functions of the vegetative organs of the seed plant.

***1b GENERAL BOTANY. (4) I, II, III** Staff
The structure, reproduction, and life cycles of typical representatives of the lower plants; reproduction and life cycles of the seed plant. **Prerequisite: Botany 1a, or 8a, or 25.**

***1c GENERAL BOTANY. (4) III** Riley
An introduction to taxonomy, ecology, and heredity in the higher plants. **Prerequisite: Botany 1b, or 8b, or 25.**

6 PLANT MICROTECHNIC. (5) III Riley
The principal methods used in the preparation of permanent slides for the compound microscope. **Prerequisite: Botany 1b or 8b.**

***8a INTRODUCTION TO BOTANY. (4) I, II** Staff
A lecture-demonstration course dealing with the structure and functions of the vegetative organs of the seed plant. Four hours.

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* Open to Freshmen.

*8b **INTRODUCTION TO BOTANY. (4) II, III** Staff
The structure, reproduction, and life cycles of typical representatives of the lower plants; reproduction in seed plants. Four hours. **Prerequisite or concurrent: Botany 1a, or 8a, or 25.**

15 **LOCAL FLORA (SYSTEMATIC BOTANY). (5) III** McFarland
A laboratory course dealing with the identification of unknown flowers and ferns. The use of manuals and methods of making an herbarium are taken up for study. The various systems of classification are taken up in detailed study, as well as the laws of nomenclature. **Prerequisite: Botany 1b or 8b.**

19 **DENDROLOGY. (3) I, III** McFarland
This is primarily a field course in which the student is taught the fundamental principles of identification of trees, as well as how to recognize the various trees by their leaf, bark, and bud characters. Both summer and winter condition of trees will be studied. **Prerequisite: 1b, or 8b, or 25.**

*25 **GENERAL PLANT BIOLOGY. (5) I, II, III** Staff
The principles underlying the structure and functions of the green plant: cells and tissues; the manufacture and use of food; the relations of a plant to water and soil; growth; the organization of the plant body; and reproduction. Illustrations will be drawn chiefly from the seed plant. To satisfy part of the group requirement in biology for those who do not plan a science major.

103a **PLANT PHYSIOLOGY. (4) I** McInteer
The principles which underlie the movement of materials in plants, covering absorption, translocation, and transpiration **Prerequisite: Botany 1b or 8b.**

103b **PLANT PHYSIOLOGY. (4) II** McInteer
A continuation of 103a, covering the chemical processes and organic materials within the plant. **Prerequisite: 103a.**

104 **GENERAL CYTOLOGY. (4) I** Riley
Structure of plant and animal cells; cell division; gametogenesis, sporogenesis, fertilization, and apomixis. **Prerequisite: Botany 1b or 8b or 8 quarter hours in Zoology.**

106a-d **SPECIAL PROBLEM. (5 ea.) I, II, III** Staff
Independent work in some phase of advanced botany. **Prerequisite: 27 quarter hours of advanced courses in Botany.**

107 **MORPHOLOGY OF ALGAE. (4) I** McInteer
The economic value of algae and the structure and life histories of representative forms of the various groups. **Prerequisite: 1b or 8b.**

114 **ECOLOGY. (5) III** McInteer
The relationships existing between plants and their various environments; plant succession, plant associations and formations; the principles of plant geography; the vegetation of North America. **Prerequisite: Botany 1b or 8b.**

115a-c **SEMINAR. (1) I, II, III** Staff
Assigned readings and reports on special topics. Required of all botany majors.

124 **ANATOMY OF VASCULAR PLANTS. (4) II** Riley
The nature and origin of primary and secondary tissues and their distribution in plant organs; the detailed structure of some plants of economic importance. **Prerequisite: Botany 1b or 8b.**

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* Open to Freshmen.

125a MORPHOLOGY OF THE FUNGI. (4) I McFarland
A comprehensive study of the many typical forms of the Myxomycetes and Phycomycetes; their structure, methods of reproduction, and classification are studied in detail. **Prerequisite: Botany 1b or 8b.**

125b MORPHOLOGY OF THE FUNGI. (4) II McFarland
A continuation of 125a, in which the student will study in detail the structure, reproduction, and classification of the Ascomycetes. Lecture two hours, laboratory four hours. **Prerequisite: Botany 125a.**

125c MORPHOLOGY OF THE FUNGI. (4) III McFarland
A comprehensive study of the Basidomycetes as to structure, reproduction, and classification. During the term the student will study the Fungi Imperfecti and the principles involved in isolation of fungi and their culture and identification. **Prerequisites: 125b.**

126a MYCOLOGY. (5) I McFarland
In this course the student spends the entire time in identifying unknown species of fungi; considerable time is spent in the field in collecting and learning the habitats of the various fungi. Laboratory ten hours. **Prerequisite: Botany 125c.**

126b MYCOLOGY. (5) II McFarland
A continuation of 126a. Laboratory, ten hours. **Prerequisite: Botany 126a.**

134 CYTOGENETICS. (4) III Riley
The importance of chromosomes in evolution and speciation; polyploidy, chromosomal aberrations, and hybridization. Lecture, two hours; laboratory, four hours. **Prerequisite: Botany 1b or 8b; Animal Industry 61 or 161, Botany 1c, or equivalent.**

150a, b ADVANCED SYSTEMATIC BOTANY.
(5, 5) I, II, III McFarland
For those students who have completed Botany 15 or its equivalent and who wish to continue with identification. The student will be expected to identify many more and more difficult specimens than in Botany 15. A comprehensive survey of the different methods of classification will be required of each student. **Prerequisite: Botany 15 or its equivalent.**

206a, b RESEARCH IN MORPHOLOGY. (5, 5) Riley
Graduate students will be assigned to problems in morphology, morphogenesis, cytology, or cytogenetics.

207a, b RESEARCH IN MYCOLOGY. (5, 5) I McFarland
Those desiring to carry on investigations in mycology should have had Botany 125c or the equivalent. Suitable work will be suggested to students desiring to enter this field.

213a-c RESEARCH IN SYSTEMATIC BOTANY. (5) I, II, III McFarland
Any student who has shown ability and initiative in Botany 150a and b or its equivalent and who is working on an advanced degree may be assigned to this course. The student may elect to work on the flora of the county in which he lives or of some local region or he may be assigned to work up some order or family of plants. A student may elect this course in the preparation of his collection which is to be incorporated in his thesis. **Prerequisite: Botany 150b.**

CHEMISTRY

Lyle R. Dawson, Charles Barkenbus, R. Ray Estes, Charles E. Holley, Jr., Gordon R. Leader, Jacob R. Meadow, John Richard Mitchell, Fred E. Sheibley, Olus Jesse Stewart, James I. Watters, and Assistants.

LOWER DIVISION REQUIREMENTS—**Freshmen and Sophomore years**

For a major in chemistry the lower division requirements for the College of Arts and Sciences must be fulfilled.

Upper Division Requirements—Junior and Senior Years

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

Requirements for a Major. Prerequisite: 1a, 1b, 20, 21a, 21b, 21c, and Mathematics through the calculus. **Required:** 130a, 130b, 130c, 140a, 140b, 140c, 144a, 144b, 144c, 110a, 110b, 111, 133, 188a, 188b, 188c, and 15 quarter hours to be chosen from the field of physical science.

Special Charges That May Be Made By the Department of Chemistry. The Department assesses charges for breakage of apparatus used by students in the laboratory courses. The amount charged each student is reported to the Comptroller at the close of the quarter or the year. The Comptroller deducts it from the $6.00 general deposit. The amount charged may vary from a few cents to four or five dollars.

*1a, b **GENERAL CHEMISTRY. (5, 5) I, II, III, IV** Staff
Chemistry of the non-metallic elements, and the metals. Lecture, 2 hours; recitation, 1 hour; laboratory, 4 hours.

*2a, b **GENERAL CHEMISTRY FOR ENGINEERS. (5, 5) I, II, III** Staff
Lecture, 2 hours; recitation, 1 hour; laboratory, 4 hours.

*3a, b **CHEMISTRY FOR NURSES. (4, 4) I, II, III, IV** Estes
This course deals with those general principles of chemistry, inorganic, organic, and physiological, which give the necessary foundation for practical work in nutrition, materia medica, and other subjects more or less dependent on a basis of chemical training. Lecture, 1 hour; recitation, 1 hour; laboratory, 2 hours.

*4a, b **GENERAL CHEMISTRY. (4, 4) I, II, III, IV** Meadow
Chemical concepts and methods as applied in our modern civilization and in our cultural life. For non-technical students. One or both quarters may be applied toward the physical science group requirements. Lecture, 2 hours; laboratory, 2 hours.

*20 **QUALITATIVE ANALYSIS (6) I, II, III, IV** Staff
Structure of inorganic compounds; ionization; equation writing, with particular emphasis on oxidation-reduction reactions; chemical equilibrium applied to the qualitative analysis scheme; hydro-

* Open to Freshmen.

lysis; amphoterism, and complex ion formation. In the laboratory the reactions of the common cations and anions are studied. Systematic analyses of unknowns for cations and anions are performed. Lecture, 3 hours; laboratory, 6 hours. **Prerequisite: Chemistry 1b or 2b.**

21a-c **QUANTITATIVE ANALYSIS. (4, 4, 5) I, II, III, IV** Stewart
A laboratory course accompanied by lectures and classroom exercises. Gravimetric and volumetric methods of analysis are studied in detail. Lecture, 1 hour; laboratory, 6, 6, and 8 hours respectively. **Prerequisite: Chemistry 20.**

30a-c **ORGANIC CHEMISTRY. (5 ea.) I, II, III, IV** Barkenbus
Lecture, 3 hours; laboratory, 4 hours. **Prerequisite: Chemistry 1b.**

37 **ORGANIC CHEMISTRY. (6) I, III, IV** Barkenbus and Estes
An elementary course for non-professional students. Lecture, 4 hours; laboratory, 4 hours. **Prerequisite: Chemistry 1b or 2b.**

110a, b **ADVANCED INORGANIC CHEMISTRY. (3 ea.)** Leader
A systematic course in inorganic chemistry with especial emphasis upon the periodic classification, valence, recent developments in this field, the various types of inorganic compounds, their preparation and reactions. The chemistry of the less common elements will also be included. General prerequisites must include acceptable courses in quantitative analysis and organic chemistry. Lecture and recitation, three hours.

111 **LABORATORY WORK IN INORGANIC CHEMISTRY. (2)** Leader
Laboratory experiments will be chosen to illustrate (a) **Inorganic Preparations:** Methods of preparation of pure samples of the different classes of inorganic compounds. (b) **Techniques:** The study of newer and more difficult techniques in the field of inorganic synthesis. The use of liquefied gases, low and high temperature apparatus, high pressure and high vacua apparatus, etc. (c) **Less Common Elements:** The preparation of pure compounds of the less familiar elements, using in most cases ores or industrial concentrates as starting materials. Six hours of laboratory. **Prerequisite or concurrent: Chem. 110a.**

114 **NON-AQUEOUS SOLUTIONS. (3)** Leader
A study of inorganic reactions in non-aqueous solutions. Lecture, three hours. **Prerequisite: Chem. 140c.**

115a, b **NUCLEAR CHEMISTRY. (3 ea.)** Leader
The chemistry of the radioelements and other substances involved in nuclear reactions. Lecture, 3 hours. **Prerequisite: Chemistry 140c.**

120 **ADVANCED QUALITATIVE ANALYSIS. (5)** Stewart and Watters
A more comprehensive course in inorganic qualitative analysis than Chemistry 20. The course will include the separation and detection of the less common elements, and will employ a more rigorous physico-chemical approach to the theory of separation. Lecture, three hours; laboratory, six hours. **Prerequisite: Chem. 140c.**

121 **SEMIMICRO QUANTITATIVE ANALYSIS. (4)** Watters
A laboratory course devoted to the quantitative analysis of both organic and inorganic substances by the use of semimicro techniques. Lecture, one hour; laboratory, nine hours. **Prerequisite: Chem. 140c.**

122 INSTRUMENTAL ANALYSIS. (4) I Watters
The applications of microscopic, colorimetric, spectrophotometric, polarographic, and electrometric methods. Lecture and recitation, two hours; laboratory six hours. **Prerequisite: Chemistry 21c.**

125 ADVANCED QUANTITATIVE ANALYSIS. (5) Stewart and Watters
The complete analysis of a silicate mineral or ore, and of alloys of iron, copper, and aluminum. Lecture, 2 hours; laboratory, 9 hours. **Prerequisite: Chem. 21c.**

126 INDUSTRIAL ANALYSIS. (3) Stewart and Watters
The use of special industrial control methods for the analysis of water, coal, petroleum, fuel gases, and atmospheric constituents. Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: Chem. 21b.**

127 MICROSCOPIC ANALYSIS. (3) Watters
Qualitative and semi-quantitative analysis of microgram amounts of various cation groups in a single drop under a microscope. Lecture, 1 hour; laboratory, 6 hours. **Prerequisite: Chem. 20.**

129a, b SELECTED PROBLEMS IN QUANTITATIVE ANALYSIS. (3, 2) I, II, III, IV Stewart and Watters
Laboratory, 9 hours and 6 hours respectively. Offered upon request. **Prerequisite: Chemistry 20.**

130a-c ORGANIC CHEMISTRY. (5 ea.) I, II, III, IV Barkenbus
A systematic study of organic compounds. Lecture, three hours; laboratory, four hours. **Prerequistei Chemistry 1b or 2b.**

133 QUALITATIVE ORGANIC ANALYSIS. (5) I, III, IV Barkenbus and Estes
A systematic study of the separation and identification of organic compounds. Lecture, one hour; laboratory, twelve hours. **Prerequisite: Chemistry 130c or 30c.**

136a, b SYNTHETIC ORGANIC CHEMISTRY. (2, 3) I, II, III, IV Barkenbus
A critical comparison of preparation methods accompanied by laboratory work and reports. Elective. Laboratory, six hours and nine hours respectively. Offered upon request. **Prerequisite: Chemistry 130c or 30c.**

140a-c PHYSICAL CHEMISTRY. (3 ea.) I, II, III, IV Dawson and Holley
The fundamental principles of physical chemistry are studied with emphasis upon the applications of these in the correlation of natural phenomena. Lecture and recitation, three hours. **Prerequisite: Chemistry 21b; Mathematics 20b; Prerequisite or concurrent: Physics 3a.**

141 INTERMEDIATE PHYSICAL CHEMISTRY. (4) I, IV. Dawson
Principles and applications of chemical thermodynamics. Lecture, four hours. **Prerequisite: Chemistry 140c.**

143a, b PHYSICAL CHEMISTRY. (4 ea.) I, II Holley
For students in Agriculture and the Biological Sciences. Lecture and recitation, three hours; laboratory, three hours. Given yearly. **Prerequisite: Chemistry 37, 20; Physics 1c; Mathematics 17.**

144a-c PHYSICAL CHEMISTRY. (2) I, II, III, IV Holley
Laboratory studies in physical chemistry, to accompany 140a-c. Laboratory, six hours.

145 COLLOID CHEMISTRY. (3) III Holley
Lectures, recitations, and assigned readings on the chemistry of colloids. Lecture and recitation, three hours. **Prerequisite or concurrent: 140c.**

150a-c PHYSIOLOGICAL CHEMISTRY. (4 ea.) I, II, III Barkenbus
A study of the chemistry of living processes. Lecture, two hours; laboratory, six hours. Offered upon request. **Prerequisite: Chemistry 20, 130c.**

160 INDUSTRIAL CHEMISTRY. (3) I Meadow
A survey of the chemistry of manufacturing processes. Lecture three hours. **Prerequisite: Chemistry 140c.**

161 INDUSTRIAL CHEMICAL CALCULATIONS. (4) II Meadow
Lecture and recitation, four hours. Given yearly. **Prerequisite: Chemistry 140c.**

181 CHEMICAL LITERATURE. (1) I Stewart
Training in the use of Chemical Literature. One hour weekly. Given yearly.

188a-c UNDERGRADUATE SEMINAR. (0, 1, 1) Staff
Reports and discussions on recent research and current chemical literature. Required of all seniors. Each senior is required to present a minimum of three reports to the student-faculty group for each quarter hour of credit earned. Attendance at the seminar for two quarters is required before the first quarter hour of credit is earned. One meeting per week.

210 SELECTED TOPICS IN INORGANIC CHEMISTRY. (3) III Leader
The chemistry of the rare earths and other less common elements; recent advances in inorganic chemistry, etc. Lecture, 3 hours.

220 THE CHEMICAL POLARIZING MICROSCOPE. (3)
The theory and practice in the use of the polarizing microscope as a means of indentifying crystalline chemical substances. Lecture, 1 hour; laboratory, 6 hours. **Prerequisites: Chem. 122 and Chem. 140c.**

221 QUANTITATIVE MICROANALYSIS. (4)
The quantitative analysis of organic and inorganic substances in the microgram and submicrogram range. Lecture, 1 hour; laboratory, 9 hours. **Prerequisite: Chemistry 21c.**

222 ELECTROMETRIC ANALYSIS. (4) Watters
The theory and application of potentiometric, polarographic, and conductometric measurements. Lecture, 2 hours; laboratory, 6 hours. **Prerequisites: Chem. 122 and Chem. 140c.**

230a, b SYNTHESIS OF ORGANIC COMPOUNDS. (3 ea.)
A thorough study of the types of reactions used in organic synthesis with emphasis on the conditions and reagents that can be used. Lecture, 3 hours. **Prerequisite: Chem. 130c.**

232 STEREOISOMERISM OF CARBON COMPOUNDS. (3) I Barkenbus and Estes
Optical isomerism of compounds containing asymmetric carbon atoms; polarimetry; optical isomerism of compounds containing no individual asymmetric atoms; stereochemistry of byphenyls and related compounds; cis-trans isomerism and stereochemistry of the sugars. Lecture, three hours. **Prerequisite: Chemistry 130c.**

234a, b THE ELECTRONIC THEORY AS APPLIED TO ORGANIC REACTIONS. (3 ea.)
A study of the modern viewpoints of valence and their application to the interpretation of organic reactions. Lecture, 3 hours. **Prerequisite: Chem. 140c.**

238a, b SURVEY OF ORGANIC CHEMISTRY. (3 ea.) Barkenbus
A general survey of the field of organic chemistry. Lecture, 3 hours. **Prerequisite: Chem. 130c or equivalent.**

240a THEORETICAL ELECTROCHEMISTRY. (3) II Dawson
Modern theories of solutions. Electrodynamic phenomena. Polarization. Electrolysis. Equilibrium in solutions of electrolytes. Lecture and recitation, three hours. **Prerequisite: Chemistry 140c.**

240b APPLIED ELECTROCHEMISTRY. (3) III Dawson
Applications of electrochemical methods in determining the properties of solutions. Primary and secondary cells. Electroplating. Electrometallurgy. Electro-analyses and other industrial processes. Lecture and recitation, three hours. **Prerequisite: Chemistry 240a.**

244 PHASE RULE. (3)
Lectures and assigned readings on the theory and application of the phase rule. Lecture, 3 hours. **Prerequisite: Chem. 140c.**

245 CATALYSIS. (3)
Theories of homogeneous and heterogeneous catalysis and applications in chemical processes. Lecture, 3 hours. **Prerequisite: Chem. 140c.**

246 CHEMICAL KINETICS. (3)
Studies of chemical reactions from the standpoint of velocity and mechanism. Lecture, 3 hours. **Prerequisite: Chem. 140c.**

248a, b CHEMICAL PRINCIPLES. (3 ea.) Dawson
Lectures, recitations, and problems dealing with the states of matter, properties of solutions, chemical and phase equilibria, chemical kinetics, and the elements of thermodynamics and electrochemistry. Lecture, 3 hours. **Prerequisites: College Physics, Integral Calculus, and one course in Physical Chemistry.**

249a, b TOPICS IN PHYSICAL CHEMISTRY. (3 ea.) Holley
Selected topics which may include photochemistry, structure of crystals, molecular spectra, nature of the chemical bond, and other recent advances in the field of physical chemistry. Lecture, 3 hours. **Prerequisites: Chem. 140c and Math. 105.**

282a THE CHEMISTRY OF THE ANTHOCYANINS, FLAVONES, AND RELATED PIGMENTS. (3) II Wender
Lectures and assigned readings on the chemistry of the anthocyanins, flavones, porphyrins, and related pigments found in nature. Lecture, three hours. **Prerequisite: 3 quarters of organic chemistry.**

282b THE CHEMISTRY OF THE ANTHOCYANINS, FLAVONES, AND RELATED PIGMENTS. (3) III Wender
Continuation of 282a. Topics studied in the two courses are not interdependent, so that 282a is not a prerequisite. Lecture, three hours. **Prerequisite: 3 quarters of organic chemistry.**

288a-f GRADUATE SEMINAR. (1) I, II, III Staff
Reports and discussions on recent research and current literature. **Required of all graduate students.** Given yearly.

290a-h **RESEARCH IN CHEMISTRY.** (5 ea.) I, II, III, IV Staff
Work may be taken in the following fields, subject to the approval of the Departmental Graduate Committee: Analytical Chemistry; Industrial Chemistry; Inorganic Chemistry; Organic Chemistry; Physical Chemistry, and Plant Chemistry.

ECONOMICS

UPPER DIVISION REQUIREMENTS—Junior and Senior Years

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

Requirements for a Major. Prerequisites: Two courses in Economics, including Economics 1. **Required:** A minimum of 28 quarter hours of advanced work in Economics, including Economics 102, 104, 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 16b must be taken in the senior year to prepare for the required comprehensive examination.

List of Courses. The courses that may be used to satisfy the above requirements are listed and described under Commerce, p. 291 and include the following: 1—Principles of Economics; *2—Economic History of Europe; *3—Economic History of the United States; *4—Resources and Industries; *7a and 7b—Principles of Accounting; *9—Business Organization; 15—Applied Economics; 16a and 16b—Tutorial Work in Economics; 102—Labor Problems; 103—Transportation; 104—Public Finance; 105—Money and Banking; 107—Statistical Method; 110—Business Cycles; 115—Value and Distribution Theory; 124—State and Local Taxation; 125—Evolution of Economic Institutions; 126—Economics of Public Utilities; 127—International Economic Policies; 130—Labor Legislation; 134—Advanced Economic History of the United States; 142—Index Numbers; 147—American Business Leaders; 148—European Business Leaders; 152—Income and Wealth; 153—The Economics of Consumption.

Education. A student in the College of Arts and Sciences may elect toward the A.B. and B.S. degree a total of 45 quarter hours from other colleges of the University.

Engineering. A student in the College of Arts and Sciences may elect toward the A.B. and B.S. degree a total of 45 quarter hours from other colleges of the University.

ENGLISH LANGUAGE AND LITERATURE

George Keyports Brady, George Boyd, Wallace Earl Briggs, Jacqueline Wiedeburg Clark, Arthur L. Cooke, John Levi Cutler, Edward Franklin Farquhar, Frank Charles Fowler, Robert G. Godfrey, Lelia Gott Harris, George C. Herndon, Grant Cochran Knight, J. Reid Sterrett, James M. Stamper, James Paul Stoakes*, Earl T. Tyler, Charles R. Trumbo, William Smith Ward, and James R. Woodall

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

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of Literature, Philosophy, and the Arts.

Requirements for a Major. Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c. **Required:** A minimum of thirty quarter hours of advanced work in English.

English Language and Rhetoric

***1aD, bD ENGLISH COMPOSITION. (5, 5) I, II** Staff
This course is designed especially for students in the lowest two deciles.

***1a-c ENGLISH COMPOSITION. (3 ea.) I, II, III, IV** Staff
Practice in writing correct and clear English, Accuracy of expression is desired rather than proficiency in style. A text book will be used, but the instruction will also be based upon the study of representative English masterpieces. Required of all freshmen.

***A AN INTRODUCTION TO THE HUMANITIES THROUGH THE STUDY OF ENGLISH LITERATURE. (3) I, II, III** Staff
Lecture and discussion, and required reading from representative works. Special attention will be devoted to the periods from the Renaissance to modern times. Designed to satisfy one of the lower division requirements in the Humanities.

2a ADVANCED COMPOSITION. (3) I Knight
An advanced course for those who wish to continue writing. Emphasis upon clear thinking and writing. Devoted exclusively to expository writing including such variants as satire and parody. **Prerequisite: English 1a, 1b, and 1c.**

2b THE SHORT STORY. (3) II Knight
Primarily a course in composition, not in the history of the short story form, although such matter is introduced. Short stories are read and analyzed; one long short story is written. **Prerequisite: English 1a, 1b, and 1c.**

30 BUSINESS ENGLISH. (3) I, II, III
Primarily for sophomores in the College of Commerce; admission of others by consent of the instructor. A study of forms of business correspondence and practice in writing such. **Prerequisite: English 1a, 1b, and 1c.**

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* **Open to Freshmen.**

† **See appended list of** leaves of absence, resignations, deaths, etc., p. 399.

102 HISTORY OF THE ENGLISH LANGUAGE. (5) II Dantzler
A survey of the development of the language, based upon a text; other readings upon various phases of language development. **Prerequisite: English 1a, 1b, 1c, 3a, 3b and 3c.**

125 PRONUNCIATION OF MODERN ENGLISH. (5) III Dantzler
A study of present day pronunciation; dialetical peculiarities. Students will become proficient in using a phonetic alphabet. **Prerequisite: English 1a, 1b, 1c, 3a, 3b and 3c.**

English Literature

3a-c HISTORY OF ENGLISH LITERATURE. (3 ea.) I, II, III, IV Staff
A chronological survey of English literature, beginning with Chaucer and extending to contemporary writers. The selections may vary from year to year. Required of English majors during the sophomore year. **Prerequisite: English 1a, 1b, and 1c.**

106a ENGLISH ROMANTIC POETRY. (5) I Brady
A careful study of growing signs of Romanticism in the early part of the 18th century. The French Revolution and its influence on the chief poets of the Romantic movement; emphasis on Wordsworth, Byron, Shelley, Keats, and other prominent poets of the first quarter of the 19th century. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

106b ENGLISH ROMANTIC PROSE. (5) II Brady
This course is designed to continue the study of ideas developed in English 106a as revealed in Rousseau, Godwin, Coleridge, Hazlitt, Lamb, DeQuincey, the Gothic romance, and Scott. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

107a VICTORIAN POETS. (5) II, IV Brady
An extensive study of the ideas of the chief poets of the Victorian era, with special emphasis on the works of Tennyson, Browning, Arnold, Swinburne, and Rossetti. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

107b VICTORIAN PROSE. (5) III Brady
A study of Carlyle, Ruskin, Newman, Spencer, Arnold, Huxley, and related writers of the period in the field of prose. Special emphasis is placed on Carlyle's **Sartor Resartus**, Newman's **Idea of a University, and Apologia Pro Vita Sua. Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

108a, b PRINCIPLES OF LITERARY CRITICISM.
(5, 5) I, II, IV Farquhar
The course attempts to show criticism as a growth and development in an historical survey and to give a corpus of opinion about literature. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

110a SHAKESPEARE—COMEDY. (5) I Farquhar
Shakespeare's comedies will be studied in detail. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

110b SHAKESPEARE—TRAGEDY. (5) II, III, IV Farquhar
A continuation of English 110a, which is not prerequisite, although desirable. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

111a THE EIGHTEENTH CENTURY NOVEL. (5) II, III, IV Knight
Defoe, Richardson, Fielding, Sterns, Smollett, Fanny Burney, and Jane Austen. This course is designed to serve as the first panel in a sequence of courses for the three regular quarters together with the Age of Pope and the Age of Johnson. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

111b THE VICTORIAN NOVEL IN ENGLAND. (5)
A continuation of English 111a. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

123a AMERICAN LITERATURE BEFORE 1830. (5) I Knight
A survey intended to show the development of American life, thought, and letters up to the Transcendental movement. Emphasis upon Edwards, Paine, Franklin, Irving, Cooper, Bryant. **Prerequisite: 1a, 1b, 1c, 3a, 3b, and 3c.**

123b AMERICAN LITERATURE AFTER 1830. (5) II, IV Knight
A continuation of 123a, which is not prerequisite. Beginning with the Transcendentalists, it studies the triumphant years of American romanticism, with especial attention to Emerson, Thoreau, Hawthorne, Melville, Poe, and Whitman. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

124 THE RENAISSANCE. (5) I Dantzler
A study of the literature of the Elizabethan period exclusive of the drama. Foreign sources of the English Renaissance. The sonnet from its origin to its development in Spencer. The pastoral from Theocritus to Spenser. Utopian literature from Plato to More. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

127a, b LITERATURE OF THE BIBLE. (5, 5) II, III Farquhar
A literary study of the Bible by books. The purpose of the course is to develop an appreciation of literature because of the demand that literature identify itself with the highest thought and feeling. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

130a, b COMPARATIVE LITERATURE. (5, 5) II, III, IV 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. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

131a-d INDEPENDENT WORK. (3 ea.) I, II, III, IV Staff
A course for juniors and seniors of exceptional scholastic standing. Each student pursues a course independently. He writes a paper embodying the results of this study and submits to an examination by the staff of the Department. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

133 THE DEVELOPMENT OF AMERICAN REALISM. (5) III Knight
The course traces the progress of American realism from Yankee and pioneer humorists through the local color school, the leading novelists of the eighties and nineties, their contemporaries in drama and poetry, to the writers of today. Especial attention is given to the social and economic conditions which motivated this literature. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

147 AGE OF JOHNSON. (5) I, IV Cooke
From the death of Pope to 1798. Johnson and his circle: Burke, Goldsmith, Gray, Walpole, and Cowper. The pre-romantic movement. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

152 AGE OF POPE. (5) III Cooke
Addison and Steele, Swift, Pope, and Defoe. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

155a CONTEMPORARY AMERICAN POETRY. (5) I Farquhar
An examination of the forces which have created modern poetry in England and America since 1900. The course is historical, tracing

literary and esthetic movements displayed in matter and style. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

155b CONTEMPORARY BRITISH POETRY. (5) II Farquhar
A continuation of 155a. **Prerequisites: English 1a, 1b, 1c, 3a, 3b, and 3c.**

170a, b BACKGROUNDS OF MODERN LITERATURE. (5, 5) I, II Cooke
A study of the relations between modern philosophic, psychological, and social thought, and literature. The European novel will be used as a focus for study. Naturalism, symbolism, impressionism, humanism, expressionism, stream of consciousness, and surrealism will be evaluated. Mann, Proust, Romains, Yeats, Huxley, Lawrence, Joyce, and others. **Prerequisite: English 1a, 1b, 1c, 3a, 3b, and 3c.**

Other courses open to Juniors and Seniors will be offered as registration may require.

210 SEMINAR. (5) I, II, III, IV Brady
Bibliographical studies. This course is required of all candidates for the M.A. degree. It should be taken at the beginning of graduate work.

213a, b SEMINAR. (5 ea.) I, II, III, IV Cooke
Studies in Eighteenth Century Literature. Johnson and his circle, Swift, the Romantic Revolt, or the foreign relations of English literature in the eighteenth century, will be chosen for extensive investigations according to the needs of the students in the group.

216a SEMINAR (American Literature, 1890-1900). (5) Knight
A study of the literature of the nineties, with emphasis upon the battle over realism, the loss of early national optimism, the resistance to naturalism, and the development of a genuine American literature.

Other seminars for graduate students, as Old English, Victorian Literature, Cultural Studies in Criticism, and Contemporary American Literature, will be offered from time to time as they may be requested.

Public Speaking

***6 THE ESSENTIALS OF SPEECH. (3) I, II, III** Sterrett
This course is designed to give the student platform experience in the fundamentals of effective public address. Emphasis will be placed upon correct enunciation, correction of speech defects and other requisite aspects of delivery of the various types of informal address. The material will be commensurate with the interests of freshmen. **For freshmen only.**

7a, b ELEMENTS OF PUBLIC SPEAKING.# (5, 5) I, II, IV
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. **Prerequisite: English 1a, 1b, and 1c.**

10a PUBLIC SPEAKING. (3) I, II, III#
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. **Prerequisite: English 1a, 1b, and 1c.**

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* Open to Freshmen.
#Note English 7a-b duplicates English 10a-b.

10b PUBLIC SPEAKING. (3) II, III#
A continuation of English 10a. Reading, informal discussion, and argument.

11a, b ARGUMENTATION AND DEBATE. (5, 5) I
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. **Prerequisite: English 1a, 1b, and 1c.**

12a DEBATE PRACTICE. (3) I, III Sutherland
The forming of a debating squad which will devote its time to preparation for the intercollegiate debates which take place in the spring. The representatives of the University in the intercollegiate debates will be chosen from this squad.

15a, b ORATORY. (3, 3) I
The work in this course is devoted to advanced extempore speaking and to the study of the art of formal address. **Prerequisite: English 7a and 7b, or 10a and 10b.**

20 SPEECH TRAINING. (5) III, IV
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. **Prerequisite: English 1a, 1b, and 1c.**

Dramatic Arts

32 VOICE DEVELOPMENT. (5) I Briggs
This course is designed especially for those students interested in speech and dramatics. It attempts to establish good habits of speech through analyzing each student's voice and articulation, and to point out methods of correcting speech faults. Exercises for flexibility, range, relief from tension, and articulation. **Prerequisite: English 1a, 1b, and 1c.**

33 EXPRESSIVE READING. (5) II Briggs
This is a course in reading which is the logical successor to Voice Development although it may be taken without previous training. Emphasis is placed on the development of flexibility, musical quality, audibility, and clarity, in the reading of prose and poetry. The interpretation of logical content, attitude, emotional quality, and imaginative quality of literature is studied. A section of the course is devoted to the study and practice of choral reading. Recommended to those who plan to teach English. **Prerequisite: English 1a, 1b, and 1c.**

***34 HISTORY OF THE STAGE. (3) I** Briggs
This course is designed to give the student a knowledge of dramatic history in relation to the problems of staging. Emphasis is placed on those aspects of the development which are of specific interest to players and directors. The course of the drama is traced upon the background of the existing knowledge of the physical stage of each period studied. Laboratory work is offered to acquaint the student with the present day developments of historic devices and techniques of staging.

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*Open to Freshmen.
#Note English 7a-b duplicates English 10a-b.

***35 STAGECRAFT. (3) II** Briggs

This is a course designed to teach the student the fundamentals of play production. It offers laboratory work which presents the technical problems of construction, painting of scenery, properties, and costuming. It is recommended to prepare the student to meet the problems presented in public school and community theatre staging.

36 STAGING TECHNIQUES. (3) III Briggs

This course is a continuation of Stagecraft which is not prerequisite, but desirable. Advanced problems of stage management, stage lighting and equipment, and specific types of modern staging, are considered, and practical experience is given the student in the design and execution of the various techniques. The student is given instruction in model-building and experimental stage design.

***37 STAGE PRODUCTIONS IN SCHOOL AND COMMUNITY. (3) IV** Briggs

This course is designed to meet the particular needs of teachers and community theatre workers. It will consider the problems of staging under circumscribed conditions and will discuss minimum essentials of play production and means of constructing or supplying these needs. Individual student problems will be considered in discussing practice of staging.

38 ORAL INTERPRETATION. (5) III Sterrett

An advanced course in study, appreciation, and oral interpretation of selections chosen from the dramatic literature of the world. Training is given in vividness of expression in writing and in the rhythmic nature of oral expression. Each student will be required to prepare a program of interpretations as a quarter's project. Recommended to those who plan to teach English.

160 THEORY AND TECHNIQUE OF ACTING. (4) I Briggs

Theory of acting applied to individual problems and groups. Development of skill, effectiveness, and grace in the use of the body. Attention to establishing mood, reactions between characters, suspense, three voice modulations, pause, and other modes of emphasis, sustaining tone and emotion, projecting voice and characterization, procuring audience response, timing, and analysis of characterization. This course is designed to be helpful to public speakers, actors, teachers, and to those who wish to overcome self-consciousness and awkwardness and to develop grace of movement, and coordination of mind and body. **Prerequisite: English 1a, 1b, 1c, 34a, and 34b.**

161 THEORY AND TECHNIQUE OF THEATRE DIRECTING. (4) II Briggs

Practice in directing, theory of plotting and interpreting a play for directors. Study of movement, interpretation of lines, creation of atmosphere, use of stage areas, arrangement of furniture for actors, picturization, balance, use of levels, methods of achieving a climax, handling of groups, planning of mob scenes. Attention is given to the psychology of actors and audience reaction. Each student will have opportunities to direct plays under supervision. This course is designed for future workers in all types of theatres, especially for teachers who will have to direct plays as part of their regular work. **Prerequisite: English 1a, 1b, 1c, 34a, and 34b.**

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* Open to Freshmen.

162 THEORY AND TECHNIQUE OF THEATRE PRODUCING. (4) III Fowler
Intensive study of the practical problems of play production. Application of modern esthetic principles and theories of the theatre. Practice and demonstration of non-professional theatre producing. Attention to coordination of the playwright, designer, technical director, electrician, stage manager, and the actor, etc. **Prerequisite: English 1a, 1b, 1c, 34a, and 34b.**

172 WRITING THE ONE-ACT PLAY. (5)
A course in the composition of original one-act play, stressing the uses of native materials, the traditions and present day life of the region with which the student is familiar. Attention on construction, technique, and dramatic composition of the well-made one-act play. Two acceptable one-act plays will be required of each student and students will have the opportunity to see the best play in the class produced by an acting group on the Guignol stage. **Prerequisite: Eng. 1a, 1b, 3a, and 3b.**

GEOGRAPHY

Joseph Raymond Schwendeman, Harry K. Hutter, Richard L. Tuthill

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

Requirements in the Field of Concentration: Sixty quarter hours of advanced work in the field of social studies and certain closely allied physical science fields.

Requirements for a Major. Prerequisites: Geography 1, 3a-b, or 10. A minimum of 24 hours of advanced work is required in the field of Geography including four hours of Geography 132a-b for those who plan graduate or professional work in geography.

***1 ELEMENTS OF GEOGRAPHY.**
(4) I, II, III, IV Schwendeman and Hutter
This course will cover geographic concepts and skills necessary (1) for further work in geography, and (2) for certification requirements for students in elementary education; and a desirable course (a) for students as a credit in science in their program of general education, and (b) for students desiring a geographic background in other fields. **Topics:** Overview of the field of geography, location on the earth as a globe, maps as global representation, global reference systems, latitude, longitude and time, map projections with elementary projection, land forms, water bodies.

***2 REGIONAL GEOGRAPHY OF THE WORLD.**
(4) I, II, III, IV Schwendeman
An overview of man's adjustment to his natural environment on the basis of the great natural regions of the world. (Required for education students for elementary certificates). **Prerequisite: Geography 1, 3a-b, or 10 or permission of instructor.**

***3a, b SOCIETIES AROUND THE WORLD.**
(5 ea.) I and II, III and IV Schwendeman and Tuthill
To apply in the group requirement in social studies. The comparative characteristics of preliterate, peasant, and civilized societies in relation to the geography of the land in which they

* Open to Freshmen.

live. Selected societies representing each of these types will be studied in detail. The variations in food, housing, clothing, tools, and transportation will be related, on the one hand, to the habitat, and, on the other hand, to occupations and economic organization, form of government and family system, religion, and art. (Not open to seniors). (Same as Sociology 3a-b). The first quarter's course, 3a, will cover the preliterate and peasant societies; 3b will deal with the civilized societies.

4 GEOGRAPHIC FOUNDATIONS OF WORLD POWER.
(4) I, III Schwendeman
A study of the geographic factors in national development and international relations. Special consideration will be given to Geopolitics. **Prerequisite: 1, 2, 3a-b, or 10.**

***10 ECONOMIC GEOGRAPHY. I, II, III, IV** Tuthill
This will include a study of the natural resources of the world and the physical factors of the environment which influence their utilization.

20 INTRODUCTION TO METEROLOGY. (4) I Hutter
An introductory study of weather elements with the use of observation. Lecture, three hours; laboratory, two hours. This course is classified as an elective in the physical sciences. No prerequisites.

***22 CLIMATOLOGY. (4) II** Hutter
This course will cover the elements of climate as a major factor in man's natural environment. **Topics:** Nature and distribution of the climatic elements, and climatic controls and the classifications of world climates. Required of students specializing in Geography. **Prerequisite: Geography 1, or 20.**

30 Elementary Cartography. (4) I, II, III, IV Staff
Elementary map study and construction with study of aerial photographs, land fall maps, and blowups. In addition to a discussion of maps and a study of map projections, plates will be constructed based on the more commonly used projections in present day affairs: Mercator, Azimuthal equidistant, Homolographic, Homolosine, Gnonomic, Conic, Lambert's Conformal, Polyconic. **Prerequisite: permission of the instructor.**

101 GEOGRAPHY OF NORTH AMERICA.
(4) I, IV Hutter
This course considers the adjustment of man to the physical factors of the environment in each of the natural regions of North America, with the exception of Mexico. **Prerequisite: 1, 3a-b, or 10.**

102 REGIONAL GEOGRAPHY OF LATIN AMERICA.
(4) II, IV Schwendeman
This course will cover Mexico, West Indies, Central America, and South America. Adjustments to natural environment will be considered from the political and natural regions viewpoint. Occupations, resources, and products will thus be studied in both their national and regional development with trade relations. **Prerequisite: 1, 3a-b, or 10.**

104 GEOGRAPHY OF EUROPE AND AFRICA.
(4) I (odd years) Tuthill
An excellent study of contrasts in natural environment and progress. Comparisons are made with the western continents in their similar latitudinal extension. **Prerequisite: 1, 3a-b, or 10.**

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* Open to Freshmen.

106 **GEOGRAPHY OF ASIA. (4) II (even years)** Tuthill
Emphasis is given to the great population concentrations of India, China, and Japan, and to the problems of the Near East. **Prerequisite: 1, 3a-b, or 10.**

108 **GEOGRAPHY OF OCEANIA. (4) II** Tuthill
The geographic factor in relation to some sixty million natives in the East Indies is analyzed. Special reference is made to the few million whites trying to develop the lands of Australia and New Zealand in the South Pacific. Also included are the strategic and economic significance of the Pacific Islands. **Prerequisite 1, 3a-b, or 10.**

120 **GEOGRAPHY OF KENTUCKY. (4) III, IV** Hutter
Topics: Kentucky's geopolitical and geomatical position and relations as viewed on graphic and cradle globes and the Air-Age azimuthal equidistant map projected from the Lexington Airport. The surface features and drainage of Kentucky with Lobeck's physiographic diagram as a basis and McFarlan's Geology of Kentucky as a reference. Weather and climate with special reference to converging air masses and our changeable weather, using Visher as a reference. More recent climatological data from the U. S. Weather Bureau will be added. Population distribution in relation to the physical regions. Agricultural and industrial development and adjustments in relation to geographic factors. Kentucky's products in national and foreign markets. The geography of Kentucky's participation in national and foreign affairs. Geography and a program for the future. **No prerequisites.**

130 **REGIONAL FIELD OBSERVATION. (4) IV** Staff
A comparative study of at least four selected regions on any one field trip. The work will consist of preliminary reading, traveling over the regions with close inspection of selected features, and a written report of both reading and field work. **Prerequisite: 1, 2, 3a-b, or 10.**

132a-b **INDEPENDENT WORK IN GEOGRAPHY. (4) I, II, III, IV** Staff
This will be for advanced work in any one of the fields of Geography. Entrance to class will be by permission of the instructor.

GEOLOGY

Arthur Crane McFarlan, William R. Brown, Louise Barton Freeman, Daniel K. Hamilton, William C. MacQuown, and Vincent E. Nelson.

UPPER DIVISION REQUIREMENTS—Junior and Senior Years

Requirements in the Field of Concentration: Sixty quarter hours in the field of Physical and Biological Science, including the major work, in courses not open to freshmen.

Requirements for a Major. Required: Geology 10a, 10b, 10c, 30a, 30b, 30c, 101a, 101b, 101c, 106a, 106b, 107a, 107b, 107c, 123a, 123b, 118a, 124b, and 124c. **Field Work**:** An early summer field trip, Geology 118a-d, is required of major students for graduation. This covers six weeks' work in selected regions. Local field work is offered throughout the year.

Students majoring in Geology are required to pass a final comprehensive examination in the department.

***3 ELEMENTARY GEOLOGY.**
(4) I, II, III McFarlan, Brown, MacQuown, Hamilton
A course in general geology including the common minerals and rocks, geologic processes, and a brief discussion of historical geology. Lecture and recitation, three hours; laboratory, two hours.

10a FIELD GEOLOGY. (3) I Nelson
An introduction to field methods involving the identification and tracing of formations, areal mapping, and structure contouring. **Prerequisite: Geology 30a, 30b, and 30c.** (Special fee $3.50)

10b FIELD GEOLOGY. (3) II Nelson and Brown
The first half is devoted to the completion of the work outlined under 10a and the second half to an introduction of the work of 10c.
(Special fee, $3.50)

10c FIELD GEOLOGY. (3) III Brown
Topographic mapping. Six hours of field work a week. **Prerequisite: Geology 30a, 30b, and 30c; Math. 3, and CE12.**
(Special fee, $2.00)

12a ELEMENTARY GEOLOGY FOR ENGINEERS. (4) I MacQuown
An introduction to the principles of geology. Recitations, three hours; laboratory, two hours.

12b ELEMENTARY GEOLOGY FOR ENGINEERS. (3) II MacQuown
The practical application of geology to engineering work. A treatment of metallic and non-metallic mineral resources. Geologic Maps. Two lectures, one laboratory. **Prerequisite: Geology 12a.**

***14a-d ELEMENTARY FIELD GEOLOGY. (1 ea.) I, III, IV**
Visits are made to localities in the vicinity of Lexington to study local geologic phenomena. (Special fees: 14a—$3.00; 14b, c, d, $3.50 ea.)

***20a, b LABORATORY WORK IN ELEMENTARY GEOLOGY. (1, 1)**

***23a-b ELEMENTARY FIELD WORK IN REGIONAL GEOLOGY. (6, 6) IV** McFarlan and Nelson
Six weeks in the field in selected areas. The party works along with that in Geology 118a. **Prerequisite: Elementary Geology.**
(Special fee, $40.00)

30a GENERAL GEOLOGY. (5) I Nelson
Geological processes—a study of the forces and processes responsible for the features of the earth. Lecture, four hours; laboratory, two hours.

30b GENERAL GEOLOGY. (5) II Nelson
Historical Geology. A study of continental evolution and the development of plant and animal life. Lecture, four hours; laboratory, two hours.

30c GENERAL GEOLOGY. (5) III Nelson
Historical Geology. A continuation of Geology 30b.

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* Open to Freshmen.
** There is a special fee of $0.50 to $1.50 for field trips in connection with all courses in elementary and general geology.
† See appended list of leaves of absence, resignations, deaths, etc. p. 379.

*50 **OUTLINES OF GEOLOGY.**
(3) I, II, III, IV McFarlan, Brown, MacQuown, and Hamilton
An introduction to general geology. The first term's work constitutes a necessary background for work in Geology 50b and 50c. Lecture, three hours.

*50b **OUTLINES OF GEOLOGY.** (3) McFarlan and Hamilton
A study of some of the more important and better known geological features of the earth. Lecture, three hours. **Prerequisite: Geology 50a.**

*50c **OUTLINES OF GEOLOGY.** (3) Brown
A study of some of the more important and better known geological features of the earth. An introduction to mineral resources, historical geology and the fossil record. Lectures, three hours. **Prerequisite: Geology 50a.**

*53 **PHYSIOGRAPHY OF NORTH AMERICA.** (4) Hamilton
A regional study of the physical regions of North America, land forms, their nature and origin. Lectures, four hours. **Prerequisite: a course in Elementary Geology.**

101a **PALEONTOLOGY.** (3) I McFarlan
A study of fossil invertebrates, their nature, classification, and geological distribution. Lecture, one hour; laboratory, four hours. **Prerequisite: Geology 30a, 30b, and 30c, and General Zoology, or a background in Zoology.**

101b **PALEONTOLOGY.** (3) McFarlan
A continuation of 101a. Lecture, one hour; laboratory, four hours. **Prerequisite: Geology 101a.**

101c **PALEONTOLOGY.** (3) McFarlan
A study of geologic faunas. Practice in determining stratigraphic horizons. Lecture, one hour; laboratory, four hours. **Prerequisite: Geology 101b.**

105a-f **INDEPENDENT WORK IN GEOLOGY.** (4 ea.)
Directed work in independent investigations. Thesis required.

106a **ECONOMIC GEOLOGY.** (4) I Brown
Non-metallic mineral deposits. A study of the distribution, mode of occurence, origin, methods of search for and uses of deposits of economic importance. Lecture, three hours; laboratory, two hours. **Prerequisite: Geology 30a, 30b, 30c, 123a, and 123b.**

106b **ECONOMIC GEOLOGY.** (4) II Nelson
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. Lecture, three hours; laboratory, two hours. **Prerequisite: Geology 30a, 30b, 30c, 123a, and 123b.**

106c **ECONOMIC GEOLOGY.** (4) Hamilton
Engineering aspects and groundwater. Professional training in the work of the geologic consultant and staff geologist in engineering work. Exploratory work for industrial and farm groundwater supplies. **Prerequisite: Geology 30a, b, c and 123a, b.**

107a-i **ADVANCED FIELD GEOLOGY.** (3 ea.) I, II, III McFarlan
A field course in geologic mapping involving problems of local structure and stratigraphy. Six hours a week in the field. **Prerequisite: Geology 10a, 10b, and 10c.** (Special fee, $3.50)

* Open to Freshmen.

118a-d FIELD WORK IN REGIONAL GEOLOGY. **(6 ea.) IV** McFarlan and Nelson
Six weeks in the field in selected areas, in a study of regional geological features. The course is an effort to bring the student into contact with diverse geological phenomena and problems. Practice in geological field methods. Required of major students at the end of their junior year. **Prerequisite: Geology 30a, 30b, 30c.** (Special fee, $40.00)

120a GEOLOGY OF KENTUCKY. (4) IV McFarlan
A study of the geological features of the state other than mineral resources. These include the major events in its geological history, the development of regional characteristics and an explanation of its scenic and natural wonders. **No prerequisite.**

120b GEOLOGY OF KENTUCKY. (4) IV McFarlan
The mineral resources of the state, their distribution, origin, and uses. Fossil record. **No prerequisite.**

122 PETROLEUM GEOLOGY. (4) III MacQuown
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. Geology of the principal producing fields. Lecture, three hours; laboratory, two hours. **Prerequisite: Geology 30a, 30b, 30c, and General Elementary Physics.**

123a MINERALOGY. (4) I Nelson
A study of geometrical crystallography and other physical properties useful in mineral identification. Lecture, two hours; laboratory, four hours. **Prerequisite: Geology 30a, 30b, and 30c; Chemistry 1a and 1b, or a background in Chemistry.**

123b MINERALOGY. (4) II Nelson
The determination of minerals by physical properties, blowpipe analysis, and the petrographic microscope. Includes a study of the origin, occurrence, and associations of these minerals. Lecture, one hour; laboratory, six hours. **Prerequisite: Geology 123a.**

124a-c REGIONAL GEOLOGY. (4 ea.) I, II, III MacQuown and Hamilton
A study of the geological regions of the United States.

125 METHODS OF SUBSURFACE CORRELATION. (4) Freeman
Methods and practice in subsurface stratigraphic work in petroleum geology. **Prerequisites: Geology 123a and 123b.**

126a-c SEMINAR. (1 ea.) I, II, III Staff
Required of all senior majors.

208 STRUCTURAL GEOLOGY. (4) Nelson
A study of the structural features of the earth's crust with an analysis of the mechanics involved in the production of such structures. Lecture and recitation, four hours; or lecture, three hours; laboratory, two hours. **Prerequisite: Physics 1a and 1b; Geology 30a, 30b, 30c, 124a, 124b, and 124c.**

210a STRATIGRAPHIC PALEONTOLOGY. (3) McFarlan
The succession of Paleozoic faunas and the use of fossils for stratigraphic correlation. Lecture, one hour; labroatory, four hours. **Prerequisite: Geology 30a, 30b, 30c, 101a, 101b and 101c.**

210b STRATIGRAPHIC PALEONTOLOGY. (3) McFarlan
A continuation of 210a. Lecture, one hour; laboratory, four hours. **Prerequisite: Geol. 210a.**

210c STRATIGRAPHIC PALEONTOLOGY. (3) McFarlan
A continuation of 210b dealing with Mesozoic and Cenozoic faunas. Lecture, one hour; laboratory four hours. **Prerequisite: Geology 210a.**

212a OPTICAL MINERALOGY. (4) Nelson
A study of the optical properties of minerals in thin sections by means of the petrographic microscope. Lecture, one hour; laboratory, six hours. **Prerequisite: Geology 123a and 123b; Physics 1a, 1b, and 1c.**

212b SEDIMENTARY PETROLOGY. (4)
A study of sedimentary rocks based on microscopical analysis. Lecture, one hour; laboratory, six hours. **Prerequisite: Geology 212a.**

212c PETROLOGY OF THE IGNEOUS ROCKS. (4) Brown
The occurrence, origin, and classification of igneous rocks. Identification with the petrographic microscope. An introduction to the metamorphic rocks. Lecture, one hour; laboratory, six hours. **Prerequisite: Geology 212a.**

217a-f SEMINAR. (1 ea.) I, II, III

GERMAN LANGUAGE AND LITERATURE

Adolph Edmund Bigge, Daniel V. Hegeman, Dorothy Lincicome†, Esther Nevitt, Anna F. Odor, and Paul Knowlton Whitaker

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

Requirements in the Field of Concentration: Sixty quarter hours in the field of Literature, Philosophy, and the Arts, including the major work, in courses not open to freshmen.

Requirements for a Major. Prerequisites: Junior standing, 1a, 1b, 1c, and 51, 52, and 53. Required: A minimum of 27 quarter hours of work at the "100" level, which must include the junior and senior tutorial courses. Majors must also pass a final comprehensive examination.

Note: No credit given when work done in high school is repeated. One year of high school language is considered equivalent to one quarter of university language study. No credit will be given for German 1a until German 1b has been completed. No student should enroll in two beginning languages at the same time.

***A AN INTRODUCTION TO THE HUMANITIES THROUGH THE STUDY OF GERMAN LITERATURE. (3) I, II, III**
Lectures, discussions, and required reading from representative works in English translation. Special attention will be devoted to the periods from the Renaissance to modern times. Designed to satisfy one of the lower division requirements in the Humanities. Does not satisfy the foreign language requirement.

***1a ELEMENTARY GERMAN. (5) I, II, III, IV**
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.

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* Open to Freshmen.
† See appended list of leaves of absence, resignations, deaths, etc., p. 399.

***1b SIMPLE READING AND PRONUNCIATION. (5) I, II, III, IV**
Continuation of German 1a with more extended exercise in easy reading, writing, and pronunciation. **Prerequisite: German 1a or one high school unit.**

***1c INTENSIVE AND EXTENSIVE GERMAN READING. (5) I, II, III, IV**
Certain selected texts are read intensively with emphasis upon translation, while others, particularly in the second half of the quarter, are read with the emphasis upon the development of rapid reading and comprehension rather than translation. **Prerequisite: German 1b.**

10a-c ELEMENTARY CONVERSATION AND COMPOSITION. (3 ea.) I, II, III
This course is conducted mainly in German. The first quarter's work will be closely based upon a textbook, but in the following quarters, opportunity will be given for the composition of original themes. **Prerequisite: German 1b, with approval of the German Department.**

20a READINGS IN MEDICAL GERMAN. (4)
This course is designed specifically to meet the needs of pre-medical and Medical Technology students, and Bacteriology majors. The text employed provides extensive reading and builds up a well-distributed vocabulary in the field of the biological sciences. **Prerequisite: German 1b.**

20b READINGS IN MEDICAL GERMAN. (4)
Continuation of German 20a. **Prerequisite: German 20a.**

21a READINGS IN CHEMICAL GERMAN. (4)
Designed to meet the needs of Industrial Chemists and Chemistry majors. The reading material provides a well-rounded vocabulary in the field of Chemistry and an intimate acquaintance with the style, characteristic of German scientific writing. **Prerequisite: German 1b.**

21b READINGS IN CHEMICAL GERMAN. (4)
Continuation of 21a. **Prerequisite: German 21a.**

51 INTRODUCTION TO GERMAN LITERATURE OF THE CLASSICAL PERIOD. (4)
Selected readings from some of the less difficult works of Lessing Goethe, Schiller, and others. The emphasis in this and the two following courses will be on the development of reading facility and the acquisition of vocabulary through extensive reading. The class work will involve some translation and clarification of difficult passages, but a considerable portion of the work will be devoted to discussion of the material as to content and artistic merit, and to ascertaining how fully the assigned material has been comprehended. **Prerequisite: German 1c.**

52 INTRODUCTION TO GERMAN LITERATURE OF THE NINETEENTH CENTURY. (4)
Readings from Heine, Storm, Keller, Meyer and other outstanding authors of the period, whose works lend themselves to reading at this level. The procedure and aims are the same as those set forth for German 51. **Prerequisite: German 1c.**

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* Open to Freshmen.

53 **INTRODUCTION TO MODERN GERMAN LITERATURE. (4)** Readings from some of the less difficult works of Hauptmann, Thomas Mann, Schnitzler, and other 20th century writers. The aims, etc., are already stated in the description of German 51. **Prerequisite: German 1c.**

101a-c **NINETEENTH CENTURY LITERATURE. (3 ea.) I, II, III, IV** Studies in German literature of the 19th century with special emphasis on selected authors. **Prerequisite: 6 quarters of German.**

102a-c **TWENTIETH CENTURY LITERATURE. (3 ea.) I, II, III, IV** Reading, discussions, and reports. **Prerequisite: 6 quarters of German.**

103a-c **LIFE AND WORKS OF GOETHE. (3 ea.) I, II, III** This course follows the unfolding of Goethe's genius from his first lyrics through the second part of Faust. His principal literary works will be read and special attention devoted to autobiographical material, letters, and diaries. **Prerequisite: 6 quarters of German.**

105a-f **INDEPENDENT WORK IN GERMAN. (4 ea.) I, II, III, IV** This course is designed for students who wish to do advanced work on any topic in the field of German. It is not limited to majors in the department.

106a-c **ADVANCED SCIENTIFIC GERMAN (3 ea.) I, II, III, IV** This course is designed primarily for students of the physical and biological sciences. Reading is done in recent German scientific journals and books, the material being selected in line with the student's special interest. **Prerequisite: German 20b or 21b, or permission of Department.**

Proseminars in 18th, 19th, and 20th Century German Literature. A three-year cycle of proseminar courses is provided in which three courses each year will cover literature of the 18th, 19th, and 20th centuries. A balanced selection of works from one representative author of each century will be studied in each course, and written reports will be assigned on various subjects related to his writing. A total of nine outstanding authors will be presented in the three-year cycle.

The purpose of the proseminar courses is threefold:

1) Study of a representative author and certain of his works in their relation to his period;
2) Acquaintance with basic works of the author;
3) Training in simple research projects and proper form in the writing of papers.

Prerequisite for any proseminar course: 6 quarters of German.

1947-48

111 **PROSEMINAR IN GOETHE. (3) I**

112 **PROSEMINAR IN KLEIST. (3) II**

113 **PROSEMINAR IN HAUPTMANN. (3) III**

1948-49

114 **PROSEMINAR IN SCHILLER. (3) I**

115 **PROSEMINAR IN GRILLPARZER. (3) II**

116 **PROSEMINAR IN THOMAS MANN. (3) III**

1949-50

117 PROSEMINAR IN LESSING. (3) I

118 PROSEMINAR IN HEBBEL. (3) II

119 PROSEMINAR IN SUDERMANN. (3) III

120a JUNIOR TUTORIAL. (1) I
History of German Literature from its Beginning to 1150.

120b JUNIOR TUTORIAL. (1) II
History of German Literature from 1150 to 1500.

120c JUNIOR TUTORIAL. (1) III

130a SENIOR TUTORIAL. (2) I
Development of the German Epic and Lyric.

130b SENIOR TUTORIAL. (2) II
Development of the German Drama.

130c SENIOR TUTORIAL. (2) III

150 ORIGIN AND DEVELOPMENT OF THE GERMAN LANGUAGE. (4)
This introductory course in Germanic Philology acquaints the student with the position of German in the Indo-European language group and traces the various stages in the development of the German language up to the present. Special emphasis is given to the relationship of German and English words. **Prerequisite: 6 quarters of German.**

151 ELEMENTARY MIDDLE HIGH GERMAN. (4)
This is essentially a literary course with only a 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. **Prerequisite: 6 quarters of German.**

152 ADVANCED GERMAN COMPOSITION. (4)
This course is primarily one for German majors, particularly those planning to teach German. It will involve intensive practice in the writing of German prose, together with some review of German grammar. **Prerequisite: 6 quarters of German.**

203a-c GERMAN LITERATURE FROM LUTHER TO LESSING. (3, 3, 3)
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.

HISTORY

Thomas D. Clark, George Barr Carson, William F. Church*, William Clement Eaton, Jack B. Goldmann, James Franklin Hopkins, Albert D. Kirwan, Robert Gerhard Lunde, Shelby T. McCloy, Rhea H. Taylor, and Bennett Harrison Wall.

The introductory courses—2a and 2b in British history, 4a and 4b in European history, and 5a and 5b in American history—will aid freshmen in subsequent courses in history, commerce, law, education, journalism, and literature.

* See appended list of leaves of absence, resignations, deaths, etc., p. 399.

UPPER DIVISION REQUIREMENTS—Junior and Senior Years

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

Requirements for a Major. Prerequisites: History 2a and 2b, or 4a, 4b, 5a, and 5b. Required: a minimum of 27 quarter hours of advanced courses in history, including the Senior Seminar.

*2a **HISTORY OF THE BRITISH PEOPLE TO THE RESTORATION.** (5) I, II, III, IV — Church
From the Roman period to the Stuart period. A general survey of the various epochs and phases of the English people at home and abroad.

*2b **HISTORY OF THE BRITISH PEOPLE SINCE THE RESTORATION.** (5) I, II, III, IV — Church
From the Stuart period to the present. A continuation of 2a.

*4a **MODERN EUROPE TO THE FRENCH REVOLUTION.** (5) I, II, III, IV — Lunde and Carson
A survey of the growth of Europe from the decline of the Roman Empire to the French Revolution.

*4b **MODERN EUROPE SINCE THE FRENCH REVOLUTION.** (5) I, II, III, IV — Lunde and Carson
A survey of European developments from the French Revolution to the present. A continuation of course 4a.

*5a **HISTORY OF THE UNITED STATES THROUGH 1865.** (5) I, II, III, IV — Clark, Hopkins, Wall, and Taylor
This course traces the nation's development through 1865. It is designed to meet the demands for a general understanding of American history. This course fulfills the requirements for the elementary teachers' certificate.

*5b **HISTORY OF THE UNITED STATES SINCE 1865.** (5) I, II, III, IV — Clark, Hopkins, Wall, and Taylor
A continuation of Course 5a, from 1865 to the present.

†8a **EUROPEAN CIVILIZATION TO 1815.** (5) I, II, III, IV — Staff
To apply on the group requirement in social studies. This course is intended to give the student an understanding of the salient features of European history and government from the early period to the mid-eighteenth century. The emphasis will be on the development of the social, economic, and governmental institutions and forces in European civilization, beginning with the legacies of the ancient Near Orient and Classical Greece and Rome; the religious civilizations of the early Middle Ages, the later Middle Ages, and the Renaissance; and the evolution of commercialism, absolutism, and rationalism of the modern occidental civilization to about 1815. Text assignments, selected readings, discussions, and class lectures.

†8b **EUROPEAN CIVILIZATION SINCE 1815.** (5) I, II, III, IV — Staff
To apply on social studies group requirement. This course is a continuation of European Civilization 8a. It aims to trace the major developments of European history and government from the eighteenth century to the present. Emphasis will be on the

* Open to Freshmen.
† No junior or senior will be admitted to 8a, b, or 10a, b, under any condition.

French Revolution, the forces of liberalism, nationalism, industrialism, and the governments of the major nations before 1914, World War I and its aftermath, the philosophies and governmental structure of the dictatorships and democracies in a disordered world, and World War II. Text assignments, selected readings, discussions and class lectures.

†10a **AMERICAN CIVILIZATION 1607-1865. (5) I, II, III, IV** Staff
Designed to apply on the social studies group requirement, and to give the student a sense of the great movements in American History and Government. It will cover the period from the beginning of American settlement in 1607 to 1865. Special effort will be made to synthesize all of the forces in American history so as to give the student a clear concept of the fundamental background meaning of American Civilization. The emphasis will be not upon the detailed factual development of American civilization, but upon the great economic, social, and political movements. Such subjects as the colonial settlement, government, and economic beginnings will be discussed as foundation topics for the later break with England. The basis for American independence, formation of state governments, and the War of the Revolution will be given special treatment. The rise of centralized government through its various phases will be studied as fundamental to an understanding of the rise of American civilization. From the date of the foundation of the Government of the United States to the end of the Civil War the historical and political course of the American people will be discussed in light of the great movements and forces which were a part of expanding country. Among these were the major conflicts of sectional, economic, and political interests. Emphasis will be placed upon text assignments, selected readings, and upon class lectures.

†10b **AMERICAN CIVILIZATION SINCE 1865. (5) I, II, III, IV** Staff
This is a continuation of American Civilization to 1865. It deals with the significant forces at work in America after the Civil War which shaped the course of history and government. Such important topics as the rise of industry, the development of public regulation of industry, the rise of the city, the changing phases of national politics, the importance of the court decisions, the expanding frontier, the formation of new state governments, the structure of the Federal Government, interest of the United States in world affairs, the twentieth century and its political reform movements and accompanying periods of reaction, the rise of industrial labor, the periods of world wars, and efforts to obtain a lasting peace and economic stability will be discussed. Emphasis will be placed upon text assignments, selected readings and class lectures and discussions.

28 **THE ANCIENT WORLD. (3) I** Carson
The near East and Pre-Grecian Period. Egypt, Babylonia, Assyria, Persia, Palestine, Greece, and Rome.

*30 **THE RISE OF AMERICAN NATIONALITY, 1607 TO THE PRESENT. (5) I, II, III, IV** Wall, Taylor, and Hopkins
This course will survey the story of the American People with the major emphasis upon the influence of inventions and discoveries and technological and industrial improvements which

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* Open to Freshmen.

† Note.—History 8a and 8b duplicate Pol. Sci. 8a and 8b and History 4a and 4b. History 10a and 10b duplicate Pol. Sci. 10a, 10b and 51, and History 5a and 5b.

have molded and influenced their social and cultural achievements. Factors which have tended to promote social and industrial development of American life will be related to the Nation's growth. Not open to students who have had History 5a or 5b.

40 **HISTORY OF KENTUCKY. (4) I, II, III, IV** Clark
A general survey of the chief periods of Kentucky's growth and development from 1750 to the present.

I. American History

100a **THE DIPLOMACY AND FOREIGN POLICY OF THE UNITED STATES TO 1898. (4) II** Hopkins
A survey designed to acquaint the student with the principles of American foreign policy and its historical evolution. **Prerequisite: Course 5a or equivalent.**

100b **THE DIPLOMACY AND FOREIGN POLICY OF THE UNITED STATES SINCE 1898. (4) III** Vandenbosch
A continuation of course 100a. Foreign policy after the United States becomes a world power. **Prerequisite: Course 5b or equivalent.**

105 **COLONIAL AMERICA. (4) II** Eaton
A study of the origins of the English colonies; their political, social, and economic development; extension of their frontiers, intercolonial wars, and external relations with the Dutch, French, and Spanish. Emphasis on imperial policies and imperial control and the colonial controversies.
Prerequisite: One year of American or European History.

106a **COLONIAL LATIN AMERICA. (3) II** Goldmann
A survey of the origins and development of the Latin American Colonies and their struggle for independence.

106b **LATIN AMERICAN REPUBLICS. (3) III** Goldmann
This course will involve a study of the political, economic, and social institutions, and problems of the Latin American Republics from attainment of independence to the present.

116a, b **SENIOR SEMINAR. (2, 2)** Staff
A course for seniors designed to present the bibliography and literature in selected fields of history.

140a, b **INDEPENDENT WORK. (3 ea.)** Staff
Under special conditions selected students may investigate special problems, with weekly reports to the instructor.

141 **TUTORIAL READING. (1)** Staff

147 **RECENT HISTORY OF THE UNITED STATES. (4) I** Clark
An intensive study of the principal movements and episodes in the history of the people of the United States from the Spanish-American War to the present. **Prerequisite: One year of American History.**

151a **THE AMERICAN FRONTIER. (4) I** Clark
A course dealing specifically with American westward expansion. This course will consider the westward movement in respect to population, political, economic, social, and cultural development; analyze the process of national adjustments; and weigh the contributions of each succeeding period. **Prerequisite: History 5a and 5b or equivalent.**

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* Open to Freshmen.

151b THE AMERICAN FRONTIER. (4) II Clark
A continuation of Course 151a. It will consider the Trans-Mississippi West.

180a HISTORY OF THE OLD SOUTH. (4) II Eaton
A study of the colonial beginnings and expansion of southern life, economics, and society. The growth of slavery, staple agriculture, and sectional politics will constitute the major interest. The course will consider the various points of sectional development which led to the break up of the Union. The South will be interpreted in both its relationship and contrast to national development. **Prerequisite: History 5a.**

180b THE SOUTH IN THE CIVIL WAR AND RECONSTRUCTION. (4) II, IV Eaton
An intensive study of constitutional theories as a background for secession. The political, social, and constitutional history of the Confederacy and the Reconstruction of the Southern States.

180c HISTORY OF THE NEW SOUTH. (4) III Clark
The evolution of southern life and society, agrarian politics, relationships with other sections, industrial growth, and new leadership. **Prerequisite: History 180a.**

184 THE GEOGRAPHIC BASIS OF AMERICAN HISTORY. (3) III Staff
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.

The "200" Group

These are content courses presented by the lecture and discussion method and as such are distinct from those numbered "300" and which are concerned with problems and the practice of research.

280 EUROPEAN HISTORIOGRAPHY. (3) I McCloy

281 AMERICAN HISTORIOGRAPHY. (3) Clark and Eaton

282 HISTORICAL CRITICISM. (3) Staff

The "300" Group

Seminars—Basically research in character. These are not content courses. They provide intensive training in historical research (collection and critical analysis of bibliography, note-taking and organization of materials, and the presentation of a properly documented thesis). It is desirable that the student take the Senior Seminar before enrolling in "300" courses. 3 hours credit, 2 class hours, and 1 conference hour.

300a, b SEMINAR IN AMERICAN FOREIGN POLICY. (4, 4) I, II Staff
Problems selected in critical periods in American foreign policy, particularly from the Spanish-American War. A seminar paper, based upon research in source materials, to be presented and defended in the seminar group.

342 SEMINAR IN KENTUCKY HISTORY. (3) I Clark
The development of Kentucky as a Western commonwealth, with emphasis on economic and political phases from the 18th century to the present, with writing of papers based upon research among documents and other source materials.

II. England and the British Empire

131a ENGLISH CONSTITUTIONAL HISTORY TO 1603. (4) I Church
A study of the backgrounds of the English constitution; the Anglo-Saxon contribution; the Norman conquest and development of governmental and legal institutions during the 12th and 13th centuries; the rise of Parliament; the Tudor strong monarchy to its close in 1603. **Prerequisite: History 2a or equivalent.**

131b ENGLISH CONSTITUTIONAL HISTORY SINCE 1603. (4) II Church
A continuation of Course 131a. The constitutional struggle between the Stuart kings and Parliament; triumph of constitutional monarchy; rise of the Cabinet; effect of the spread of democracy in recent times. **Prerequisite: History 2b or equivalent.**

134 HISTORY OF CANADA. (4) Church
A brief survey of Canada under the French; increasing emphasis on the development of Canada under British control; evolution of the Dominion; relation with the United States and British Commonwealth of Nations. **Prerequisite: One year of College History.**

135a THE BRITISH EMPIRE TO 1860. (4) I Church
Origin of the British Empire, 1783 to 1860; development of British sea power: The early growth and development of Canada, Australia, New Zealand, South Africa, and India. Lectures, class discussions, readings, and reports.

135b THE BRITISH EMPIRE SINCE 1860. (4) II Church
A continuation of 135a. Great Britain and the growth of the Dominions and the Commonwealth since 1860. Emphasis will be placed upon the Dominion of Canada and extension of the dominion idea to other parts of the Empire. **Prerequisite: 2a and 2b.**

138 BRITISH SOCIAL HISTORY DURING THE TUDOR PERIOD. 1485-1603. (3) III Church
A study of British life, manners, and customs in town and country. Particular emphasis will be placed upon the age of Elizabeth, with political events subordinated to social changes. Lectures discussions, and reports. **Prerequisite: History 2a.**

139 BRITISH SOCIAL HISTORY SINCE 1815. (4) I, IV Church
A detailed study of Britain's political, social, and diplomatic and industrial development during the modern period. Special consideration will be given to the part played by Britain in World War 1 and World War II, and her position in the contemporary world.

115 THE RENAISSANCE AND REFORMATION. (4) II McCloy
This course is designed for a study of the birth of modern spirit and institutions. Among the topics studied will be the rise of universities and professions, the expansion of commerce and finance, exploration, the interest in culture and art, the break up of the Medieval Church, the Wars of Religion of the Sixteenth Century, the birth of national states, and the movement toward royal absolutism. **Prerequisite: History 8a or 4a.**

119a THE FRENCH REVOLUTION AND NAPOLEON.
(4) III McCloy
A study of the period 1789-1815 in Europe, treating of the appearance and manifestation of the spirit of revolt. Conditions in France and adjoining nations, the evolution of France from 1778 to 1795 and subsequent changes under Napoleon. Open to juniors, seniors, and graduate students, with supplementary reading for the latter.

119b EUROPE IN THE NINETEENTH CENTURY.
(4) II McCloy
Starting with the fall of Napoleon, this course treats the successive political changes in 1823, 1830, 1848, and 1871, together with the outstanding commercial, cultural, and scientific developments of European life after 1815; the expansion of Europe in Africa and Asia, and the reactions upon the great states of the world.

120 EUROPE IN THE TWENTIETH CENTURY.
(4) III Carson
A study of recent and contemporary movements. The rise and conflict of the chief colonial empires; European interference and control in Asia and Africa; forces and elements leading up to the great war; socialism; public education; invention and discoveries.

121 SOCIAL AND POLITICAL FACTORS IN CONTEMPORARY CIVILIZATION. (3) IV Carson
The crisis in world history due to the challenge to the capitalistic democracies by communism and fascism, and to the revolution in international relations precipitated by the Second World War; special emphasis upon tensions, conflicts, and solutions in the United States.

145 RUSSIA SINCE 1900. (4) II, IV Carson
This course will trace the development of Russia through the revolutionary upheavals of the present century, from a partly feudal and almost wholly agricultural country under the tsarist regime of the nineteenth century to a proletarian and industrial state under the soviet regime. Special attention will be given to a study of the methods, aims, and achievements of the Bolshevik leaders and the Communist Party; an analysis of the nature of society in the world's principal socialist state; and economic, political, and diplomatic factors which have made Russia a leading world power.

171 EUROPE IN THE EIGHTEENTH CENTURY. (3) I Lunde
A study of the development of the absolute monarchies from Louis XIV; the European rivalries at home and abroad; benevolent despotism, and the age of the Enlightenment. Considerable attention will be given to the social and cultural aspects of the period. **Prerequisite: History 4a or equivalent.**

176 FRANCE SINCE 1870. (3) IV Carson
A study of the parties, politics, administration, diplomacy, economy, social movements, and general culture of France from 1870 to the present. A reading knowledge of French will be helpful to graduate students. Readings, reports, and discussions. **Prerequisite: History 4b or equivalent.**

177 GERMANY SINCE 1870. (5) I, III Carson
German politics, culture, colonies, and international relations under Bismarck's Germany; the Empire, the Weimar Republic, and Nazi Germany under Hitler. Readings, reports, lectures, and discussions. **Prerequisite: History 4b or equivalent.**

THE FAR EAST

190a **THE FAR EAST TO 1900. (4) III** Vandenbosch
The Portuguese, Dutch, French and British colonial and trading empires in the Central East (Indian, Burma, Indo-China and the East Indies). **Prerequisite: Course 8a or equivalent.**

190b **THE FAR EAST SINCE 1900. (3) V** Vandenbosch
The contacts of Europe and America with the Far East (China, Japan, Korea and the Philippines) in the 19th and 20th centuries. **Prerequisite History 8b or equivalent.**

194 **THE UNITED STATES IN THE PACIFIC AND THE FAR EAST SINCE 1898. (3) I** Vandenbosch
This course presents the policies which resulted in annexation of Hawaii and the Philippines, the announcement of the so-called open door policies and the integrity of China, with their historic development. It concludes with the Stimson doctrine of non-recognition.

320a, b **ORIGINS OF WORLD WAR I. (4, 4)** McCloy and Carson
Seminar

331 **SEMINAR IN MODERN BRITISH HISTORY. (4)**

350a, b **SEMINAR IN THE FRENCH REVOLUTION. (4, 4) I, II** McCloy
Problems selected in the decade of revolution, 1789-1799. A seminar paper based upon research in the official **Moniteur,** in the public documents, and in the memoirs of the period, to be presented and defended in the seminar group. A reading knowledge of French is essential.

Home Economics. A student in the College of Arts and Sciences may elect toward the A.B. and B.S. degree a total of 45 quarter hours from other colleges of the University.

HYGIENE AND PUBLIC HEALTH

John Sharpe Chambers, George Fergison Doyle, William Brooks Hamilton, Wilbur August Heinz, Charles McChord, and Edward C. Humphrey.

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

Requirements in the Field of Concentration: Sixty quarter hours in the field of Biological Sciences and Social Studies (Sociology, Social Work, Political Science), including the major work, in courses not open to freshmen.

Requirements for a Major. Prerequisite: 18 quarter hours in Biological Sciences. **Required:** A minimum of 22 quarter hours of advanced work in Hygiene and Public Health.

*1 **PERSONAL AND COMMUNITY HEALTH. (2) I, II, III** Heinz and Hamilton
Lectures and recitations. An introduction to the principles of personal and community health.

*9 **HYGIENE FOR TEACHERS. (3) I, II, III, IV** Heinz
The purpose of the course is to acquaint the student of education and teachers in service with the general nature of health problems

* Open to Freshmen.

in the school. Required of all students who wish to qualify for the Elementary or Secondary School Certificate. Open only to prospective teachers.

51 PERSONAL HEALTH PROBLEMS.
(3) I, II, III Heinz and Hamilton
A course involving the detailed study of certain practical health problems of the present day. Presentation of essential health knowledge with enough anatomy, physiology and other underlying sciences to clarify and support the health teaching. Not available for credit to students who have had Hygiene 1. The course may be used by Sophomores, Juniors, and Seniors to meet the general hygiene requirement. Not open to Freshmen.

Courses open only to Upper Division and Graduate Students

100a PUBLIC HEALTH. (4) I, III, IV Chambers and Heinz
A consideration of the cause, prevalence, transmission, and control of preventable diseases.

100b PUBLIC HEALTH. (4) II, IV Chambers and Heinz
A continuation of 100a. Environmental and organization approach to disease prevention.

110 HEALTH EDUCATION. (4) II, IV Heinz
A course dealing primarily with principles of health education, health service and health protection. Intended to consider also the cooperative nature of school health work through study of problems in the solution of which contributions are made by parents, the school and the community.

111a, d INDEPENDENT WORK IN HYGIENE AND PUBLIC HEALTH. (4 ea.) I, II, III, IV Heinz

115 COMMUNICABLE DISEASES. (4) II, IV Hamilton
A study of communicable diseases with reference to causal agents, avenues of infection and methods of prevention, with special emphasis on those diseases prevalent in Kentucky.

120a MENTAL HYGIENE. (4) I, III Ratliff
An introduction to mental hygiene including a consideration of the cause, treatment and prevention of mental disorders. Not open to students who have credit in Psychology 124.

120b MENTAL HYGIENE OBSERVATION. (4) II Ratliff
A continuation of Hygiene 120a. Students are given the opportunity to apply to concrete cases the principles and concepts developed in 120a.

150a, b PROBLEMS IN HEALTH EDUCATION. (3, 3) III, IV Heinz
An individual problems course for students and teachers in service, based upon a systematic attack upon the health problems of a school.

Other courses for Upper Division and Graduate students, such as Vital Statistics (118), School and Community Health (122), and others are given from time to time.

JOURNALISM

Leonard Niel Plummer, J. A. McCauley, Marguerite McLaughlin, Victor Rowe Portmann, Willis Carleton Tucker, and R. W. Wild.

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

Requirements in Field of Concentration: Sixty quarter hours in courses not open to freshmen, including the major work, in either the field of Social Studies or that of Literature, Philosophy, and the Arts, during junior and senior years.

Requirements for a Major. Prerequisite: Journalism, 2, 21, and 22. **Required:** Journalism 100a, 100b, 101a, 101b, 105, 106, 107, 108, 109a, 109b, 123a, 123b, and 127.

The Degree of A.B. in Journalism. Four sequences leading to the degree of A.B. in Journalism are outlined on page 69.

Comprehensive Examinations. Majors and candidates for the degree in journalism are required to pass a final comprehensive examination at the end of the senior year.

*2 **INTRODUCTION TO JOURNALISM.** (3) I, II, III, IV Plummer
A course of lectures and readings designed to introduce pre-journalism students to the opportunities in journalism and advertising, the qualifications and training implicit in journalism as a profession, and the field of journalistic publication in all its branches.

10a, b **SURVEY OF JOURNALISM.** (4, 4) I, II, III, IV McLaughlin
A general non-professional course covering newspaper organization and problems of interest to newspaper readers. Lectures and practice in the style of writing employed by the press. Not open to majors in journalism.

21 **ETYMOLOGY.** (4) I, II, III, IV Plummer
A study of words and their fundamental values with reference to development of a writing vocabulary.

22 **PRINCIPLES OF NEWS WRITING.** (4) I, II, III, IV Tucker
Lectures and readings on the development of the modern news style. Practice in effective writing.

100a **NEWS REPORTING.** (3) I, II, III Plummer, Wild, and McCauley
Instruction and practice in news gathering, news evaluation, and news writing. **Prerequisite: Journalism 22.**

100b **NEWS REPORTING.** (3) II, III, IV Portmann, Wild, and McCauley
A continuation of Journalism 100a with emphasis on special fields of information. **Prerequisite: Journalism 100a.**

101a **COPYREADING.** (3) II, IV Tucker and McCauley
Instruction and practice in newspaper deskwork. Preparation of local, state, telegraph, and radio news and features. Lecture, 1 hour; laboratory, 4 hours. **Prerequisite: Journalism 100a.**

101b **EDITING.** (3) I, III Tucker and McCauley
A continuation of Journalism 101a with emphasis on press association copy, picture editing, and page make-up. Lecture, 1 hour; laboratory, 4 hours. **Prerequisite: Journalism 101a.**

* Open to Freshmen.

102 COMMUNITY JOURNALISM. (4) I, IV Portmann
A study of the problems which confront the community weekly and the small city daily. **Prerequisite: Journalism 22.**

103 NEWSPAPER ADMINISTRATION. (4) II, IV Portmann
A study of the business, circulation, advertising, and accounting divisions of the newspaper with special emphasis on the community newspapers. **Prerequisite: Journalism 22.**

105 LAW OF THE PRESS. (3) III Plummer
A study of the special laws of libel, copyright, and regulatory provisions that pertain to the press. **Prerequisite: Journalism 22.**

106 INFLUENCE OF THE NEWSPAPER. (4) III Plummer
A course devoted to the examination of criticism of the modern press and an evaluation of the influence of the press in the twentieth century. Lectures and readings directed toward the evolution of principles for the guidance of members of the news, editorial, and business staffs of newspapers. **Prerequisite: Journalism 22 and senior standing.**

107 EDITORIAL WRITING. (3) III Tucker
A study of editorials, editorial columns, and editorial pages. Publication of copy encouraged. **Prerequisite: Journalism 22.**

108 HISTORY OF JOURNALISM. (4) II, IV Portmann
A study of the rise and development of American journalism and newspapers. **Prerequisite: Journalism 22 and senior standing.**

109b TYPOGRAPHY. (2) I, III Portmann
Instruction and practice in typographic composition. Use of type faces in news editing. Laboratory, four hours.

109b TYPOGRAPHY. (2) I, III Portmann
A continuation of Journalism 109a with emphasis on typography in the make-up of American newspapers. Laboratory, four hours. **Prerequisite: Journalism 109a.**

110 SUPERVISION OF HIGH SCHOOL PUBLICATIONS. (4) III, IV Portmann
A study of the problems that confront the adviser of the high school newspaper or magazine. Open to advisers or prospective advisers with consent of the instructor.

111 VERBAL CRITICISM. (4) III, IV Tucker
A study of words and their synonyms with reference to developing accuracy in use of the English language in journalistic work.

112 CRITICAL WRITING FOR THE PRESS. (4) I, II, III, IV McLaughlin
The function of criticism in journalism. Reviewing of motion pictures, plays, concerts, and books for newspapers with emphasis upon student work in Kentucky newspapers.

114 NEWSPAPER ADVERTISING AND PROMOTION. (4) I, III Portmann
Relations of newspapers with retail advertisers; newspaper advertising department organization; advertising rate structures; classified advertising; legal advertising; organization and development of the promotion department.

115 ADVERTISING TYPOGRAPHY AND LAYOUT. (4) I, III, IV Portmann
A study of the principles of typographic families and illustrations and decorations that pertain to layout in modern advertising.

Practical work with merchants included in the latter part of the course. Lecture, 2 hours; laboratory, 4 hours.

118 **PUBLICITY. (4) III, IV** Plummer
Lectures and practice dealing with the aims and methods of writing news and special articles on the work of schools, colleges, libraries, and social service organizations.

120 **SEMINAR IN PUBLIC OPINION. (4) III** Plummer
A detailed examination of techniques developed and used by the press in influencing public opinion. Specific cases studied. Latter part of course devoted to the preparation of newspaper campaigns dealing with current problems of society. **Prerequisite: Senior or graduate standing.**

123a **FEATURE WRITING. (3) II** Tucker and Plummer
Instruction and practice in writing features. Lectures, readings, and reports directed toward discovering, gathering, organizing, writing, and marketing feature articles. **Prerequisite: Journalism 22.**

123b **FEATURE WRITING. (3) III** Tucker
A continuation of Journalism 123a with emphasis on writing, illustrating, and marketing features for newspaper supplements, trade journals, and other periodicals.

125 **MAGAZINE ARTICLE WRITING. (4) IV** Plummer
Lectures, personal conferences, and practice in writing and submitting material for publication in magazines; study of the markets for this material; free-lance article writing.

127 **REPORTING PUBLIC AFFAIRS. (3) III, IV** Plummer
Instruction and practice in reporting the news originating in courts and other public institutions and the news of politics, finance, and labor. Lecture, 2 hours; Laboratory, 2 hours. **Prerequisite: Journalism 22 and senior standing.**

150 **RADIO NEWS SCRIPTS. (3) I, III** Tucker
Instruction and practice in writing news and feature material for radio presentation. **Prerequisite: Journalism 22.**

LAW

A student in the College of Arts and Sciences may elect toward the A.B. degree a total of 45 quarter hours from other colleges of the University. However, election of law courses is restricted.

LIBRARY SCIENCE

Robert H. Deily, Laura K. Martin†, Margaret Roser, and Azile M. Wofford.

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

Requirements in Field of Concentration: Sixty quarter hours of advanced work in the Field of Literature, Philosophy, and the Arts, or acceptable equivalent, including the major work.

Requirements for a Major. Prerequisite: Junior or senior standing. Prospective majors should consult with the Head of the

† See appended list of leaves of absence, resignations, deaths, etc., p. 399.

Department regarding courses to be taken during the first three years of college. A broad academic program with emphasis on literature, language, and the social sciences is recommended. Previous experience in library work and facility in the use of the typewriter are considered assets. **Required courses:** The full professional curriculum of 45 quarter hours. With the approval of the Head of the Department a student may substitute one course outside the Library Science Department, e.g. Education 186, Visual Teaching, for one of the electives.

Requirements for the Degree of Bachelor of Science in Library Science. Prerequisites: A Bachelor's degree from an approved college or university. Undergraduate preparation should emphasize academic rather than professional courses, with emphasis on literature, languages, and the social sciences. Previous experience in library work and facility in the use of the typewriter are considered assets. **Required courses:** The professional curriculum of 45 quarter hours. With the approval of the Head of the Department a student may substitute one course outside the Library Science Department, e.g. Education 186, Visual Teaching, for one of the electives.

General Courses

*25 **USE OF THE LIBRARY. (2) I, II, III, IV** Staff
A practical survey of library book resources, tools, and services; designed to aid the college student in his study, research, and recreational reading.

Professional Courses

101a-d **INDEPENDENT WORK. (1 ea.) I, II, III, IV** Staff
Conferences, assigned readings, reports, etc. **Prerequisite: L.S. 121, 129a, 133a, 145 and 152a.**

110 **THE LIBRARY IN THE SCHOOL. (3) II** Wofford
A study of the school library as a functioning organization. Topics included: School library objectives; planning and equipment; personnel problems; standards; budgets and finance; circulation records and procedures; attendence and other records; instruction in the use of the library; school library activities; school library and other community agencies.

112 **THE PUBLIC LIBRARY. (3) II** Deily
A study of the public library as a functioning institution. Topics included: Organization and administration of public library service; selection of books for public libraries; registration and circulation records; analysis of public library services and activities; trends in public library service; the library in relation to other community organizations. The course will include case studies of specific libraries.

114 **THE COLLEGE AND UNIVERSITY LIBRARY. (3) III, IV** Deily
A study of the college and university library as a functioning institution. Topics included: Higher education in America; functions of the library in higher education; library standards; organization and administration of libraries in higher educational

* Open to Freshmen.

institutions; the library staff; finances; book collections; buildings; equipment; records and reports; circulation problems and procedures; analysis of library services and activities; trends in college and university library service; library relations with faculty, students, and administration. The course will include case studies of specific libraries.

121 **INTRODUCTION TO LIBRARY WORK. (3) I, IV** Wofford
An orientation course designed to give students a general understanding of libraries and library work. Topics included: Survey of libraries in the United States; types of positions in libraries; training for library work; qualifications expected of the trained librarian; library work as a profession; functions of libraries; general principles of library administration. This course is open to prospective majors during their Junior year to give them an opportunity to test their interest in library science.

127 **READING FOR YOUNG PEOPLE. (3) III** Wofford
This course will consider reading needs and interests of young people, together with library materials appropriate for each. Methods of reading guidance with various types of readers and employing all kinds of media will be considered. Important for the prospective school librarian and others planning library work with young people. **Prerequisite: L.S. 152a, 152b.**

128 **CHILDREN'S LITERATURE. (3) III, IV** Martin
A survey of children's books with a comparative study of representative types from pre-school to junior high school age; illustrations and editions; book reviewing periodicals; aids in the selection of children's books and magazines. Closely correlated with L.S. 132.

129a **CATALOGING AND CLASSIFICATION. (4) I, IV** Wofford
A study of the principles and methods of classifying and cataloging books. Emphasis will be on the functions of cataloging and classification but with sufficient practice work to enable students to handle cataloging problems in a library situation.

129b **CATALOGING AND CLASSIFICATION. (4) II, IV** Wofford
A continuation of L.S. 129a.

132 **LIBRARY WORK WITH CHILDREN. (3) III, IV** Martin
A study of the origin and present status of library work with children in school and public libraries. Units of the course include story-telling and other methods of developing the child's appreciation of literature; administration of library work with children; and elementary school library service. **Prerequisite: L.S. 128.**

133a **REFERENCE AND BIBLIOGRAPHY. (4) I** Deily
A study of the essential reference works, including dictionaries, encyclopedias, atlases, yearbooks and periodical indexes; of the more important subject and trade bibliographies; vertical file materials; and of the standards and methods by which such material is selected, organized, and efficiently used. Special attention is paid to the reference book collection in the high school library.

133b **REFERENCE AND BIBLIOGRAPHY. (3) II** Deily
A continuation of L.S. 133a. Emphasis is placed on reference books in subject fields and on the national and subject bibliographies. **Prerequisite: L.S. 133a.**

139 FIELD WORK. (3) III, IV Roser and Staff
Comparable to practice teaching. Observation of service in libraries in the area, and supervised practical work in all departments of the libraries of the University School and nearby school systems. The course is supplemented by class-room discussions. Six hours per week. **Prerequisite: L.S. 121, 129a, 129b, 133a, 145, 152a and 152b.**

145 ORGANIZATION OF LIBRARY MATERIALS. (2) II, IV Wofford
A course designed to give the beginning librarian practical instruction in the acquisition and organization of library materials. Among the topics included are ordering, accessioning, preparation of books and other materials for library use, mending, binding procedures, inventory, and the other processes concerned with the physical maintenance of the collection. The use of library statistics in making reports is investigated.

152a BOOK SELECTION. (4) I, IV Martin
A general study of book selection principles and methods, with emphasis on printed materials as they interpret modern problems. Topics and activities included: Principles and standards for the selection of books, periodicals and pamphlets, book publishing, series and editions; extensive reading and evaluation of types of books in philosophy, religion, sociology, science, the fine arts, history and travel; critical examination of aids to book selection, including book reviewing periodicals.

152b BOOK SELECTION. (3) II, IV Martin
A continuation of L.S. 152a, with intensive reading and evaluation of books in biography, fiction, poetry, drama and essays. Practice in the selection of books for varying types of library situations, in oral and written reviews, characteristics of adult readers and their needs.

154 SEMINAR IN PROBLEMS OF LIBRARIANSHIP. (3) III, IV Deily
The investigation and discussion of recent developments in librarianship as reported in the current literature; the use of the library survey as an instrument of analysis is explored; the influences of current economic, social, and educational problems upon library development. **Prerequisites: L.S. 121, 129a, b, 133a, 145, 152a, b.**

MATHEMATICS AND ASTRONOMY

Harold Hardesty Downing, Delbert F. Atkins, Virginia S. Baskett, Marion Clay Brown, Leon Warren Cohen*, Betty D. Crawley, Theodore K. Dyer, Raymond I. Fields, Lydia Roberts Fischer, A. E. Foster, Casper Goffman, Albert A. Grau, S. J. Jasper, Claiborne Green Latimer*, Sallie Elizabeth Pence, Charles L. Riggs, Sara L. Ripy, F. Virginia Rohde, Dudley Eugene South, Garnet L. Tiller Kenneth P. Wood, Nelson Yeardley, and Assistants.

Mathematics

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

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

* See appended list of leaves of absence, resignations, deaths, etc., p. 399.

Requirements for a Major. Prerequisite: Math. and Ast. 2, 3, 17, 19, 20a, and 20b. **Required:** A minimum of 27 quarter hours of advanced work in mathematics, including one course in Algebra, one in Geometry, one in Analysis, and one in Applications. Major students are required to enroll in tutorial courses for four quarters during the junior and senior years and to pass a final comprehensive examination in Mathematics.

Requirements for Graduate Work. Graduate students must have had at least 18 quarter hours of mathematics beyond elementary calculus before counting work toward an advanced degree.

*D **ELEMENTARY MATHEMATICS. (0) I, II, III**
A study of the elementary mathematical principles and operations that are essential to the comprehension of college courses in science.

*2 **SOLID GEOMETRY. (4) I, II, III, IV** Staff
For those who have not had the subject in high school. It is a prerequisite for analytics.

*3 **PLANE TRIGONOMETRY. (5) I, II, III, IV** Staff
The usual course in plane trigonometry. **Prerequisite: 1½ units High School Algebra, or 5a.**

*5a **COLLEGE ALGEBRA. (4) I, II, III, IV** Staff
A course designed for those students who have had high school algebra but whose preparation is inadequate for a standard course in college algebra. **Prerequisite: Math. and Ast. D or its equivalent as determined by the Department of Mathematics and Astronomy from the University placement tests.**

*5b **COLLEGE ALGEBRA. (4) I, II, III, IV** Staff
A continuation of 5a. Completion of material in Math. and Ast. 17. **Prerequisite: Math. and Ast. 5a.**

*15 **MATHEMATICS OF FINANCE. (4) I, II, III** Staff
A study of simple interest, simple discount, compound interest, annuities. Applications to solutions of problems in amortization, sinking funds, valuations of bonds. Primarily for Commerce students. **Prerequisite: Math. and Ast. 5a and 5b or 17.**

*17 **COLLEGE ALGEBRA. (5) I, II, III, IV** Staff
The standard course. A review of quadratic equations; includes simultaneous quadratics, variations, permutations and combinations, and theory of equations. **Prerequisite: 1½ units high school algebra and an adequate preparation for a standard course in college algebra, as determined by the Department of Mathematics and Astronomy from the University placement tests, or 1 unit high school algebra and an adequate knowledge of the fundamental mathematical operations as determined by the department from the University placement tests.**

*19 **PLANE AND SOLID ANALYTIC GEOMETRY. (5) I, II, III, IV** Staff
The standard elementary course. **Prerequisite: Math. and Ast. 5a and 5b or 17, 2, and 3.**

20a **DIFFERENTIAL CALCULUS. (5) I, II, III, IV** Staff
The course covers elementary differential calculus and an introduction to the integral. **Prerequisite: Math. and Ast. 19.**

* Open to Freshmen.

20b INTEGRAL CALCULUS. (5) I, II, III, IV Staff
Completing the course in elementary calculus. **Prerequisite: Math. and Ast. 20a and 2.**

11 SPHERICAL TRIGONOMETRY. (3) III Downing
Primarily for Civil Engineers. Three hours a week. **Prerequisite: Math. and Ast. 3.**

12 LEAST SQUARES. (3) III Downing
Primarily for Civil Engineers. Three hours a week. **Prerequisite: Math. and Ast. 19.**

16a-f TUTORIAL WORK IN MATHEMATICS.
(1 ea.) I, II, III Senior Staff
Open only to A. & S. majors in mathematics.

***24 ELEMENTARY THEORY OF STATISTICS. (3) II, III** South
Formulas and methods for arithmetic mean, geometric mean, median, standard deviation, skewness, and linear correlation coefficient will be derived, with emphasis upon the assumptions made and limitations in their use. Some elementary theory of probability will be introduced for use in the study of normal distributions, interpretation of standard deviation, and probable error of an observation. **Prerequisite: 1½ units of high school algebra.**

25 INTERMEDIATE CALCULUS. (4) IV Downing
Purpose: To bridge the gap between the Integral Calculus and Advanced Calculus. Contents: To include such topics as Limits, Continuity, Curvature, Mean Value Theorem and Indeterminate Forms, Series Expansions of Functions, Hyperbolic Functions, Partial Differentiation, Properties of Definite Integrals, Reduction Formulas in Integration, and other advanced forms of Integrals.

103 THEORY OF EQUATIONS. (4) III, IV South
This course is based on Dickson's First Course in the Theory of Equations, which is used as a text. **Prerequisite: Math. and Ast. 20a.**

105a DIFFERENTIAL EQUATIONS. (4) I, II, IV Downing and others
A first course in differential equations based on A. Cohen's text. **Prerequisite: Math. and Ast. 20b.**

106a, b ADVANCED CALCULUS. (4) I, II
Limits and Infinite Series. Continuous functions. Definite integral and derivative. Application to power series and Fourier series. **Prerequisite: Math. and Ast. 20b.**

107 PROJECTIVE GEOMETRY. (4) II, IV Pence
A brief course in synthetic projective geometry. **Prerequisite: Math. and Ast. 20a.**

110a-f INDEPENDENT WORK IN MATHEMATICS.
(4 ea.) I, II, III, IV Senior Staff
Limited to upper division and graduate students of high standing. **Prerequisite: Math. and Ast. 20b.**

113 FOURIER SERIES AND SPHERICAL HARMONICS.
(4) IV Downing

116 ANALYTICAL MECHANICS. (4) III Downing
Topics included: Composition and resolution of forces; statics of a particle; moments; couples; center of gravity; friction; simple

* Open to Freshmen.

harmonic motion; constrained motion; work; energy; inertia; impulse. **Prerequisite: Math. and Ast. 20b.**

119 **MODERN GEOMETRY.** (4) III — Pence
A course covering the subject substantially as presented in Altschiller-Court's text. **Prerequisite: Math. and Ast. 20a.**

120 **MATHEMATICAL STATISTICS.** (4) III — South
Topics considered: Averages, coefficients of dispersion and skewness, graphical representation, Bernoulli's Theorem, curve-fitting, theory of sampling, correlation, and regression lines. **Prerequisite: Math. and Ast. 20a.**

122 **ACTUARIAL MATHEMATICS.** (4) II
Theory and construction of mortality tables, life annuities premiums, terminal values, etc. **Prerequisite: Math 15 and 20a.**

124 **ELEMENTARY THEORY OF STATISTICS.** (3) III — South
This course is designed for students in departments other than Mathematics. The content will be similar to that of Mathematics 24, except that extra work will be required for graduate credit. Credit will not be given for both Mathematics 24 and 124.

203a-d **THESIS.** (4 ea.) I, II, III, IV — Senior Staff
Required in addition to other requirements for advanced degrees.

204 **CALCULUS OF VARIATIONS.** (4)
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, Weierstrass, and Jacobi, Isoperimetric problems. **Prerequisite: Math. 105a, 106a.**

205 **DIFFERENTIAL GEOMETRY.** (4)
Introductory 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.

206 **THEORY OF GROUPS.** (4)
An introductory course.

207a, b, c **THEORY OF NUMBERS.** (4)
207a—This course covers the material in Chapters 1-5 inclusive, of Dickson's Introduction to the Theory of Numbers.
207b—Material of Chapters 6-9 inclusive, of Dickson's Introduction to the Theory of Numbers.
207c—Continuation of 207b.

208 **THEORY OF FUNCTION OF A REAL VARIABLE.** (4)
Theory of the real number system; elements of point-set theory, measure of sets, and the Riemann and Lebesgue theories of integration. **Prerequisites: Math. 105a, 106a.**

209 **THEORY OF FUNCTIONS OF A COMPLEX VARIABLE.** (4) I
Introduction to the algebra and calculus of complex numbers and their geometric representation. Conformal transformation. Theory presented mainly from Cauchy-Riemann viewpoint, with reference to Weierstrass development. Introduction to Riemann surfaces. **Prerequisites: courses 105a, 106a.**

218 **ALGEBRAIC NUMBERS.** (4) IV
An introductory course in the theory of algebraic numbers. **Prerequisites: Consent of instructor. This work is based on Heck's etc.**

220a-d **MATHEMATICS SEMINAR.** (3 ea.) II — Latimer

Astronomy

*51a, b **DESCRIPTIVE ASTRONOMY. (4, 4) II, III** Rohde
An elementary, non-mathematical course.

NOTE—Other courses such as Partial Differential Equations, Axiomatics, Tensor Analysis, Orthogonal Systems of Numbers, Practical Astronomy, Elementary Observations in Astronomy, Integral Equations, Algebraic Curves, Modern Solid Geometry, Algebraic Invariants, Celestial Mechanics, Curve Tracing, Geometric Transformations, Vector Analysis, Adv. Analytics, Series, Solid Analytics, Calculus of Finite Differences, Higher Algebra, and second courses in various subjects will be given from time to time.

251a **CELESTIAL MECHANICS. (4) IV**
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.

MILITARY SCIENCE
(ROTC)

Gabriel T. Mackenzie, John L. Carter, Ollie E. Day, J. C. Durr, Robert R. Ellison, Edward Gedrich, Donald W. Glenn, John C. Jones, Elmer O. Kinker, Edgar L. Kiser, Gerald P. Lerner, Edward B. Raber, Arvid W. Segerquist, Lawrence Spears, and Jerome Tartar.

Branch Immaterial

First Year Elementary Course, ROTC.

Introductory course in Military Science covering the following subjects: World Military Situation, Military Organization, Hygiene and First Aid, Leadership, Drill and Exercise of Command, Individual Weapons and Marksmanship, Map and Aerial Photograph Reading and National Defense Act and ROTC. The subjects listed above will be offered in the three quarters of the course as local conditions dictate.

*1a **FIRST YEAR ELEMENTARY COURSE, ROTC. (2)** Staff
Three hours per week.

*1b **FIRST YEAR ELEMENTARY COURSE, ROTC. (2)** Staff
Three hours per week.

*1c **FIRST YEAR ELEMENTARY COURSE, ROTC. (2)** Staff
Three hours per week.

Second Year Elementary Course, ROTC.

Course in Military Science covering the following subjects: World Military Situation, Leadership, Drill and Exercise of Command, Physical Development Methods, Map and Aerial Photograph Reading, Military Administration, Evolution of Warfare, and Military Laws and Boards. The subjects listed above will be offered in the three quarters of the course as local conditions dictate.

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* Open to Freshmen.

6a SECOND YEAR ELEMENTARY COURSE, ROTC. (2) Staff
Three hours per week. **Prerequisite: 1a, 1b, 1c.**

6b SECOND YEAR ELEMENTARY COURSE, ROTC. (2) Staff
Three hours per week. **Prerequisite: 1a, 1b, 1c.**

6c SECOND YEAR ELEMENTARY COURSE, ROTC. (2) Staff
Three hours per week. **Prerequisite: 1a, 1b, 1c.**

Advanced Course, ROTC

Advanced courses in Military Science providing training in Infantry, Signal Corps and Air Force. Upon successful completion of the course, Reserve Commissions as 2nd Lieutenants, Officers Reserve Corps, are granted. Each member of the advanced course will be required to attend a six week summer camp.

Prerequisites for **all** Advanced Courses, ROTC, is completion of the two year Elementary Course, or one (1) years **active** duty in the armed forces.

Infantry

Course in advanced Military Science leading to a Reserve Commission as 2nd Lieutenant, Officers Reserve Corps, Infantry.

First Year Advanced Course, ROTC, Infantry.

The subjects covered in the three quarters are: Military Problems of the United States, Military Leadership, Psychology and Personnel Management, Drill, Occupied Territories, Military Laws and Boards, and Infantry Tactics and Technique.

7a FIRST YEAR ADVANCED COURSE, ROTC, INFANTRY. (4) Staff
Five hours per week.

7b FIRST YEAR ADVANCED COURSE, ROTC, INFANTRY. (4) Staff
Five hours per week.

7c FIRST YEAR ADVANCED COURSE, ROTC, INFANTRY. (4) Staff
Five Hours per week.

Second Year Advanced Course, ROTC, Infantry.

The subjects covered in the three quarters are: Command and Staff, Military Teaching Methods, Psychological Warfare, Geographical Foundations of National Power, Drill, Combined and Joint Operations, Military Mobilization and Demobilization, and Infantry Tactics and Technique.

8a SECOND YEAR ADVANCED COURSE, ROTC, INFANTRY. (4) Staff
Five hours per week. **Prerequisite 7a, 7b, and 7c.**

8b SECOND YEAR ADVANCED COURSE, ROTC, INFANTRY. (4) Staff
Five hours per week. **Prerequisite 7a, 7b, and 7c.**

8c SECOND YEAR ADVANCED COURSE, ROTC, INFANTRY. (4) Staff
Five hours per week. **Prerequisite 7a, 7b and 7c.**

Signal Corps

Course in advanced Military Science leading to a Reserve Commission as 2nd Lieutenant, Signal Corps.

Prerequisite: In addition to the prerequisites for all advanced courses given above, the student must be enrolled in Electrical Engineering, Electronics Engineering, Mechanical Engineering, or in a course leading to a BS degree with a major in physics.

First Year Advanced Course, ROTC, Signal Corps.

The subjects covered in the three quarters are: Military Leadership, Psychology and Personnel Management, Drill, Military Problems of the United States, Occupied Territories, Military Law and Boards of Officers, and Signal Corps Tactics and Techniques.

9a FIRST YEAR ADVANCED COURSE, ROTC, SIGNAL CORPS. (4) Staff
Five hours per week.

9b FIRST YEAR ADVANCED COURSE, ROTC, SIGNAL CORPS. (4) Staff
Five hours per week.

9c FIRST YEAR ADVANCED COURSE, ROTC, SIGNAL CORPS. (4) Staff
Five hours per week.

Second Year Advanced Course, ROTC, Signal Corps.

The subjects covered in the three quarters are: Command and Staff, Military Teaching Methods, Psychological Warfare, Geographical Foundations of National Power, Drill, Combined and Joint Operations, Military Mobilization and Demobilization, and Signal Corps Tactics and Techniques.

10a SECOND YEAR ADVANCED COURSE, ROTC, SIGNAL CORPS. (4) Staff
Five hours per week. **Prerequisite: 9a, 9b and 9c.**

10b SECOND YEAR ADVANCED COURSE, ROTC, SIGNAL CORPS. (4) Staff
Five hours per week. **Prerequisite: 9a, 9b and 9c.**

10c SECOND YEAR ADVANCED COURSE, ROTC, SIGNAL CORPS. (4) Staff
Five hours per week. **Prerequisite: 9a, 9b and 9c.**

Air Force

The first year Advanced Course, Senior Air-ROTC will consist of subjects peculiar to the AAF: History of the AAF, Organization of the AAF, AAF Training, AAF Statistical Control Methods, Air Intelligence and Combat Orders, Navigation, Aeronautics, Camouflage, Communications, and Guided Missiles. A summer camp of six weeks duration will be required of all students as a part of the Course.

11a FIRST YEAR ADVANCED COURSE, ROTC AIR FORCE. (4) Staff
Five hours per week.

11b FIRST YEAR ADVANCED COURSE, ROTC, AIR FORCE. (4) Staff
Five hours per week.

11c FIRST YEAR ADVANCED COURSE ROTC, AIR FORCE. (4) Staff
Five hours per week. .

The Second year advanced Course, Senior Air ROTC will specialize the individual student in his desired field of the AAF. The student emerges with an AAF military occupational specialty (MOS) authorized for AAF personnel and upon completion of four academic years at the University will lead to a commission in the Air Reserve as 2nd Lieutenant. Dependent upon enabling legislation students will be offered ten hours of orientation flying and an additional fifteen hours of flying (including soloing) for the students eligible and desiring same.

2nd year advanced course ROTC Air Force

12a-1 COMMUNICATIONS. (4) Staff
Five hours per week. **Prerequisite: 11a, 11b, and 11c.**

12a-2 AIRCRAFT ENGINEERING. (4) Staff
Five hours per week. **Prerequisite: 11a, 11b, and 11c.**

12a-3 ADMINISTRATION. (4) Staff
Five hours per week. **Prerequisite: 11a, 11b, and 11c.**

12b-1 COMMUNICATIONS. (4) Staff
Five hours per week. **Prerequisite: 11a, 11b, and 11c.**

12b-2 AIRCRAFT ENGINEERING. (4) Staff
Five hours per week. **Prerequisite: 11a, 11b, and 11c.**

12b-3 ADMINISTRATION. (4)
Five hours per week. **Prerequisite: 11a, 11b, and 11c.**

12c 2nd YEAR ADVANCED COURSE AIR FORCE ROTC GENERAL SUBJECTS. (4) Staff
Five hours per week. **Prerequisite: 11a, 11b, and 11c.**

MUSIC

Alexander Capurso, Lela W. Cullis, Aimo Kiviniemi, Robert Kuhlman, Mildred Sinclair Lewis, Ford Montgomery, Robert Morgan, Frank J. Prindl, and Vilem Sokol.

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

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

Music Requirements for a Major. Prerequisite: Junior standing; Music A, 12a, 12b; 33a, 33b and 33c; Applied Music: 18 quarter hours.

Required: A minimum of 22 quarter hours of advanced work in music: 19a, 19b, 34a, 34b, 34c, 114a and 114b or 115 (depending on instrumental or choral major and Applied Music. Other courses, such as Music 4a, 4b, Music 7, 8, 9; 13a and 13b or 26 may be elected.

Music 42 and a comprehensive examination are required of all music majors in the senior year.

Participation in Musical Groups: All music majors are required to participate in either the Orchestra or Glee Club without credit during the freshman and sophomore years. However, credit will be allowed freshmen and sophomores for one of these courses if the student participates in both organizations concurrently. During the junior and senior years credit is allowed for participation in either or both of these groups and the Concert Band.

*A **AN INTRODUCTION TO THE HUMANITIES THROUGH THE STUDY OF MUSIC** (For both Music Majors and non-Music Majors)
(3) I, II, III, IV Staff
An introduction to the Humanities through the study of music in relation to Western culture. Lectures and discussions, with illustrations by performance and from recordings. Study of musical forms; required reading and listening; analyses of selected masterworks. Special attention will be devoted to the periods from the Renaissance to modern times. Designed to satisfy one of the lower division requirements in the Humanities.

4a **PUBLIC SCHOOL MUSIC. (3) I, IV** Lewis
A course in music methods and materials for use in **Primary** * **Grades**, stressing care of the child voice; rote-song singing, and Repertoire; rhythmic development; listening experiences of standard musical literature; beginning phases of notation.

4b **PUBLIC SCHOOL MUSIC. (3) II, IV** Lewis
A course in music methods and materials for use in the **Intermediate Grades.** Continuation of 4a with the development of two and three part singing; minor mode; chromatics, and rhythmic notation, as found in typical music texts for fourth, fifth, and sixth grades.

7 **STRINGS—Methods, Materials, and Techniques. (3) I, IV** Sokol
This course includes a practical study in the elementary techniques of the violin, viola, violoncello, and string bass, together with the study of teaching methods and materials as related to instrumental music in public schools. **Prerequisite: Junior standing.**
For music majors and non-music majors.

8 **BRASSES AND PERCUSSION—Methods, Materials, and Techniques. (3) I, II, III, IV** Prindl
This course includes a practical study in the elementary techniques of the cornet and trumpet, horns, trombone, baritone, tuba, timpani, bass and snare drums, together with the study of teaching methods and materials as related to instrumental music in the public schools. **Prerequisite: Junior standing.**
For music majors and non-music majors.

* Open to Freshmen.

9 **WOODWINDS—Methods, Materials, and Techniques.** **(3) I, III** Prindl
This course includes a practical study in the elementary techniques of the flute, oboe, clarinets, saxophones, and bassoon together with the study of teaching methods and materials as related to instrumental music in the public schools. **Prerequisite: Junior standing.**
For music majors and non-music majors.

12a **COUNTERPOINT. (3) II, IV** Prindl
A study of melody writing and the combining of melodies; melodic and rhythmic dictation; study of scales and intervals at the keyboard; drill in sight singing. Study of master works in two voices; the writing of counterpoint in two voices on original or given **canti fermi,** leading to the composition of original two-part inventions and free forms in vocal style. Required of all music majors. **Prerequisite: Music A** (unless excused by instructor) and ability to play piano music of the difficulty of simple hymns.

12b **COUNTERPOINT. (3) III, IV** Prindl
A continuation of Music 12a. A study of master works in three and four voices, leading to the writing of short fugues on given and original themes. Required of all music majors. **Prerequisite: Music 12a.**

13a **FORM AND ANALYSIS. (3) II, IV** Sokol
A study of the design and harmonic structure of simple and complex forms of music through analyses of standard musical compositions. **Prerequisite: Music 33a, b.**

13b **FORM AND ANALYSIS. (3) III, IV** Sokol
A continuation of Music 13a. **Prerequisite: Music 13a.**

†15a-l **APPLIED MUSIC—Piano.**
(2 ea.) I, II, III, IV Montgomery, Morgan, and Cullis

†16a-l **APPLIED MUSIC—Strings. (2 ea.) I, II, III, IV** Sokol, and Prindl

†17a-l **APPLIED MUSIC—Voice.**
(2 ea.) I, II, III, IV Kuhlman and Kiviniemi

†18a-l **APPLIED MUSIC—Organ. (2 ea.) I, II, III, IV** Cullis

19a, b **HISTORY OF MUSIC. (4, 4) I, II, IV** Capurso
A general study of the history of music development from the standpoint of form. Open to music majors and non-music majors.

20a **SURVEY OF MUSIC LITERATURE. (3) II, IV** Capurso
This course is intended for non-music majors desiring to acquire an understanding of the literature of music. It consists of a presentation of the composers and works representing the polyphonic and classic periods. Opportunity is afforded for extensive listening to recorded music together with lecture presentation, demonstrations, and collateral reading.

20b **SURVEY OF MUSIC LITERATURE. (3) III, IV** Capurso
Continuation of Music 20a. A study of the symphony, piano music, songs, and opera from Beethoven to the present era. (Not open to music majors.)

† Courses a, b, c open to Freshmen; d, e, f, courses for Sophomores; g, h, i, courses for Juniors, and j, k, l, courses for Seniors.

*22a-c **BAND. (2 ea.) I, II, III** Prindl
For Freshmen enrolled in Military Science.

23a-c **BAND. (2 ea.) I, II, III**
For sophomores enrolled in Military Science.

26 **HIGH SCHOOL METHODS. (3) III, IV** Lewis
Development of knowledge and skills in handling the music programs in junior and senior high schools. This includes study of the adolescent in the junior high school; general music classes; music appreciation and theory classes; organization and training of special music groups as band, orchestra, and glee clubs; material for assemblies and integrated units.

28a-c **CONCERT BAND. (2 ea.) I, II, III** Prindl
For juniors.

29a-c **CONCERT BAND. (2 ea.) I, II, III** Prindl
For Seniors.

†31a-l **APPLIED MUSIC—Woodwind Instruments. (2 ea.) I, II, III** Prindl and Adams

†32a-l **APPLIED MUSIC—Brass and Percussion Instruments. (2 ea.) I, II, III** Prindl

*33a **ELEMENTARY HARMONY, SIGHTSINGING, AND DICTATION. (4) I, III, IV** Sokol
Melodic and rhythmic dictation, drill in sightsinging and keyboard harmony. Harmonizing of given and original melodies, using tonic, dominant, and dominant seventh chords and their inversions. Required of all music majors. **Prerequisite: Music 12b.**

*33b **ELEMENTARY HARMONY, SIGHTSINGING, AND DICTATION. (4) II, III, IV** Sokol
A continuation of Music 33a. Introduction of the dominant ninth and the incomplete dominant dissonance; the sub-dominant triad and the dominant seventh chord and non-harmonic tones. Required of all music majors. **Prerequisite: Music 33a.**

*33c **ELEMENTARY HARMONY, SIGHTSINGING, AND DICTATION. (4) I, III, IV** Sokol
Continuation of 33b. A study of subordinate triads and the chords of the seventh; modulations to closely related keys. Analysis of master works. Required of all music majors. **Prerequisite: Music 33b.**

34a **ADVANCED HARMONY, SIGHTSINGING, AND DICTATION. (4) I, III, IV** Sokol
A continuation from Elementary harmony. Modulation by common chord and by diminished seventh; chromatic alterations of all principal and subordinate triads and seventh chords. Required of all music majors. **Prerequisite: Music 33c.**

34b **ADVANCED HARMONY, SIGHTSINGING, AND DICTATION. (4) II, III, IV** Sokol
Continuation of Music 34a. Modulation by chromatic alterations and further study of chromatic dissonances. Required of all music majors. **Prerequisite: 34a.**

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* Open to Freshmen.

† Courses a, b, c, open to Freshmen; d, e, f, courses for Sophomores; g, h, i, courses for Juniors, and j, k, l, courses for Seniors.

34c ADVANCED HARMONY, SIGHTSINGING, AND DICTATION. (4) III, IV Sokol
Continuation of Music 34b. Modulation by common tone. Further study of chromatic dissonances; scales other than the diatonic, and survey of contemporary harmonic experiments. Required of all music majors. **Prerequisite: 34b.**

†39a-l GLEE CLUB. (1 ea.) I, II, III, IV Lewis and Kiviniemi
Any student in the University may be admitted to the glee club after consultation with the director.

†40a-l ORCHESTRA. (1 ea.) I, II, III Capurso
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. (1) III, IV Capurso
A general study of any particular phase of music or music education; preparation for comprehensive examination, and graduation recital.

110 RESEARCH PROBLEMS IN PEDAGOGY OF THEORY. (3) I, II, III, IV Sokol
An independent course in the teaching of counterpoint and theory to be selected by the instructor on the basis of prerequisite training and practical need. **Prerequisite: Music 33a, 33b, 34a, 34b or equivalent, 12a, and 12b.**

111a RESEARCH PROBLEMS IN MUSIC. (3) I, II, III, IV Capurso
A research course in some phase of music other than history or pedagogy of music theory. The student will confer with the instructor whenever either or both of them deem it advisable.

111b RESEARCH PROBLEMS IN MUSIC. (3) I, II, III, IV Capurso
Continuation of 111a. This course permits research in some phase of music which may, or may not, lead to the Master's Degree.

114a ORCHESTRATION. (3) II, IV Capurso
This course includes a study of the individual instruments of the symphony orchestra and concert band; practice in arranging primarily for the string orchestra; the technique and practice of the fundamentals of orchestral conducting and score reading; and the problems of organizing and developing school bands and orchestras.

114b INSTRUMENTAL CONDUCTING AND SCORE READING. (3) III, IV Capurso
A continuation of 114a which includes a further study of orchestral conducting and arranging for woodwind and brass ensembles and symphony orchestra. Recommended for instrumental majors.

115 CHORAL METHODS AND CONDUCTING. (3) III, IV Lewis
This course is intended for music supervisors majoring in the choral field and will be a study of materials, techniques, and problems of presenting choral literature on the secondary level. Recommended as elective for choral supervisors.

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† Courses a, b, c open to Freshmen; d, e, f, courses for Sophomores; g, h, i, courses for Juniors, and j, k, l, courses for Seniors.

200a, b CREATIVE WORK IN HOMOPHONIC FORMS OF COMPOSITION. (3 ea.) II, IV
A detailed study of the structure of the theme and variations, the rondo, and the sonata-allegro. Analysis of works of the masters is supplemented by original composition in the various forms. **Prerequisites: Music 34c and 13b.**

201a, b CREATIVE WORK IN CONTRAPUNTAL FORMS OF OF COMPOSITION. (3 ea.) III, IV
A detailed study of the structure of the chorale, the motet, the canon, the invention, and the fugue. Analysis of works of the masters is supplemented by original compositions in these forms. **Prerequisites: Music 12b and 34c.**

204 ADVANCED BAND TECHNIQUE. (3) III, IV Prindl
An advanced course in band technique with concentration on band organization and materials, the technique of band conducting and general preparation of band instrumentations for balance, the study of transposition of band repertoire, and an intensive study in the field of band arranging.

208a-d SEMINAR IN MUSIC. (1 ea.) I, II, III, IV Capurso
One two-hour meeting is held each week for discussion of current developments in music found in recent books and periodicals.

210 BAROQUE MUSIC. (3) II Capurso
An intensive study of the baroque period beginning with the close of the Renaissance and culminating with Handel and Bach. It considers the underlying religious, philosophic, social, and scientific influences of that era and their effect upon the forms and style of music. **Prerequisite: Music 19a, b or 20a, b.**

211 THE CLASSIC AND ROMATIC PERIODS. (3) I Capurso
An intensive study of keyboard compositions, chamber music and early orchestra writing in Italy, France, and Germany; and the music of the romantic period in Germany and France. Lectures, conferences, and reports. **Prerequisite: Music 19a, b or 20a, b.**

212 MUSIC IN AMERICA. (3) II Capurso
This course considers the history of music in America from Colonial times to the present day. Analysis of certain important works of contemporary native composers. Recitations, assigned readings, and research. **Prerequisite: Music 19a, b or 20a, b.**

213 INTERPRETATION OF INSTRUMENTAL LITERATURE. (3) III, IV Capurso, Prindl
This course is intended for experienced leaders of school musical organizations, particularly of orchestras and bands. It includes a critical study of the standard classical chamber and symphonic scores and their interpretive problems based upon the composer, period, and style. Lectures, demonstrations, and assigned readings. **Prerequisite: Music 114a or the approval of the instructor.**

214 ADVANCED INSTRUMENTAL CONDUCTING. (3) I, IV Capurso
This course is intended to develop the ability to interpret and conduct the larger forms written for the symphony orchestra. It provides further opportunity for practice in reading from the full score and includes problems of phrasing, balance, tempo, timbre, and dynamics. Lectures and drill periods with the Uni-

versity Symphony Orchestra. **Prerequisite: Music 114a, b or with the permission of the instructor.**

215a-c **APPLIED MUSIC—Piano.**
(2 ea.) I, II, III, IV Montgomery and Morgan
A study of advanced major piano works such as the sonatas and concertos of Mozart, Beethoven, Brahms, and other masters. Two half-hours of individual lesson a week. A term paper approved by the instructor, which gives evidence of research in some phase of piano literature, style, or composer; and at least one recital each quarter. **Prerequisite: Twelve quarter hours of accredited undergraduate study in Applied Music, Piano.**

216a-c **APPLIED MUSIC—Strings. (2 ea.) I, II, III, IV** Sokol
A study of the literature of the violin, viola, or violoncello, including the advanced studies and caprices of Fiorillo, Rode, Dont, Campagnoli, Goltermann, and others; and the major sonatas and concertos of Beethoven, Tschaikovsky, Brahms, etc. A term paper approved by the instructor which gives evidence of research in some phase of string literature, style, or composer; and at least one recital each quarter. **Prerequisite: Twelve quarter hours of accredited undergraduate study on the string instrument in which graduate work is desired.**

217a-c **APPLIED MUSIC—Voice.**
(2 ea.) I, II, III, IV Kiviniemi and Kuhlman
A study of the more advanced type of song literature covering the classic, romantic, and modern periods. A term paper approved by the instructor which gives evidence of research in some phase of solo vocal literature, style, or composer, and at least one recital each quarter. **Prerequisite: Twelve quarter hours of accredited undergraduate study in voice.**

NOTE: Courses from the following list will be given as a demand for them justifies: 43a, b Survey of Musical Theory; 218a, b, c Applied Music, Organ; 203, Choral Literature and Technique.

PHILOSOPHY

John Kuiper and Jesse DeBoer.

UPPER DIVISION REQUIREMENTS—Junior and Senior Years

Requirements in Field of Concentration: Sixty quarter hours of advanced work, including the major courses, which may be elected in either (1) the field of Literature, Philosophy, and the Arts, or (2) the field of Social Studies.

Requirements for a Major. Prerequisite: 8 quarter hours in Philosophy. **Required:** A minimum of 22 quarter hours in Philosophy; Philosophy 35a-c; and a comprehensive examination in the senior year.

A INTRODUCTION TO THE HUMANITIES THROUGH THE STUDY OF PHILOSOPHY. (3) I, II, III, IV Kuiper and DeBoer
Special attention will be devoted to the periods from the Renaissance to modern times. Lectures, discussions, and required reading from representative works. Designed to satisfy one of the Lower Division requirements in the Humanities.

21 INTRODUCTION TO PHILOSOPHY. (4) I, II, III, IV Kuiper
An elementary study of the principal types of philosophy, past and present.

31 LOGIC. (4) I, II, III, IV Kuiper
A study of the logical principles underlying valid thought.

35a-c TUTORIAL WORK IN PHILOSOPHY. (1 ea.) I, II, III Kuiper
Weekly conferences with major students; reports on assigned readings; readings in preparation for the comprehensive examination. Required of senior majors in Philosophy.

51 ETHICS. (4) I, II, III, IV DeBoer
A study of morality and right action, and an introduction to a general theory of value.

At least six of the following courses will be offered during 1947-48.

101a HISTORY OF PHILOSOPHY. (4) DeBoer
A survey of the philosophical thought of ancient Greece and Rome, and of medieval Christendom.

101b HISTORY OF PHILOSOPHY. (4) Kuiper
A survey of modern European and American philosophy from the Renaissance to contemporary times.

102 CONTEMPORARY PHILOSOPHY. (4) DeBoer
A study of contemporary philosophic tendencies, notably naturalism, empiricism, pragmatism, idealism, and neoscholasticism. Bertrand Russell, John Dewey, George Santayana, A. N. Whitehead, and Henri Berguson are among the philosophers to be discussed.

106 REPRESENTATIVE MODERN PHILOSOPHERS. (4) Kuiper
A study in the original works of the chief figures in modern philosophy. Special attention will be given to Descartes, Spinoza, Locke, Hume, and Kant.

109a-d INDEPENDENT WORK. (4 ea.) I, II, III, IV Kuiper and DeBoer
Open only to students who have distinguished themselves in Philosophy or in allied subjects.

115 INTERMEDIATE LOGIC. (4) Kuiper
A second course in logic, including the logic of classes, of relations, of propositions, and of propositional functions; the theory of deductive systems; and a consideration of the rival schools of contemporary logical theory.

118 PLATO AND ARISTOTLE. (4) DeBoer
A study in English of the chief dialogues of Plato and of Aristotle's Ethics, Politics, and Metaphysics.

120 GREAT RELIGIONS OF THE WORLD. (4) DeBoer
A study of six religions in relation to the culture in which they arose: Shinto, Hinduism, Buddism, the religion of ancient Greece, Judaism, and Christianity.

201a, b SEMINAR IN PHILOSOPHY. (2, 2) Staff
One 2-hour meeting a week for discussion of current developments in Philosophy as found in books and periodicals. Readings and reports.

210a, b **TYPES OF LOGICAL THEORY.** (4, 4) Kuiper
An intensive study of recent and contemporary contributions to logical theory: Whitehead and Russell, C. I. Lewis, R. Carnap, John Dewey, and others.

220a, b **RESEARCH IN PHILOSOPHY.** (4, 4) Staff
This course is primarily intended for advanced students who desire and are prepared to do research in logic and epistemology.

PHYSICAL EDUCATION

Charles William Hackensmith, Bess G. Donaldson, Joseph Jenkins Huddleston†, Bernard Mason Johnson, Milo Gist Karsner†, Charles Kuhn, Harry Current Lancaster, Ann Elizabeth Lankford, William E. McCubbin, Rome Rankin, Revell Estill Shaw, Florence Offutt Stout, Jean Willis Sudduth, Joyce Louise Wakefield, and Louise Wilson.

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

Requirements in Field of Concentration: Sixty quarter hours of advanced work in the field of Biological Sciences, including the major work.

Requirements for a Major. Prerequisites: Zoology, 1a, 1b and 1c; for Men, Physical Education 30, 31, 32, 36 and 37 and 38; for Women, Physical Education 30, 31, 32, 36, 37 and 38. **Required:** Physical Education 123, 125, 120a and b, (For Women, 115) 60a, 60b, and 60c, Anatomy and Physiology 4 and 5, and Hygiene 7. Minimum on Major, 22 credits. Comprehensive examination senior year.

For teacher certification requirements, check with Dean of Education College and Head of Department of Physical Education.

Service Courses for Men

For information on meeting the physical education requirement, uniforms and fees see page 77.

Service Courses for Women

For information on meeting the physical education requirement, uniforms and fees see page 77.

*2 **TAP DANCING.** (1) I, II, III, IV Wakefield
Fundamental Steps designed for beginners. Three hours per week.

*19 **FOLK DANCING.** (1) I, III, IV Lankford
Participation in folk dances of various countries. Three hours per week.

*20 **BADMINTON.** (1) I, II, III, IV Lankford
Fundamentals of badminton. For beginners. Three hours per week.

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* Open to Freshmen.
† See appended list of leaves of absence, resignations, deaths, etc., p. 399.

*22 **BOWLING. (1) I, II, III** Wakefield
Participation and instruction in Bowling. Special charge of $3.00 to $4.00 for bowling alley fees. Three hours per week.

*27 **MODERN DANCE. (1) I, II, III, IV** Shaw
Class work in technique, dance form, and rhythmical activities with creation of patterns by class. Three hours per week.

*28 **HORSEBACK RIDING. (1) I, II, III** Wakefield
Fundamentals of riding. Beginners, and elementary class. Special fee of $8.00 to $12.00. Three hours per week.

*29 **ADVANCED MODERN DANCE. (1) II, IV** Shaw
Practice in technique and composition of contemporary dancing. **Prerequisites: Physical Education 23 or 27.** Three hours per week.

Professional and Teacher Training Courses

*30 **CALISTHENICS, APPARATUS AND TUMBLING. (3) I, II** Staff
Theory and practice of various systems of Calisthenics, including the German and Swedish. Demonstration and practice of the fundamentals of tumbling, pyramid building, and exercises on the various pieces of gymnasium apparatus. Separate class for men and women. Six hours per week.

*31 **SPORTS AND GAMES. (3) II, III, IV** Staff
Instruction and practice in individual and team sports, low organized games, relays, contests, and mass athletics. Separate class for men and women. Six hours per week.

*32 **RHYTHMICAL ACTIVITIES. (3) I, II, III, IV** Wakefield
Fundamentals of rhythm and basic dance steps in social, tap, and folk dancing. Development of appreciation of the dance and skill in executing dances. Women only. Six hours per week.

*33 **FOOTBALL COACHING FUNDAMENTALS. (3) I, IV** McCubbin
Theory and Practice in coaching fundamentals involved in football. Men only. Six hours per week.

*34 **BASKETBALL COACHING FUNDAMENTALS. (3) II, IV** McCubbin
Theory and Practice in coaching fundamentals involved in basketball. Men only. Six hours per week.

*35 **TRACK AND BASEBALL COACHING FUNDAMENTALS. (3) III, IV** McCubbin
Theory and Practice in coaching fundamentals involved in track and baseball. Men only. Six hours per week.

*36 **FIELD SPORTS FOR WOMEN. (3) I, III, IV** Lankford
Theory and practice of techniques and teaching procedure of field sports for women including hockey, soccer, field ball, speed ball, etc. Women only. Six hours per week.

*37 **BASKETBALL AND VOLLEYBALL COACHING FUNDAMENTALS FOR WOMEN. (3) II, IV** Lankford
Theory and practice of techniques and teaching procedures of basketball and volleyball for women. Special emphasis on coaching fundamentals of these sports. Women only. Six hours per week.

* Open to Freshmen.

*38 **GOLF AND TENNIS. (3) I, III, IV** Lankford
Theory and practice in methods and principles involved in the teaching of the fundamental skills and advanced coaching techniques in golf and tennis for women. Women only. Six hours per week.

42 **PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL. (5) I, II, III, IV** Gilb
Required of all who wish to qualify for the Elementary School Teaching Certificate. Materials, practice, and techniques in physical education activities suitable for elementary school children. Consideration of the significance of physical education in the elementary school and responsibilities of the class room teacher for leadership. Five hours per week.

55 **TECHNIQUE AND PROCEDURE OF THE DANCE. (3) II, III, IV** Shaw
An analysis of techniques and teaching procedures of traditional dance steps and movements. A consideration of the relationship of musical and movement patterns. Projects to foster the development of the student's analytical and critical faculties pertaining to the dance. Women only. Three hours per week.

60a-c **TUTORIAL WORK IN PHYSICAL EDUCATION. (1 ea.) I, II, III** Staff
This is work to be given in connection with the comprehensive examination. For A. & S. Majors only. Two hours per week.

115 **HISTORY AND SURVEY OF THE DANCE. (4) II, III, IV** Shaw
A study of the history and development of the various dance forms, including ballet dances, free dances, folk dances, national dances, eastern dances, American Indian dances, and a study of modern tendencies, and relation of dancing to physical education. Four hours per week.

120a, b **KINESIOLOGY. (3, 3) I, II, III** Hackensmith
A study of the principle types of exercise with special consideration to the muscular and mechanical factors involved in bodily movement and function. A detailed study of the effects on bodily development and efficiency of muscular activity. A study of the prevention and treatment of certain physical defects and deformities through a knowledge of body mechanics. **Prerequisite: Anatomy and Physiology 4 and 5.** Three hours per week.

123 **HISTORY AND PRINCIPLES OF PHYSICAL EDUCATION. (5) II, III** Hackensmith
Study of the historical development of Physical Education, and contributions of the individual and organizational movements. An interpretation of the biological, psychological, and sociological principles of physical education. Five hours per week.

125 **ADMINISTRATION AND ORGANIZATION OF RECREATION. (4) III, IV** Staff
A study of policies and procedures involved in organization and administration of recreation for children, youth, and adults. Four hours per week.

126 **THE OPERATION AND FUNCTION OF PLAYGROUNDS AND COMMUNITY CENTER RECREATION. (4)** Pherigo
Planning the program, choosing activities, development of local resources and facilities for the playground and community center. Four hours per week.

* Open to Freshmen.

129 PHYSICAL EDUCATION IN THE SECONDARY SCHOOL. (4) I, IV Lankford
Required of all physical education majors who wish to qualify for teacher certification as physical education teachers on the secondary school level. Study of theory, practice, and methods of teaching physical education activities and programs for secondary school pupils. Four hours per week.

131 ADVANCED BASKETBALL. (3) III, IV McCubbin
Lectures and recitation on theory and practice of team play in basketball. Special emphasis is placed on systems of offense and defense as used by the leading coaches throughout the country. Three hours per week. **Prerequisite: For undergraduates, P. E. 34, Men only.**

142 ADVANCED FOOTBALL. (3) II, IV McCubbin
Lecture and recitation on the theory of football. Special emphasis is placed on generalship, signal systems, scouting, and conditioning of players. Football is studied from the coach's viewpoint. **Prerequisite: For undergraduates, P. E. 33, Men only.** Three hours per week.

149 ADMINISTRATION OF PHYSICAL EDUCATION AND ATHLETICS. (4) I, IV Staff
Policies and procedures of administration on the secondary school and collegiate levels. Special emphasis on construction and care facilities, equipment, and supervision of personnel. Four hours per week.

151 ORGANIZATION OF INTRAMURAL SPORTS. (3) I, IV McCubbin
A study of the history and development of intramural sports on the elementary, secondary, and college levels. Lecture, recitation, and practice in accepted methods of organizing and administering intramural sports. Three hours per week.

200 GRADUATE SEMINAR IN PHYSICAL EDUCATION. (3) I, IV Hackensmith
Graduate students majoring in physical education who are engaged in writing these should register for this course. Three hours per week.

201a RESEARCH IN PHYSICAL EDUCATION. (4) I, II, III, IV Hackensmith
The theory and practice of the measurement of strength, size and maturity, power, motor educability, and agility. Tests of track and field events, general motor capacity and ability, endurance, and special abilities. A study of the requirements of a good physical efficiency test and the use of scoring tables. Four hours per week.

201b RESEARCH IN PHYSICAL EDUCATION. (4) I, II, III, IV Hackensmith
The use of tests in classification and achievement. Paper and pencil tests, rating scales, measurement in health field, scoring and using the medical examination, cardiovascular tests, body mechanics, problems in grading physical education activities, and methods of test construction. Four hours per week.

202 PROBLEMS COURSE IN CONTEMPORARY MOVEMENTS IN PHYSICAL EDUCATION. (4) II, IV Rankin
A detailed study and analysis of various foreign systems and procedures in physical education and athletic activities, including Ger-

many, Denmark, Sweden, England, Italy, Russia, Japan, Olympic Games, and present athletic and physical education trends in the United States. Four hours per week.

203 **CURRENT STUDIES IN THE ADMINISTRATION OF PHYSICAL EDUCATION. (3) II, IV** Staff
For Administrative Officers, Directors of Physical Education, and Leisure Time Activities. A study of representative programs of physical education and standards for evaluating programs. Three hours per week.

204 **CURRENT STUDIES IN THE ADMINISTRATION OF ATHLETICS. (3) III, IV** Staff
For Athletic Directors, Supervisors, and Athletic Coaches. A study of representative athletic administration procedures for colleges, public school system, and municipal athletic leagues. Three hours per week.

PHYSICS

William Snyder Webb, Samuel Judson Allen, Lewis Wellington Cochran, Clyde Brooks Crawley, William Richard Elliott, Harold Graham Flanary, Thomas Marshall Hahn†, Otto Townsend Koppius, Karl Otto Lange, Joseph Tinsley Meers, Waldemar Noll*, Louis Arthur Pardue, Franklin Benjamin Pauls, Bertrand Pettus Ramsay†, William O. Shropshire, Jarvis Todd†, Fred W. Warburton†.

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

Requirements in Field of Concentration: Sixty quarter hours of advanced work in the field of Physical Sciences, including the major work.

Requirements for a Major. Prerequisite: Physics 3a-c; Mathematics 17, 3, and 19. **Required:** Mathematics 20a, 20b, Physics 125c, and a minimum of 22 quarter hours of advanced work in Physics; and a comprehensive examination in the senior year.

1a **GENERAL ELEMENTARY PHYSICS. (5) I, II, III, IV** Staff
An elementary course covering Mechanics of Solids, Liquids, and Gases. Lectures and recitations, four hours; laboratory, two hours. **Prerequisite: High School or College Algebra.**

1b **GENERAL ELEMENTARY PHYSICS. (5) II** Staff
Continuation of Physics 1a, covering Magnetism and Electricity. Lectures and recitations, four hours; laboratory, two hours. **Prerequisite: Physics 1a.**

1c **GENERAL ELEMENTARY PHYSICS. (5) I, III** Staff
Continuation of Physics 1b, covering Heat, Sound, and Light. Lectures and recitations, four hours; laboratory, two hours. **Prerequisite: Physics 1a.**

3a **GENERAL COLLEGE PHYSICS. (6) I, II, III, IV** Staff
An advanced general course covering Mechanics of Solids, Liquids, and Gases. Lectures and recitations, four hours; laboratory, four

† See appended list of leaves of absence, resignations, deaths, etc., p. 399.

hours. **Prerequisite: College Algebra and Trigonometry, Mathematics 19; College Chemistry or equivalent; concurrent: Mathematics 20a.**

3b GENERAL COLLEGE PHYSICS. (6) I, II, III, IV Staff
An advanced general course, covering Electricity and Magnetism. Lectures and recitations, four hours; laboratory, four hours. **Prerequisite: Physics 3a.**

3c GENERAL COLLEGE PHYSICS. (6) I, II, III, IV Staff
An advanced general course, covering Heat, Sound, and Light. Lectures and recitations, four hours; laboratory, four hours. **Prerequisite: Physics 3a.**

7a GENERAL ELEMENTARY PHYSICS. (7) Staff
An elementary course covering Mechanics of Solids, Liquids and Gases; and Heat. (Given only First Term, Summer Quarter.) **Prerequisite: High School or College Algebra.**

7b GENERAL ELEMENTARY PHYSICS. (7) Staff
An elementary course covering Magnetism, Electricity, Sound and Light. (Given only Second Term, Summer Quarter.) **Prerequisite: Physics 7a or equivalent.**

***15a-c TUTORIAL WORK IN PHYSICS. (2 ea.)** Staff
A conference course for prospective major students in Physics. Conference and laboratory work, three hours.

***51 INTRODUCTION TO PHYSICS. (3) I, II, IV** Webb
A lecture demonstration course covering the subjects of Mechanics of Solids, Liquids, and Gases.

***52 INTRODUCTION TO PHYSICS. (3) II, IV** Webb
A lecture demonstration course covering the subjects of Electricity and Magnetism. **Prerequisite: Physics 51.**

***53 INTRODUCTION TO PHYSICS. (3) III, IV** Webb
A lecture demonstration course covering the subjects of Heat, Sound, and Light. **Prerequisite: Physics 51.**

104 THEORETICAL MECHANICS. (6) I Crawley
This course begins with a careful statement of the fundamental laws of mechanics and the conditions under which they hold. Defined quantities are introduced logically. The work is usually based on some standard text but will be supplemented by lectures. The student is expected to solve a representative list of problems. Lectures and recitations, six hours. **Prerequisite: Physics 3b and 3c, and Mathematics 20b.**

108 THEORY OF LIGHT. (5) II Crawley
This course is designed to provide a foundation for the study of the nature of light and optical phenomena. Six topics are treated: wave motion, Maxwell's definition of physical optics, geometrical optics, interference, diffraction, and optical instruments. **Prerequisite: Physics 3b and 3c, and Mathematics 20b.**

110 SPECTROSCOPY. (5) Koppius and Crawley
This course considers the production, recording, and interpretation of spectra, both atomic and molecular; Bohr-Sommerfeld theory, energy levels, normal and excited states, absorption and Raman spectra. The laboratory will emphasize those principles and techniques which are fundamental in spectroscopy: the general

* Open to Freshmen.

principles of spectroscopic apparatus; theory and use of prism and grating spectographs; light sources, photographic procedures; wavelength and intensity determinations; spectrophotometer and densitometer; qualitative and quantitative spectrum analysis. **Prerequisite: Physics 3b and 3c, and Mathematics 20b.**

111 **ELECTRICITY AND MAGNETISM. (5) I** Crawley
A study of the fundamental theory of electricity and magnetism, dealing with electrons. The physical concepts of electrical quantities are emphasized and systems of units defined. The course covers electrostatic forces and energy, conductors and dielectrics, electrolysis, thermoelectricity, magnetic forces and energy of currents, magnetization of iron, transient and alternating currents, and Maxwell's waves. **Prerequisite: Physics 3b and 3c, and Mathematics 20b.**

114 **VACUUM TUBES AND CIRCUIT THEORY. (4) IV** Crawley
The theory of vacuum tubes and the measurement of their characteristics; amplifiers and oscillators; piezoelectric phenomena; radiation and propagation of high frequency electric waves; measurement of circuit constants, etc. **Prerequisite: Physics 3b and 3c, and Mathematics 20b.**

117 **THEORY OF HEAT. (3) I** Koppius
A lecture and problems course dealing with the fundamental principles of heat phenomena. Topics included are: high and low temperatures; elementary kinetic theory; specific heat relations, both classical and modern; expansion; conduction; radiation; temperature dependence of physical quantities such as viscosity, surface tension, elasticity, etc. **Prerequisite: Physics 3b and 3c, and Mathematics 20b.**

119 **PRINCIPLES OF X-RAYS. (4) III** Pardue
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. **Prerequisite: Physics 3b and 3c, and Mathematics 20b.**

120 **X-RAY TECHNIQUE. (3) II, IV** Crawley
An introductory course in x-ray technique. The first half of the course deals with the design and operation of x-ray equipment, the physical basis of voltage, current, time and distance factors, intensifying screens, darkroom procedure, etc. The second half is devoted to practice in the radiography of the extremities, chest, head, teeth, etc. **Prerequisite: Physics 1b and 1c.**

123a **PRINCIPLES OF THERMODYNAMICS. (3) II** Koppius
A lecture and problems course covering the first and second laws of thermodynamics. Derivation of thermodynamic relations and their application to processes in physics and allied sciences. Some of the topics considered are: Equation of state for ideal and real gases, specific heat relations, continuity and changes of state, vapor and osmotic pressure, thermodynamic functions and thermodynamic equilibrium. **Prerequisite: Physics 117 or equivalent.**

123b **PRINCIPLES OF THERMODYNAMICS. (3) III** Koppius
A continuation of Physics 123a. The phase rule and phase equilibria, equilibrium in liquid systems, ionic equilibrium, electro-

motive force and free energy, the solid state, surface phenomena, radiation, Nernst's heat postulate. **Prerequisite: 123a.**

125a-d INDEPENDENT WORK IN PHYSICS. (4 ea.) Staff

131 EXPERIMENTAL PHYSICS: ELECTRICITY. (3) I, II Crawley
The course provides advanced laboratory practice in electrical measurements. It includes calibration and use of the quadrant electrometer, the d'Arsonval galvanometer and the Type K Potentiometer; studies of dielectrics and the magnetization of iron; measurements of capacitance, resistance and inductance; absolute determinations of electrical quantities. **Prerequisite: Physics 111, or equivalent.**

135 EXPERIMENTAL PHYSICS: ATOMICS AND NUCLEONICS. (3) III Pardue
Methods of producing and detecting nuclear particles will be studied. Instruments to be employed in measurements are ionization chambers, Geiger counters, cloud chambers, photographic films, mass spectrographs, and Van de Graaff generator. Measurements will be made on half-lives, absorption coefficients, ranges, particle energies. The experiments include methods appropriate to alpha particles, electrons and positrons, photons, neutrons, fisson fragments and mesons. **Prerequisite or concurrent: Physics 155.**

137 EXPERIMENTAL PHYSICS: HEAT. (3) Koppius
An advanced laboratory course in modern methods of measuring thermal quantities. Opportunity is provided for using the gas thermometer, resistance thermometer, thermopiles and various types of radiation pyrometers. Construction and calibration of thermocouples. Determination of coefficients of expansion, vapor pressure and densities, viscosity, surface tension, freezing and boiling points, specific and latent heats, ratio of specific heats, heats of combustion, thermal conductivities, radiation constants, etc. **Prerequisite: Physics 117, or equivalent.**

138 EXPERIMENTAL PHYSICS: LIGHT. (3) II Koppius and Crawley
This course is an advanced laboratory study of lenses, mirrors, prisms, gratings, light sources, filters, apertures, and combinations of these elements in optical systems. The experiments include measurements with such instruments as the photometer, the spectrometer, the interferometer, and the polarimeter, etc. **Prerequisite: Physics 108, or equivalent.**

155 FUNDAMENTAL ATOMIC AND NUCLEAR PHYSICS. (5) III Pardue
This course will stress the fundamental principles of atomic and nuclear theory and practice thereby providing a foundation for students interested either in applied nucleonics or in a broader study of atomic and nuclear physics. Topics: atomic nature of matter, electricity and radiant energy; atomic and molecular structure; general laws of radioactivity; alpha, beta, and gamma radiations and their interaction with matter; nuclear structure; artificial transmutation of nuclei, nuclear fission. **Prerequisite: Physics 3b and 3c, and Mathematics 20b.**

Courses from the following list will be given as a demand for them justifies: Physical Optics, Kinetic Theory of Matter, Dynamics of a Particle, Electromagnetic Theory of Light, Transient Electric and Vacuum Tube Phenomena, Quantum Theory, Theore-

tical Physics, Thermodynamics, X-Rays and their Application to Physical Problems, Relativity, Electrodynamics, Magnetism.

For the description of these graduate courses, see the Graduate School Bulletin.

220a, b SEMINAR. (1, 1) Staff
A weekly meeting of the staff and advanced students for the presentation and discussion of recent developments in physics as reported in the current literature, and of work in progress in the department. Credit is given only to those who satisfactorily present papers.

226a, b RESEARCH IN PHYSICS. (4, 4) Staff

227a, b RESEARCH IN PHYSICS. (6, 6) Staff

POLITICAL SCIENCE

Amry Vandenbosch, Alexander T. Edelmann, Gladys M. Kammerer, Charles Povlovich, John Estill Reeves†, William D. Stout, Ernest Greene Trimble, Kenneth E. Vanlandingham, and Assistants.

UPPER DIVISION REQUIREMENTS—Junior and Senior Years

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

Requirements for a Major. Prerequisite: Political Science 51 and 80. **Required:** At least one course in each of four fields of Political Science, including one course each in Constitutional Development and Political Theory; Political Science 190; minimum of 24 quarter hours of advanced work in Political Science; a comprehensive examination in the senior year.

***8a EUROPEAN CIVILIZATION TO 1815. (5) I, II, III, IV** Staff
For content see History 8a.

***8b EUROPEAN CIVILIZATION SINCE 1815. (5) I, II, III, IV** Staff
For content see History 8b.

***10a AMERICAN CIVILIZATION, 1607-1865. (5) I, II, III, IV** Staff
For content see History 10a.

***10b AMERICAN CIVILIZATION SINCE 1865. (5) I, II, III, IV** Staff
For content see History 10b.

***15 PROBLEMS OF CITIZENSHIP. (5) I, II, III, IV** Staff
Public opinion, the newspaper, advertising, the modern economic system, labor problems, unemployment, agriculture, conservation, and the race problem.

***51 AMERICAN GOVERNMENT. (5) I, II, III, IV** Staff
A survey course in the structure and operation of the Federal Government.

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† See appended list of leaves of absence, resignations, deaths, etc., p. 399.
* Open to Freshmen.

52 MUNICIPAL GOVERNMENT. (5) I Reeves
An introductory course in the study of the structure and functions of modern city governments.

80 STATE GOVERNMENT. (5) I, II, III, IV Reeves
A study of the forms and functions of government in operation in the states of the United States.

NOTE: Pol. Sci. 8a and 8b duplicate History 8a, 8b, 4a and 4b; Pol. Sci. 10a and 10b duplicate History 10a, 10b, 5a and 5b; and P. S. 51. No junior or senior admitted to 8a, 8b, 10a, or 10b under any condition.

111 CURRENT PUBLIC AFFAIRS. (2) I, III Staff
An analysis and discussion of the most significant contemporary problems and events affecting public policy.

180a-d INDEPENDENT WORK. (5 ea.) I, II, III, IV Staff
Honors course for seniors who are majors or minors in the department. Consent of the department required for admission.

190 SEMINAR IN POLITICAL SCIENCE. (5) II Staff
Open to major students.

I. Political Parties and Public Opinion

170 POLITICAL PARTIES. (5) I, III Shannon
An analysis of public opinion and pressure groups; a survey of the history, organization methods, and functions of political parties in the United States; with first-hand studies of the individual's participation in government.

173 PUBLIC OPINION. (5) II, IV Shannon
The concept of public opinion; public opinion as an agency of political control; influence of the press, propaganda technique and control; competition of pressure groups for political influence.

RELATED COURSES IN OTHER DEPARTMENTS

Psychology 104, Social Psychology.

II. Public Administration

172 KENTUCKY GOVERNMENT AND CONSTITUTION (5) IV Reeves
An intensive study of government and administration in Kentucky. The course is intended primarily for teachers of civics in the secondary schools, and for teachers of government in colleges.

177a PUBLIC ADMINISTRATION. (5) I, IV Kammerer
A functional study of governmental administration, with emphasis on the theory and practice of administration, the evolution of administrative organization, and staff functions of government, including personnel and financial administration.

177b PUBLIC ADMINISTRATION. (5) II, IV Kammerer
A continuation of Political Science 177a, with emphasis on the line functions of government, including the protection of life and property, judicial administration, law enforcement, public health, welfare, education, conservation, and business regulation.

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
Social Work 100. Public Welfare Adm.
Social Work 112. Fields of Social Work
Social Work 151. Public Assistance

III. Theory

171a EARLY POLITICAL THEORY. (5) I Shannon
The political theories of Plato and Aristotle, and Roman Political Thought. Thomas Acquinas, Dante, Christian Political Thought.

171b MODERN POLITICAL THEORY. (5) II, IV Shannon
Detailed study of Machiavelli, Hobbes, Locke, Rousseau, Millard, and the theories of the American and French Revolutions, the English Utilitarians, Democratic Political Theory, Socialism, and Communism.

175 CONTEMPORARY AMERICAN POLITICAL THOUGHT. (5) III Shannon
Conceptions of the respective roles of national and local governments subsequent to the war between the states; American ideas of laissezfaire and free enterprise; resistance to monopoly; the new nationalism, the new freedom, the new deal, American Development of Socialism and Communism; Current ideas of America's role in world affairs.

RELATED COURSES IN OTHER DEPARTMENTS

Philosophy 101a and 101b. History of Philosophy
Philosophy 110. Making of the Modern Mind

IV. Comparative Government

155a COMPARATIVE GOVERNMENT—PARLIAMENTARY DEMOCRACIES. (5) II, IV Trimble
A study of the governments of England, Ireland, and the British self-governing dominions.

155b COMPARATIVE GOVERNMENT—CONTEMPORARY DICTATORSHIPS. (5) III, IV Trimble
A study of the governments of Europe, including France and Switzerland, and the dictatorships of Italy, Germany, and Russia.

168 THE GOVERNMENTS AND POLITICS OF EASTERN ASIA. (5) I, IV Vandenbosch
An introductory study of the political institutions of China, Japan, the Philippines, and Dutch East Indies and India. Constitutional principles, governmental organization, the party systems, current political issues, and contemporary problems of international relations.

V. Public Law

159a AMERICAN CONSTITUTIONAL DEVELOPMENT. (5) I, IV Trimble
Chronological survey of the making of the constitution and its interpretation through principal statutes and judicial decisions;

some emphasis upon the economic and social interests which influenced this growth.

159b AMERICAN CONSTITUTIONAL DEVELOPMENT.
(5) II, IV 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.

176 LEGISLATION. (5) III Kammerer or Reeves
A functional study of legislative bodies and the process of legislation. Emphasis is placed on the organization of legislative assemblies, the operation of the committee system, the actual process of enactment, including the drafting of bills, and the external controls over legislation.

RELATED COURSES IN OTHER DEPARTMENTS

History 131a, b. English Constitutional History
Law 149. Municipal Corporations
Law 161a, b. Constitutional Law I and II

VI. International Law and Diplomacy

101 LATIN AMERICAN RELATIONS. (5) III, IV Edelmann
The relations between the United States and the Latin American countries, the Monroe Doctrine, Pan-Americanism, Pan-Hispanism, and Latin America and the League of Nations.

150 INTERNATIONAL LAW. (5) II, IV 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; and the treatment of aliens and international claims.

160 AMERICAN FOREIGN RELATIONS. (5) IV Vandenbosch
An examination of the chief principles and problems of American Foreign policies; the part of the House, the Senate, the Courts and the President in the initiation, conduct, and control of foreign policies; the organization of the Department of State, the selection of personnel, and the status and duties of foreign service officers.

165 WORLD POLITICS. (5) I, III, IV Edelmann or 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 devolpment of international conferences, the League of Nations, and the recent foreign policy of the important nations.

RELATED COURSES IN OTHER DEPARTMENTS

Economics 127. International Economic Policies.
History 100a, b. The Diplomacy and Foreign Policy of the United States.
History 120. Europe in the Twentieth Century.
History 135. The British Empire.
History 145. Russia Since 1900.
History 176. France Since 1870.
History 177. Germany Since 1870.
History 190. The Far East.
Law 164. Conflict of Laws.

202 **NATIONAL AND REGIONAL PLANNING.** (5) III, IV Shannon
A survey of conditions leading to efforts at planning. A study of the theories and principles of planning; a detailed investigation of the regional life of selected areas.

204 **INTERNATIONAL RELATIONS AND ORGANIZATION.** (5) III Vandenbosch
Social and economic factors leading to the establishment of international administrative organs, the International Labor Organization, the League of Nations; the United Nations and related organizations.

206 **SPECIAL PROBLEMS IN PUBLIC ADMINISTRATION.** (5) II, IV Shannon
A research course in selected problems of public administration. The problems will be selected in accordance with the needs and desires of students registered for the course.

211 **THE CONSTITUTION AND CIVIL RIGHTS.** (5) II Trimble
The American Conception of civil rights as expounded by the Constitutional Fathers and as interpreted by the courts. The social, economic, and political aspects and implications of these rights. Special attention will be given to the decisions of the United States Supreme Court.

213 **FEDERAL CENTRALIZATION.** (5) I Trimble
A study of the shifting of power and control from the states to the federal government as a result of the economic and social development of the country and the resulting alteration of our constitutional system. Special attention will be given to the development of such provisions of the constitution as the commerce clause, the taxing clause, and of grants-in-aid and the more important measures of the New Deal.

217 **CONTEMPORARY AMERICAN DIPLOMATIC PROBLEMS.** (5) IV Vandenbosch
The following topics would be included in the scope of the course, the specific subjects varying from time to time: the Monroe Doctrine, Pan-Americanism, the Open Door, arbitration, limitations of armament, non-recognition doctrine, problems of the Philippines, American-Canadian relations, American-Mexican relations, and such other current issues along this line as may arise from time to time.

271 **SEMINAR IN CONTEMPORARY POLITICAL THEORY.** (5) IV Shannon
An intensive study of the nature of the Contemporary ideologies of Socialism, Communism, Syndicalism, pluralism, anarchism, facsism, political and social democracy.

PSYCHOLOGY

Frank A. Pattie, John H. Baker, Henry Beaumont†, Harold E. Black†, James S. Calvin, Lysle W. Croft, Graham B. Dimmick, Lyle K. Henry, H. H. Humphreys, Parl L. Mellenbruch, Edward Newbury, Margaret Ratliff, Edwin Straus, A. Bertrand Warren†, W. E. Watson, and Assistants.

For information regarding the Industrial Psychological, Child Guidance, and Educational Testing Services, see "Special Services of the University," pp. 25, 355.

† See appended list of leaves of absence, resignations, deaths, etc., p. 399.

UPPER DIVISION REQUIREMENTS—Junior and Senior Years

Requirements for a Major. Prerequisites: A minimum of 10 quarter hours in Psychology, including Psychology 1 and 8, or their equivalent. **Required:** The student may choose as his field of concentration either the Biological or the Social Science group of subjects. In either case 22 of the 60 quarter hours in the field must be courses in Psychology not open to freshmen.

*1 **INTRODUCTION TO PSYCHOLOGY. (6) I, II, III, IV** Staff
An introduction to the study of the fundamental problems of human behavior. Recitations, demonstrations, and lectures. This course or its equivalent is the prerequisite to all other courses in the department.

*2 **APPLIED PSYCHOLOGY (4) I, II, III, IV** Mellenbruch
The applications of psychological principles to business, industry, and public life. Special emphasis is placed on motivation, efficiency, and influencing the behavior of others. **Prerequisite: Psychology 1 or equivalent.**

5 **PSYCHOLOGY OF ADVERTISING AND SELLING. (4) I, IV** Mellenbruch
General principles of psychology applied to these fields as a fundamental basis for preparing advertisements and plans for selling. Attention is given to research methods and to the social significance of advertising. **Prerequisite: Psychology 1 or equivalent.**

*6 **PERSONALITY. (4) I, II, III, IV** Ratliff and Newbury
An introductory course in the field of personality with special emphasis upon the biological and social factors involved in personality development. Four hours of lecture a week. **Prerequisite: Psychology 1 or equivalent.**

7 **PSYCHOLOGY OF THE CHILD. (4) I, II, III, IV** Humphreys
The development of behavior from birth to maturity. The problems of conduct arising during infancy, childhood, and adolescence in relation to child care and training. **Prerequisite: Psychology 1 or equivalent.**

8 **INDIVIDUAL DIFFERENCES. (4) I, II, III, IV** Newbury
An introduction to the study of individual differences in behavior in relation to measurement in psychology. The relation of such factors as race, sex, heredity, physical constitution, environment, and training to differences in behavior will be considered. This course is a prerequisite to Psychology 101, 102, 103, and 105. Four hours of lecture a week. **Prerequisite: Psychology 1 or equivalent.**

101 **PRACTICE IN TESTING: INTELLIGENCE TESTS. (3) I, IV** Mellenbruch
This course provides advanced laboratory practice in the measurement of intelligence by individual techniques. Six hours a week. **Prerequisite: Psychology 8 or equivalent.**

102 **PRACTICE IN TESTING: PERSONALITY TESTS. (3) II** Mellenbruch
The purpose of this course is to give the student practical training and experience in the use of a selected list of personality tests and closely related techniques, commonly used in evaluating the non-

* Open to Freshmen.

intellectual aspects of personality. Six hours a week. **Prerequisite: Psychology 8 or equivalent.**

103 PRACTICE IN TESTING: APTITUDE AND TRADE TESTS. (3) III Mellenbruch
This course provides laboratory practice in the use, scoring, and interpretation of industrial tests used in the fields of vocational and educational guidance and selection. Six hours a week. **Prerequisite: Psychology 8 or equivalent.**

104 SOCIAL PSYCHOLOGY. (4) II White
Description and explanation of social phenomena in terms of the original and acquired reaction systems of the individual. So-called types are characterized in respect to the social problems they present. Topics given special consideration: Crowds, mob behavior, propaganda, and nationalism. **Prerequisite: Psychology 1.**

105 EMPLOYMENT PSYCHOLOGY. (4) II Beaumont
Emphasis is placed on the characteristics of an effective interview, the significance of certain items in the application blank, the use of objective tests in selection and the relation of adjustment, interests, special abilities, and experience to job fitness. Opportunities are provided for practice in interviewing and evaluating essential information in employment work. Three hours of lecture, two hours of laboratory a week. **Prerequisite: Psychology 8 or equivalent.**

106 INDUSTRIAL PSYCHOLOGY. (4) I, III Beaumont
Applications of psychology to industrial personnel problems: training and upgrading of employees, merit ratings, factors involved in industrial fatigue, surveys of attitudes, improvement of morale, reduction of turnover and absenteeism, safety promotion, providing incentives, welfare provisions, etc. Opportunities are provided for observation of successful methods in use in industrial situations. three hours of lecture, two hours of laboratory a week. **Prerequisite: Psychology 1 or equivalent.**

109 EXPERIMENTAL PSYCHOLOGY: THE SENSES. (3) I Calvin
The nature of the adequate stimuli, the sensory responses, and the techniques of measuring thresholds are the chief topics. Some consideration is given to spacial and form responses. One hour lecture, four hours laboratory. **Prerequisite: Psychology 1.**

110 EXPERIMENTAL PSYCHOLOGY: THE PERCEPTUAL PROCESS. (3) II Calvin
Attention, association, thinking, feeling, and problem solving are investigated experimentally. The primary purpose of the experiments is to acquaint the student with the laboratory techniques involved in study of the above concepts. One hour lecture, four hours laboratory. **Prerequisite: Psychology 1.**

113 PSYCHOLOGY OF LEARNING. (3) III Calvin
An experimental study of the learning process with an analysis of types of learning. The lectures are centered around the topics of the nervous mechanism in learning and the conditioned response. In the laboratory, the conditions which affect learning are studied. Examples of such conditions are: the effect of drugs, the relation to learning of length, amount and complexity of the material, and of the mode of attack. One hour lecture and four hours laboratory a week. **Prerequisite: Psychology 1.**

114 ABNORMAL PSYCHOLOGY. (4) I, IV Ratliff
An intensive course on disturbed conduct and thinking studied from both the theoretical and the practical points of view. The

major psychoses and neuroses are given special consideration. Some opportunity for clinical observation is provided. **Prerequisite: Psychology 1.**

115 GENETIC PSYCHOLOGY. (4) II, IV Newbury
Influence of hereditary factors in the development of human behavior, with a critical survey of the problem and the evidence in connection with certain psychological traits such as musical and other special abilities, intelligence, insanity, and interests. **Prerequisite: Psychology 1.**

116 ANIMAL BEHAVIOR. (5) II Newbury
Three hours of lecture, four hours of laboratory a week. A survey of the field of animal behavior with special reference to experimental technique. Opportunity for research experience in an animal laboratory. Topics include: problems of heredity and environment, activity, instinct, motivation, learning, sensory discrimination, and personality in subhuman species. Relationships to human problems indicated. **Prerequisite: Psychology 1.**

120a-d INDEPENDENT WORK IN PSYCHOLOGY.
(3 ea.) I, II, III, IV Staff
Designed for advanced students and graduates who undertake minor research problems to be conducted in regular consultation with the instructor. A minimum of six hours time per week is required. **Prerequisite: Major in the Department with a standing of two in psychology courses.**

121 STUDENT PERSONNEL. (4) III, IV 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. **Prerequisite: Psychology 1.**

124 MENTAL HYGIENE. (4) II Ratliff
The objective of the course is to give a general orientation to the subject of mental hygiene, its historical development, its scope and relation to various sciences. The individual and cultural determinants of behavior will be discussed. Not available for credit to students who have had Hygiene 120a. The courses are taught at the same time, and the student may take the course either as Hygiene or Psychology. **Prerequisite: Psychology 1.**

125 EXPERIMENTAL CHILD STUDY. (4) III Humphreys
An advanced course in the psychology of the normal child. The scientific background of experimental and observational method. Opportunities are provided to work with children in the University Nursery, Pre-School, and Elementary School. **Prerequisite: Psychology 7.**

126 MENTAL HYGIENE OBSERVATION. (4) II Ratliff
A continuation of Psychology 124. Students are given the opportunity to apply to concrete cases the principles and concepts developed in 124. **Prerequisite: Psychology 124 or Hygiene 120a. This course is offered also as Hygiene 120b, but cannot be carried in both departments.**

201a-h SEMINAR IN PSYCHOLOGY. (1 ea.) I, II, III 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.

203a-h PROBLEMS IN PSYCHOLOGY. (3 ea.) I, II, III The Staff
Shorter research problems are registered under this number. A minimum of six hours per week is required in consultation with the instructor.

210a-h RESEARCH IN PSYCHOLOGY. (5 ea.) I, II, III The Staff
Research or thesis work may be registered under this number. A minimum of nine hours per week is required on research conducted in consultation with the instructor.

211 MENTAL WORK AND FATIGUE. (4) II Calvin
A laboratory course. Four hours devoted to experiments and one hour discussion each week. **Prerequisite: An advanced course in Experimental Psychology and Elementary Statistics or their equivalent.**

212 THE EMOTIONS. (5) III Calvin
A laboratory course. Four hours devoted to experiments and one hour discussion each week. **Prerequisite: An advanced course in Experimental Psychology and Elementary Statistics or their equivalent.**

213 THE OBSERVATION PROCESS. (5) I Calvin
A laboratory course. Four hours devoted to experiments and one hour discussion each week. **Prerequisite: An advanced course in Experimental Psychology and Elementary Statistics or their equivalent.**

215 PSYCHOMETRICS. (5) II Mellenbruch
An advanced course which considers the treatment and interpretation of human measurements. The course deals with the computation and interpretation of simple, partial and multiple correlations, regressions, equations, and reliability of measures. **Prerequisite: Mathematics 24 or its equivalent.**

217 PSYCHOLOGY OF LANGUAGE. (4) 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.

219 CLINICAL PSYCHOLOGY. (5) III Dimmick
Two hours clinic and two hours lecture. A survey of clinical work on the diagnosis and adjustment of problem children and adults. The course gives practical training and experience with representative cases.

220 HISTORY OF PSYCHOLOGY. (3) I White
An historical presentation of the origin and development of psychological thought in Ancient Greece, rational, modern, empirical, and the beginning of experimental psychology, with the discussion of the various approaches to the science.

221 SYSTEMATIC PSYCHOLOGY. (3) II White
The evaluation of the fundamental concepts and current schools of Psychology.

236 OCCUPATIONAL INFORMATION. (4) I, III Henry
A study is made of the characteristics required for various occupational groups. Emphasis is placed on occupational ability patterns, occupational trends, job opportunities, and working conditions. Three hours lecture, two hours laboratory. **Prerequisite: Psychology 8.**

237 CLINICAL TESTING. (3) I, II, III Watson
Provides the student with extensive experience in the use of clinical diagnostic techniques with a variety of pathological subjects at different age levels. Emphasis will be placed upon the critical analysis and evaluation of the patient's test performances. Special consideration will be given such matters as: Item analysis of subtests, patterns of scatter and differential diagnostic value of characteristic patterns. In the interpretation of test results, a major emphasis will be placed upon the interrelations existing in respect to the total picture presented by the patient as these become meaningfully correlated with the data of the social history, the medical history, and the psychiatric study. Eight hours a week. **Prerequisite: Psychology 101.**

238 THE RORSCHACH TEST. (6) I, II, III, IV Dimmick
The purpose of this course is to introduce the student to the Rorschach test as a clinical instrument. The course provides for practice in administering, scoring, and interpreting the test data derived from a diversity of normal and pathological subjects. Emphasis is placed upon the integration of the Rorschach data with that derived from other sources and its particular value in delineating the effective and conative factors of the personality as these play a dynamic role in the individual's competence in handling his reality relationships. One hour lecture, ten hours laboratory. **Prerequisite: Psychology 219.**

239 THE THEMATIC APPERCEPTION TEST. (3) II, IV Dimmick
This course introduces the student to the Thematic Apperception test as a clinical diagnostic procedure of primary importance in obtaining a picture of the actual thought content, attitudes, and feelings of the patient. Thus the data obtained serve to supplement and fill in the personality frame-work etched in outline by the Rorschach and by other tests of cognitive functions such as tests of intelligence, concept formation, impairment and/or deterioration, etc. The course will provide practice in administering, scoring, and interpreting data from normal and pathological subjects. **Prerequisite: Psychology 238.**

240 THERAPEUTIC PROCEDURES. (4) III Dimmick
This course will present the history, evolution, and rationale of a wide range of interrelated therapeutic procedures. These will be discussed in respect to their indications and contra-indications. Emphasis will be placed upon direct therapy, but supportive and indirect therapy will be accorded consideration. Demonstrations of selected therapeutic procedures will be provided, and the student will be given supervised experience in respect to: (1) Non-directive psychotherapy (interview), (2) Directive psychotherapy (interview), (3) Play therapy, and (4) Use of painting and drawing. **Prerequisite: Psychology 239.**

241 MOTIVATION. (4) I Dimmick
This course will survey our present knowledge, clinical, experimental, and observational, in respect to the affective and conative factors in psychopathological reactions. In this course our interest will center predominantly in the dynamics of human behavior as elaborated in the psychology of Freud and the psychoanalytic school.

300 MEDICAL THERAPEUTIC PROCEDURE. (1) I, II, III Straus
This course presents the rationale, indications, procedures, and results of two important psychiatric therapeutic methods: (1) Electrical and pharmocological shock, and (2) Narcohypnosis or

drug-analytic method. Opportunity for a demonstration of these procedures will be provided and this will be followed by a discussion and interpretation of the results in the light of the total personality picture presented by the patient.

431a-p **SPECIAL FIELD PRACTICUM. (6) I, II, III, IV** White
An intensive course in field work for students planning to get a Ph.D. with a major in clinical psychology. Minimum of twenty hours a week. Laboratory fee, $75.

RADIO ARTS

Elmer Griffith Sulzer, and Lolo Lemme Robinson

*1a **RADIO TODAY. (3) I, IV** Sulzer
The networks, the broadcasting station, electrical transcriptions, radio reception, radio speaking, specialized types of speech programs, oral interpretation scope, problems of pronunciations, and dialects. Lecture and recitation, three hours.

*1b **RADIO TODAY. (3) II** Sulzer
Types of writing, including the commercial continuity, the radio address, the radio play, adaptation of the plot into a script; the musical mike including the fundamental radio musical forms; radio in public service; the preparation of children's programs. Lecture and recitation, three hours.

*1c **RADIO TODAY. (3) III** Sulzer
Broadcasts to schools; the use of sound equipment in schools; building the radio schedule; serving the sponsor; listener problems; the law as it affects broadcasting; radio as a vocation; the newer radio arts (FM, Facsimile, Television); and teaching the broadcaster. Lecture and recitation, three hours.

2a **RADIO ANNOUNCING. (3) I, III** Robinson
The study and practice of radio announcing, with emphasis on studio and microphone techniques, pronunciation, inflection, and adaptation of manner to material. Workshop on WBKY. Recitation and Lecture, two hours; laboratory, two hours. No prerequisite. Not open to freshmen.

2b **RADIO DRAMA. (3) II** Robinson
The uses of drama in radio; methods of interpretation, script reading; the integration of effects (music, manual and recorded sound effects, filter microphones, montages, cross fades, etc.). Workshop on WBKY. Recitation and Lecture, two hours; laboratory, two hours. No prerequisite. Not open to freshmen.

101 **RADIO REGULATIONS. (3) III** Sulzer
An intensive study of Parts 2, 3, and 4 of the Rules and Regulations of the Federal Communications Commission, including various application procedures; the music licensing regulations of ASCAP, SESAC, and BMI, and programming practices; censorship through FCC licensing practices; libel and slander; copyrights as applied to broadcasting. Recitation or lecture, three hours. No prerequisite.

102 **ADVANCED RADIO ANNOUNCING. (3) III, IV** Robinson
The study of techniques and theory pertaining to specialized radio announcing; news commentating, public events, man-on-the-street, the interview, round-table participation and moderation,

* Open to Freshmen.

public forum on the radio; the master of ceremonies; concert announcing and intermission comment. Workshop on WBKY. Lecture and recitation, two hours; laboratory two hours. **Prerequisite 2a.** Not open to freshmen.

ROMANCE LANGUAGES AND LITERATURES

Hobart Ryland, Aida Greenhood, Jane Haselden, J. Eduardo Hernandez*, Margaret Bennett Horsfield*, John Keller, Paulette Lager, Robert J. Niess, Jose Puente, Blaine W. Schick*, Alberta Wilson Server, and Assistants.

UPPER DIVISION REQUIREMENTS—Junior and Senior Years

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

Requirements for a Major. Prerequisite: Junior standing; in French: R. L. 1a, 1b, 2a, 2b; 4a, 4b, or 5a, 5b; 3a, 3b, or 8a, 8b; in Spanish: R. L. 5a, 5b, 7a, 7b, 10a, 10b, 10c; 1a, 1b or 4a, 4b. **Required:** A minimum of 22 quarter hours of advanced work in Romance Languages; R. L. 80a-c. Comprehensive examination in the senior year.

***A An Introduction to the Humanities through the Study of Romance Literature. (3) I, II, III** Staff
An introduction to the Humanities through the study of Romance Literature; lectures, discussions, and required reading from representative works in English translation. Special attention will be devoted to the periods from the Renaissance to modern times. Designed to satisfy one of the lower division requirements in the Humanities. Does not satisfy the foreign language requirement.

***1a ELEMENTARY FRENCH. (5) I, II, III, IV** Staff
The study of the basic principles of the language through grammar, with emphasis on oral practice through the use of oral exercises.

1b ELEMENTARY FRENCH. (5) I, II, III, IV Staff
A continuation of 1a. A short reader is introduced towards the end of the Quarter. **Prerequisite: 1a or one year of high school French.**

2a INTERMEDIATE FRENCH. (4) I, II, III, IV Staff
Supplementary reading. A good pronunciation, a thorough knowledge of grammar and verbs, and reading and conversation are the aims of the course. Rapid reading of ordinary French and the ability to express oneself in French are stressed. **Prerequisites: 1a, b or two years of high school French.**

2b INTERMEDIATE FRENCH. (4) I, II, III, IV Staff
Continuation of 2a. **Prerequisite: 2a or three years of H.S. French.**

3a, b FRENCH CONVERSATION AND COMPOSITION. (3, 3) I, II, III, IV Ryland
This course is designed to give students a fair amount of fluency in the use of the spoken language. The grammar will be developed by the writing of exercises out of class. Vocabulary will be built

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* Open to Freshmen.
† See appended list of leaves of absence, resignations, deaths, etc., p. 399.

by the use of images rather than by translation, i.e. the direct method. **Prerequisite: 2a, b.**

6a-c **FRENCH NOVEL AND DRAMA. (4, 4, 4) I, II, III, IV** Niess
Reading of standard texts in prose, fiction, and drama. Verb drill, dictation, composition, conversation drill, based on some text read and memorized. Reports on assigned reading outside of classroom. **Prequisite: 2a, b.**

8a, b **FRENCH PHONETICS. (4, 4) I, II, III** Schick
A scientific study of French sounds based on the International System of Phonetic Symbols. **Prerequisite: R. L. 2a, b.**

80a-c **TUTORIAL SEMINAR.**
(1 ea.) I, II, III, IV Ryland and Server
To prepare seniors for the Comprehensive Examination. Required of all Majors in Romance Languages during the senior year.

103a, b **ADVANCED PHONETICS. (4, 4) I, II, III, IV** Schick
This course is especially planned for teachers of phonetics both in high school and in college. **Prerequisites: 8a, b and 6a, b.**

109a-c **FRENCH LITERATURE OF THE XIX CENTURY.**
(3 ea.) I, II, III, IV Ryland
During the year some of the standard works are studied. Written reports in French on assigned topics. Outside reading of 1500 to 2000 pages to be assigned when the class has been started. **Prerequisites: 6a, b.**

110a-c **FRENCH LITERATURE OF THE XVII CENTURY.**
(3 ea.) I, II, III, IV Horsfield
A course in the Classic Drama of the XVII Century. During the year the student is expected to read in class plays from the works of Corneille, Racine and Moliere. Other writers of the XVII Century will also be read. **Prerequisites: 6a, b.**

113a, b **ADVANCED FRENCH GRAMMAR.**
(4, 4) I, II, III, IV Ryland or Niess
A study of the finer points of French Grammar. **Prerequisites: 6a, b.**

114a-h **INDEPENDENT WORK. (3 ea.) I, II, III, IV** Staff
Prerequisites: 6a, b.

115a-c **FRENCH LITERATURE OF THE XVIII CENTURY.**
(3 ea.) I, II, III, IV Schick
A study of the representative writers of the XVIII Century with special attention given to Voltaire and Rousseau. **Prerequisites: 6a, b.**

116a-c **FRENCH LITERATURE OF THE XX CENTURY.**
(3 ea.) I, II, III, IV Niess
A study of the modern writers starting with the Symbolist Group and continuing up to the present. **Prerequisite: 6a, b.**

201a, b **FRENCH LITERATURE OF THE RENAISSANCE.**
(4, 4) I, II, III, IV Niess
A course starting with Francois Villon and including such writers as Marot, Rabelais, Calvin, Montaigne, Ronsard, DuBellay, Belleau and Regnier. To be given in French. **Prerequisite: 32 quarter hours of college French**

202a, b **OLD FRENCH. (4, 4) I, II, III, IV** Schick
First Quarter, a study of the syntax and composition of old French. Second Quarter, Reading of texts in old French. **Pre-**

requisite: 2 years of German, 4 years of French, Recommended: 2 years of Latin.

204a ROMANCE PHILOLOGY. (4) I, II, III, IV Schick
A study of the elements of Vulgar Latin. The phonology, etymology, morphology and historical grammar of the various Romance Languages. **Prerequisite: 202a, b.**

204b ROMANCE PHILOLOGY. (4) I, II, III, IV Schick
General trends and comparative Romance Philology. **Prerequisite: 204a.**

205a-h SEMINAR IN FRENCH LITERATURE.
(4 ea.) I, II, III, IV Staff
Prerequisite: 32 quarter hours of college French.

Spanish

5a ELEMENTARY SPANISH. (5) I, II, III, IV Staff
The study of the basic principles of the language through grammar, with emphasis on oral practice through the use of oral exercises.

5b ELEMENTARY SPANISH. (5) I, II, III, IV Staff
Continuation of 5a. A short reader is introduced towards the end of the quarter. **Prerequisite: 5a or one year of high school Spanish.**

7a INTERMEDIATE SPANISH. (4) I, II, III, IV Staff
Review of grammatical principles, composition work, and reading of selected Spanish works. **Prerequisite: 5a, b or two years of high school Spanish.**

7b INTERMEDIATE SPANISH. (4) I, II, III, IV Staff
Continuation of 7a. **Prerequisite: 7a or three years of high school Spanish.**

9a-c SPANISH NOVEL AND DRAMA.
(4 ea.) I, II, III, IV Server and Keller
Reading of standard texts; brief survey of Spanish Literature composition, and outside reading. **Prerequisite: 7a, b.**

10a-c SPANISH CONVERSATION AND COMPOSITION.
(4 ea.) I, II, III Server
This course is designed to give the student a fair amount of fluency in the use of the spoken language. Dictation, vocabulary building, special emphasis on pronunciation; grammar developed by oral exercise. Class conducted entirely in Spanish. **Prerequisite: 7a, b.**

102a, b ADVANCED SPANISH GRAMMAR AND COMPOSITION.
(4, 4) I, II, III, IV Server
A study of the finer points of Spanish Grammar. **Prerequisite: 9a, b.**

104a-c SPANISH LITERATURE OF THE XVII CENTURY.
(3 ea.) I, II, III, IV Hernandez
Selected literature of the Golden Age; cervantes, the picaresque novel. **Prerequisite: 9a, b.**

106a-c SPANISH LITERATURE OF THE XX CENTURY.
(3 ea.) I, II, III, IV Niess
Beginning with the later works of the Generation of 1898 and continuing up to the present; representative works of recent writers are studied. **Prerequisite 9a, b.**

108a-c **SPANISH AMERICAN LITERATURE.** (3 ea.) I, II, III, IV — Server
A study of representative writers and principal literary productions of Spanish America. Outside reading of 2000 to 2500 pages of selected works. **Prerequisite: 9a, b.**

112a **SPANISH LITERATURE OF THE XIX CENTURY.** (3) I, II, III, IV — Server
A study of Spanish Romanticism and the works of the leading Constumbristas. **Prerequisite: 9a, b.**

112b, c **SPANISH LITERATURE OF THE XIX CENTURY.** (3, 3) I, II, III, IV — Server
A study of the novel and drama of the second half of the XIX Century. **Prerequisite: 9a, b.**

203a **OLD SPANISH.** (4) I, II, III, IV — Server
A study of the vocabulary and grammar of Old Spanish contrasting and comparing it to modern Spanish. **Prerequisite: 32 quarter hours of college Spanish.**

203b **OLD SPANISH.** (4) I, II, III, IV — Server
Reading in texts of Old Spanish. **Prerequisite: 203a.**

206a-d **SEMINAR IN SPANISH LITERATURE.** (4 ea.) I, II, III, IV — Staff
Prerequisite: 32 quarter hours of college Spanish.

Italian

4a, b **ELEMENTARY ITALIAN.** (5, 5) I, II, III, IV — Schick
A study of the grammar and composition of Italian. **Prerequisite for 4b is 4a or one year of high school Italian.**

15a, b **INTERMEDIATE ITALIAN.** (4, 4) I, II, III, IV — Schick
Review of grammatical principles and readings in selected Italian works. **Prerequisite for 15a: 4a, b. Prerequisite for 15b: 15a.**

SOCIAL WORK

Harold E. Wetzel, Alice R. Rucker and Visiting Lecturers.

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

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

Requirements for a Major: A basic minimum of twenty-two hours in social work including 116, 122, 124, 130a, plus additional courses depending on the students area of specialization including specific courses in sociology, psychology, hygiene, and rural sociology. Tutorial and comprehensive examination in the senior year.

Graduate Work. The graduate curriculum is offered to students interested in social work as a profession and leads to a certificate on successful completion of forty-five quarter hours. Prerequisite: graduate standing, thirty-six quarter hours in courses in the social sciences and the consent of the department. Students

lacking the prerequisite number of hours in the social sciences will be required to carry additional courses to make up the deficiency in in this field. Application should be made to the department in advance of registration.

100 PUBLIC WELFARE ADMINISTRATION. (2) III Wetzel
Philosophy, background, and methods of tax-supported social work. The inter-relationship of federal, state, and local services; standards and supervision as influenced by federal security legislation. **Prerequisite: S. W. 122 and 151.**

105 CHILD WELFARE SERVICES. (4) II, IV Wetzel
A study of community and national programs for child care and protection, including aid to dependent children and other social security services.

110 PSYCHIATRIC INFORMATION FOR SOCIAL WORKERS. (2) III Gail
An analysis of personality development and behavior patterns with special reference to psychiatric interpretation and their implication for social case work. For majors in the department. **Prerequisite: eight hours in social work.**

113 INTRODUCTION TO SOCIAL CASE WORK I. (2) III
An introductory course in the generic principles of social case work. Discussion based on selected readings and case records. For majors in the department. **Prerequisite: eight hours in social work.**

116 SOCIAL WORK RESEARCH AND STATISTICS. Wetzel
A consideration of statistical and other types of research in social work problems with illustrations drawn from current studies of government and private welfare agencies.

122 FIELDS OF SOCIAL WORK. (4) I, II, III, IV Wetzel
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.

124 ORIENTATION TO SOCIAL WELFARE PRACTICE I. (4) I Wetzel
An introduction to the organization and function of selected social work agencies in the community. Lectures, discussions, and observational visits.

127a-c TUTORIAL WORK IN SOCIAL WORK. (1) I, II, III Staff
Open only to senior majors in the department.

130a COMMUNITY ORGANIZATION FOR SOCIAL WELFARE. (2) I Rucker
Methods and techniques of social welfare planning for the treatment and prevention of social problems. Analysis of needs and resources, coordination of existing agencies, financing and developing chest and council programs, and the interpretation of social work to the community, will be among the subjects treated. **Prerequisite or concurrent, S.W. 122.**

130b COMMUNITY ORGANIZATION FOR SOCIAL WELFARE. (2) II Rucker
A continuation of 130a with special emphasis on the organization and function of national welfare agencies. **Prerequisite or concurrent, S.W. 122.**

131 INTRODUCTION TO FIELD WORK PRACTICE IN COMMUNITY ORGANIZATION. (2) III Rucker
One hundred clock hours of supervised work in planning and execution of simple projects in community organization.

140 PRINCIPLES OF SOCIAL GROUP WORK. (4) III. Rucker
A critical study of the theories and practices of social group work with reference to the work of public and private agencies in this field.

144 FIELD PARTICIPATION IN GROUP WORK PROGRAMS. (4) I, IV Rucker
Supervised experience in the practice of group work in connection with a program in a local group work agency. For senior majors specializing in group work. **Prerequisite SW 140, and consent of instructor.**

151 PUBLIC ASSISTANCE PROGRAMS. (4) II, IV Wetzel
A study of the current function of public assistance upon the federal, state, and local levels with emphasis on the public assistance provision of the social security act, general relief, and work relief policies. **Prerequisite or concurrent, S.W. 122.**

217 GENERIC SOCIAL CASE WORK II. (2) II
An introductory course for graduate students with emphasis upon the application of case work principles in problems of increasing complexity. **Prerequisite: S.W. 113, or special permission.**

220a SUPERVISED FIELD WORK. (3) I, IV
150 clock hours of supervised field work in a public or a private agency.

220b SUPERVISED FIELD WORK. (3) II, IV
150 clock hours of supervised field work in a public or private agency.

220c SUPERVISED FIELD WORK. (4) III, IV
200 clock hours of supervised field work in a public or private agency.

221 ADVANCED SOCIAL CASE WORK I. (2) III
An advanced course built around the theoretical aspects of case work problems encountered by the students in their field work, and supplemented by cases presenting other problems.

225 SOCIAL INSURANCE. (2) III Wetzel
A study of social insurance in Europe and the United States. Emphasis will be given to the problems in administration, financing, and coverage.

227 RURAL SOCIAL WORK PROBLEMS. (4) III Rucker
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

Irwin T. Sanders, C. Arnold Anderson, Harry Best, William Clayton Bower, David Lincoln Hatch, and Sarah Bennett Holmes.

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

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

Requirements for a Major. Prerequisite: Sociology 3a and 3b, or two of the following: 1, 2, 7 or 18. **Required:** Minimum of 25 quarter hours of advanced work in Sociology, including at least 4 quarter hours in Theory and Methodology, 8 quarter hours in one of the other sub-divisions below, and Sociology 19a, b, c, and 20a, b, c. Comprehensive examination in senior year.

I. Introductory and General Sociology

***3a, b SOCIETIES AROUND THE WORLD.**
(5, 5) I and II, II and III Sanders and Hatch
To apply in the group requirements in social studies. The comparative characteristics of preliterate, peasant, and civilized societies in relation to the geography of the land in which they live. Selected societies representing each of these types will be studied in detail. The variations in food, housing, clothing, tools, and transportation will be related, on the one hand, to the habitat and, on the other hand, to occupations and economic organization, form of government and family system, religion and art. The first quarter's course, 3a, will cover the preliterate and peasant societies; 3b will deal with the civilized societies. (Not open to seniors.) (Same as Geography 3a, b.)

***1 INTRODUCTORY SOCIOLOGY. (5) I, II, III, IV** Best and Holmes
A survey of the basic elements of culture, collective behavior, communities, social institutions, and social change. Basic concepts required for the analysis of sociological data are systematically considered. Not open to seniors.

***2 MODERN SOCIAL PROBLEMS. (5) II, IV** Best and Holmes
An introductory course involving an examination of selected social problems of the present day. Some topics dealt with are: family disorganization, poverty, crime, racial issues, handicapped classes, housing conditions, population movements, social implications of industrial development, etc. Not open to seniors.

***7 SOCIAL INSTITUTIONS. (4) I**
A comparative analysis of the familial, economic, aesthetic, religious, and other basic institutions of human society.

19a-c JUNIOR TUTORIAL. (1 each)
Conferences, assigned readings, reports, etc. For Junior majors.

20a-c SENIOR TUTORIAL. (1 ea.) I
Conferences, assigned readings, reports, etc. For senior majors.

II. Theory and Methodology

105 SOCIAL THEORY: PLATO TO COMTE. (4) I Sanders
The social theories of representative social thinkers, together with a brief study of their lives and the time in which they lived. Extensive reading of their works.

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* Open to Freshmen.

114a-f INDEPENDENT WORK IN SOCIOLOGY. Staff
(1 ea.) II, III, IV
Study of some special topic by duly authorized students.

122a, b SOCIOLOGICAL THEORY: CONTEMPORARY. Staff
(4, 4) II, III
A study of the leading developments in sociological theory and methodology from Comte to the present time.

124 TECHNIQUES OF SOCIAL INVESTIGATION. (4) III Hatch
A study of the practical applications of sociology in organizing, conducting, and interpreting social surveys and other forms of concrete research. Some background in statistics desirable for the student.

201a-c SOCIOLOGY SEMINAR. (2 ea.) II, III Staff
Consideration mainly of methods of research and of current sociological literature.

225 SYSTEMATIC SOCIOLOGY. (4) I
An intensive study of certain selected sociological theorists such as Weber, Durkheim, Simmel, Pareto, and others.

III. Social Organization and Process

18 COMPARATIVE SOCIOLOGY. (4) III Sanders
A study of the dynamics of culture as shown in a primitive, a peasant, and a modern culture system.

27 RELIGION AND CULTURE. (4) III Bower
A functional approach to the understanding of religion as a form of social behavior. Cultural sources of religious ideas and practices are traced, and special attention is given to the church as a social institution, ceremonials as symbols, secularization and other trends. Open to sophomores who have had Sociology 1, and to all upper division students.

28 THE CULTURAL PROCESS AND THE HEBREW-CHRISTIAN RELIGION. (4) IV Bower
A study of the reciprocal relation of religion and culture in the Hebrew-Christian religion as a specific social phenomenon. Cultural substrata of cultic life in Palestine and the Near East as disclosed by archaeological remains. Effects of cultural change upon Hebrew religious thought. Social origins of Christianity. Open to sophomores who have had Sociology I and to upper division students.

109 THE FAMILY. (4) I, III Hatch
A study of the family, both in its historical aspects and in connection with modern life.

112 THE COMMUNITY. (4) II Hatch
Major structural and functional aspects of modern American community types are viewed in terms of developmental processes, human ecology, and current problems of control and planning.

121 POPULATION PROBLEMS. (4) I
A study of movements and trends in population, with respect to race, age, birth-rates, etc.

125 AMERICAN REGIONALISM. (4) I
Regional similarities and differences in American society and culture are delineated, and derived problems are subjected to a sociological analysis.

126 OCCUPATIONAL ORGANIZATION. (4) II
A sociological analysis of the division of labor in contemporary society, including detailed consideration of professionalism through a study of the social organization of several selected professions.

127 DIFFERENTIATION AND STRATIFICATION. (4) III Anderson
A systematic treatment of the factors underlying differentiation and stratification, with particular attention to problems of caste and class.

128 HUMAN RESOURCES OF THE SOUTH. (4) III Anderson
Intensive analysis of the population and sociological organization of the south. Consideration of the sociological factors influencing the optimum development and utilization of the human resources of this region. **Prerequisites: for social science majors, senior standing; for others by arrangement.**

209 SEMINAR IN THE FAMILY. (2) IV Sanders
A seminar for advanced students interested in family research, family counselling, or dealing with family relationships in some other professional capacity.

224 MINORITY GROUPS. (4) III Best
A sociological scheme of analysis is applied to the special problems of adjustment arising from ethnic group relations and culture contacts.

IV. Social Disorganization and Reorganization

6 AMERICAN IMMIGRANTS AND RACES. (2) II Best
A study of ethnic groups in the United States, and of national policies for dealing with related problems, including special attention to the Negro problem.

101 POVERTY AND DEPENDENCY. (4) I Best
A study of poverty and social dependence and of measures for their alleviation and reduction, with special attention to present private and public activities in this direction, including social insurance.

102 SOCIAL PATHOLOGY. (4) II Sanders
A systematic examination of the various types of social disorganization, with particular emphasis upon the sociological explanation of underlying factors.

103 CRIMINOLOGY. (4) II, IV Best
A study of general conditions as to crime and delinquency, of measures of punishment and reform of offenders, of criminal procedure and its possible reform, and of measures for the prevention of crime.

130 SOCIAL SYSTEMS. (4) III Best
A study of the different social systems, including experimental communities that have been proposed or attempted in human society from the earliest times to the present.

223 SOCIAL TREATMENT OF DELINQUENCY. (4) III Best
Methods for dealing with delinquents are analyzed and evaluated in historical perspective.

226 SOCIAL LEGISLATION. (4) IV Best
Leading developments in the field of social legislation are traced, and current measures and proposals are evaluated.

V. Personality and the Group

9 INDIVIDUAL DEVELOPMENT AND THE GROUP. (4) I, II, III, IV — Newbury
(Same course as Psychology 8, Individual Differences)
A study of socialization from a differential point of view.

21 THE CHILD IN SOCIETY. (4) I, II, III, IV — Humphreys
(Same course as Psychology 7, Psychology of the Child)
The development of behavior from birth to maturity. The problems of conduct arising during infancy, childhood, and adolescence in relation to child care and training.

25 COLLECTIVE BEHAVIOR. (4) II — Anderson
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.

104 SOCIAL PSYCHOLOGY. (4) II, IV — White
(Same course as Psychology 104, Social Psychology)
Description and explanation of social phenomena in terms of the original and acquired reaction systems of the individual. Topics given special attention: crowd and mob behavior, propaganda, and nationalism.

111 PSYCHO-SOCIAL RELATIONS IN INDUSTRY. (4) I, III — Beaumont
(Same course as Psychology 106, Industrial Psychology)
A psycho-social approach to problems arising from the division of labor in modern industrial society.

VI. Rural Sociology

(The following courses in Rural Sociology are offered in the College of Agriculture. For course descriptions, see page 262.)

10 Rural Sociology
110 Rural Sociology
120 Rural Leadership and Social Change
130 a-c Special Problems in Rural Life
140 a-c Rural Life
200 a-c Research in Rural Sociology
210 Seminar in Rural Organization
220 Seminar in Rural Social Attitudes
250 Topical Seminar (Land use, migration, highland societies)

ZOOLOGY

William Delbert Funkhouser, William R. Allen, Alfred Charles Brauer, David R. Lincicome†, and William A. Muller.

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

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

Requirements for a Major. Prerequisite: Junior standing; Zoology 1a, 1b, 1c. **Required:** Zoology 7a, 7b, 7c, or 157a, 157b, 157c; Zoology 106; Zoology 108a, 108b; Zoology 114a, 114 b, 114c; a minimum of twenty-two quarter hours' work above 1a, b, c, passing a comprehensive examination before graduation.

† See appended list of leaves of absence, resignations, deaths, etc., p. 399.

***1a GENERAL ZOOLOGY. (4) I** Funkhouser and others
A general course in zoology consisting of lectures, recitations, and laboratory work. The first quarter is devoted primarily to the study of the invertebrates.

***1b GENERAL ZOOLOGY. (4) II** Funkhouser and others
A continuation of Course 1a, but open to students beginning the course. The second quarter is devoted primarily to a study of the higher invertebrates.

***1c GENERAL ZOOLOGY. (4) III** Funkhouser and others
A continuation of course 1a and 1b, but open to students beginning the course. The third quarter is devoted to the vertebrates.

7a COMPARATIVE ANATOMY. (3) I Allen and Muller
Lower invertebrates. An intensive study of the anatomy of representatives of all the important phyla, classes, orders and a few families with gross studies of many genera. Life histories of important forms. **Prerequisite: Zoology 1a, 1b, and 1c.**

7b COMPARATIVE ANATOMY. (3) II Allen and Muller
Higher invertebrates. Comparative organology and physiology. Continuation of 7a.

7c COMPARATIVE ANATOMY. (6) III Allen and Muller
Systematic consideration of classes, orders, and some families of the vertebrates. Detailed dissection of a few selected types.

11 NATURE STUDY. (4) IV Allen
A course in general nature study intended primarily for teachers who desire preparation in the use of natural history material in the elementary schools. Intimate studies of local plants and animals based largely on field work.

25 GENERAL ANIMAL BIOLOGY. (5) I, II, III, IV Muller
A general course designed for agriculture students consisting of a synoptic survey of the animal kingdom stressing the principles of organization of the animal body together with the fundamentals of physiology, development, heredity, and evolution. Recitation 3 hours and laboratory 4 hours.

101a HISTOLOGY. (4) I, IV Brauer and Muller
Histology of the tissues. A course in the technique of the preparation of animal tissues for microscopic study. Practice in imbedding, staining, sectioning, mountaing, and identification of tissues. **Prerequisite: Zoology 1a, 1b, and 1c.**

101b HISTOLOGY. (4) II, IV Brauer and Muller
Histology of the organs. A continuation of Course 101a in which the studies are based on the organs and special attention given to pathology. **Prerequisite: Zoology 101a.**

102 ORNITHOLOGY. (4) III, IV Funkhouser and Allen
A study of the life histories, anatomy, and physiology of birds with particular reference to the habits, songs, nests, migration, and economic importance of our native birds.

103a GENERAL ENTOMOLOGY. (4) I Allen
A beginning course in the study of insects. Gross anatomy, morphology, and life-histories of representatives of the most important orders.

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* Open to freshmen.

103b GENERAL ENTOMOLOGY. (4) II Allen
A continuation of Course 103a. Taxonomy and entomotaxy are given special attention during the second quarter.

105 PARASITOLOGY. (5) I, IV Lincicome
Designed especially for pre-medical, medical technology, pre-veterinarian and agricultural students. Protozoan, helminth, and arthropod parasites of man and domestic animals with particular emphasis on life histories, epidemiology, methods of control, methods for the diagnosis of parasitic diseases of both man and other vertebrate hosts, techniques for the examination of hosts for their parasites and the preparation of parasites for critical study. **Prerequisite: Zoology 1a, b, c, 101a (7a desirable).**

106 EMBRYOLOGY. (6) III, IV Brauer and Muller
A general course in ontogeny. Studies in maturation, fertilization, cleavage, organogensis and anomalies of development with laboratory work based on the chick and the pig. **Prerequisite: Zoology 1a, 1b, 1c, and 101a.**

108a PRINCIPLES OF ZOOLOGY. (3) I, IV Funkhouser
(Evolution.) An advanced lecture course open only to juniors, seniors, and graduate students on the fundamental principles of biology. The first quarter is devoted primarily to the study of organic evolution. Three times a week.

108b PRINCIPLES OF ZOOLOGY. (3) II, IV Funkhouser
(Heredity.) A continuation of Course 108a. The second quarter is devoted to the study of heredity, eugenics, and animal instincts. Three times a week.

110a-f INDEPENDENT WORK. (4 ea.) I, II, III Staff
Special problems for individual students who are capable of pursuing independent investigations. **For Zoology Majors.**

114a-d ZOOLOGICAL SEMINAR. (1 ea.) I, II, III Staff
Presentation of results of research; reports on technical papers in current literature; book reviews; news notes; discussions of recent developments in zoology; and 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.

115a ADVANCED PARASITOLOGY. (4) II Lincicome
(Protozoology). The etiology, pathology, epidemiology, diagnosis, prophylaxis and control of protozoan diseases of man are studied critically. Intensive practical study of the diagnosis of protozoan diseases of man. Lecture 2, laboratory, 4 hours. **Prerequisite: Zoology 1a, 1b, 1c, and 105.**

157a INVERTEBRATE ANATOMY. (3) I Allen and Muller
An advanced course on the comparative anatomy of invertebrate animals with special attention paid to phylogeny, organology, and taxonomy. **Prerequisite: Zoology 1a, 1b, and 1c.**

157b INVERTEBRATE ANATOMY. (3) II Allen and Muller
A continuation of Course 157a devoted to the higher invertebrates.

157c VERTEBRATE ANATOMY. (6) III Allen and Muller
(1) Systematic consideration of classes, orders, and some families of Vertebrata. (2) Detailed dissection of types not previously

studied. (3) Comparative organology and (briefly) physiology of the several classes. (4) Preparation of charts and diagrams of nervous systems, urinogenital systems, and vascular systems. (5) Complete demonstration of the mammalian anatomy.

166 **PHYSIOLOGY OF DEVELOPMENT. (3) I** Brauer
A review of theories of differentiation and a consideration of the genetic, environmental, and correlative physiological factors in differentiation. Lectures, assigned readings and literature reports. **Prerequisites: Zoology 1a, 1b, 1c; 7a, 7b, 7c or 106.**

168 **BIOLOGY OF SEX. (3) II** Brauer
The cytological, genetic, and physiological problems of sexual differentiation. Such cases as hermaphroditism, gynandromorphism, intersexuality, and reversals are considered. Lectures, literature reports, assigned readings. **Prerequisites: Zoology 1a, 1b, 1c; 7a, 7b, 7c, or 106.**

210a-c **PROBLEMS IN ZOOLOGY. (4) I, II, III** Staff
Students qualified to undertake graduate work will be assigned to appropriate research problems to be pursued independently. Conferences, laboratory, field, and library work. Eight hours per week. Written reports.

COLLEGE OF AGRICULTURE AND HOME ECONOMICS

Agricultural Entomology

Walter Allen Price and Lee Hill Townsend.

1 AGRICULTURAL ENTOMOLOGY. (4) I, II, III, IV Townsend
A general consideration of the fundementals of insect structure, biology, and classification, with frequent discussions of current topics relating to both beneficial and destructive insects. Lecture, three hours; laboratory, two hours.

2 APICULTURE. (4) III Price and Townsend
The anatomy of the bee; the colony; location and equipment of the apiary; production of comb and extracted honey; diseases and enemies of bees. Much of the laboratory work has to do with manipulation of beekeeping equipment and with the bees themselves. Lecture, three hours; laboratory, two hours.

3 INSECTS OF THE HOME AND FLOWER GARDEN. (3) II Townsend
Life histories, habits, and control of the more common insects which are injurious and troublesome in the home and flower garden. Lecture, two hours; laboratory, two hours.

102 ECONOMIC ENTOMOLOGY. (4) IV Townsend
Especially planned for those intending to take up vocational agricultural teaching and county agent work. The life history, control, and means of identification of the common and important economic insects of Kentucky are considered. The making and care of school collections, cages, etc., are described. Lecture, three hours; laboratory, two hours. **Prerequisite: A. E. 1.**

103 ECONOMIC ENTOMOLOGY: FRUIT AND GARDEN INSECTS. (4) I Townsend
Life histories, habits, distribution, and control of insects injurious to fruit and garden crops, with special attention to those species found in Kentucky. The various diseases, parasites, and predators of these injurious species are also given attention. Lecture, three hours; laboratory, two hours. **Prerequisite: A. E. 1.**

104 ECONOMIC ENTOMOLOGY: FARM CROP INSECTS AND ANIMAL PARASITES. (4) II Townsend
Life histories, habits, distribution, and control of insects injurious to common farm crops including those of stored grain and forage; also insect parasites of the common farm animals. The various diseases, parasites, and predators of these injurious species are given attention. Lecture, three hours; laboratory, two hours. **Prerequisite: A. E. 1.**

105a-d SYSTEMATIC AND TECHNICAL AGRICULTURAL ENTOMOLOGY. (3 ea.) I, II, III, IV Townsend
Insect physiology, anatomy, ecology, and taxonomy, entomological literature and technique; studies of special groups of insects. Time to be arranged. **Prerequisite: A. E. 1, and any of the following: 102, 103, 104.**

201a-d ENTOMOLOGICAL PROBLEMS. (3 ea.) I, II, III, IV Price
Investigations of chosen insect problems, including original work. Discussion and assignment of current insect subjects. Time to be arranged. **Prerequisite: A. E. 1, 103, 104, 105a-d.**

AGRICULTURAL EXTENSION

Thomson Ripley Bryant

101 METHODS IN AGRICULTURAL EXTENSION. (1) III Bryant
Methods used in Extension Work in agriculture and home economics; organization, administration, and financing; cooperating agencies; proper relationships; organizing the working forces; and methods of making effective programs of work. Lecture, 1 hour.

AGRONOMY

Edmund J. Kinney, Ernest N. Fergus, Perry E. Karraker, James B. Kelley, William S. Ligon, Paul M. Phillippe, William D. Valleau, and Earl R. Young

Courses in Crops

1 ELEMENTARY FARM CROPS. (5) I, II, III Phillippe
A survey course considering geographical distribution, science of production, and uses of important field crops. Lecture and recitation, four hours; laboratory, two hours.

2 MARKET GRAIN GRADING. (3) I Phillippe
Studies of federal classes and grades of market grains. Attention is also given to show standards. Laboratory, six hours. **Prerequisite: Agr. 1.**

103 WEEDS. (3) III Phillippe
The importance, characteristics, identification, and control of weeds with emphasis on identification and control of Kentucky weeds. Lecture and discussion, two hours. Laboratory, two hours. **Prerequisite: Botany 1b.**

104 ADVANCED CROPS: FORAGE CROPS. (4) I, IV Fergus
(Alternate years)
A comprehensive study of forage crops with special emphasis upon their production in Kentucky. Recitation, four hours. **Prerequisite: Agr. 1; Bot. 1b.**

105 ADVANCED CROPS: TOBACCO AND CEREALS. (4) II Kinney
Tobacco and the important cereal crops are studied in considerable detail as regards distribution, soil, climatic adaptation, and technique of production. Lecture and recitation, four hours. **Prerequisite: Agr. 1; Botany 1b.**

106 FIELD CROP IMPROVEMENT. (3) II Kinney
A study of the principles involved and the technique used in breeding crop plants. Lecture and recitation, three hours. **Prerequisite: Agr. 1; A. I. 61.**

107 TOBACCO. (2) II Kinney
A course designed for students particularly interested in the more practical phases of tobacco production and grading. Laboratory periods are devoted entirely to practice in grading various types of tobacco leaf. Offered in alternate years. Lecture, one hour; laboratory, two hours.

200a-c AGRONOMY SEMINAR. (1) I, II Agronomy Staff

204a, b SPECIAL PROBLEMS IN PRODUCTION OF FORAGE CROPS. (3) III, IV Fergus
Intensive studies of research relative to particular problems in crop production. **Prerequisite: Approval of Instructor.**

205a, b SPECIAL PROBLEMS IN PRODUCTION OF TOBACCO AND CEREALS. (3) I, II Kinney

Courses in Soils

10 SOILS. (5) I, II Ligon
A general study of the origin, classification, properties, and management of soils. It is desirable that students take Agronomy 11 concurrently. Lecture and recitation, five hours. **Prerequisite: Chem. 1b.**

11 SOILS LABORATORY. (3) I, II Seay
Laboratory and field exercises on important soil properties and processes, designed to accompany Agronomy 10. Two three-hour laboratory periods. **Prerequisite or parallel: Agr. 10.**

12 SOIL CONSERVATION. (3) I Karraker and Ligon
The problems of soil depletion and their solution through conservation farming with especial emphasis on Kentucky conditions. Lecture and recitation, three hours. **Prerequisite: Agr. 10.**

110 SOIL BIOLOGY. (4) II Seay
A study of soil organisms and biological soil processes in relation to soil productivity. Lecture, one hour; laboratory, six hours. **Prerequisite: Agr. 10; Bact. 52 desirable.**

112a, b SPECIAL PROBLEMS IN SOILS. (3, 3) I, II, III, IV Karraker and Ligon
Study of some special phases of soils not covered in other courses. Only three quarter hours may be taken in a term. **Prerequisite: Agr. 10 and approval of instructor.**

113 EXPERIMENTAL METHODS AND INTERPRETATION OF RESULTS. (4) II Roberts
A study of the essentials of reliable experimentation, including sources of error; a study of experimental data with emphasis on interpretation. **Prerequisite: Agr. 10.**

114 ADVANCED SOILS. (3) II Karraker
An advanced study of the physical and chemical properties and processes of soils with applications to soil management. Lecture and recitation, three hours. **Prerequisite: Agr. 10.**

119 SOIL ORIGIN, CLASSIFICATION, AND MAPPING. (4) III Ligon
Factors and processes of soil formation, characteristics and agricultural significance of the great soil groups, classification of soils, and the nature, use, and preparation of soil maps. Lectures and recitations, three hours. Laboratory and field work, 7 three-hour periods by appointment. **Prerequisite: Agr. 10 and approval of instructor.**

200a-c AGRONOMY SEMINAR. (1 ea.) I, II, III Agronomy Staff

212a-d RESEARCH IN SOILS. (3 ea.) I, II, III, IV Karraker and Ligon
Each course offered each quarter, but only three hours may be taken in a quarter. **Prerequisite: approval of instructors.**

Courses in Plant Pathology

23 PLANT PATHOLOGY. (6) I — Valleau
A general survey of the causes, effects of, and methods of control of plant diseases. Recitation, three hours; laboratory, six hours. **Prerequisite: Bot. 1a and 1b.**

200a-c AGRONOMY SEMINAR. (1) I, II — Agronomy Staff

223a, b LITERATURE OF PLANT PATHOLOGY. (4) I, II — Valleau
A survey of the literature of plant pathology. **Prerequisite: Agr. 23.**

Courses in Farm Engineering

1 MECHANICS OF THE FARMSTEAD. (4) I, II, IV — Kelley and Young
A study of the fundamentals of engineering as applied to agriculture. The course includes: mechanics of materials, transmission of power, farm implements, farm sanitation, equipment, and farm electrical and heating problems. Lecture and recitation, three hours; laboratory, two hours.

2 FARM MOTORS. (4) III — Kelley and Young
A study of the fundamental principles governing the selection, construction, operation, and repair of motors, tractors, and tractor equipment for farm use. Lecture and recitation, three hours; laboratory, two hours.

3 FARM STRUCTURAL ENGINEERING. (3) I, II — Young
A combination drawing and shop course in the construction, care, and repair of farm buildings and equipment; drawing; use of lumber, and farm woodworking. Lecture, one hour; laboratory, four hours.

4a FARM SHOP. (3) II, III, IV — Young
Principles and practices in farm tool sharpening, soldering, painting and concrete work; selection, use and care of tools; shop exercises and projects in repair and construction of farm equipment. Lecture, one hour; laboratory, four hours.

4b FARM SHOP. (3) I, III, IV — Young
Principles and practices in farm metal work including cold metal work, forging, gas, and electric welding, pipe fitting, and machinery repair; selection, use, and care of tools; shop exercises and projects in repair and construction of farm equipment. Lecture, one hour; laboratory, four hours.

101a-d SPECIAL PROBLEMS. (4 ea.) I, II, III, IV — Kelley and Young
This course is designed to permit advanced students to make an intensive study of some phase of agricultural engineering in which they are particularly interested. **Prerequisite: F. E. 1 and approval of instructor.**

102 DAIRY ENGINEERING. (4) II — Kelley
A study of the engineering principles involved in the construction, installation, operation, and management of machinery and equipment used in the handling and manufacturing of dairy products. Lecture and recitation, three hours; laboratory, two hours. **Prerequisite: F. E. 1.**

104 RURAL ELECTRIFICATION. (3) II — Kelley
This course is designed to give students information on how to obtain electric service and on the problems involved in the selection, operation, and care of electrical equipment in the home and on the farm. Lecture and recitation, three hours.

105 ENGINEERING PRACTICES IN SOIL MANAGEMENT.
(4) III, IV Kelley
Surveying, mapping, and determining areas of farmland; designing farm drainage systems; problems in controlling erosion with terraces and other mechanical structures. Lecture, two hours; laboratory, four hours.

ANIMAL INDUSTRY

Wesley Patterson Garrigus, John Orville Barkman, Fordyce Ely, Richard Mather Forbes, Wyatt Marion Insko, Jr., Henry Bartlett Morrison, Dewey G. Steele, Ernest T. Wightman, and Edward James Wilford.

Courses in Animal Husbandry

1 FARM LIVESTOCK PRODUCTION. (5) II, IV
Importance and use of livestock products; types, market classes, and grades of beef cattle, sheep, swine, horses, and mules; the origin, development, and characteristics of the more important breeds. Lecture, three hours; laboratory, four hours.

2 LIVESTOCK JUDGING. (4) III
Judging beef cattle, sheep, swine, draft horses, and mules. Practice in writing reasons and giving reasons orally. Laboratory, eight hours. **Prerequisite: A. I. 1.**

3 LIVESTOCK MANAGEMENT. (1) III
Strictly practical livestock management problems are handled in this course, including preparation of animals for show and sale ring. Laboratory, two hours. **Prerequisite: A. I. 1.**

4 ADVANCED LIVESTOCK MANAGEMENT. (1) 1
Intensive training in approved livestock management practices, primarily for those who intend to manage livestock farms. Laboratory, two hours. **Prerequisite: A. I. 1 and A. I. 3.**

5 LIGHT HORSE HUSBANDRY. (4) III Garrigus
A brief study of the breeds of light horses; selection, feedings, and management; fundamental instruction in equitation. Not open to freshmen. Lecture, two hours; laboratory, four hours.

6 FARM BUTCHERING AND MEAT CURING. (5) I, II Wilford
Slaughtering and blocking out of beef, veal, hog, and lamb carcasses into wholesale, minor wholesale, and retail cuts; correlation of breeding and feeding with carcass values; meat curing, with special emphasis on pork. Lecture, two hours; laboratory, six hours. **Prerequisite: A. I. 1.** Not open to freshmen.

7 IDENTIFICATION AND EVALUATION OF MEATS.
(2) I, II Wilford
Meat cutting, identification, selection, grading and judging with emphasis on the nutritional and economic values of the different grades and cuts of meats. Laboratory, four hours. Not open to freshmen.

8 RETAIL MEATS. (2) III Wilford
A study of meat cutting and processing methods, cut-out values, consumer preferences, and processing meats for freezing. Laboratory, four hours. **Prerequisite: A. I. 6.**

100 ANIMAL BREEDING. (5) II Steele
Breeding plans, inbreeding, linebreeding, outcrossing; disease resistance; inheritance of lethal characters; genetics of sex; heredity in cattle, sheep, swine, horses, and laboratory animals. Given alternate years. Lecture, five hours. **Prerequisite: A. I. 61.**

102 ADVANCED LIVESTOCK JUDGING. (4) I
Primarily for judging team candidates. Open only to those who have made good standings in the prerequisite courses. Lecture and laboratory. **Prerequisite: A. I. 1 and A. I. 2.**

103 WORK STOCK PRODUCTION. (3) II
History and importance of the horse and mule industry; selection, breeding, feeding, and management of horses and mules. Lecture, two hours; laboratory, two hours. **Prerequisite: A. I. 1 and A. I. 81.**

104 SHEEP PRODUCTION. (4) IV
History and importance of the sheep industry; selection, breeding, feeding, and management of sheep; production and handling of wool. Lecture, three hours; laboratory, two hours. **Prerequisite: A. I. 1 and A. I. 81.**

105 BEEF PRODUCTION. (4) III Garrigus
History and importance of the beef cattle industry; selection, breeding, feeding, and management of beef cattle. Lecture, three hours; laboratory, two hours. **Prerequisite: A. I. 1 and A. I. 81.**

106 PORK PRODUCTION. (4) I, III Wilford
History and importance of the swine industry, selection, breeding, feeding, and management of swine. Lecture, three hours; laboratory, two hours. **Prerequisite: A. I. 1 and A. I. 81.**

108 MEAT JUDGING. (1) I Wilford
Intensive instruction in the judging of carcasses and cuts of beef, veal, pork, and lamb. Laboratory, two hours. **Prerequisite: A. I. 6.**

109a-d SPECIAL PROBLEMS IN ANIMAL HUSBANDRY.
(3 ea.) I, II, III, IV Animal Husbandry Staff
Approval of instructor required.

200a-c ANIMAL INDUSTRY SEMINAR. (1 ea.) I, II, III Staff

201a-d RESEARCH IN MEATS. (3 ea.) I, II, III, IV Wilford
Problems involving original investigation.

203a-d RESEARCH IN HORSE HUSBANDRY. (3 ea.) I, II, III, IV
Problems involving original investigation.

204a-d RESEARCH IN SHEEP HUSBANDRY. (3 ea.) I, II, III, IV
Problems involving original investigation.

205a-d RESEARCH IN BEEF CATTLE HUSBANDRY.
(3 ea.) I, II, III, IV Garrigus
Problems involving original investigation.

206a-d RESEARCH IN SWINE HUSBANDRY.
(3 ea.) I, II, III, IV Wilford
Problems involving original investigation.

Courses in Dairying

21 FARM DAIRYING. (4) I, IV Ely and Morrison
The place of dairying in agriculture; factors affecting the secretion, composition, physical and chemical properties of milk and cream; the food value of dairy products, common dairy calculations; clean milk production; common farm dairy processes, such as separation, churning, and storage of dairy products. Lecture, three hours; laboratory, two hours.

22 JUDGING DAIRY PRODUCTS. (2) I Barkman
A study of the accepted standards of judging market milk, butter, ice cream, cheese, and starters; practice in scoring these products in accordance with standard methods. Lecture, one hour; laboratory, two hours.

23 JUDGING DAIRY CATTLE. (3) III, IV Ely
Selection of sires, cows, and heifers with due consideration for breed and dairy type; application of the principles involved in the problem of herd improvement. Laboratory, six hours. **Prerequisite: A. I. 21.**

120 DAIRY CATTLE BREEDING. (4) III, IV (Alternate) Ely
The application of genetics to present day problems of breed and herd improvement; the progeny testing of sires; type classification, selective registration; the rise and fall in popularity of prominent families and strains within the leading dairy breeds. Lecture, three hours; laboratory two hours. **Prerequisite: A. I. 61.**

121 DAIRY CATTLE FEEDING AND MANAGEMENT. (4) I, IV (Alternate) Ely
The application of the principles of nutrition to dairy cattle feeding; current methods contributing to maximum efficiency in the production of quality dairy products on the farm. Lectures, three hours; laboratory, two hours. **Prerequisite: A. I. 81.**

122 ADVANCED DAIRY CATTLE JUDGING. (2) I Ely
Primarily for judging team candidates. Open only to those who have made good standings in the prerequisite courses. Lecture and laboratory. **Prerequisite: A. I. 21, and A. I. 23.**

124 BUTTER. (3) I Barkman
A study of the various problems and processes involved in the manufacture and storage of butter. Lecture, one hour; laboratory, six hours. **Prerequisite: A. I. 21.**

125 ICE CREAM. (3) II Barkman
A study of the problems and processes involved in the manufacture and handling of ice cream. Lecture, one hour; laboratory, six hours. **Prerequisite: A. I. 21.**

126 MARKET MILK. (3) III Morrison
A study of the problems connected with the production and handling of market milk. Lecture, two hours; laboratory, three hours. **Prerequisite: A. I. 21.**

127 CHEESE. (3) II Barkman and Morrison
A study of problems and processes involved in the manufacture and ripening of cheddar and other common cheeses. Lecture, one hour; laboratory, six hours. **Prerequisite: A. I. 21.**

128 TECHNICAL CONTROL OF DAIRY PRODUCTS. (3) III Morrison
Various chemical and bacteriological tests used in the control of production or processing of dairy products. Laboratory and recitation, six hours. **Prerequisite: A. I. 21, A. I. 130 and A. I. 131.**

129a-d SPECIAL PROBLEMS IN DAIRYING.
(3 ea.) I, II, III, IV Dairy Staff
Approval of instructor required.

130 DAIRY BACTERIOLOGY. (3) II Morrison
The application of bacteriological principles to the production and processing of milk and other dairy products, involving entrance of micro-organisms into dairy products, effects of their growth, and methods for their control. Lecture, three hours. **Prerequisite: Bact. 52 or 102.**

131 DAIRY BACTERIOLOGY LABORATORY. (3) II Morrison
Laboratory to accompany A I 130.
Laboratory practice in bacteriological examination of milk and other dairy products. Laboratory, six hours. **Prerequisite or concurrent: A. I. 130.**

221a-d RESEARCH IN DAIRYING.
(3 ea.) I, II, III, IV Ely and Morrison
Special problems involving original investigation on the part of the student in either dairy production or dairy manufacturing.
Note: See also A. I. 200, Animal Industry Seminar.

Courses in Poultry Husbandry

41 FARM POULTRY PRODUCTION. (4) III, IV Wightman
Principles of poultry husbandry, breeds and poultry improvement; selection and culling; incubation and brooding; feeding, housing, and disease control; marketing poultry products. Lecture, three hours; laboratory and demonstration, two hours.

43 HATCHERY MANAGEMENT. (4) II Wightman
Principles involved in operating incubators and brooders, hatchery operation and management; factors influencing the avian embryo; practice in the operation of commercial incubators. Lecture, two hours; laboratory, four hours. **Prerequisite: A. I. 41 and approval of instructor.**

140 POULTRY BREEDING. (4) II Wightman
Genetic principles involved in poultry breeding; disease resistance; inheritance of egg production and related character; development of breeding programs. To be given in alternate years. Lecture, four hours. **Prerequisite: A. I. 41 and A. I. 61.**

141 ADVANCED POULTRY PRODUCTION. (5) I, IV Wightman
Studies of control measures in poultry diseases, nutrition, marketing; flock management and replacement. Lectures, three hours; laboratory and demonstration, four hours. **Prerequisite: A. I. 41.**

142 MARKETING AND PROCESSING POULTRY PRODUCTS.
(3) II Wightman and Roberts
Organization and functioning of markets, methods of selling, prices, and price making forces are combined with laboratory instruction in grading, packaging, and handling poultry and eggs according to recognized commercial standards. Lecture, two hours; laboratory, two hours. **Prerequisite: A. I. 41 and M and R. F. 100.** This is the same course as M. and R. F. 142.

149a-d SPECIAL PROBLEMS IN POULTRY.
(3 ea.) I, II, III, IV Wightman
Approval of instructor required.

241a-d RESEARCH IN POULTRY. (3 ea.) I, II, III, IV Wightman
Problems involving original investigation.
NOTE: See also A. I. 200, Animal Industry Seminar.

Courses in Genetics

61 GENETICS. (4) I, III, IV Steele
The elementary principles of heredity and their relationship to plant and animal breeding. Attention is directed briefly to human heredity. Lecture, four hours. **Prerequisite: At least one course in biology.**

62 GENETICS LABORATORY. (1) I, III, IV Steele
Technic of Drosophila breeding; analysis of Mendelian ratios in corn, observation of chromosomes in mitosis and reduction. Laboratory, two hours. To be taken concurrently with A. I. 61, at student's option.

161 GENETICS. (4) III, IV Steele
Lectures of A. I. 61 and assigned readings. Primarily for graduate students.

162 GENETICS LABORATORY. (1) I, III, IV Steele
Similar to A. I. 62 but additional work required. Primarily for graduate students. Laboratory, two hours. To be taken concurrently with A. I. 161, at student's option.

163 ADVANCED GENETICS. (4) II Steele
Concerned chiefly with the physical basis of heredity, mutations and chromosomal aberrations, linkage, genetics and development, and reports on current literature. Lecture, four hours. **Prerequisite: A. I. 61 or A. I. 161.**

169a-d SPECIAL PROBLEMS IN GENETICS. (3 ea.) I, II, III, IV Steele
Approval of instructor required.

261a-d RESEARCH IN GENETICS. (3 ea.) I, II, III, IV Steele
Problems involving original investigation.

See also A. I. 100, Animal Breeding; A. I. 120, Dairy Cattle Breeding; A. I. 140, Poultry Breeding; and A. I. 200, Animal Industry Seminar.

Courses in Animal Nutrition

81 PRINCIPLES OF ANIMAL NUTRITION. (4) III, IV
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. Lecture, four hours. **Prerequisite: Chem. 1a.**

181 ANIMAL NUTRITION. (4) II Forbes
The chemistry and physiology of animal nutrition and the nutritive requirements for growth, fattening, reproduction, lactation and other body functions. Lecture, four hours. **Prerequisite: Chem. 1a, 1b, and 37 or equivalent.**

182 LABORATORY METHODS IN ANIMAL NUTRITION. (3) II Forbes
The use of laboratory techniques and equipment in the solution of fundamental problems of nutrition. Lecture, one hour; laboratory, four hours. **Prerequisite or concurrent: A. I. 181.**

183 ADVANCED ANIMAL NUTRITION. (3) III Forbes
History and development of nutritional theories and techniques; a critical review of current literature. Lecture and recitation, three hours. **Prerequisite: A. I. 181.**

189a-d SPECIAL PROBLEMS IN ANIMAL NUTRITION.
(3 ea.) I, II, III, IV Forbes
Approval of instructor required.

281a-d RESEARCH IN ANIMAL NUTRITION.
(3 ea.) I, II, III, IV Forbes
Problems involving original investigation.

ANIMAL PATHOLOGY

Floyd Edgar Hull and William Wallace Dimock

101 ANATOMY AND PHYSIOLOGY OF DOMESTIC ANIMALS. (4) I Hull
Correlation of structure and function of the organs and systems of the animal body; a study of anatomy and physiology as related to work offered in courses in livestock judging, animal nutrition, butchering, animal breeding, infectious diseases, and animal hygiene. Lecture, three hours; demonstration lecture, one hour. **Prerequisite: Junior standing.**

102 INFECTIOUS DISEASES OF DOMESTIC ANIMALS. (4) II Dimock
Distribution, general nature, manner of dissemination, methods of control, prevention, and eradication of infectious and parasitic diseases of animals. Lecture, three hours; demonstration lecture, one hour. **Prerequisite: A. P. 101, or approval of instructor.**

103 ANIMAL HYGIENE. (4) III Hull and Dimock
A consideration of both general and specific measures designed to promote health and prevent disease. Animal Hygiene includes feed and water, housing and ventilation, yards and pastures, sanitation and environment. All are part of the many problems to be considered in a program of animal health. **Prerequisite: A. P. 101 and A. P. 102, or approval of instructor.**

104a-c SPECIAL PROBLEMS IN ANIMAL PATHOLOGY.
(3 ea.) I, II, III Hull and Dimock
Prerequisite: A. P. 101, A. P. 102, and A. P. 103 or approval of instructor.

201a-c INVESTIGATIONS IN ANIMAL DISEASES.
(3 ea.) I, II, III Dimock
Prerequisite: A. P. 101, A. P. 102, A. P. 103 or equivalent. This course is open only to persons who have degrees in veterinary medicine.

FARM ECONOMICS

William Durrett Nicholls, Howard Wayland Beers, Lawrence Allen Bradford and Harold F. Kaufman.

1 AGRICULTURAL ECONOMICS. (5) I, II, III, IV Bradford
The principles of economics as applied to agriculture. A study of the agricultural industry from historic, geographic, and economic approaches. **Prerequisite: Ec. 1.**

101 PRODUCTION ECONOMICS. (3) I Bradford
Economic analysis appropriate to the examination of problems of agricultural production; enterprise relationships; interregional competition. **Prerequisite: F. E. 1 and approval of instructor.**

110 FARM MANAGEMENT. (4) I, II, III, IV Bradford
A study of the organization and management of farms and of the factors contributing to high net earnings. Problem assignments assist students to apply the principles of production economics to farming. **Prerequisite: F. E. 1.**

111 ADVANCED FARM MANAGEMENT. (3) I Nicholls
A fuller study of the principles of farm management considered in course 110. Current and recent literature of farm organization and management will be studied and some consideration given to farm management as observed in European countries when such has a bearing on management principles in this country. **Prerequisite: F. E. 110 and approval of instructor.**

112a-c SPECIAL PROBLEMS IN FARM MANAGEMENT. (3 ea.) I, II, III Nicholls
Students are assigned some special problem such as the cost of producing some class of farm products, or profitable farm organization in a specified community. **Prerequisite: F. E. 110 and approval of instructor.**

113 TYPES AND SYSTEMS OF FARMING. (3) III Nicholls
A critical study of the business organization and management of successful Kentucky farms. Several field trips will be made to farms whose operators have achieved outstanding financial success while at the same time maintaining or increasing productivity of their farms. **Prerequisite: F. E. 110 and approval of instructor.**

114a-c FARM MANAGEMENT FOR A CHANGING AGRICULTURE. (1 ea.) IV Bradford
Application of recent developments in agriculture to the management of individual farms; extent and methods of making adjustments in farm organization; use and influence of mechanization, credit and governmental programs.

115 FARM ACCOUNTING. (3) II Bradford
An application of some of the fundamental principles of accounting to the study of the organization and operation of farms. Lectures, 2 hours; laboratory, 2 hours.

120 LAND ECONOMICS. (3) I Nicholls
A study of land resources in relation to present and prospective needs; examination of the economic characteristic of land and of the bases for classifying land; land income, land values, and tenure in relation to land use and conservation. **Prerequisite: F. E. 1 or approval of instructor.**

121 LAND-USE PLANNING. (3) II Nicholls
A study of the national needs and national policies which led to the land-use pattern; social and economic implications of the present destruction and loss of soil resources; contribution and limitations of land-use planning toward the development of socially desirable programs for the use of natural resources. **Prerequisite: F. E. 120 or approval of instructor.**

122 LAND VALUE AND APPRAISAL. (3) II Nicholls
The capitalization process, and other devices for valuing farm land; appraisal procedures of the Federal Land Banks and of other credit institutions. **Prerequisite: F. E. 120 or approval of instructor.**

123a-c CURRENT LAND PROBLEMS. (1 ea.) IV
A study of the requirements for and the supply of agricultural land in the United States.

200a-c AGRICULTURAL ECONOMICS SEMINAR. (1) I, II, III Staff
Discussions and papers on methods, problems, current literature and research in the field of agricultural economics. Required of all graduate students in the department.

201a-c RESEARCH IN FARM ECONOMICS.
(3 ea.) I, II, III, IV Nicholls and Staff
Assignment of an advanced problem in the field of farm economics. Stress is placed on the plan, technique, and scientific method used by the student in developing his research.

202a, b ECONOMICS OF PRODUCTION AS APPLIED TO AGRICULTURE. (3, 3) II, III Bradford
This course places emphasis upon the fundamental considerations essential to the study of production organization in the economy of modern agriculture. Theoretical analysis will be applied to such questions as the combination of the agents of production, scale and intensity of production, comparative advantage and interregional analysis, and to an evaluation of national agricultural policies and programs. **Prerequisite: Approval of instructor.**

203 COST, PRICE, AND PRODUCTION RELATIONSHIPS IN AGRICULTURE. (3) III
Consideration is given to the different concepts of cost which are encountered in the agricultural research field; considerable attention is paid the applicability of the traditional cost-price rationale in the agricultural industry. **Prerequisite: Approval of instructor.**

Courses in Rural Sociology

10 RURAL SOCIOLOGY. (3) I, II, IV Beers
Introductory study of rural people and their communities; the distribution, mobility and vitality of rural population; characteristics of the rural community, rural groups and institutions; orientation to rural community problems.

110 RURAL SOCIOLOGY. (3) I, II, IV Beers
The work in Rural Sociology 10 with additional reading and problem assignments. **Prerequisite: Soc. 1 of Economics 1.**

120 RURAL LEADERSHIP AND SOCIAL CHANGE. (3) II Kaufman
Rural culture and tradition; social processes in rural life, rural-urban relationships; survey of modern and contemporary changes within the rural community vitally affecting farm life; special emphasis upon attitudes, personality, and the relation of leadership to change; leadership problems and methods in agriculture and rural life. Lectures, recitations, and student projects. **Prerequisites: R. S. 10 or 110, or approval of instructor.**

130a-c SPECIAL PROBLEMS IN RURAL LIFE. (3) I, II, III Staff
Supervised individual study in selected sub-fields of rural sociology. Population, standards of living, neighborhood and community change, and rural institutions are among the available fields for investigation. **Prerequisite: Approval of instructor.**

140a-c RURAL LIFE. (1) IV Beers
The responses of rural people and their social organization to current trends in southern states and in the nation. Population, community; rural groups and institutions; rural attitudes.

200a-c RESEARCH IN RURAL SOCIOLOGY. (3) I, II, III Staff
Individual graduate research with correlated study of rural social research types and methods. **Prerequisite: Introductory course in statistics.**

210 SEMINAR IN RURAL ORGANIZATION. (3) I Beers
Organizational behavior of farmers; social analysis of farmers' organizations and other rural interest groups, national, state, and local; comparative study of group types; trends affecting the social structure of rural communities; agricultural planning and social planning in rural communities. **Prerequisite: Approval of instructor.**

220 SEMINAR IN RURAL SOCIAL ATTITUDES. (3) III Kaufman
The nature and genesis of rural attitudes and their relation to rural social control; analysis of contemporary rural attitudes and opinion. **Prerequisite: Approval of instructor.**

250 TOPICAL SEMINAR. (3) II Beers
Analysis of topics of scientific interest in rural sociology, selected from such fields as the following; criticism of contemporary research; sociological factors in land use; migration; rural social ecology of the South; highland societies; sociography of rural groups.

HORTICULTURE

Albert Jackson Olney, Norris Raymond Elliott, Emery Myers Emmert, Clair Smith Waltman, and G. H. Wiggin.

1 GENERAL HORTICULTURE. (3) I, II, III, IV Olney
A study of the principles and practices basic to the production of fruit, flowers, and vegetable crops. Lectures, 3 hours.

2 PRINCIPLES OF SPRAY PRACTICE. (2) I Waltman
A study of the principles and practice of spraying for the control of pests of horticultural crops. Lecture, 1 hour; laboratory, 2 hours.

11 THE HOME FRUIT AND VEGETABLE GARDEN. (3) III Olney
A course dealing with the practical details of fruit and vegetable production in the home garden, and designed for women interested in preparing for home demonstration work, rural teaching, or other agricultural activities. Two lectures and one laboratory per week.

20 ELEMENTARY LANDSCAPE GARDENING. (2) II Elliott
The elementary principles of landscape as applied to planting of urban home grounds and farmsteads. Lectures, 2 hours.

22 ELEMENTARY FLORICULTURE. (2) III Elliott
The elementary principles of growing flowers and decorative plants, as house plants, and outdoor culture. Lectures, 2 hours.

103 POMOLOGY: POME FRUITS. (4) I Waltman
A course dealing with the theory and practice of commercial pome fruit production, with major emphasis on apple growing. Lectures, 3 hours; laboratory, 2 hours. **Prerequisite: Hort. 1.**

104 POMOLOGY: STONE FRUITS. (3) I Waltman
A detailed study of commercial peach, plum and cherry growing, with special emphasis on peach production. Lectures, 2 hours; laboratory, 2 hours. **Prerequisite: Hort. 1.**

105 POMOLOGY: SMALL FRUITS. (3) I Waltman
A detailed study of the care and management of commercial plantings of strawberries, raspberries, and other bush fruits. Lectures, 2 hours; laboratory, 2 hours, first half; lectures, 3 hours a week last half. **Prerequisite: Hort. 1.**

106a-c SPECIAL PROBLEMS IN POMOLOGY. (3) I, II, III Waltman
This course is designed to meet the need for advanced work. **Prerequisite: Hort. 1, 103, 104, 105, and approval of instructor.**

110 THE PRINCIPLES OF VEGETABLE GARDENING. (4) I Emmert
A study of the fundamental principles underlying commercial production of vegetables. Lectures, 3 hours; laboratory, 2 hours. **Prerequisite: Hort. 1, and Agronomy 10.**

111 GFOWING VEGETABLE PLANTS UNDER GLASS. (3) I Emmert
Production of vegetable plants grown for transplanting; types of hotbeds, cold frames, and simple greenhouse structures. Lectures, 2 hours; laboratory 2 hours. **Prerequisite: Hort. 110.**

112a-c SPECIAL PROBLEMS IN VEGETABLE CROPS. (3) I, II, III Emmert
This course is designed to meet the need for advanced work. **Prerequisite: Hort. 1, 110, and approval of instructor.**

120 LANDSCAPE GARDENING. (4) III, IV Elliott
The adaptation of principles of landscape architecture; including the coordination of buildings with surroundings; identification and uses of decorative materials and their requirements. Lectures, 3 hours; laboratory, 2 hours.

121 ADVANCED LANDSCAPE. (3) II Elliott
A continuation of Horticulture 120 with special emphasis on design and use of materials. Lectures, 2 hours; laboratory, 2 hours. **Prerequisite: Hort. 120.**

122 FLORICULTURE. (2) III Elliott
A detailed study of specific groups of flowers such as bulbs, iris, and roses. Lectures, 2 hours.

123 PLANT PROPAGATION. (3) II Elliott
A detailed study of the methods of propagating certain horticultural plants. Includes cuttings, grafting, and budding. Lectures, 2 hours; laboratory, 2 hours. **Prerequisites: Hort. 1; Bot. 1a, 1b.**

124a-c SPECIAL PROBLEMS IN ORNAMENTAL HORTICULTURE. (3) I, II, III Elliott
This course is designed to meet the need for advanced work. Approval by the instructor required. **Prerequisites: Hort. 1, 120, 121; Bot. 1a, 1b.**

125 PLANTS AND PLANTING MATERIALS. (2) III Elliott
A study of woody and herbaceous plants, their identification, suitability for landscape uses and the effects produced. Lecture, 1 hour; laboratory, 2 hours. **Prerequisite: Hort. 120.**

200a-c SEMINAR. (1) I, II, III Olney and Staff

201a-c RESEARCH IN HORTICULTURE. (3) I, II, III Olney and Staff
Prerequisite: Approval of instructors.

Forestry

1 OUTLINE OF FORESTRY. (5) I Wiggin
A general introduction to forestry, dealing with the concepts of forestry, what it is, how it is developing, what is being done, and why it is an essential enterprise. Fundamental problems of forest and woodland development in Kentucky are analyzed. Lectures, 4 hours; laboratory, 2 hours.

101a FARM WOODLANDS. (4) I Wiggin
History of forests and woodlands in the United States and Kentucky, silvics, important trees of Kentucky; structure and physiology of trees; ecology of woodlands; volume of woodland products. Lectures, 3 hours; laboratory, 2 hours.

101b FARM WOODLANDS. (4) I Wiggin
Principles of forest mensuration, increment and yield of growing timber; care and improvement of the farm wood lot; natural and artificial reproduction; protection; utilization and marketing. Lectures, 3 hours; laboratory, 2 hours. **Prerequisites or concurrent for 101a.**

MARKETS AND RURAL FINANCE

Aubrey J. Brown, Dana George Card, Carl McKinley Clark, Frank LeRond McVey, Hugh Bruce Price, John Bissell Roberts, and Leon A. Vennes.

30 SOURCES AND USES OF AGRICULTURAL DATA. (2) III Card
Methods of collecting, tabulating, and presenting agricultural information; the use of tables and graphs; principal sources of production and market information; and interpretation of the agricultural census, crop and livestock estimates, and market news reports. Averages, ratios, and short cuts in simple arithmetic computations are included. Lecture, one hour. Laboratory, two hours.

100 MARKETING. (4) I, III, IV Brown
Principles and methods of marketing farm products; methods of marketing at country points and in central markets; classes and functions of middlemen; marketing specific commodities; market prices; marketing costs; and cooperative marketing. Lecture, four hours. **Prerequisite: F. E. 1.**

101 COOPERATIVE MARKETING. (3) II Vennes
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. Lecture, three hours. **Prerequisite: M. and R. F. 100.**

102 MARKETING TOBACCO. (2) I Clark
Principles, methods, and problems in marketing tobacco including systems of marketing, organization of auction markets, functional problems of warehouse operations, efficiency in the pricing of tobacco, monopolistic aspects of competition, and international movement of tobacco and tobacco products. **Prerequisite: M. and R. F. 100.**

103 MARKETING LIVESTOCK. (2) III Brown
Analysis of local, auction, and terminal market organization, including marketing agencies, market institutions, marketing services, public regulation, direct marketing, and cooperative organization. **Prerequisite: M. and R. F. 100.**

104 MARKETING DAIRY PRODUCTS. (2) II Roberts
Economic aspects of markets for the principal dairy products, including factors affecting the efficiency of dairy marketing organizations, price policies, quotation systems, cooperation, and marketing agreements. **Prerequisite: M. and R. F. 100.**

110 AGRICULTURAL PRICES. (3) I, IV Card
A study of factors influencing prices of farm products, price trends, cycles, supply-price relationships, the effects of inflation and deflation upon agriculture, price legislation, and the current outlook for individual farm products. **Prerequisite: F. E. I.**

111 MARKET PRICES. (3) III Card
A study of price making forces in agricultural markets over relatively short periods of time; interregional and intermarket price relationships; effects of grading, price quoting, method of sale, extent of competition, speculation, and marketing agreements. **Prerequisite: F. E. 1, M. and R. F. 100.**

120 FARM FINANCE. (3) I Clark
Principles of financing the production and marketing of farm products; credit needs of agriculture, including short-time intermediate and farm mortgage-credit requirements; organization and operation of the federal farm loan system and other agencies which furnish credit for agriculture. Lecture, three hours. **Prerequisite: F. E. I.**

130 AGRICULTURAL STATISTICS. (5) I, III Card
A study of the principles and methods involved in the analysis interpretation, and use of agricultural statistics; time series; tabular relationships; gross correlation; and graphic multiple correlation. Sampling, tests of reliability and significance of statistical measures, and analysis of variance, as used in agricultural research, are studied.

140 AGRICULTURAL POLICY. (5) III Price
General development of the principles underlying agricultural policy, including analysis of the place of agriculture in the general economy, goals or objectives of agricultural policy; causes and development of the present agricultural problem; appraisal of current or proposed programs, and legislation for remedial action. **Prerequisite: F. E. I.**

141a-c CURRENT PROBLEMS IN AGRICULTURAL ECONOMICS. (1) IV Price
This course emphasizes recent developments in agricultural marketing, production, and credit. Especial consideration of federal production adjustment programs, organization of agricultural credit, marketing agreements, and cooperation. **Prerequisite: F. E. 1.**

142 MARKETING AND PROCESSING POULTRY PRODUCTS. (3) II Roberts and Wightman
Organization and functioning of markets, methods of selling, prices and price making forces are combined with laboratory instruction in grading, packaging, and handling poultry and eggs according to recognized commercial standards. Lecture: two

hours; laboratory, two hours. **Prerequisite; A. 141 and M. and R. F. 100.** This is the same course as A. 1. 142.

200a-c **SEMINAR. (1) I, II, III** Brown and Staff
Analysis of current problems in the field of marketing and rural finance.

202a-c **SPECIAL PROBLEMS IN MARKETING AND RURAL FINANCE. (3) I, II, III** Brown and Staff
Open to graduate students who have the necessary training and ability to do research on individual problems. The course consists of individual work on some selected problem related to agricultural marketing or agricultural finance. **Prerequisite: Approval of head of department.**

204 **RESEARCH IN MARKETING. (3) II** Price
Laying out the research project. Analysis of data. **Prerequisite: M. and R. F. 100.**

210 **THEORY OF AGRICULTURAL PRICES. (3) I** Brown
The application of economic theory to the field of agricultural prices. Variability and flexibility in the price structure in terms of price behavior and with respect to some important factors influencing long time, cyclical, and seasonal changes in agricultural prices. Attention will be given to the effects of changes in industrial production and consumer incomes, foreign demand, mechanization of agriculture, production cycles, middlemen's margins, etc. **Prerequisite: M. and R. F. 110.**

211 **RESEARCH METHODS IN AGRICULTURAL PRICES. (3) III** Card
This course is primarily a critical and historical study of the application of various methods of analysis to specific types of price problems, including the assembling of data, the theory and practice of sampling, supply-price relationships, and methods of testing the results of analysis. Students entering the course should have a broad preparation in general economics, agricultural economics, and statistics. **Prerequisite: M. and R. F. 130.**

240 **EFFECTS OF POLITICAL, ECONOMIC, AND CULTURAL FORCES ON RURAL LIFE IN AMERICA. (3) II** McVey
A course for graduate students in the heritages and political and economic forces that have affected the life and the property of the people engaged in agriculture. The period covered is from colonial times to the present. Lectures, readings, and assigned topics, three hours a week.

HOME ECONOMICS

Statie Estelle Erikson, Marie Rodes Barkley, Leora Bentley, Stella Elizabeth Helton, Verna Latzke, Mary Mumford, Frances Seeds, Lottie E. Sumner, Helen Wilmore, and Mary Terrell Wooldridge.

Courses in Foods and Nutrition

2 **NUTRITION AND PUBLIC HEALTH. (3) III** Erikson
Nutrition as it affects social and family problems in the field of public health. Consideration is given to the food budget on different economic levels. Lecture, three hours. Not open for credit to students registered in home economics.

3 FOOD PREPARATION AND ELEMENTARY NUTRITION. (4) I, III — Wooldridge
A course for nurses. Food composition is studied and its relation to normal nutritional requirements for optimum health. The laboratory includes practice in food preparation and the planning and preparation of meals for various age groups. **Prerequisite: A & P 6a, 6b.**

5 FOODS. (5) I, III, IV — Barkley
An introduction to the study of food. The course includes a study of methods of preparation and principles involved. Lecture and laboratory, nine hours.

6 FOODS. (4) II, III, IV — Barkley
This course includes the classification and composition of foods and the selection, purchase, and preparation of food in connection with meal planning and service. Lecture and laboratory, nine hours. **Prerequisite: H. E. 5.**

11 FOOD AND NUTRITION. (6) I, II, III — Erikson
The properties and nutritive values of food and its conversion into the matter and energy of the body. Lecture, three hours; laboratory, six hours. **Prerequisite: Chemistry 37, A. and P. 3.**

101 PRINCIPLES OF NUTRITION. (4) III, IV — Erikson
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. Lecture, four hours. Not open for credit to students registered in home economics.

102 DIETETICS. (6) I, II, III, IV — Wooldridge
Daily food requirements at different age levels, emphasis being given to satisfying the divergent needs of families and other groups. Practice is given in normal dietaries. Lecture, three hours; laboratory, six hours. **Prerequisite: H. E. 6 and H. E. 11.**

103a, b PUBLIC SCHOOL NUTRITION. (2, 2) I, II, IV — Wooldridge
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 programs in public schools. Lecture, two hours. **Prerequisite or parallel: H. E. 102.**

103c, d PUBLIC SCHOOL NUTRITION. (1, 1) I, II, IV — Wooldridge
Opportunities are given to make and collect illustrative material for courses in applied nutrition. Observations of nutrition classes, school cafeterias and other nutrition projects are made. Laboratory, two hours. **Prerequisite or parallel: H. E. 103a or H. E. 103b.**

105a-c EXPERIMENTAL COOKERY. (4 ea.) I, II — Wooldridge
Study of factors that affect the results obtained in cooking and food preparation processes. Experimental work is carried out under controlled conditions and special emphasis is placed on physical, chemical and mechanical conditions. Lecture, one hour; laboratory, six hours. **Prerequisite: Chem. 37, H. E. 5 or approval of instructor.**

106a-d FIELD WORK IN NUTRITION. (5) IV — Wooldridge
Nutrition problems at different age levels with emphasis on the child in the public school, correlated with surveys and experimental studies to show the relation between diet selection and its physical and mental effects. Lecture and laboratory. **Prerequisite: H. E. 103a or H. E. 103b, or approval of instructor.**

107 WORKSHOP IN NUTRITION. (5) IV Erikson
This workshop gives opportunity to workers in the field of nutrition to obtain help in presenting community nutrition programs. The nutrition problem is analyzed in its relation to agricultural and socio-economic problems. The latest findings in technical information on nutrition are presented. Opportunity is given to collect visual aid material for teaching nutrition.

108a-d SEMINAR IN NUTRITION. (2 ea.) I, II Erikson
Investigations of recent research in nutrition. Lecture, two hours. **Prerequisite: Senior or graduate standing.**

111 ADVANCED NUTRITION. (4) II, IV Erikson
Human nutrition studies as an application of the principles and methods of the chemistry of nutrition to the characteristic properties of the bodily cell structure and metabolism. Laboratory work includes gastric, blood and urine analyses. Lecture, two hours; laboratory, four hours. **Prerequisite: H. E. 11.**

112 NUTRITION IN DISEASE. (4) III, IV Erikson
Metabolic processes of the body in normal and diseased conditions, correlating the metabolic changes due to disease with diet therapy. Practice is given in planning, calculation and preparation of therapeutic diets. Lecture, two hours; laboratory, four hours. **Prerequisite: H. E. 102; H. E. 111 or taken concurrently.**

114 FOOD PRESERVATION. (3) IV Helton
The principles of preserving food by drying, canning, pickling, salting, and quick freezing. Practice in the canning of fruits, vegetables, and meats; and the pickling of fruits and vegetables; and making of jellies and preserves. **Prerequisites: Bact. 52 and H. E. 5.**

200a-d SEMINAR IN NUTRITION. (2 ea.) I Erikson

206a-d ADVANCED FIELD WORK IN NUTRITION. (1 ea.) I, II, III, IV Wooldridge
The course is a continuation of H. E. 106a-d with investigations of recent research in the field. Lecture and laboratory. **Prerequisites: H. E. 103, H. E. 106a, or approval of instructor.**

Courses in Clothing, Textiles, and Related Art

17 CLOTHING. (3) I, II, III, IV Latzke
A survey course emphasizing the consumer economics of clothing. Included will be clothes budgets, techniques of buying clothes, clothing construction. Open only to non-home economics students. Lecture, one hour; laboratory, four hours.

25 TEXTILES. (3) I, III, IV (Alternate) Sumner
A study of fundamental weaves, yarns, fibers, and finishes, with reference to the selection of appropriate fabrics from both economic and artistic viewpoints. Lecture, two hours; laboratory, two hours.

26 COSTUME DESIGN. (4) I, II, III, IV (alternate) Seeds
Appropriate costuming for the individual. Analysis of physical and mental makeup followed by study of costume color, line and texture for the individual and her costume needs. Original costumes. Lecture, two hours; laboratory, four hours. **Prerequisite: H. E. 26.**

27 CLOTHING. (5) I, II, III, IV (Alternate) Latzke
Fundamental principles of clothing construction applied to the making of garments. Study and use of commercial patterns; modification of patterns. Lecture, two hours; laboratory, six hours. **Prerequisite: H. E. 25 and H. E. 26.**

125 ADVANCED TEXTILES. (3) I, IV (Alternate) Sumner
Individual term problems. Lecture, three hours. **Prerequisite: H. E. 25, Econ. 1.**

126 ADVANCED COSTUME DESIGN. (4) II, IV (Alternate) Seeds
A survey of costume throughout the ages. Planning of modern costumes. Lecture, two hours; laboratory, four hours. **Prerequisite: H. E. 26.**

127 ADVANCED CLOTHING. (4) I, II, IV Seeds, Latzke, and Sumner
A creative approach to costume problems is encouraged. Values in both individually made and in ready-to-wear clothes are analyzed. Costumes are designed and constructed—giving as wide experience as possible with various techniques of pattern making, of construction, and of fitting. Lecture, one hour; laboratory, six hours. **Prerequisite: H. E. 27.**

129 INTERIOR DECORATION. (4) I, III, IV (Alternate) Seeds
A study of color, line, and texture as they are used to create effective interiors suited to modern living. Lecture, two hours; laboratory, four hours. **Prerequisite: H. E. 25, Art 30b.**

135 DECORATIVE TEXTILES. (3) II, IV (Alternate) Sumner
Survey of decorative textiles through the ages, with the emphasis on modern use of decorative fabrics in the home. Construction of decorative fabrics. Lectures and laboratories. **Prerequisite: H. E. 25, and Art 30a, 30b, 30c.**

137 ADVANCED CLOTHING PROBLEMS. (3) II, III, IV Latzke
This course is planned on the basis of the needs and interests of the individual student. Some suggestive topics for study are: tailoring, remodeling, children's clothing, the clothing industry, clothing economics, clothing for the family. Lecture, two hours; laboratory, four hours. **Prerequisite: H. E. 127.**

139a PROBLEMS IN INTERIOR DECORATION.
(3) II, IV (Alternate) Seeds
Selected problems in furnishing the home. The practical aspect of decorating is emphasized; as part of the problems, projects are carried out in furniture refinishing, slip cover making and simple upholstering. Lecture, one hour; laboratory, four hours. **Prerequisite: H. E. 129.**

139b PROBLEMS IN INTERIOR DECORATION.
(3) II, IV (Alternate) Seeds
A series of individual problems is selected, then solved by doing the decorating or by making plans, drawings and color plates. A survey is made of interior decoration through the ages. Lecture, one hour; laboratory, four hours. **Prerequisite: H. E. 129.**

237a-d SEMINAR IN TEXTILES AND CLOTHING.
(3 ea.) I, II, III, IV Seeds
Investigations of special textile and clothing problems. Lecture, three hours.

Courses in Institution Management

41 INSTITUTION MARKETING. (4) I, II, IV Helton
The economics of food and supplies for institutions. Field trips are made to wholesale houses, distributing centers and food factories. Lecture, three hours; laboratory, two hours. **Prerequisite: Econ. 1.**

42 INSTITUTION FOODS. (6) I, II, III Helton
Large quantity food preparation and service. Experience in using modern equipment in preparation of large quantities of food. Introduction to food cost accounting. Lecture, three hours; laboratory, six hours. **Prerequisite: H. E. 6.**

141 INSTITUTION ORGANIZATION AND ADMINISTRATION. (4) II, IV Helton
Principles of institution organization, types of institutional service, modern industrial tendencies, advertising, personnel, and financial control. Lecture, three hours; laboratory, two hours. **Prerequisite: H. E. 41 and H. E. 42.**

142a-c INSTITUTION MANAGEMENT. (4 ea.) III, IV Helton
Application of scientific principles of institution management. Practice is given in office management and in the different units of service. Lecture, one hour; laboratory, six hours. **Prerequisite: H. E. 141.**

143 INSTITUTION EQUIPMENT. (4) IV Helton
Selection, arrangement, cost, and care of institution equipment. Problems of lighting, heating, ventilation, and refrigeration for institution food preparation and service units. Lecture, three hours; laboratory, two hours. **Prerequisite: H. E. 42.**

Courses in Child Development

51 HEALTH OF THE FAMILY. (4) I, III Erikson
Study of the factors that influence health, the agencies and forces to be utilized for health improvement, application of modern science to health improvement, prevention of specific diseases, and practice in the technique of home nursing. Lecture, four hours.

150 TECHNIQUES OF GUIDANCE FOR THE PRE-SCHOOL CHILD. (4) I, III Mumford
Study of specific techniques of guidance which parents or other adults may use in fostering optimum development of the pre-school child. Observation of teacher techniques in the nursery school and practice in their application is required. Lecture, two hours; laboratory, four hours. **Prerequisite: H. E. 152.**

152 CHILD CARE AND DEVELOPMENT. (5) I, II, III, IV Bentley
Study of the care and training of the child from infancy thru the pre-school period. Standards for normal development—physical, social, emotional, and mental—are emphasized. Observation of pre-school children and participation in nursery school activities are required. Meetings with parents are required. Lecture, three hours. **Prerequisite: Psych. 7 and A. & P. 3.**

154 FAMILY LIVING. (4) II, IV Mumford
The inter-relationships of community and family living. Emphasis is given to the influence of home conditions on the members of the family, and the results of such influence on attitudes and behaviors that affect community living. Lecture, four hours. **Prerequisite: H. E. 61, H. E. 152, Econ. 1, Soc. 1, or R. S. 10.**

155 THE CHILD AND HIS CLOTHING. (3) IV Bentley
A study of the appreciation of the needs in children's clothing, the physiological and psychological functions, as well as the selection, cost and care of children's clothing. Lectures and laboratory.

156 PLAY AND PLAY MATERIALS. (3) IV Bentley
A study of the appreciation of the importance of the right kind of play materials in the development of pre-school children; of materials to use, costs, labor, and time; and construction of toys. Lectures and laboratory.

157 INFANT DEVELOPMENT. (3) IV Mumford
Study of the development of the child in the pre-natal and infant periods. Consideration is given to the pre-natal factors that affect the child's development, such as heredity, the anatomy and physiology of reproduction, prenatal nutrition of both the mother and the fetus. The neo-natal period includes study of sleep, emotion, motor activities, vocalization of the infant and infant feeding. Field trips are required. Lecture, three hours.

Courses in Home Management

61 HOUSING. (4) I, III, IV Wilmore
The first part of the course deals with the social and economic problems of housing American families. The second half deals with the problems of house buying and house planning from the standpoint of the consumer. Lecture, four hours.

161 CONSUMER PROBLEMS. (4) II, III, IV Wilmore
A study of consumer buying and its social and economic aspects. An analysis of the common problems of the manufacturer, the merchant, and the consumer in order to understand better the needs and responsibilities of each group. Lecture, four hours. **Prerequisite: Econ. 1.**

162a HOME MANAGEMENT AND FAMILY RELATIONSHIPS. (4) I, II, III, IV Wilmore
The philosophy and principles of home management. A study of the management of resources available to the family for optimal development. Includes the mechanics of time, energy, and money management. Emphasis is placed on personal development, social and family relationships. Lecture, four hours. **Prerequisite: Econ. 1, H. E. 61.**

162b HOME MANAGEMENT AND FAMILY RELATIONSHIPS. (5) I, II, III, IV Wilmore
A residence period in the University home management house is required of all seniors in home economics. The course consists of laboratory work affording experience in the application of principles presented in other courses. **Prerequisite: H. E. 162a; prerequisite or parallel: H. E. 102.**

262 ADVANCED HOME MANAGEMENT AND FAMILY RELATIONSHIPS. (3) II Wilmore
A course affording opportunity for special study of social and economic problems affecting family life. Lecture, three hours. **Prerequisite: H. E. 162a and 162b.**

General Courses

71 SURVEY OF HOME ECONOMICS. (1) III Helton
Lectures on opportunities within the field of home economics. Lecture, two hours.

72 PROFESSIONAL PROBLEMS OF HOME ECONOMICS. (1) I Wilmore
Lecture, two hours.

170a-d SPECIAL PROBLEMS. (2 ea.) I, II, III, IV Staff
Intensive work on specific phases in any of the fields of home economics, namely: food preparation, meal planning and service, nutrition, clothing, textiles, costume design, housing, child development, institution economics, consumer problems, home management, dietetics, and interior decoration.

270a-d SPECIAL PROBLEMS. (2 ea.) I, II, III, IV Staff
All fields.

COLLEGE OF ENGINEERING

CIVIL, ARCHITECTURAL, AND SANITARY ENGINEERING

Robert Ezekiel Shaver, Robert Fulton Baker, Alvin Lee Chambers, Frank Jacobs Cheek, Jr., Ernst Vern Johnson, and Samuel A. Mory, Jr.

Architectural Engineering

1 **ARCHITECTURAL RENDERING.** (3) III — Johnson
Pictorial delineation of architectural subjects in the medium of pencil, ink, and water color. Drawing, nine hours.

3 **SANITATION, ACOUSTICS, FIRE PREVENTION.** (4) I — Cheek
Theory and practice as applied to architectural design. Lecture and recitation, four hours. **Prerequisite: Junior classification.**

4a **ARCHITECTURAL DESIGN.** (4) I — Johnson
Principles of aesthetic design and functional planning of buildings. Drawing room, 12 hours. **Prerequisite: Junior classification.**

4b **ARCHITECTURAL DESIGN.** (4) II — Johnson
Continuation of Arch. Eng. 4a. Drawing room, 12 hours. **Prerequisite: Arch. Eng. 4a.**

5 **BUILDING EQUIPMENT.** (3) III — Cheek
Theory and practice of modern building equipment. Lecture and recitation, three hours. **Prerequisite: Mech. Eng. 103.**

6 **INDEPENDENT PROBLEMS.** (6) III — Johnson
Development of complete working drawings and specifications of a building, to be selected by the student with the approval of the instructor. Class work, three hours; drawing room, nine hours. **Prerequisite: Arch. Eng. 4a.**

7 **BUILDING CONSTRUCTION.** (1) III — Cheek
Theory and practice of modern building construction. Materials and their use. Contractor's operation, inspection, and methods of procedure. Lecture and recitation, two hours. **Prerequisite: Senior classification.**

Civil Engineering

*12 **PLANE SURVEYING.** (4) I, III — **Shaver**
Theory and use of the transit, level, and compass in land surveys, leveling, and municipal and topographic surveys. General use and care of surveying instruments, note keeping, field problems, and computations. Class work, three hours; field work, three hours. **Prerequisite: Math 3.**

15 **GENERAL SURVEYING.** (5) IV — 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. Lecture, recitation, and field practice, **44 hours a week for three weeks. Prerequisite: Civ. Eng. 16a.**

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* Open to Freshmen.

† See appended list of leaves of absence, resignations, deaths, etc. p. 399.

16a ROUTE SURVEYING. (4) I Shaver
Curves, line, grade, earthwork, theory of location as it applies to railways and highways, overhaul, mass diagram, and estimate of cost. Lecture and recitation, four hours. **Prerequisite: Civ. Eng. 12.**

16b ROUTE SURVEYING. (4) IV 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, or Junior Classification in Mining Engineering.**

17 HYDROGRAPHIC SURVEYING. (1) IV Shaver
Given at the summer surveying camp located at Camp Robinson, Noble, Breathitt County, Kentucky. Stream gauging, sounding, and measuring the flow in Kentucky River, location surveys for bridges and power dams. Surveys for impounded water supplies, and 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, or Junior Classification in Mining Engineering.**

18 MAPPING AND TOPOGRAPHIC DRAWING. (3) III Shaver
Construction of maps from field notes, reproductions and changing scale of maps, topographic symbols, contours, projected location, profile, line, and grade. Drafting room, nine hours. **Prerequisite: Civ. Eng. 12.**

19 AIR NAVIGATION. (3) III Shaver
Principles of navigation as applied to aircraft. A study of charts, altimeters, compasses, drift sights, air speed indicators and navigation aids. Solution of problems in piloting and dead reckoning. Lecture and recitation, three hours.

23 SEMINAR. (1) III Chambers
A study of current engineering literature as related to civil engineering; assigned reading and reports. Round table conference, two hours. **Prerequisite: Junior classification.**

31 HIGHWAY LOCATION, CONSTRUCTION, AND MAINTENANCE. (3) III Chambers
Principles of location, topographic conditions, economic considerations, benefits, and costs. Materials and types of roads, and general maintenance. Lecture and recitation, three hours.

32 STREETS AND PAVEMENTS. (3) III Chambers
Drainage, subgrade, foundations, surfacing materials; resistance to friction, safety appliances, construction, maintenance, and traffic census. Lecture and recitation, three hours. **Prerequisite: Civ. Eng. 31.**

37 HIGHWAY MATERIALS. (2) III Chambers
Methods of testing highway materials and the relation of such tests to standard specifications. Laboratory, four hours. **Prerequisite or concurrent: Civ. Eng. 32.**

49 RAILWAY CONSTRUCTION AND MAINTENANCE. (3) II Shaver
Theory of construction, road bed, track, sub-drainage, structures, yards, terminals, revisions, cost of operation, and maintenance of way. Lecture and recitation, three hours. **Prerequisite: Civ. Eng. 16a.**

81 TESTING MATERIALS. (2) I, II, III, IV Chambers
Experimental investigations and tests of woods, metals, cement, concrete, and other construction materials to verify the laws governing their behavior under given conditions. Laboratory, four hours. **Prerequisite or concurrent: Applied Mech. 100.**

107 SOIL MECHANICS. (5) III Baker
A study of soil and its utilization in foundations for structures and subgrade for highways. Stabilization and improvement of bearing values. Lectures and recitations, 3 hours a week; laboratory, 4 hours. **Prerequisite: Applied Mech. 100.**

110a REINFORCED CONCRETE. (6) II Mory
A study of concrete mixtures. Theory and design of beams, slabs, columns, bridges, buildings, retaining walls, dams, arches, and rigid frames. Lecture and recitation, four hours; drawing room, two hours; laboratory, two hours. **Prerequisite: Civ. Eng. 171a.**

110b REINFORCED CONCRETE. (5) III Mory
Continuation of Civ. Eng. 110a. Lecture and recitation, three hours; drawing room, four hours. **Prerequisite: Civ. Eng. 110a.**

114 ADVANCED SURVEYING. (4) I Shaver
Triangulation and base line measurement, precise and trigonometric leveling. Methods of adjustment. Observation and calculations for determining time, azimuth, and latitude and longitude. Theory and practice of photogrammetry. Lecture and recitation, three hours; field work, three hours. **Prerequisite: Civ. Eng. 12.**

120 HYDRAULICS. (3) I, II, III, IV Cheek
Principles of hydraulics and hydrodynamic pressure. Flow of water through orifices, nozzles, pipes, and open channels, over weirs, and against stationary and moving vanes. Loss from friction and other sources. Lecture and recitation, three hours. **Prerequisite or concurrent: App. Mech. 100.**

122 WATER POWER ENGINEERING. (3) III Mory
Investigations, design, and operation of water power projects. Lecture and recitation, three hours. **Prerequisite: Civ. Eng. 120.**

123 HYDRAULICS LABORATORY. (2) I, II, III, IV Cheek
Experimental investigation of flow of water in pipes, channels, over weirs, measure of friction and hydrostatic pressure, and hydraulic machinery. Laboratory, four hours. **Prerequisite or concurrent: Civ. Eng. 120.**

171a, b THEORY OF STRUCTURES. (5, 3) I, II, III Mory
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. Lecture and recitation, five hours and three hours, respectively. **Prerequisite or concurrent: Applied Mech. 100. Prerequisite for 171b is 171a.**

173a STEEL STRUCTURES. (4) I, II, III Mory
Design and detail of steel buildings and highway bridges. Lecture, one hour; drawing room, nine hours. **Prerequisite: Civ. Eng. 171a.**

173b STEEL STRUCTURES. (3) II Mory
Design and detail of steel railway bridges. Drawing room, nine hours. **Prerequisite: Civ. Eng. 173a.**

174 GRAPHIC SOLUTIONS. (3) I, II, III Mory
Principles and methods of determining stresses by graphic solution as applied to structural engineering. Elementary problems in the design of timber, steel, and masonry structures. Lecture, one hour; drafting room, six hours. **Prerequisite or concurrent: Civ. Eng. 171a.**

Sanitary Engineering

24 SANITARY ENGINEERING FOR SANITARY INSPECTORS. (5) IV Cheek
Elementary principles of sanitary engineering, including municipal and rural sanitation, water supply, sewage disposal, collection and disposal of waste, dairy inspection, and insect control. Total time 45 hours of lectures, recitations, and field trips; 36 hours of laboratory followed by four weeks of supervised field work in approved county health offices, with a weekly seminar in the Fayette County Health Office.

151 WATER SUPPLY AND WATERWORKS. (3) II Cheek
Sources of supply; rainfall, surface water, rivers, lakes, and ground water. Theory of filtration, purification, equipment, and distribution. Problems in design and construction. Lecture and recitation, three hours. **Prerequisite: Civ. Eng. 120.**

152 SEWERS AND SEWAGE DISPOSAL. (3) II Cheek
Sanitary and storm sewer systems, theory of design, and method of disposal. Lecture and recitation, three hours. **Prerequisite: Civ. Eng. 120.**

153 DESIGN OF WATERWORKS AND SEWERS. (2) III Cheek
Design of water supply systems, storm and sanitary sewers, and disposal plants. Specifications and estimates of cost. Drawing room, six hours. **Prerequisite or concurrent: San. Eng. 151 and San. Eng. 152.**

156 WATER AND SEWER PLANT OPERATION. (2) III Cheek
Standard methods of control for producing best results in the treatment of water and sewage. Practice with miniature plants. Laboratory, four hours. **Prerequisite or concurrent: San. Eng. 151 and San. Eng. 152.**

157 SANITARY ENGINEERING FOR HEALTH OFFICERS. (2) IV Cheek
General principles of sanitary engineering, including municipal and rural sanitation, water supply, collection of waste, sewers and sewage disposal, insect control, milk sanitation, principles of heating, and lighting and ventilation. Lectures, recitations, and field trips, eight hours a week for eight weeks.

158 SANITARY ENGINEERING DESIGN. (4) III Cheek
For students majoring in Sanitary Engineering. Complete design and layout of a water plant, distribution system, storm and sanitary sewer, and sewage disposal plant. Drawing room, twelve hours. **Prerequisite or concurrent: San. Eng. 151 and San. Eng. 152.**

182 SANITATION. (3) III Cheek
Presented from an engineering viewpoint. Municipal and rural sanitation, treatment and protection of water supplies, disposal of refuse and sewage, control of insects, food supply, plumbing and ventilation. Lecture and recitation, three hours. **Prerequisite: Bact. 57.**

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-f **CONSTRUCTION.** (3 ea.) I, II — Mory
Advanced work in plain and reinforced concrete, theory, design, and experimental work. Class work, five hours; laboratory, ten hours.

232a-f **HIGHWAY ENGINEERING.** (3 ea.) I, II — 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, and laboratory investigations on all kinds of surfacing materials. Structures, their design and maintenance. Class work, five hours; laboratory, ten hours.

242a-f **RAILROAD ENGINEERING.** (3 ea.) II, III — Shaver
Advanced course in location, construction, maintenance, economical selection of lines, grade reduction, cost of operation, valuation, and structures and their maintenance. Class work, five hours; laboratory, ten hours.

252a-f **SANITARY ENGINEERING.** (3 ea.) II, III — Cheek
Advanced course in sewer design, construction and maintenance; design, maintenance, and operation of sewage disposal plants; water supply and waterworks design; and construction and maintenance. (Courses in water analysis and bacteriology should be taken in connection with this course.) Class work, 5 hours; laboratory, 10 hours a week.

262a-f **GEODETIC SURVEYING.** (3 ea.) III, IV — Shaver
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, five hours; laboratory, ten hours.

272a-f **STRUCTURAL ENGINEERING.** (3 ea.) II, III — Mory
Advanced course in structural design, mill building, and railroad and highway bridges. The use of influence diagrams and detail drawings. Class-work, five hours; laboratory, ten hours.

282a-i **SPECIAL PROBLEMS IN CIVIL ENGINEERING.** (3 ea.) — Staff
Open to graduate students who have the ability to carry on research. Each course consists of individual work in one of the various fields of Civil Engineering. Laboratory, 18 hours a week. **Prerequisite: Approval of Head of the Department.**

ELECTRICAL ENGINEERING

Ernest Adolphe Bureau, Leslie Keene Adams, Nathan B. Allison, Brinkley Barnett, Earl T. Noble, and Harry Alex Romanowitz

11 **ELECTRICAL LABORATORY.** (1) — Adams and Barnett
(For Electrical and Architectural Engineers.) A study of the methods and materials used in connecting electrical apparatus and in the wiring of buildings. Adequacy, serviceability, safety, and costs are emphasized. Laboratory, two hours.

21 PRINCIPLES OF ELECTRICAL ENGINEERING. (6) III Staff
(For Electrical Engineers.) A first course in electrical engineering. A study of the application of the fundamental laws of electric, magnetic, and dielectric circuits. Classroom, 5 hours; laboratory, 2 hours. **Prerequisite: Phys. 3b; Math. 20a.**

101 FUNDAMENTALS OF ELECTRICAL MACHINERY. Barnett and Noble
(4) I, III
(For Civil, Metallurgical, and Mining Engineers.) A study of the more common types of D.C. and A.C. electrical equipment and machinery. Classroom, three hours; laboratory, three hours. **Prerequisite: Phys. 3b.**

102 ELECTRICAL MACHINERY. (3) II Bureau
(For Metallurgical and Mining Engineers.) A study of electric power and its control as applied to mining machinery and metallurgical processes. Classroom, three hours. **Prerequisite: Elec. Eng. 101.**

105 DIRECT CURRENT CIRCUITS AND MACHINERY. Barnett
(6) III, IV
(For Mechanical Engineers.) Subjects studied are batteries, D.C. generators, motors, control apparatus, power transmission, etc. Classroom, four hours; laboratory, six hours. **Prerequisite: Phys. 3b.**

106 ALTERNATING CURRENT CIRCUITS AND MACHINERY. (6) I, IV Barnett
(For Mechanical Engineers.) The fundamental theory of A.C. circuits and apparatus. It includes a study of single phase and polyphase generators, motors, transformers, converters, etc. Classroom, four hours; laboratory, six hours. **Prerequisite: Elec. Eng. 105; Math. 20b.**

107 ELECTRICAL CONTROL. (4) IV Bureau
A study of the field of electrical engineering which is concerned with the control of electric equipment. It involves a study of the individual types of contactors, relays, etc., as well as the various circuits with which they are tied together into units for automatic functioning. Classroom, three hours; laboratory, two hours. **Prerequisite: Elec. Eng. 116, and Elec. Eng. 106 or Elec. Eng. 101.**

108 ELECTRONIC CONTROLS. (4) II Allison and Romanowitz
A study of the application of thermionic and light sensitive tubes to industry in non-communication uses such as the controlling of manufacturing processes and motive equipment, safe-guarding life and property, etc. Classroom, three hours; laboratory, three hours. **Prerequisite: Elec. Eng. 116, and Elec. Eng. 161.**

110a-c ELECTRICAL LABORATORY. Barnett and Noble
(1 ea.) II, III, IV
(For Electrical Engineers.) An experimental study of electrical circuits and machinery. Laboratory, two hours. **Concurrent: Elec. Eng. 115, and Elec. Eng. 116.**

111a-c ADVANCED ELECTRICAL LABORATORY. Bureau
(2, 1, 1) I, II, III
(For Electrical Engineers.) Advanced laboratory study of electrical machinery with special reference to A.C. apparatus. Laboratory two 2-hour periods, and three hours, respectively. **Concurrent: Elec. Eng. 117.**

114 ALTERNATING CURRENT CIRCUITS. (6) II Bureau and Noble
A mathematical study of electric circuits under the influence of steady state non-sinusoidal as well as sinusodial voltages. Vector algebra, Fourier series and symmetrical components as well as graphical methods are used. Classroom, five hours; Laboratory, three hours. **Prerequisite: Elec. Eng. 21 and Math. 105a.**

115 DIRECT CURRENT MACHINERY. (4) II Staff
(For Electrical Engineers.) A study of D.C. machinery operation and behavior. Classroom, three hours; calculating room and laboratory, three hours. **Prerequisite: Elec. Eng. 21 and Math. 20b.**

116 ALTERNATING CURRENT MACHINERY. (5) III Staff
(For Electrical Engineers.) A study of A.C. machinery operation and behavior. Classroom, four hours; calculating room and laboratory, three hours. **Prerequisite: Elec. Eng. 114 and Elec. Eng. 115.**

117 ADVANCED ALTERNATING CURRENT MACHINERY. (5) IV Staff
(For Electrical Engineers.) Advanced analytical study of A.C. machinery characteristics. Classroom, five hours. **Prerequisite: Elec. Eng. 116.**

120 ELECTRICAL CIRCUIT ANALYSIS. (3) III Allison, Bureau, and Romanowitz
Application of higher mathematics to the solution of special types of electrical engineering problems. Lecture and recitation, three hours. **Prerequisite: E. E. 114, Math. 105a.**

123 ELECTRICAL EQUIPMENT PROBLEMS. (3) I Barnett and Bureau
(For Electrical Engineers.) Individual problems related to engineering practice are assigned. The solutions involve economic as well as engineering considerations. A formal written report is required for each assignment. Nine hours. **Prerequisite: Elec. Eng. 116; and Math. 105a.**

124a ELECTRICAL DESIGN. (2) II Barnett
D.C. machinery design. Six hours. **Prerequisite: Elec. Eng. 115.**

124b ELECTRICAL DESIGN. (2) III Barnett
A.C. machinery design. Six hours. **Prerequisite: Elec. Eng. 116.**

135 ELECTRICAL NETWORKS. (4) I Allison, Bureau and Romanowitz
Fundamentals of networks theory in communication and power circuits. Lecture and recitation, three hours; laboratory, three hours. **Prerequisite: E. E. 114 and E. E. 120.**

136 ILLUMINATION ENGINEERING. (4) III Bureau and Romanowitz
A study of light sources and photometry; fundamental principles of illumination as applied to home, public building, and commercial lighting; outdoor lighting. Classroom, three hours; laboratory, two hours. **Prerequisite: Phys. 3b and Math. 20b.**

137 ELECTRIC POWER TRANSMISSION AND DISTRIBUTION. (4) II Barnett
A study of the materials and equipment used and the problems involved in the design, building, and operation of electrical transmission lines and distribution systems. Classroom, four hours. **Prerequisite: E. E. 116 and E. E. 106 or E. E. 101.**

139 TELEPHONY. (4) IV Bureau and Romanowitz
The theory and practice of modern telephone operation. Lecture and recitation, four hours. **Prerequisite: E. E. 135.**

151a-c SEMINAR. (1 ea.) II, III, IV Staff
Weekly meeting with staff for reports and discussion on research and modern trends and practices in Electrical Engineering. Two hours. **Prerequisite: Senior Standing.**

152a-c INDEPENDENT PROBLEMS. (2 ea.) II, III, IV Staff
(For Electrical Engineers.) A problem, approved by the Head of the Department, forms the background for study and research. Only students, the character of whose previous work justifies it, will be allowed to register for this work.

152d-f INDEPENDENT PROBLEMS. (3 ea.) II, III, IV Staff
(For Electrical Engineers.) A problem, approved by the Head of the Department, forms the background for study and research. Only students, the character of whose previous work justifies it, will be allowed to register for this work.

161 RADIO ENGINEERING. (4) III Allison and Romanowitz
Elements of electronic circuits. Electron behavior; thermionic emission; diodes, triodes, tetrodes, pentodes and their characteristics; qualitative performance of tubes in electronic circuits; and electronic instruments. Lectures and recitations, three hours; laboratory, three hours. **Prerequisite: E. E. 114.**

162 RADIO ENGINEERING-RECEIVERS. (4) I Allison and Romanowitz
Power supplies, amplifiers, oscillators, detectors, and complete receiver circuits. Lecture and recitation, three hours; and laboratory, three hours. **Prerequisite: E. E. 161.**

163 RADIO ENGINEERING-TRANSMITTERS. (4) III Allison and Romanowitz
Transmitter circuits, crystal oscillator, amplitude modulation, frequency modulation, high frequency lines, and antenna. Lecture and recitation, four hours. **Prerequisite: E. E. 162 and E. E. 135.**

164 RADIO ENGINEERING-HIGH FREQUENCY PHENOMENA. (5) II Romanowitz
Circuit elements; wide band amplifiers; pulse, trigger, and sweep circuits; square wave testing, and transient response. Lecture and recitation, four hours; laboratory, three hours. **Prerequisite: E. E. 163.**

165 RADIO ENGINEERING—FUNDAMENTALS OF ELECTRIC WAVES. (3) II Romanowitz
Equations of plane waves; application of vector analysis in electric and magnetic field theory; introduction to Maxwell's equations. Lecture and recitation, three hours. **Prerequisite: E. E. 120 and E. E. 114.**

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics, and Mathematics. For major work, a candidate must hold a bachelor's degree in Electrical Engineering or its equivalent.

205 ADVANCED INDUCTION MOTOR THEORY. (6) Bureau
A study of the theory underlying the characteristics of single phase and polyphase induction motors. Recitation, four hours; laboratory, six hours.

206 ELECTRIC POWER TRANSMISSION. (6) Barnett
The theory underlying the calculation and operation of long distance transmission circuits. Special attention to relay control. Recitation, four hours; laboratory, six hours.

207 ELECTRIC POWER DISTRIBUTION. (6) Barnett
A study of the theory underlying the operation and control of various types of distribution circuits. Recitation, four hours; laboratory, six hours.

208 ELECTRIC TRACTION. (6) Bureau
An advanced study of electric power application to railways, cranes, elevators, etc. Recitation, four hours; drawing room, six hours.

209 TELEPHONE ENGINEERING. (4) Romanowitz
An advanced study of the theory and operation of modern telephone exchanges. Layouts and designs are made to meet different assumed conditions. Recitation, four hours.

210 SYMMETRICAL COMPONENTS. (6) Bureau
A study of the symmetrical component method of analyzing unbalanced conditions on transmission lines and its use in solving relay applications. Recitation, four hours; laboratory and design, six hours.

226 RADIO ENGINEERING—ULTRA HIGH FREQUENCY. (4) Romanowitz
Negative and positive grid oscillators; the magnetron, the klystron ultra high frequency transmission lines and circuit elements. Lecture and recitation, three hours; laboratory, three hours. **Prerequisite: E. E. 164 or equivalent.**

227 RADIO ENGINEERING—RADIATION AND PROPAGATION. (3) Romanowitz
Basic laws; plane waves, polarization; short antenna fields and radiated energy; finite length antenna; propagated waves. Lecture and recitation, three hours. **Prerequisite: E. E. 165 or equivalent.**

230a-i SPECIAL PROBLEMS IN ELECTRICAL ENGINEERING. (3 ea.) Staff
Open to graduate students who have the ability to carry on research. Each course consists of individual work in one of the various fields of Electrical Engineering. Laboratory, 18 hours a week. **Prerequisites: Approval of Head of the Department.**

ENGINEERING—GENERAL

Daniel Voiers Terrell, Brinkley Barnett, Morris W. Beebe, Ernest Adolphe Bureau, Willis Merle Carter, Alvin Lee Chambers, Charles Stevens Crouse, Robert Dawson Hawkins, Clinton Kelly Hoffman, John Sherman Horine, Stanton C. D. Lawson, Clifton O'Neal Mock, Louis Edward Nollau, William Frederick Savage, Robert Ezekiel Shaver, and T. Rankin Terry.

Applied Mechanics

2 MECHANISMS. (3) Hawkins and Lawson
Movement of machine parts such as crank and link motions, cams, gears, straight line and quick return motions. Lecture and recitation, two hours; drafting, three hours. **Prerequisite: Phys. 3a, Math. 17, Math. 3; and Eng. Draw. 18.**

3 STATICS. (5) I, II, III, IV Hawkins and Lawson
A study of forces, vectors, couples, moments of areas and masses, center of gravity, and their application to engineering structures in two and three dimensions. Lecture and recitation, five hours. **Prerequisite: Phys. 3a, Math. 20a. Prerequisite or concurrent: Math. 20b.**

4 DYNAMICS. (3) I, II, III, IV Hawkins and Lawson
Motion of a particle, dynamics of moving bodies, impulse and momentum, work and energy. Lecture and recitation, three hours. **Prerequisite: Appl. Mech. 3. Prerequisite or concurrent: Math. 20b.**

5 ELEMENTS OF THE SLIDE RULE. (1) II Staff
Lectures 2 hours per week relative to the theory of the slide rule and exercises in the computation of numerical problems by means of the slide rule. **Prerequisite: Math. 17 and Math. 3.**

100 STRENGTH OF MATERIALS.
(5) I, II, III, IV Hawkins and Lawson
A general course in the application of the principles of mechanics to the solution of problems in stress and strain due to direct forces, shear, bending torsion, eccentric loads and combined stresses in beams, columns, thin cylinders, springs, etc. Lecture and recitation, five hours. **Prerequisite: Appl. Mech. 3. Prerequisite or concurrent: Math. 20b.**

106 ADVANCED STRENGTH OF MATERIALS.
(5) III, IV Hawkins and Lawson
Unsymmetrical bending of beams, bending and deflection of thin plates, stress of analysis of thick walled cylinders, and rotating discs. Theory of elastic energy and curved beams, stress concentration, and fatigue. Lecture and recitation, five hours. **Prerequisite: Math. 20b and Appl. Mech. 100. Prerequisite or concurrent: Math. 105a.**

107 MECHANICAL VIBRATIONS. (5) I, III Hawkins
Vibrations of systems of one and several degrees of freedom, balancing of rotating machines, critical speeds, and torsional and lateral vibrations of shafts. Lecture and recitation, five hours. **Prerequisite: Math. 105a, Appl. Mech. 4, and Appl. Mech. 100.**

Engineering Administration

102 ENGINEERING ADMINISTRATION. (4) I, II, IV
A study of the methods, procedures, and principles involved in engineering analyses, contracts, specifications, estimates and valuations, and administration of engineering projects. Lecture and recitation, four hours. **Prerequisite: Com. 1 or Pol. Sci. 15.**

Engineering Drawing

***1a ELEMENTARY ENGINEERING DRAWING.**
(3) I, II, III, IV Nollau and Horine
Freehand lettering, care of and exercises in the use of instruments, principles of orthographic and axonometric projection, technical sketching, tracing, methods of reproduction of drawings, and chart and diagram drawings. Working drawings both detail and assembly. Three 3-hour periods a week.

***1b DESCRIPTIVE GEOMETRY. (3) I, II, III, IV** Nollau and Horine
A study of the essential principles of descriptive geometry and the solution of practical problems pertaining to the various branches

* Open to Freshmen.

of engineering. Three 3-hour periods a week. **Prerequisite: Eng. Draw. 1a.**

*2 **MECHANICAL DRAWING. (2) II** Nollau and Horine
(For students in Industrial Chemistry.) Freehand lettering, exercises in the use of instruments, orthographic and axonometric projection, graphs, tracing and reproduction of drawings as well as drafting as applied to industrial engineering. Three 2-hour periods a week.

12 **GRAPHICAL COMPUTATIONS. (3)** Carter
Graphic solution of problems in mechanism, construction, and use of alignment charts and practice in the use of planimeter and mechanical integrator. Lecture, 1 hour; drafting room, 6 hours. **Prerequisite or concurrent: Phys. 3a, App. Mech. 2. Prerequisite: Eng. Draw. 18.**

18 **ADVANCED ENGINEERING DRAWING. (3) I, III** Nollau
Comprises working drawings of parts of machines, both detail and assembly; technical sketching of simple machines and working drawings from technical sketches; and tracing in pencil and ink. Nine hours. **Prerequisite: Eng. Draw. 1b.**

115 **PHOTOGRAPHY. (4) II, III** Nollau
(Required for Metallurgical Engineers, elective for other senior Engineers.) Fundamental principles of photography. Lectures on the optics and chemistry of photography together with practical demonstrations. Negative making, printing, etc. Lecture, one hour; recitation, one hour; laboratory, two hours a week. **Prerequisite: Chem. 1a, Phys. 3a.**

Student Assemblies

*1a, b **INTRODUCTION TO ENGINEERING.**
(1, 0) I, IV Horine and others
Scientific lectures and demonstrations covering all branches of engineering and the allied sciences. Study of the curricula of the College of Engineering to aid the student in choosing the branch of engineering which he wishes to follow. One hour a week.

*2 **ENGINEERING PROBLEMS.**
(1) II Beebe, Allison, Savage and Shaver
Analysis and solution of basic engineering problems as applied to the particular branch of engineering in which the student is registered, including the use of the slide rule. Two hours a week.

3a-c **CLASS SOCIETY. (Sophomore.)**
(0 ea.) I, III, IV Barnett, Chambers, Crouse, and Terry
The class societies are affiliated as student branches of the four founder national engineering societies. Lectures on engineering projects of local and national interest. One hour a week.

4a-c **CLASS SOCIETY. (Junior.)**
(0 ea.) II, III, IV Barnett, Chambers, Crouse, and Terry
1 hour a week. Content same as 3a.

5a-c **CLASS SOCIETY. (Senior.)**
(0 ea.) I, II, III Barnett, Chambers, Crouse, and Terry
One hour a week. Content same as 3a.

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* **Open to Freshmen.**

MECHANICAL ENGINEERING

Estel Burdell Penrod, Willis Merle Carter, Richard Bennett Knight, Fritz Mangelsen, Andre Johannes Meyer, T. Rankin Terry, William Frederick Savage, and Sylvan Brooks Walton†.

15a-c MANUFACTURING PROCESSES. (3 ea.) **I, II, III, IV** Mangelsen
Covering modern precision machine shop methods, work layout, machine tool operation, inspection, measurement of finished work, machine assembly, as well as the technique of pattern making, welding, and foundry practice. Lecture, recitation and Visual Aid, two hours; Shop Practice, four hours.

100a MACHINE DESIGN. (4) **I, IV** Carter
(For Mechanical Engineers.) Design of machine and structural elements. Lecture, two hours; drawing room, six hours. **Prerequisite: Eng. Draw. 12, Mech. Eng. 15a, b. Prerequisite or concurrent: Applied Mech. 100.**

100b MACHINE DESIGN. (4) **I, II** Carter
(For Mechanical Engineers.) Continuation of Mech. Eng. 100a. Individual work on the design and construction of complete machines or structures. Lecture, two hours; drawing room, six hours.

101 MECHANICAL ENGINEERING DESIGN. (4) **I, II** Knight
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. Lecture, 1 hour. Drawing room, nine hours. **Prerequisite: Appl. Mech. 100; Mech. Eng. 104c; Mech. Eng. 105, Mech. Eng. 107, and Mech. Eng. 114.**

103 ELEMENTS OF HEAT-POWER ENGINEERING. (3) **I** Penrod and Terry
(For Civil and Mining Engineers.) Brief general course in heat-power engineering, including elementary principles of thermodynamics and power plant equipment. Recitation, two hours. **Prerequisite: Phys. 3a.**

104a ENGINEERING THERMODYNAMICS. (3) Penrod and Terry
Fundamental principles of thermodynamics including the application and theory of fluid flow, engines, turbines, air compressors, refrigeration, gaseous mixtures and combustion. Lectures and recitations, three hours a week. **Prerequisites: Phys. 3c and Math. 20b.**

104b ENGINEERING THERMODYNAMICS. (3) Penrod and Terry
Continuation of Mech. Eng. 104a. Lectures and recitations, three hours a week. **Prerequisite: Mech. Eng. 104a.**

104c ENGINEERING THERMODYNAMICS. (3) Penrod and Terry
Continuation of Mech. Eng. 104b. Lectures and recitations, three hours a week. **Prerequisite: Mech. Eng. 104b.**

105 STEAM POWER PLANT EQUIPMENT. (4) **I, IV** Terry
Study of the characteristics and use of steam power plant equipment, including steam generators, fuel handling and burning equipment, coal and ash handling, draft producers, dust collectors, smoke abatement, prime movers, generators, air preheaters, economizers,

† See appended list of leaves of absences, resignations, deaths, etc., p. 399.

feed water heating and treatment, pumps, continuous blow down, and combustion control. Recitation, four hours. **Prerequisite: Mech. Eng. 104c.**

107 FLUID MECHANICS. (4) IV Penrod and Savage
Covering the statics, kinematics, dynamics, and thermodynamics of fluids, both liquids and gases, including the derivation and use of all fundamental formula for flow through orifices, nozzles, pipes, fittings, etc., together with the study of dams, weirs, metering devices, turbines, pumps, the aerodynamics of bodies moving through air and the hydrodynamics of bodies moving through water. Recitation, four hours. **Prerequisite: Mech. Eng. 104a.**

108 INTERNAL COMBUSTION ENGINES. (5) II Meyer and Carter
A study of internal combustion engine cycles and the characteristics and performance of actual engines, valve gears, and materials of construction. Recitations, 5 hours. **Prerequisite: Mech. Eng. 104b.**

109 REFRIGERATION. (5) Knight
A course which deals with compression and absorption refrigeration machines in which special attention is given to properties of refrigerants, laws and properties of solutions, heat balance, heat exchanges, theory of freezing, food storage, and refrigeration capacity. Lectures and recitations, five hours a week. **Prerequisite: Mech. Eng. 104c.**

110 HEATING AND VENTILATING DESIGN. (2) II Knight and Terry
Brief course for Architectural Engineers, covering the selection and layout of heating and ventilating equipment. Drawing room, six hours. **Prerequisite or concurrent: Mech. Eng. 116.**

112a, b MECHANICAL LABORATORY. (2, 2) I, II, III, IV Staff
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, one hour; laboratory, three hours. **Prerequisite: Mech. Eng. 104a.**

113a, b MECHANICAL LABORATORY. (2, 2) I, II, IV Staff
Performance tests on heating, ventilating, and power plant equipment. Lecture, one hour; laboratory, three hours. **Prerequisite: Mech. Eng. 112b. Prerequisite or Concurrent: Mech. Eng. 105, Mech. Eng. 107, and Mech. Eng. 114.**

114a AIR CONDITIONING, HEATING AND VENTILATING. (5) Knight
Theory of air conditioning and the mechanical equipment of buildings. Special attention is given to construction and use of psychrometric charts; heat transmission, heat and cooling load calculations, heating and cooling systems, the gas-fired air conditioner and the heat pump system. Lectures and recitations, five hours a week. **Prerequisite: Mech. Eng. 109.**

114b AIR CONDITIONING, HEATING AND VENTILATING. (4) Knight
Continuation of Mech. Eng. 114a and the complete design and layout of a year-round air conditioning system. Lectures and recitations, two hours a week; laboratory, six hours a week. **Prerequisite: Mech. Eng. 114a.**

116 ELEMENTARY HEATING, VENTILATING, AND AIR CONDITIONING. (4) II Knight and Terry
A course involving heating and ventilating calculations with descriptions of various types of equipment. Latter part of quarter devoted to a discussion of the basic principles of air conditioning. Recitation, four hours. **Prerequisite: Phys. 3a, Junior Classification.**

121 MACHINE DESIGN. (3) I, IV Carter
(For Electrical Engineers.) Similar to Mech. Eng. 100a with special attention to the mechanical features of electrical machines. Lecture, one hour; drafting, eight hours. **Prerequisite: Eng. Draw. 18; Mech. Eng. 15a. Prerequisite or concurrent: Applied Mech. 100.**

122a-c SEMINAR. (1 ea.) I, II, III, IV Penrod
Studies of current engineering literature and problems and 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. Two hours a week. **Prerequisite: Senior Classification.**

129 ELEMENTS OF HEAT TRANSFER. (4) Penrod
The transfer of heat by conduction, convection and radiation with special attention given to dimensionless ratios, film theory, heat transfer and pressure drop, and heat exchangers. Lectures and recitations, four hours per week. **Prerequisite: Mech. Eng. 104a.**

130a APPLIED AERODYNAMICS. (3) Savage
Study of the atmosphere, boundary layers, fluid mechanics principles as applied to aerodynamics, wind tunnel weighing systems, circulation theory, basic wing theory, lift and drag, compressibility, performance of propeller-engine and jet-propelled aircraft, thermodynamics principles, and stability and control of the airplane. Lectures and recitations, three hours. **Prerequisite: Mech. Eng. 107, Mech. Eng. 104b.**

130b APPLIED AERODYNAMICS. (3) Savage
Continuation of Mech. Eng. 130a. Lectures and recitations, three hours. **Prerequisite: Mech. Eng. 130a.**

131a AIRPLANE DESIGN. (3) Savage
Design of a small light plane including study of basic design problems; aerodynamic factors in design, stress analysis of structures, aircraft materials, control systems, weight and balance control, engine installations, inboard profile, and cost items. Lectures and recitations, three hours. **Prerequisite: Mech. Eng. 100a, Mech. Eng. 104b.**

131b AIRPLANE DESIGN. (3) Savage
Continuation of Mech. Eng. 131a. Lectures and recitations, three hours. **Prerequisite: Mech. Eng. 131a.**

131c AIRPLANE DESIGN. (3) Savage
Continuation of Mech. Eng. 131b. Drawing room, six hours. **Prerequisite: Mech. Eng. 131b.**

132 AERODYNAMICS LABORATORY. (3) Savage
Study of basic wind tunnel design, smoke flow over plates and bodies, wind tunnel support systems, velocity distribution in tunnel working sections, drag of various objects, and pressure distribution over airfoils at various angles of attack. A complete wind tunnel analysis of a scale model airplane will be done in order to determine lift, drag, pitching moment, rolling moment, yawing

moment, and side force data. Lecture, one hour; laboratory, four hours. **Prerequisite: Mech. Eng. 130b, Mech. Eng. 107.**

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics, and Mathematics. For major work, a candidate must hold a bachelor's degree in Mechanical Engineering or its equivalent.

201a-f **AUTOMOTIVE ENGINEERING. (3 ea.)** Meyer
An advanced course in the essentials of motor vehicle design, construction, and operation. Drafting room, laboratory, and lectures by appointment.

202a-f **POWER PLANT ENGINEERING. (3 ea.)** Terry
Advanced work in the design, selection, layout, and operation of heat-power plant equipment.

203a-f **HEATING, VENTILATING, AND AIR CONDITIONING. (3 ea.)** Knight
Advanced work in the design, selection, layout, and operation of heating, ventilating, and air conditioning equipment.

204a-f **ADVANCED MACHINE DESIGN. (3 ea.)** Meyer and Carter
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.

210a-i **SPECIAL PROBLEMS IN MECHANICAL ENGINEERING. (3 ea.)** Penrod, Meyer, and Carter
Open to graduate students who have the ability to carry on research. Each course consists of individual work in one of the various fields of Mechanical Engineering. Laboratory, 18 hours a week. **Prerequisite: Approval of Head of the Department.**

METALLURGICAL AND MINING ENGINEERING

Charles Stevens Crouse, Morris Wilson Beebe, Carroll Sparks Carter, Arthur S. Coffinberry, Robert Carlisle Duncan, and George Richard Gerhard.

Metallurgical Engineering

26 **ENGINEERING METALLURGY. (3) I, II, III** Gerhard
(For Civil, Electrical and Mining Engineers.) An elementary course in metallurgy designed to acquaint the user of metals with the fundamental principles employed in the production and treatment of engineering metals and alloys, such principles being necessary to an intelligent use of these materials. Lecture and recitation, three hours. **Prerequisite: Chem. 1b or 2b.**

27 **GENERAL METALLURGY. (3) I, II, III, IV** Gerhard
(For Metallurgical Engineers.) An elementary course in general metallurgical principles together with a consideration of fuels, refractories, furnaces, pyrometry, and the several alloy types. Lecture and recitation, three hours. **Prerequisite: Chem. 1b or Chem. 2b.**

29 METALLURGY OF THE FERROUS METALS. (4) I, III Gerhard
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. Lecture and recitation, four hours. **Prerequisite: Met. 27.**

37 ADAPTIVE METALLURGY FOR ENGINEERS. (5) II Gerhard
This course is designed to cover the fundamental principles of mechanical and physical metallurgy and heat treatment. It includes a study of the correlation of metallic structures to properties, machinability and applications, of the engineering metals, primarily from the standpoint of the needs of mechanical engineers. Lecture and recitation, four hours; Laboratory, three hours. **Prerequisite: Chem. 1b or Chem. 2b; and Physics 3a.**

60 METALLURGICAL LABORATORY AND SHOP PRACTICE. (5) IV Staff
This is a summer course and consists of metallurgical and allied problems worked out practically in the laboratories and shops. The problems given may vary from year to year according to circumstances and the particular fields of interest of the student. Laboratory, twelve hours. **Prerequisite: 6 quarters in Metallurgical Engineering.**

120 ASSAYING. (2) Staff
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, six hours. **Prerequisite: Chem. 21b and Met. 27.**

121 FUEL AND METALLURGICAL LABORATORY. (2) III Crouse
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, six hours. **Prerequisite: Chem. 21b and Met. 27.**

128 METALLURGY OF NON-FERROUS METALS. (4) II Crouse
This course comprises a study of the principles and processes employed in the production and preparation for use of copper, lead, aluminum, and other non-ferrous metals such as gold, silver, zinc, etc., and of their respective alloys. Lecture and recitation, four hours. **Prerequisite: Met. 27.**

132a, b METALLURGICAL CALCULATIONS. (4, 4) II, III Crouse
This course comprises a study of the calculations involved in the practical application of the principles to general metallurgy, as well as those used in both ferrous and non-ferrous metallurgical practice. Recitation and problem, four hours. **Prerequisite: Chem. 21b; Met. 29, and Met. 128.**

140 THE SCIENCE OF METALS. (4) I, III Gerhard and Coffinberry
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. Lecture and recitation, three hours; laboratory, three hours. **Prerequisite: Phys. 3c, Chem. 21b, and Met. 29.**

141 ALLOY STEELS. (3) III Coffinberry
The thermal behavior of low and high alloy steels is discussed on the basis of each particular phase diagram. The sub-critical transformation of austenite in alloy steels and the physical properties of the

products of this type of decomposition of austenite are reviewed. Martensite and intermediate transformations are treated. The heat treatment of complex alloy steels such as the high speed and high alloy die steels receive particular emphasis. Lecture and recitation, three hours. **Prerequisite: Met. 37 or Met. 140.**

142a, b **HEAT TREATMENT. (3, 3) I, II** Coffinberry
This course comprises a study of the methods used and the principles involved in the heat treatment of metals and alloys. Lecture and recitation, two hours; laboratory, three hours. **Prerequisite: Met. 60 and Met. 140.**

143a, b **PHYSICS OF METALS. (4, 4) I, II** Coffinberry
The study of the laws governing the formation of alloys. Subjects discussed are atomic structures of metals and alloys, atomic forces, super-lattics, ferro-magnetism, perfect and imperfect crystals, corrosion, super-conductivity, the physical properties of metals as a function of the periodic and electro-chemical position, diffusion, free energy, and Hume-Rothery and other rules. In addition the course entails the application in the X-ray laboratory of the work taken in the classroom together with the development of an operating technique in radiography as applied to metals and alloys. Lecture and recitation, three hours; laboratory, three hours. **Prerequisite: Phys. 119, Phys. 123b; and Met. 140.**

144 **NON-FERROUS METALLOGRAPHY. (3) III** Coffinberry
The physical properties of the non-ferrous metals and the interpretation of the properties obtained on the basis of the phase diagram is the prime objective of this course. The light alloys and the age hardening theory are emphasized. Bearing metals and the bronzes receive special attention. Lecture and recitation, two hours; laboratory, three hours. **Prerequisite: Met. 140.**

150 **INDUSTRIAL MINERAL PREPARATON AND USES. (3) III** Beebe
This course comprises a study of the more common non-metallic substances utilized in industry such as carbon, lime, clay nitrogen, etc. Lecture and recitation, three hours. **Prerequisite: Met. 27.**

164 **ELEMENTS OF LOW TEMPERATURE CARBONIZATION. (3)** Crouse
An elementary course in the study of the principles involved in the low temperature carbonization of coals and other carbonaceous materials, including hydrogenation. Lecture and recitation, three hours, with assigned reference reading. **Prerequisite: Phys. 123b, Chem. 140c.**

166a, b **EXTRACTIVE METALLURGY. (5, 4) I, II** Carter
Study of the principles and mechanisms applied to the practices of gravity concentration, flotation, and related processes, in the preparation of mine products for market, including discussion of the principles of plant design, with reference reading planned to keep the student informed of current technological development. Recitation and lecture, five hours and four hours a week respectively, with reference reading and problems. **Prerequisite: Chem. 1b, Phys. 3b, Math. 20a, Met. 27. Prerequisite for 166b is 166a.**

167 **EXTRA ACTIVE METALLURGY PLANT PRACTICE. (2) III** Carter
This is a course in the operation of plants studied in Met. 166a, and 166b. Laboratory, six hours. **Prerequisite: Met. 166b.**

175a-c SEMINAR. (1 ea.) I, II, III Staff
This course includes general round table discussions of various metallurgical principles and problems, the preparation and delivery of papers and reports on metallurgical subjects, extemporaneous speaking and the briefing of technical books and articles in the current literature. Two hours a week. Prerequisite: nine quarters in Metallurgical Engineering.

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics, and Mathematics. For major work, a candidate must hold a bachelor's degree in Metallurgical Engineering or its equivalent.

205 HEAT TREATMENT OF METALS AND ALLOYS. (9) Crouse and Coffinberry
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. Lecture and recitation, three hours; laboratory, twelve hours a week.

207 TECHNOLOGY OF ALLOYS. (9) Crouse
This course comprises a study of the principles and practices used in the production of alloys of various kinds with special stress upon any particular group of alloys that the student may choose. Reference reading and laboratory work are emphasized. Lecture and recitation, three hours; laboratory, twelve hours.

208 ADVANCED METALLOGRAPHY. (9) Crouse and Coffinberry
This course comprises a detailed study of the structure of metals and alloys together with their preparation for examination under the microscope. In addition instruction is given in the taking of microphotographs. Reference reading and laboratory work are emphasized. Lecture and recitation, three hours; laboratory, twelve hours.

209 ADVANCED ORE DRESSING. (9) Carter
This course comprises a study of the technique of ore dressing plant design and gives an opportunity for original research in concentration problems. Lecture and recitation, three hours; laboratory, twelve hours.

210 TECHNOLOGY OF LOW TEMPERATURE CARBONIZATION. (9) 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. Lecture and recitation, three hours; laboratory, twelve hours. **Prerequisite: Sufficient background in Physics, Chemistry, and Metallurgy, this background to be determined by the Head of the Department after consultation with the student.**

211 ELEMENTS OF OIL SHALE ENGINEERING. (3) Crouse
This course comprises an elementary study of the destructive distillation of oil shales for the production of oil, gas, and by-products, together with the history of the oil shale industry and the economic factors upon which the future development of the industry depends.

Lecture and recitation, three hours. **Prerequisite: A sufficient background of Physics, Chemistry, and Geology.**

212 OIL SHALE TECHNOLOGY. (9) Crouse
This course involves a detailed study of the principles employed and the methods used in the production of oil from shale. Reference reading and laboratory work are emphasized. It is desirable that the student have some knowledge of physical and organic chemistry. Lecture and recitation, three hours; laboratory, twelve hours. **Prerequisite: Sufficient background in Chemistry and Physics.**

213 X-RAY METALLOGRAPHY. (6) Coffinberry
Radiography of castings and welds. The atomic structure of metals and alloys will be determined. Laue, Debye, focusing, rotating crystal, Phragmen and Sacks type diffraction cameras will be studied; also stereographic and gnomonic projection, pole figures, fibre patterns, crystal structure, and Comen's analytical method of calculating lattice parameters. Radiographs will be made and interpreted. Lecture and recitation, three hours; laboratory, six hours. **Prerequisite: Met. 143b.**

214 THE METALLIC STATE. (3) Coffinberry
Fibre patterns, stereographic projection and goniometry. Crystal chemistry and metallic crystals. Quantum mechanical concepts for isolated atoms are applied to interacting atoms, leading to methods of calculating energies and forces binding atoms together in crystals. Lecture and recitation, three hours **Prerequisite: Met. 143b.**

215 ADVANCED ALLOY STEELS. (4) Coffinberry
An advanced course in alloy steels including stainless and heat resisting steels, structural steels and alloy cast irons. Lectures and recitations, three hours; laboratory, three hours.

216a THE PHYSICAL CHEMISTRY OF STEEL MAKING. (3) Coffinberry
A study of the kinetics and equilibria involved in steel making processes. The reactions of the open hearth furnace are considered in terms of the free energies of substances at elevated temperatures and the activities of components in the metal, slag and gaseous phases. Special attention is given to slag constitution, slag control, and the effects of alloying and deoxidizing additions to the liquid metal. The influences of melting, refining and deoxidizing practices on the properties of the finished steel are also emphasized. Lectures and recitations, three hours.

216b THE PHYSICAL CHEMISTRY OF STEEL MAKING. (3) Coffinberry
A continuation of Metallurgical Engineering 216a. Lectures and recitations, three hours. **Prerequisite: Met. Eng. 216a.**

216c THE PHYSICAL CHEMISTRY OF STEEL MAKING. (4) Coffinberry
A continuation of Metallurgical Engineering 216b with the addition of laboratory work consisting of the production and testing of small experimental heats of both acid and basic electric furnace steels. Lectures and recitations, three hours; laboratory, three hours. **Prerequisite: Met. Eng. 216b.**

217 THE MICROSCOPY OF SLAGS AND REFRACTORIES. (4) Coffinberry
The identification and study of phases occurring in slags, ceramic bodies, and other non-opaque materials of metallurgy through the use of the petrographic microscope. Emphasis is placed on the

interpretation of microstructural features as indicators of high temperature reaction tendencies among silicate and oxide phases. Phase equilibrium relationships in silicate and oxide systems are considered and some attention is given to phase identification by X-ray diffraction. Lectures and recitations, two hours; Laboratory, six hours.

218 **DIFFUSION AND HEAT FLOW IN METALS. (3)** Coffinberry
The differential equations of Fick and Fourier are applied to diffusion in the homogenization of alloys and in solid state transformations, to the heating of metals by furnace and induction methods, and to the cooling of metals in heat treatment, welding and casting. Radiation and convection, in addition to conduction, are given consideration as modes of heat transfer involved in the principles of furnace design. Lectures and recitations, three hours.

230a-d **RESEARCH IN X-RAY METALLOGRAPHY. (9 ea.)** Coffinberry
Research problems in X-ray metallography either diffraction or radiographic. Lecture and recitation, three hours; laboratory, twelve hours. **Prerequisite or concurrent: Met. 213.**

240a-i **SPECIAL PROBLEMS IN METALLURGICAL ENGINEERING. (3 ea.)** Staff
Open to graduate students who have the ability to carry on research. Each course consists of individual work in one of the various fields of Metallurgical Engineering. Laboratory, eighteen hours a week. **Prerequisites: Approval of Head of the Department.**

Mining Engineering

126a-b **DEVELOPMENT OF MINES. (5, 3) III, IV (2d half)** Carter
Includes study of the origin of mineral deposits in general, as they concern the engineering procedures involved in the location and exploration of mineral deposits and of the engineering processes involved in the development of prospects into mines. Recitation, five hours and three hours, respectively; reference reading and assigned reports. **Prerequisite: Chem. 2b, Phys. 3b, Geol. 12b. Prerequisite for 126b is 126a.**

127a, b **MINING UNDERGROUND. (4, 3) II, III** Carter
Includes a study of methods of excavation and support, and underground working and development faces in all types of underground mining operations. Recitation and lecture, four hours and three hours, respectively, with assigned reference reading. **Prerequisite: Min. 126a. Prerequisite for 127b is 127a.**

128 **MINING AT THE SURFACE. (3) II** Carter
Study of the methods of working placer deposits, open-pit mines, and similar surfacial mining operations. Lecture and recitation, three hours, with assigned reference reading. **Prerequisite: Min. 126a.**

129a, b **MINE VENTILATION AND DRAINAGE. (4, 3) I, II** Carter
Includes study of the principles applied in the conditioning of underground mine atmospheres, the drainage of underground mine workings, and the problems encountered in the handling of emergencies, such as fires and floods in underground working. Recitation and lecture, four hours and three hours, respectively. **Prerequisite: Min. 126a. Prerequisite for 129b is 129a.**

130 MINE ADMINISTRATION. (5) III Carter
A study of the engineering aspects of mine administration and management, of the technology and mechanization studies of mining and market preparation processes, and practice in the fundamentals of mine plant design. Recitation and lecture with assigned reference reading, five hours. **Prerequisite: Min. 126a.**

160 MINE SURVEYING AND FIELD PRACTICE IN MINING ENGINEERING. (10) IV (2nd half) Carter
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, forty-four hours a week for six weeks. **Prerequisite: six quarters in Mining Engineering.**

175a-c SEMINAR. (1 ea.) I, II, III Staff
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. Two hours a week. **Prerequisite: nine quarters in Mining Engineering.**

Prerequisite for graduate work: Students desiring to take any of the following courses should have a thorough working knowledge of Chemistry, Physics, and Mathematics. For major work, a candidate must hold a bachelor's degree in Mining Engineering or its equivalent.

203 MINE ORGANIZATION. (5) Carter
This course comprises a detailed study of the structure and function of a mining enterprise from both the financial and the engineering standpoints. Lecture and recitation, five hours.

206 EXPLOSIVE ENGINEERING. (3) Carter
This course comprises a study of the principles involved in the use of explosives in large scale mining and quarrying practice. Lecture and recitation, three hours.

207 ADVANCED PROSPECTING. (3) Carter
This course comprises a detailed study of the principles involved in the geophysical investigation of the minerals of the earth's crust. Lecture and recitation, three hours.

208 COAL DUST INVESTIGATION. (6) Carter
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, eighteen hours.

209a, b ADVANCED MINE ENGINEERING. (5, 5) Carter
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. Lecture and recitation, three hours; drawing and mapping, six hours.

220a-i SPECIAL PROBLEMS IN MINING ENGINEERING. (3 ea.) Staff
Open to graduate students who have the ability to carry on research. Each course consists of individual work in one of the various fields of Mining Engineering. Laboratory, eighteen hours a week. **Prerequisite: Approval of Head of the Department.**

COLLEGE OF LAW

Alvin E. Evans, Roy Moreland, Frank Murray, Hubert E. Nelson, Paul Oberst, Frank Hall Randall, William Lewis Roberts, and Dorothy Salmon.

101a-c **CONTRACTS I-II-III (3, 3, 3) I, II, III** — Murray and Nelson

Williston's Cases (4th ed.).

The formation of contracts, offer and acceptance, consideration, contracts under seal. The Statute of Frauds. Parties affected by contracts, contracts for the benefit of third persons, assignments, joint and several contracts. The performance of contracts, express and implied conditions, impossibility of performance, and illegal contracts.

102a-c **TORTS I-II-III. (3, 3, 3) I, II, III** — Nelson and Oberst

Thurston and Seavey's Cases.

Breach of legal duty, causation, duty of care, contributory negligence, care in the use or occupation of land, extra-hazardous occupation, joint torts, deceit, defamation, slander, libel, privilege, malicious prosecution, interference with social and business relations, inducing breaches of duty, unfair competition, strikes, boycotts, and business combinations.

103 **PROPERTY I. (3) II**

Roberts' Cases.

Personal property: possession, the nature and rights of possession, bona fide purchase, purchase by judicial sale, gifts, loss by surrender of possession, assignability, conversion, and acts constituting conversion.

104 **PROPERTY II. (3) III**

Rundell's Cases.

Introduction to the law of conveyancing, tenure, estates and tenancies, joint tenants, reversion and remainder, seisin and disseisin, rents, and rights incident to the ownership of land or estates therein. The land itself—air, water, fixtures, waste, profits, easements, licenses, etc.

105 **AGENCY. (3) III** — Evans

Mechem's Cases (3d ed.).

Nature of relation, appointment, liabilities of principal for agent's torts, contracts, crimes, liabilities of agents, parties to writings, undisclosed principal doctrines, delegation of agency, termination, and ratification.

106a, b **PLEADING I-II. (3, 3, 3) I, III** — Randall

Keigwin's Cases on Common Law Pleading.

Sunderland's Cases on Code Pleading.

Pleading I: Common-law forms of action—a study of common-law pleading sufficient to aid the student in an understanding of modern code pleading.

Pleading II: Pleading under the code system with some emphasis on that of Kentucky. The topics include parties, causes of action and joinder thereof, and the different pleadings considered separately.

107a **CRIMINAL LAW. (3) I** — Moreland

Hall and Glueck's Cases.

Jurisdiction; the criminal act, complete and incomplete; criminal intent, actual and constructive; duress and mistake of fact, of law;

justification; parties in crime; crimes against the person; and crimes against property.

107b CRIMINAL PROCEDURE. (3) II Moreland
Keedy's Cases.
Police officers, arrest, investigation of crime, the magistrate, indictment and information, jurisdiction of the trial court, venue, interstate rendition, arraignment, the petit jury, the prosecuting attorney, counsel for defense, the verdict, and methods of review.

120a, b TRIAL PROCEDURE. I-II (3, 3) I, II Randall
Sunderland's Cases.
Procedure in the trial courts and also in the appellate courts. Discovery before trial, pre-trial hearings, as well as all the steps in the trial of cases and selection of juries. Students draw the usual instruments in the trial court and a complete set of pleadings and papers in the Court of Appeals of Kentucky.

121a, b EQUITY I-II. (4, 4) II, III Moreland
Chafee and Simpson's Cases, (2d ed.)
Basis of equity jurisdiction, specific performance of contracts, reformation, reexecution, rescission and cancellation, injunctions in relation to torts, bills of peace, quia timet, interpleader, account and position of equity in the legal system.

122 PROPERTY III. (3) III Murray
Martin's Cases.
Titles and conveyancing. Adverse possession; prescription; accretion; dedication; mode of conveyance at common law, under the Statute of Uses, and under modern statutes; execution of easements by implication; estates; covenants for title; estoppel by deed; and priorities.

123 NEGOTIABLE INSTRUMENTS. (4) I Murray
Britton's Cases on Bills and Notes.
A general study of the law of bills and notes following the Uniform Negotiable Instrument Law, including: operative facts of negotiability; transfer of negotiable instruments, including types and effects of indorsements; the rights of a holder in due course; defenses that may be asserted against a payee, holder, and holder in due course; the effect of illegality, mistake, lack of consideration, forgery, and fraud; the liability of primary and secondary parties and the requirement of presentment, notice, and protest; the liability of accommodation parties; problems of collection; transfers after maturity; implied warrants of a transferor; and the method and results of acceptance.

124a, b EVIDENCE I-II. (3, 3) I, II Randall
McCormick's Cases.
Rules of admissibility, real evidence, circumstantial evidence, testimonial evidence, rule for preference of documentary origin, rules for preference between different kinds of witnesses, the hearsay rule and its exceptions, rules of conditional and absolute conclusion, procedure of admissibility, law and fact, judge and jury, burden of proof and presumptions, judicial notice, and parol evidence rule.

125 PRACTICE COURT. (2) III Randall
This course is designed to fit the student for actual court practice following his training in the various subjects of substantive law. This training will give some knowledge of the work the young lawyers will experience in their professional career. All proceedings will be conducted in the main under the Kentucky code, but so treated as to give a fair understanding of like work in other states.

141 PARTNERSHIP. (2.5) III **Murray**

Mechem's Cases.

Distinction between partnership and other forms of business association, partnership by contract and by estoppel, competency of partners to become partners, nature and character of partnership, characteristics of partnership ownership of property, transfer of property, nature of the partnership obligation, powers of partners, rights and remedies of creditors, and termination of partnership.

142 INDUSTRIAL RELATIONS. (2.5) IV **Moreland**

Albertsworth's Cases.

Relations between employer and employee, the common law background; Employers' Liability Acts and Safety Regulations; and Workmen's Compensation. During the latter half of the course a special study is made of the Kentucky Workmen's Compensation Act and Kentucky cases relating thereto.

144 LEGAL BIBLIOGRAPHY. I, II, III Salmon

How to Find the Law (3d ed.).

Practice in the library in the use of statutes, reports, digests, encyclopedias, annotated cases, citation books, reference tables, indices, and textbooks.

145 INSURANCE. (3) II Murray

Goble's Cases.

Nature of contract, insurable interest, making the contract, concealment, representations, warranties, implied conditions of forfeiture, waiver and estoppel, rights under the contract, and construction of the policy.

147 RESTITUTION. (3) II **Murray**

Woodruff's Cases.

Restitution at law for mistake, duress and undue influence, illegality, impossibility, benefits received under contracts within and without the statute of frauds, and benefits received without contracts.

148 DOMESTIC RELATIONS. (3) I Nelson

McCurdy's Cases (3d ed.).

Contracts to marry; breach of promise; marriage: formal requisites, capacity, etc.; property rights of husband and wife; status of married women at common law and under statute; transactions between husband and wife; torts affecting the marital relations, divorce and separation; parent and child; custody, services, and earnings; torts to children; torts by children; adoption, bastardy; infancy—voidable acts; disaffirmance, ratification; contracts for necessaries; liability for torts; insanity; drunkenness; and aliens.

149 MUNICIPAL CORPORATIONS. (2.5) IV **Randall**

Stason's Cases.

Nature of municipal corporations; distinction between municipal corporations and other corporations; functions; creation; alteration; dissolution; legislative control; organization; powers of, such as police power to tax; power to contract and acquire, manage and dispose of property; liability on contracts and for torts; and remedies.

150 PUBLIC UTILITIES. (4) I Oberst

Robinson's Cases (2d ed.).

Consideration will be given to the numerous classes of business and undertakings which have a double aspect of being privately owned and conducted for private profit and subject to abnormal duties of public service—common carriers, hotels, telephone, telegraph, express,

gas, electric light, irrigation, and pipe line businesses; undiscriminatory service, and provision of reasonable rates.

152 OIL AND GAS. (2.5) IV Moreland
Kulp's Cases (2d ed.).
General considerations as to oil and gas leases—infants, married women, life tenants, and others as parties. Special study of the granting clause—lessee's interest, lessee's right to ejectment; the habendum clause—duration of lease; the operating and related clauses; termination; right to specific performance; construction of oil and gas leases; and doctrine of development.

153 TAXATION I-II. (5) III Oberst
Magill & Maguire's Cases.
Due process limitations upon jurisdiction to tax; multiple taxation of intangibles; property taxes; inheritance and estate taxes; gifts to take effect in possession or enjoyment at death; gifts in contemplation of death; taxation of powers of appointment; gift taxes; individual and corporate income taxes; items included in gross income; accounting basis; capital gains and losses; permissible deductions; and excise taxes.

154 DAMAGES. (2.5) IV Randall
McCormick's Cases.
Nature of damages, avoidable consequences, counsel fees, certainty, compensation, damages for non-pecuniary injuries, pain, inconvenience, mental suffering, aggravation value, interest, special rules in certain acts, damages for death, and eminent domain.

160a, b PRIVATE CORPORATIONS I-II. (4, 2) II Evans
Dodd and Baker's Cases.
Characteristic features of a corporation, formation, powers and liabilities, rights of stockholders, directors, legislative control, dissolution, and creditors of the corporation.

161a, b CONSTITUTIONAL LAW I-II. (4, 2) II, III Oberst
Dodd's Cases (2d ed.).
Making and changing constitutions, function of judiciary in enforcing constitutions, separation and delegation of powers of government, personal liberty, interstate privileges and immunities of states, the 14th Amendment, due process and equal protection of the laws, eminent domain, protection to persons accused of crime, powers of federal government, money, banking, postal, military powers, citizenship and suffrage, foreign relations, territories, dependencies, new states, and inter-governmental relations.

162 PROPERTY IV (FUTURE INTERESTS). (4) III
Leach's Cases.
Rights of entry for condition broken, escheat and possibilities of reverter, reversions, vested remainders and executory interests, contingent remainders, limitations to classes, freehold interest subject to a term, rule against perpetuities, and illegal restraints and conditions.

163 WILLS AND THE ADMINISTRATION OF ESTATES. (4) I Evans
Mechem & Atkinson's Cases.
Descent and distribution, the making and revocation of wills, including testamentary capacity, execution, attestation, integration, revocation by mistake and dependent relative revocation; probate and administration, including will contests, jurisdiction of probate courts, contracts of personal representatives, and claims against the estate and settlement of estates.

164 CONFLICT OF LAWS. (5) III **Moreland**
Cheatham, Dowling & Goodrich's Cases.
Nature of the subject, penal laws, procedure, judgments, domicile, capacity, form, particular subjects, litigation, family law, inheritance, foreign administrator.

165a, b TRUSTS I-II. (3, 3) I **Evans**
Scott's Cases (3d ed.).
Uses and Statute of Uses; trusts distinguished from other relationships; their creation; their elements; the transfer of the beneficiary's interest; the administration, termination, and modification of trusts; charitable trusts; liability to third persons and of third persons; and resulting and constructive trusts.

166 SALES. (5) III **Murray**
Woodward's Cases (3d ed.).
Subject matter of the contract; transfer of property and title; destruction of goods and risk of loss; obligation of seller and buyer; rights of unpaid seller against the goods; remedies of the seller on the contract; and remedies of the buyer on the contract.

167 ADMINISTRATIVE LAW. (4) III **Oberst**
Stason's Cases.
The creation, function, and powers of administrative tribunals; procedure before such tribunals, the scope and manner of judicial review of their orders.

169 LAW OF THE AIR. (3) III **Randall**
Selected cases and readings.
The course will deal principally with aircraft law as follows: proprietary rights in air space at common law, federal and state statutes, torts liability, criminal responsibility, aircraft as common carriers, the rules of the road, international aspects of air law; and legislation for future development of air law.

170 LEGAL ETHICS. (2.5) IV **Murray**
Cheatham's Cases.
A study of the requirements for admission to the bar; bar organizations, with special reference to the organization in Kentucky and other states having integrated bars; procedure in disciplining lawyers; unauthorized practice of law; proper and improper methods of securing clients; fees and charges; contingent fees; and the relation of the lawyer to his client with special attention to confidential communications, representing conflicting interests, collections and accounting, and the effect of negligence and incompetence. The course also includes a study of the obligation of the lawyer to the court and society and the limitation on the lawyer in serving the interest of his client. There are chapters on the relation of lawyers and judges; lawyers and juries; lawyers and witnesses; lawyers and other lawyers; and on the effect of a lawyer's acts in private life. The course is taught from special assignment sheets with references to Kentucky Statutes and cases, and the Canons of Ethics of the American Bar Association.

172a-h PROBLEMS OF RESEARCH. (3 ea.) I, II, III, IV **Staff**
This course is reserved for students who are preparing to make an independent study of some legal problem under the supervision of some member of the law school staff.

173 FEDERAL JURISDICTION AND PROCEDURE. (3) II **Randall**
Dobie and Ladd's Cases.
Jurisdiction of and procedure in the several federal courts, diversity of citizenship, jurisdictional amount, venue, concurrent jurisdiction,

original and appellate jurisdiction, procedure in district court, circuit court of appeals, and Supreme Court. Special attention is given to pleading and trial practice.

174 **CREDIT TRANSACTIONS. (5) III**
Hanna's Cases on Security.
This course deals with real estate loans, suretyship, pledges, mortgages, disposition of stocks and bonds, and problems of agricultural finance.

176 **TRADE REGULATION. (3) II** Oberst
Oppenheim's Cases.
Contracts not to compete at common law. Competitive practices; intimidating and molesting; unfair practices; unfair advertising; combinations. The federal statutes.

177 **STATUTORY INTERPRETATION. (2.5) IV** Murray
de Sloovere's Cases.
This course covers the interpretation of statutes, including such matters as process of interpretation, subject matter and purpose of the state, content, associated words, extrinsic aids, relation to other statutes and to the common law, mandatory and directory provisions, judicial notice, operation, effect, and repeal of statutes.

178 **CREDITORS' RIGHTS. (4) II**
Hanna & McLaughlin's Cases (3d ed.).
Enforcement of judgments; fraudulent conveyances; general assignments; receiverships, bankruptcy, assets, and distribution.

179 **LEGISLATION. (4) III** Oberst
Horack's Cases.
Typical federal and state statutes will be used. The history of legislation, legislative agencies, content, preparation, province and subject matter, legislative drafting, means of making laws effective, mechanics, interpretation, operation, amendment, abrogation and repeal, and relation of traditional law to legislation.

180 **LABOR LAW. (3) III** Oberst
Landis' Cases.
A study of the case and statute law which is applicable to labor controversies. Consideration will be given to strikes, the ends for which men may strike, the trade agreement between the employer and the union, the boycott, the use of the union label on goods, federal intervention in labor disputes, and employer interference with the right to work and trade.

181a-c **LAW JOURNAL NOTE EDITING. (1.5 ea.) I, II, III** Staff
This course is to be required of all senior members of the Law Journal staff and consists of study and criticism of the notes and comments prepared by the student editors of the Law Journal for publication. Definite assignments are made prior to the meeting of the class and the class is under the supervision of a member of the faculty in whose particular field the note or comment happens to fall.

182 **DEFENSE LEGISLATION AND MILITARY LAW. (4) III** Roberts
Schiller's Cases.
This course will deal with recent defense legislation affecting industries; legislation affecting property rights; legislation dealing with the establishing of a more efficient army and navy, including the Selective Service Act of 1940. The course will also cover the constitutional aspects of the questions involved.

183 LANDLORD AND TENANT. (2) I, IV Murray
Walsh and Niles' Cases.
The course in Landlord and Tenant deals with the characteristics of leases; the creation of the relationship of landlord and tenant; covenants implied in the lease; restrictions on the lessee's use of the property; transfers by the lessor and by the lessee; rent; taxes; repairs; and termination of the relationship.

COLLEGE OF EDUCATION

AGRICULTURAL EDUCATION

Carsie Hammonds, Watson Armstrong*, Harold Binkley, Mark Maynard Botto*, W. C. Montgomery*, William Ray Tabb, J. P. Truitt, and Maurice Stanley Wall.

179 DETERMINING CONTENT IN VOCATIONAL AGRICULTURE (4) IV Hammonds

Interpretation of data as a basis for course building. Each student works out the content of a four-year course in vocational agriculture.

181 TEACHING VOCATIONAL AGRICULTURE (11) I, II, III
Armstrong, Hammonds, Montgomery, Tabb, and Truitt

Preparation for teaching of agriculture. About one-half of the course is practice.

182 ADULT-FARMER SCHOOLS AND YOUNG-FARMER COURSES IN AGRICULTURE. (3) I, II, III Hammonds

A general introduction to adult-farmer schools and young-farmer courses with some observation of work in both of these fields.

188 FARM PRACTICE SUPERVISION. (1)
Armstrong, Hammonds, and Tabb

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

280 METHOD IN TEACHING VOCATIONAL AGRICULTURE. (4) IV Hammonds

The principles of method applied to the teaching of agriculture. **Prerequisite: Experience in teaching vocational agriculture.**

281 TEACHING PREVOCATIONAL AGRICULTURE. (4) Hammonds

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

287a ADVANCED PROBLEMS IN AGRICULTURAL EDUCATION (5) I, II, III, IV Hammonds and Armstrong

Specific problems selected according to the needs of the group.

287b SELECTING TEACHING MATERIALS. (4) IV Armstrong

Selection of specific references and other teaching materials to be used in the teaching of vocational agriculture.

287c ADULT-FARMER SCHOOLS. (4) IV Hammonds and Armstrong

Preparation for teaching adult farmers; organization of adult-farmer schools, curriculum content, method of teaching, and follow-up work.

287d DIRECTING FARM PRACTICE. (4) IV Hammonds

Farm practice as a method of teaching; standards, planning, supervision, and records.

287e TEACHING FARM SHOP. (4) IV Tabb

A study of necessary content for shop, plans for securing and equipping the shop, and methods of teaching farm shop.

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* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

287f YOUNG-FARMER SCHOOLS. (4) Hammonds and Armstrong
Content and method of teaching young-farmer courses in vocational agriculture.

289a, b RESEARCH IN AGRICULTURAL EDUCATION.
(5, 5) I, II, III, IV Hammonds, Armstrong, and Tabb
Individual problems of importance to agricultural education.

BUSINESS EDUCATION

104 FOUNDATIONS OF BUSINESS EDUCATION IN THE HIGH SCHOOL. (4) I, IV
The origin, the status, and the objectives of business education in the secondary school. Required of business education majors.

158a TEACHING SECRETARIAL SUBJECTS. (3) II, IV
Special techniques and devices for teaching shorthand, typewriting, and secretarial office practice. Required of business education majors.

158b TEACHING ACCOUNTING. (3) III, IV
Materials and techniques used in the teaching of accounting. Required of business education majors.

184 TEACHING OFFICE APPLIANCES. (3) I, IV
Methods and materials used in teaching the various office appliances to high school pupils. Dictating machines, mimeographs, multigraphs, graphotypes, mimeoscopes, addressing machines, filing devices, calculating machines, and other appliances are used.

192 TEACHING GENERAL BUSINESS. (3) IV
A critical study of the objectives of the general business course. A syllabus is prepared for teaching this subject.

208a-d PROBLEMS IN BUSINESS EDUCATION.
(4 ea.) III, IV
Advanced problems in the field. The type of problems considered is influenced by the interests and needs of the group. Some of these problems are: testing in business subjects, extracurricular activities in commerce, job studies, placement and follow-up type of equipment, and supervision.

256 THE SOCIAL BUSINESS SUBJECTS IN HIGH SCHOOL.
(4) IV
An examination of the various social business subjects, to determine their contribution to the objectives of business education.

257a, b SEMINAR IN BUSINESS EDUCATION. (1, 1) IV
A study of current literature in business education with special reference to trends in this field.

259 THE COMMERCE CURRICULUM. (4) II, IV
A study of business subjects offered in the high school, to determine their content and the place each should occupy in high school curricula. A course of study is developed for each subject.

260 TEACHING CONSUMER COURSES IN THE HIGH SCHOOL.
(4) I, IV
Techniques and devices for teaching high school pupils the various aspects of consumer education. Emphasis is placed on procedures rather than on content and the student is presumed to have a background of training in economics before taking the course.

270 BUSINESS TEACHER EDUCATION IN COLLEGES AND UNIVERSITIES. (4) IV
A survey of business teacher education in public and private colleges, teachers' colleges, and universities. Major emphasis is placed upon the development of curricula which will meet certification requirements in the various states, and improve secondary business education.

271 THE SUPERVISION OF BUSINESS EDUCATION. (3) IV
Duties and responsibilities of city and state supervisors, department heads, and others engaged in directing business education.

272a, b INDEPENDENT WORK IN BUSINESS EDUCATION. (4, 4) I, II, III, IV
An independent work course for students who have done a minimum of 18 quarter hours of graduate work, one-half of which must have been in business education.

CURRICULUM AND INSTRUCTION

William Septimus Taylor, Louis Clifton, Ellis Ford Hartford, and Charles R. Spain.

35 INTRODUCTION TO EDUCATION. (2) I, II, III Hartford and Spain
A general orientation to the field of education. Topics include: the school in a democratic society, the teacher, the learner, the educative process, and principles of education.

114 EDUCATIONAL SOCIOLOGY. (4) Hartford
The sociological foundations of education. Topics include: the role of the school and contributions of non-school educative agencies, home-school-community relationships, social factors affecting child development, social needs as foundations of school curricula and adult education programs, and the application of sociological findings to the field of education.

127 THE ELEMENTARY CURRICULUM. (4) Spain
The philosophy and techniques of curriculum construction and some practical work in construction.

175a-f MODERN EDUCATIONAL PROBLEMS. (4 ea.)
A brief survey of some of the problems in modern education.

175g MODERN EDUCATIONAL PROBLEMS: EDUCATION OF HANDICAPPED CHILDREN. (4) IV
Procedures to be used in the education of children who are handicapped physically, mentally, or emotionally. Attention is given to work with individual children as well as with groups.

175i MODERN EDUCATIONAL PROBLEMS: COMMUNITY ORGANIZATION IN ADULT EDUCATION. (4)
Problems of community organizations as they affect the adult life of citizens of the community served.

186 VISUAL TEACHING. (4) I, IV Clifton
Methods and techniques of visual instruction. Special emphasis is placed on charts, slides, graphs, maps, still pictures, motion pictures, and other visual aids; their effective use in teaching; and the planning of outlines and lessons involving their use. Attention is given also to the administration of visual aids in the school.

200a, b PHILOSOPHY OF EDUCATION. (4, 4) II, III, IV Hartford
An advanced course dealing with the philosophy of democratic education and applications to some of the larger educational problems of today. **Prerequisite: 16 quarter hours in Education.**

205a, b REVIEW OF CURRENT EDUCATIONAL LITERATURE. (4, 4) I, II, III, IV Hartford
An extensive study of current educational literature as found in educational periodicals. **Prerequisite: 16 quarter hours in Education.**

226a-f PROBLEMS OF THE SCHOOL CURRICULUM. (4 ea.) Hartford and Spain
Problems in the field of the school curriculum and in the preparation of instructional materials. Students enrolling in this course are required to leave on file with the College of Education a complete report of each problem studied.

227a PRINCIPLES OF CURRICULUM CONSTRUCTION. (4) II, IV Spain
A survey of modern curriculum-making as carried on in progressive city and county school systems, laboratory schools, and state school systems; also an intensive study of the principles underlying curriculum revision. **Prerequisite: Teaching experience; 16 quarter hours in Education.**

227b TECHNIQUES IN CURRICULUM CONSTRUCTION. (4) III, IV Spain
The techniques employed to determine content of courses of study, and practical work in curriculum construction. **Prerequisite: Teaching experience; 16 quarter hours in education.**

228a-d SEMINAR IN EDUCATION. (1 ea.) Taylor
A course planned for graduate students majoring in education, given under the direction of the faculty of the College of Education.

230 PROBLEMS OF EDUCATIONAL SOCIOLOGY. (4) IV Hartford
An advanced course in the application of sociological findings to educational programs. Special emphasis is placed upon the problems and potentialities of Southern regions with implications for education. **Prerequisite: 16 quarter hours in Education.**

234 PROBLEMS IN CURRICULUM MAKING. (4) I Spain
The selection of materials in the elementary and secondary fields, the types of units used in modern instruction, how the child learns, the various educational agencies in the community, and how the school may be made a real community center.

245 ORGANIZATION OF AUDIO-VISUAL AIDS. (4) II Clifton
Beginning the audio-visual program, qualifications and duties of staff members assisting in the audio-visual program, sources and criteria for judging equipment and supplies, the audio-visual aids budget, projection mechanics, and in-service teacher training.

246 MOTION PICTURES IN EDUCATION. (4) III Clifton
The history of the educational motion picture, technique in the use of films, educational scenario writing, grading and scoring films, and motion picture appreciation.

247a, b INDEPENDENT WORK IN PHILOSOPHY OF EDUCATION. (4, 4) I, II III, IV Hartford and Spain
An independent work course for students who have done a minimum of 18 quarter hours of graduate work including Education 200a, 200b, and 227a or 227b

275 ADVANCED PROBLEMS IN PHILOSOPHY OF EDUCATION. (4)
Problems in modern education. Special emphasis is given to such problems as social strains and conflicts, cultural and community foundations, the readjustment and reconstruction of our various traditions, and the process of solving these problems from the standpoint of the schools.

DISTRIBUTIVE OCCUPATIONS

Walter Maurice Baker

112 DETERMINING TEACHING CONTENT IN DISTRIBUTIVE OCCUPATIONS. (4) I, II, III, IV Baker
Course construction in the field of distributive occupations. This course is planned to meet the needs of persons engaged as instructors in the field of distributive occupations.

115a, b PROBLEMS IN DISTRIBUTIVE EDUCATION. (4.4) I, II, III, IV Baker
Problems involved in teaching vocational distributive education in day, part-time, and evening schools. The problems are selected in accordance with the needs and desires of the students. Prerequisite: Education 112 and 128.

116 PROBLEMS OF THE COORDINATOR IN DISTRIBUTIVE OCCUPATIONS. (4) I, II, III, IV Baker
Problems facing the coordinator as he acts in the capacity of intermediator between the school and the business world. Problems in placing students in stores, in follow-up methods, in store contacts, and in securing the cooperation of personnel management are discussed.

128 TECHNIQUE OF TEACHING DISTRIBUTIVE OCCUPATIONS. (4) I, II, III, IV Baker
A study of the methods of teaching as applied to distributive occupations education. The purpose of the course is to train prospective teachers to teach in the field of distributive occupations.

EDUCATIONAL ADMINISTRATION

William Septimus Taylor, Leo Martin Chamberlain, Moses Edward Ligon*, Maurice F. Seay, and Leonard E. Meece.

101 SCHOOL ORGANIZATION. (4) I, II, III, IV Seay
A course designed to familiarize the prospective teacher with those activities of school organization and administration in which he may be expected to participate. Topics emphasized are administrative control, selection of teachers, tenure, loads, salaries, retirement, supervision, classification and promotion, attendance, community relationships, and professional ethics.

198 THE ADMINISTRATION OF PUPIL PERSONNEL. (4) IV Seay
The school census, enforcement of attendance, personnel records, marking, pupil progress, and classification. The course is designed primarily for prospective superintendents and attendance officers.

202 LOCAL SCHOOL ADMINISTRATION. (5) I, IV Seay and Meece
Public school administration for the prospective superintendent of a county or city school system. The course deals with the state as an

* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

educational agency, the local school district, the board of education, the superintendent, the internal organization for the administration of a school system, problems of the teaching personnel, problems of pupil personnel, business management, finance and accounting, the curriculum, school building planning and management, and the supervision of instruction. This is one of the basic courses in school administration and should be taken at or near the beginning of the student's graduate program.

203 CONSTITUTIONAL AND LEGAL BASIS OF PUBLIC SCHOOL ADMINISTRATION. (4) II, III, IV Ligon

A study of court decisions, to discover the legal principles involved in practical problems of school administration. Topics discussed are: the school and the state, school districts, school officers, relations of school districts and municipalities, authority of school districts and district officers, school board procedure and records, tort liability of school districts, personal liability of school officers, contractual authority and liability of boards of education, school money, the school debt, acquisition and use of school property, employment and dismissal of teachers, school attendance, rules and regulations of school boards, discipline and punishment of pupils, textbooks and studies. **Prerequisite: Education 202, Ed. 213, or Ed. 232.**

204 REDIRECTING EDUCATIONAL EFFORTS AND RESOURCES TO MEET NEW CONDITIONS. (4) II, IV Seay

The public school and its responsibilities. The course gives particular attention to changing emphases in education resulting from changes in the social and economic order.

206 PROBLEMS OF COLLEGE TEACHING. (4) Taylor

Methods commonly used in college teaching, bases for measuring instruction, marking systems, qualifications for college teaching, and efforts being made to improve college instruction.

207 SCHOOL BUILDING AND EQUIPMENT. (4) Chamberlain

Measurement and evaluation of existing building facilities, planning new school buildings, financing the building program, building operation and maintenance. **Prerequisite: Education 202 or its equivalent.**

210a, b INDEPENDENT WORK IN SCHOOL ADMINISTRATION. (4, 4) I, II, III, IV Seay and Meece

An independent work course for students who have done a minimum of 18 quarter hours of graduate work including Education 202, 225a, or 225b.

213 STATE SCHOOL ADMINISTRATION. (4) II, IV Seay

The administration of American education from the standpoint of the federal and state governments. The course deals with federal relations to education, the state as an educational agency, local units for the administration of education, the scope of the school system, state school support, state control of the material environment and equipment, the training and certification of teachers, and teachers' contracts, tenure, and retirement.

221a, b SEMINAR IN ADMINISTRATION. (4.4) Seay and Meece

A critical study of selected problems in school administration.

225a SUPERVISION OF INSTRUCTION. (4) I, III, IV Seay

The development, purposes, organization, and planning of supervision; use of classroom visitation, demonstration lessons, teachers' meetings, and individual conferences; the course of study, tests and measurements, equipment and supplies, the teacher, and the pupil.

225b SUPERVISION OF INSTRUCTION. (4) II, IV Seay

Planning of specific programs for the improvement of instruction which are to be directed by superintendents, principals, supervisors, or helping teachers. Special consideration is given to current programs of in-service education of teachers as sponsored by different educational agencies in Kentucky.

231 FINANCING PUBLIC EDUCATION. (4) II, IV Seay and Meece

Budgetary procedure, school costs, school indebtedness, state finance, fiscal reports, and accounting procedures. These topics are treated primarily from the standpoint of the superintendent of schools. **Prerequisite: Education 202 or its equivalent.**

233 THE ADMINISTRATION OF THE TEACHING PERSONNEL. (4) I Seay and Chamberlain

A specialized course in school administration, primarily for prospective superintendents. The course emphasizes principles and practices in teacher preparation, teacher selection and placement, measurement of teaching efficiency, salaries, tenure, retirement, teaching loads, sick leave and related problems, and personnel records.

236 BUSINESS ADMINISTRATION OF PUBLIC EDUCATION. (4) Seay

A specialized course for prospective superintendents covering the following aspects of school administration: the organization for business management; the scope of business administration; appraisal, depreciation, and insurance of school property; maintenance of the school plant; plant operation; selection, training, and pay of the custodial staff; purchase and management of supplies; textbook management; selection and purchase of equipment; inventories; and transportation.

238 TRENDS IN HIGHER EDUCATION. (4) Chamberlain

A survey of modern tendencies in American higher education in the following areas: scope and development, objectives, organization, administration, curricula, finance, faculty and student personnel. The course is designed to serve the needs of present and prospective college administrators and teachers and others interested in developments in higher education. For those desiring special instruction in the work of the registrar a program of laboratory work will be arranged.

239 THE ADMINISTRATION OF PUBLIC SCHOOLS IN RELATION TO OTHER AGENCIES. (4) Seay

The relationship of public schools with other agencies and services, such as the public health service, the agricultural extension service, employment bureaus, public libraries, parent-teacher associations, and professional organizations of teachers. A study is made of the function and organization of such agencies. The general aim of the course is to give the school administrator an understanding of the social agencies which should be included in the total education program of a community.

250a, b EDUCATIONAL PROBLEMS AND COMMUNITY RESOURCES. (4, 4) Seay

Primary emphasis is on the utilization of community resources in the improvement of instruction. Attention is given to national, regional, and local agencies, the work of which is closely associated with the educational program, and to experiments with and demonstrations of new methods and content in education.

276 ADMINISTRATIVE PROBLEMS IN TODAY'S EDUCATION. (4) **Seay**
Present-day problems of persons in administrative positions in public education. The course is designed to be of assistance particularly to superintendents of schools.

301a, b RESEARCH PROBLEMS IN EDUCATIONAL ADMINISTRATION. (4, 4) I, II, III, IV **Seay and Meece**
An independent research course. Students confer individually with the instructor. **Prerequisite: One year of graduate work.**

321a, b RESEARCH PROBLEMS IN HIGHER EDUCATION. (4, 4) I, II, III, IV **Taylor and Chamberlain**
An independent research course. Students confer individually with the instructor. **Prerequisite: One year of graduate work.**

EDUCATIONAL PSYCHOLOGY

William Septimus Taylor, and Carsie Hammonds

16 EDUCATIONAL PSYCHOLOGY. (5) I, II, III, IV **Ross and Hammonds**
Application of psychology to the problems of learning and teaching.

118 EDUCATIONAL TESTS AND MEASUREMENTS FOR ELEMENTARY TEACHERS. (4) III, IV
The problems of measurement in the elementary school; formal and informal tests; marking systems; etc. **Prerequisite: One quarter of Psychology.**

119 FOUNDATIONS OF ELEMENTARY EDUCATION. (4)
The psychology of the child in the primary and intermediate grades. **Prerequisite: One quarter of Psychology.**

122 EDUCATIONAL TESTS AND MEASUREMENTS FOR HIGH SCHOOL TEACHERS. (5) I, II, III, IV
The problems of measurement in the junior and senior high school, with special emphasis on standardized tests. The construction and use of new-type tests, use and limitations of traditional examinations, marking systems, etc., are also considered.

147 FOUNDATIONS OF SECONDARY EDUCATION. (4) I, IV
The psychology of the pupil in junior and senior high school. **Prerequisite: One quarter of Psychology.**

216 SEMINAR IN TESTS AND MEASUREMENTS. (4) IV
A critical study of certain problems in measurement; individual work. **Prerequisite: Education 122 or 118.**

222 METHODOLOGY OF EDUCATIONAL RESEARCH. (4) I, III, IV **Taylor**
A course 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: 16 quarter hours in Education.**

223 EDUCATIONAL STATISTICS. (5) III, IV
A non-mathematical study of the applications of statistical and graphical methods to educational data.

254 PROBLEMS IN EDUCATIONAL PSYCHOLOGY. (4) I, II, III

A critical survey of the conflicting schools of psychology, theories of learning, etc. **Prerequisite: One year of Psychology.**

255a GUIDANCE IN TODAY'S SCHOOLS. (4) IV

A course for superintendents, principals, teachers, counselors, and others who have the responsibility of carrying out an effective program of guidance in the public schools. The course deals with principles and techniques for the formulation and evaluation of a complete guidance program including inventories, counseling, placement, and follow-up.

255b TECHNIQUES OF COUNSELING. (4)

This course is intended for all teachers. Attention will be given to the counseling of pupils on educational, vocational, and personal problems. Each person enrolled will be given an opportunity to work with pupils in determining aptitudes and abilities and in aiding them to work out programs for their continued education.

258a, b INDEPENDENT WORK IN EDUCATIONAL PSYCHOLOGY. (4, 4) I, II, III, IV

An independent work course for students who have done a minimum of 18 quarter hours of graduate work including Education 122, 147, or 254.

ELEMENTARY EDUCATION

May Kenney Duncan, Lyman Ginger, Estelle Adams, Anna Bruce Boone, Bernice Naylor Callaway, Louise Swinford Clark, Katherine Conroy, Ruth Haines, Pauline Hilliard, and Louise Willson.

20 INDUSTRIAL ARTS FOR ELEMENTARY GRADES. (3) I, IV Haines

A practical course involving the use of tools and various materials suitable for use in the elementary school. It is intended for teachers who wish to make industrial arts an integral part of the elementary school curriculum.

42 ARITHMETIC IN ELEMENTARY GRADES. (4) II Duncan

A study of children's interests in, and needs for arithmetic: evaluation of practice and materials, organization of subject matter, activities involving arithmetic, drill, problem solving, diagnosis and remedial instruction, and testing.

44 FUNDAMENTALS OF ELEMENTARY EDUCATION. (10) I, III Haines and Duncan

A course planned to acquaint the student with the principles and practices of a modern elementary school. It includes directed observation and participation on the elementary level. (This course may be substituted for student teaching on the sophomore level for the Provisional Elementary Certificate.)

110 ADVANCED INDUSTRIAL ARTS. (3) III, IV Haines

The industrial processes involved in records and shelter suitable for classroom experimentation. As a result of work in this course the teacher should be able to guide children in construction activities pertaining to the study of records and shelter—book binding, block

printing, paper decorating, toy making, elementary woodwork, and interior decorating.

133 STUDENT TEACHING IN THE ELEMENTARY SCHOOL. **(15) I, II, III, IV** Ginger and Supervising Teachers
A course designed to give the student experience with and practice in the program of a modern elementary school. (Note: The student spends from 8:00 a.m. until 2:00 p.m. in the classroom for the quarter. One hour per day additional, 2:00 p.m. to 3.00 p.m., is spent in conference and discussion with the supervising teacher. A student who has had three credits in student teaching may take this course with reduced hours and reduced credits.) **Prerequisite: Education 44; senior standing in the elementary curriculum.**

141 PROBLEMS IN DIAGNOSTIC AND REMEDIAL READING. (4) IV Duncan
Problems of prevention, diagnostic, and remedial work in reading, with demonstration of the use of instrumentation in diagnosis and correction of reading difficulties and the application of these clinical procedures to problem cases. The course includes problems of elementary and high school teachers and administrators. (Three hours lecture and discussion and two hours laboratory.)

172 TEACHING READING IN THE ELEMENTARY SCHOOL. (5) III, IV Duncan
A practical application of principles derived from psychology and research, with discussion of aims, primary reading, activities leading to reading, reading in the intermediate grades, oral and silent reading; phonics, diagnostic and remedial work, means of testing, and suitable material for each grade.

173 TEACHING LITERATURE TO CHILDREN. **(5) II, IV** Duncan
Literature for children from kindergarten to Grade VI; children's interests at different ages and stages of development; story telling and dramatization; reading and book reports from various types of literature—modern fantastic tales, realistic stories, biography, folklore, myths and legends, and poetry.

174 PRE-SCHOOL THEORY AND MANAGEMENT. (4) I Clark
The nature, development, care, and educational training of the pre-school child. Emphasis is placed on the formation of proper emotional and social habits and standards for the right environmental set-up. Students schedule regular periods for observing and assisting in the kindergarten.

176 PRE-SCHOOL ORGANIZATION AND TEACHING. (4) II Clark
The pre-school movement in Europe and America, and the organization, equipment, curriculum, and methods of pre-school teaching. Students taking this course schedule regular periods for observing and assisting in the kindergarten.

196 SCIENCE IN THE ELEMENTARY SCHOOL. (5) I, IV Adams
A background of elementary science usable with children in the first six grades. The course includes planning units of work, organizing and using materials and references, making bibliographies for teachers and children, use of illustrative material, and excursions.

212 THE ELEMENTARY SCHOOL. (5) III, IV Duncan
A course designed to help the superintendent, elementary principal, and elementary supervisor in a better understanding of the modern

elementary school. The activity program, objectives, and research and study in the skills and content subjects of the elementary curriculum are discussed from the standpoint of supervision.

215a, b **INDEPENDENT WORK IN ELEMENTARY EDUCATION.** (4, 4) I, II, III, IV Duncan
An independent work course for students who have done a minimum of 18 quarter hours of graduate work including Education 212 or 229.

224 **ORGANIZATION AND SUPERVISION OF STUDENT TEACHING.** (5) II, IV Duncan
A course planned for students preparing to do critic teaching in the fields of elementary and secondary education. It includes the basic principles underlying the entire program and deals with specific problems for critic teachers on the elementary and secondary levels.

229 **THE ELEMENTARY PRINCIPAL.** (5) I, IV Duncan
Problems related to the elementary principalship: the professional preparation, selection, and status of the principal; the relation of the principal to other administrative officers, supervisors, teachers, pupils, and parents; problems of attendance, discipline, health, and records; and the application of sound principles to the improvement of teaching. Emphasis is placed on the community relationship of elementary principals and teachers and ways in which they may cooperate and improve the life of the community. Attention is given also to problems presented by members of the class.

308a, b **RESEARCH PROBLEMS IN ELEMENTARY EDUCATION.** (4, 4) I, II, III, IV Duncan
An independent research course. Students confer individually with the instructor. **Prerequisite: One year of graduate work.**

HISTORY OF EDUCATION

William Septimus Taylor and Moses Edward Ligon.

117a **HISTORY OF EDUCATION.** (4)
A survey of the history of secondary education from the Greek period to the present time.

117b **HISTORY OF EDUCATION.** (4)
A survey of the history of elementary education beginning with Athenian education and closing with present elementary education in America.

201a **EARLY HISTORY OF EDUCATION IN THE UNITED STATES.** (4)
The development of education through the colonial period and the early years of the national period.

201b **RECENT EDUCATIONAL HISTORY IN THE UNITED STATES.** (4)
The growth of education from the beginning of public education to the more recent educational movements.

219 **GREAT EDUCATORS AND THEIR WORK.** (4)
A study of the lives and writings of the world's educators to acquaint the student with the ideals and contributions to society of great educators.

220 **COMPARATIVE EDUCATION.** (4) II, IV Taylor
Comparisons of modern national systems of education.

235 HISTORY OF EDUCATION IN KENTUCKY. (4) IV
A course designed to give the student an historical background of education in Kentucky.

237a, b RESEARCH IN HISTORY OF EDUCATION. (4, 4)
Independent work for students in history of education.

HOME ECONOMICS EDUCATION

Ethel Lee Parker, and Ruth Sneed.

160 TECHNIQUE OF TEACHING HOME ECONOMICS.
(4) I, II, III — Parker
A study of methods of teaching as applied to home economics. **Prerequisite: Home Economics 3, 6a, 6b, 26, 29, and 51; Education 147.**

162 STUDENT TEACHING IN HOME ECONOMICS.
(8) I, II, III — Parker
Practical application of methods in teaching various phases of home economics. **Prerequisite: Education 160.**

165 ADULT EDUCATION IN HOME ECONOMICS.
(4) I, II, III — Parker
Problems involved in teaching vocational homemaking in day, part-time, and evening schools.

261 HOME ECONOMICS SUPERVISION.
(4) IV — Parker
A course planned primarily to help prepare teacher trainers and supervisors of home economics education. **Prerequisite: Education 160 and 162; experience in teaching; approval of instructor.**

263 CURRENT PROBLEMS IN HOME ECONOMICS EDUCATION. (4) IV — Parker
Recent developments in the field of home economics education. **Prerequisites: Education 160 and Ed. 162; experience in teaching.**

264 MODERN TENDENCIES IN HOME ECONOMICS EDUCATION. (4) — Parker
A basic course for graduate students in home economics education. It is designed to acquaint students with modern tendencies in education. Some problems considered are the contribution of home economics to the general education of boys and girls, evaluation, and integration.

265a, b INDEPENDENT WORK IN HOME ECONOMICS EDUCATION.
(4, 4) I, II, III, IV — Parker
An independent work course for students who have done a minimum of 18 quarter hours of graduate work, one course of which must have been in home economics education.

266a-c SEMINAR IN HOME ECONOMICS EDUCATION.
(3 ea.) I, II, III — Parker
Individual investigations and reports on special problems in home economics education.

267 DIRECTED SUPERVISION IN HOME ECONOMICS EDUCATION. (4) — Parker
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 Education 261.) **Prerequisite: Two years' teaching experience; recommendation by the Department of Home Economics Education.**

268 **HOME ECONOMICS CURRICULUM CONSTRUCTION.** (4) IV Parker
A study of the underlying principles of curriculum building for junior and senior high school home economics. **Prerequisite: Education 160 and Ed. 162**

269 **EVALUATION IN HOME ECONOMICS EDUCATION.** (4) IV Parker
A course intended to acquaint teachers of home economics with techniques used in measuring attainment in home economics in the junior and senior high school and college. **Prerequisite: Teaching experience.**

INDUSTRIAL EDUCATION

Thomas L. Hankins, and Charles R. Crumpton.

71 **TRADE ANALYSIS.** (3) IV Hankins and Crumpton
A course planned to meet the needs of vocational teachers in the fields of coordination, shop instruction, and related subjects in connection with day, part-time, and evening schools.

77 **SHOP MANAGEMENT PROBLEMS.** (3) IV Hankins and Crumpton
Industrial education in the school shop. The course evaluates all types of activities in connection with this part of the educational program and gives due weight to each factor.

78 **CONFERENCE LEADER TRAINING.** (3) Hankins and Crumpton
Methods of presenting subject matter that will allow free and constructive thinking. The conference method does this by developing situations and case studies which are handled by the Box-Head Analysis system of control.

82 **INSTRUCTIONAL MATERIAL IN INDUSTRIAL EDUCATION.** (3) I, II, III, IV Hankins and Crumpton
Selecting and arranging course material in trade and industrial subjects. Preparation of instruction and check sheets with emphasis on their uses. **Prerequisite: Education 71.**

83 **PRINCIPLES OF TRADE TEACHING.** (3) I, II, III, IV Hankins and Crumpton
This course deals with the fundamentals of learning and teaching that have special significance in trade and technical subjects.

123 **VOCATIONAL GUIDANCE.** (3) Hankins and Crumpton
A course designed to give the teachers, principals, superintendents, and welfare workers a comprehensive view of the factors in vocational guidance and of the agencies contributing to or influencing life choices, and an analysis of the human and economic resources of a given civic unit.

134 **ORGANIZATION AND OPERATION OF PART-TIME AND EVENING CLASSES.** (3) I, II, III, IV Hankins and Crumpton
A course for administrators, coordinators, and teachers in part-time and evening industrial education. Covers the duties of a coordinator in cooperative training programs.

136 SURVEYS IN INDUSTRIAL EDUCATION.
(3) I, II, III, IV Hankins and Crumpton

Techniques and methods for making various types of surveys to determine needs for vocational training in trades and industries. Forms, questionnaires, outlines, interviews and conferences are studied as means of evaluating the effectiveness of industrial education programs.

137 SPECIAL PROBLEMS IN INDUSTRIAL EDUCATION.
(3) I, II, III, IV Hankins and Crumpton

The supervised study of approved problems in industrial education on a research basis.

143 MODERN INDUSTRIAL ANALYSIS.
(3) I, II, III Hankins and Crumpton

Modern industrial organizations; trends in industrial educational policies; the proper approach to and analysis of these problems as they affect the industrial vocational teacher.

171a, b PRINCIPLES AND PHILOSOPHY OF INDUSTRIAL EDUCATION. (3, 3) I, II, III, IV Hankins and Crumpton

A course planned primarily for the advanced student in industrial education. It covers the general philosophy of vocational education as it is tied up with the problems and principles of industrial education.

183a, b METHODS IN INDUSTRIAL EDUCATION.
(3, 3) IV Hankins and Crumpton

The most approved methods in instructional management, including lesson planning, in the field of vocational industrial education.

MUSIC EDUCATION

Alexander A. Capurso.

251 PROBLEMS IN PUBLIC SCHOOL AND COMMUNITY MUSIC. (5) II, IV Capurso

Problems in teaching, supervising, organizing, and leading public school and community music activities. Students in-service have an opportunity to bring problems from their own school or community situations and, when possible, the instructor visits them in the field. This course includes projects, demonstrations, readings, and discussion.

252 FIELD PROBLEMS IN MUSIC. (2) III, IV Capurso

A course designed to permit the teacher or leader in the field to work out his local problems as an independent graduate teaching project under the guidance of the music staff.

253 INDEPENDENT WORK IN MUSIC EDUCATION.
(5) III, IV Capurso

A course designed for graduate students who undertake research problems in music education, conducted in regular consultation with the instructor.

SECONDARY EDUCATION

Grace Anderson, Robert Bills†, Ralph W. Cherry, Elsie Church, Maurice Clay, May Kenney Duncan, Stella Spicer Gilb, Lyman Ginger, Gladys Greathouse†, Ruth Haines, Margaret Bell Humphreys, Durbin Collins Kemper, Meitha Heitman MacLaury, Mildred May†, Mary Mulligan, Anna Browning Peck, Carolyn Schoeffler†, Martha Virginia Shipman, and Mary Lucille West.

105 FUNDAMENTALS OF SECONDARY EDUCATION.
(4) I, II, III, IV Ligon and Cherry
Laboratory methods of instruction: fundamental processes, control, operation, and administration.

107 SAFETY EDUCATION. (4)
Techniques and skills for the teaching of safety education in all its aspects. Particular emphasis is placed on driver education and the problems related thereto.

111 REMEDIAL READING IN THE SECONDARY SCHOOL.
(3) Duncan
A study of diagnostic and remedial work with reading disability cases in the junior and senior high school. This course is designed to enable the teacher to diagnose reading difficulties and to remedy them. Observation, case studies, and practice in remedial work with children are required of all students. The course includes a critical study of the investigations and literature in the field.

142 STUDENT TEACHING IN ART. (9) I, II, III Haines
A course planned for teachers who contemplate becoming supervisors of art in the public schools. **Prerequisite: Education (see Professional Major); 27 quarter hours in Art; senior standing.**

153 STUDENT TEACHING IN ENGLISH.
(12) I, II, III, IV Anderson and Shipman
Course of study, minimum essentials, materials, methods, testing, language and composition, and literature. The course includes observation and practice, five hours; and conferences, two hours. **Prerequisite: Education (see Professional Major); 27 quarter hours in English; senior standing.**

154 STUDENT TEACHING IN LANGUAGES.
(12) I, II, III, IV West
Aims and objectives, course of study, methods, tests, equipment, and analysis of textbooks. The course includes observation and practice, five hours; and conferences, two hours. **Prerequisite: Education (see Professional Major); 27 quarter hours in subject to be taught; senior standing.**

155 STUDENT TEACHING IN THE SCIENCES.
(12) I, II, III, IV Kemper
Aims and objectives, courses of study, methods, tests, equipment, general science, biology, physics, and chemistry. The course includes observation and practice, five hours; and conferences, two hours. **Prerequisite: Education (see Professional Major); 27 quarter hours in subject to be taught; senior standing.**

† See appended list of leaves of absence, resignations, deaths, etc., p. 399.

156 STUDENT TEACHING IN MATHEMATICS.
(12) I, II, III, IV Church
Course of study, materials, methods, and testing. The course includes observation and practice, five hours; and conferences, two hours. **Prerequisite: Education (see Professional Major); 27 quarter hours in Mathematics; senior standing.**

157 STUDENT TEACHING IN THE SOCIAL STUDIES.
(12) I, II, III, IV Peck and Shipman
Objectives, preparation of the teachers, courses of study, methods, supplementary materials, visual instruction, testing, and professional helps. The course includes observation and practice, five hours; and conferences, two hours. **Prerequisite: Education (see Professional Major); 27 quarter hours in subject to be taught; senior standing.**

169a-c STUDENT TEACHING IN PHYSICAL EDUCATION.
(3 ea.) I, II, III Clay, Gilb and Ginger
A course for students who desire to become directors of physical education and coaches of athletics in the public schools. **Prerequisite: Education (see Professional Major); 27 quarter hours in Physical Education including required lower division Physical Education courses, and Anat. and Phys. 4 and 5; senior standing.**

177a-c STUDENT TEACHING IN MUSIC.
(3 ea.) I, II, III MacLaury
A course planned for teachers who contemplate becoming supervisors of music in the public schools. **Prerequisite: Education (see Professional Major); 27 quarter hours in Music, senior standing.**

193 STUDENT TEACHING IN BUSINESS EDUCATION.
(9) I, II, III, IV Humphreys
Practice in junior business training, in shorthand, in typewriting, and in such other commercial subjects as are commonly taught on the secondary level. **Prerequisite: Education (see Professional Major); 27 quarter hours in Commerce; senior standing.**

214a, b THE SECONDARY SCHOOL. (4, 4) I, II, III, IV Ligon and Cherry
A course designed to acquaint the prospective principal or superintendent with the nature and function of the secondary school. This is one of the basic courses in the field of administration and should be taken at or near the beginning of the student's graduate program.

232 HIGH SCHOOL ADMINISTRATION. (4) I, III, IV
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.

241 PROBLEMS IN TEACHING THE SOCIAL STUDIES.
(4) IV Peck
Approved methods of teaching the social studies. Source materials dealing with the problems of teaching, such as research findings, yearbooks, and periodicals, are investigated and current practices in the best high schools of the country are stressed.

242 PROBLEMS IN TEACHING ENGLISH. (4) IV Anderson
Approved methods of teaching English. Source materials dealing with the problems of teaching, such as research findings, yearbooks,

and periodicals, are investigated and current practices in the best high schools of the country are stressed.

243 PROBLEMS IN TEACHING MATHEMATICS. (4) IV
Approved methods of teaching mathematics. Source materials dealing with the problems of teaching, such as research findings, yearbooks, and periodicals, are investigated and current practices in the best high schools of the country are stressed.

244 PROBLEMS IN TEACHING PHYSICS. (4) IV
Approved methods of teaching physics. Source materials dealing with the problems of teaching, such as research findings, are investigated and current practices in the best high schools of the country are stressed.

248a, b INDEPENDENT WORK IN SECONDARY EDUCATION. (4, 4) I, II, III, IV
An independent work course for students who have done a minimum of 18 quarter hours of graduate work including Education 214 or 232.

249 EXTRACURRICULAR ACTIVITIES. (4) III
Underlying principles, faculty activities, home-room activities, student council, clubs, athletics, publications, dramatics, honor societies, and commencements. **Prerequisite: 16 quarter hours in Education.**

307a, b RESEARCH PROBLEMS IN SECONDARY EDUCATION. (4, 4) I, II, III, IV
An independent research course. Students confer individually with the instructor. **Prerequisite: One year of graduate work.**

VOCATIONAL EDUCATION

Carsie Hammonds and Watson Armstrong†

211 THE ADMINISTRATION OF VOCATIONAL EDUCATION. (4) II Hammonds and Armstrong
A course designed for superintendents and principals of high schools. The purpose of the course is to train for administering and supervising vocational education. Topics emphasized include aims and purposes of vocational education, relationship of vocational to other education, financing vocational education, and relationship of local to state administration.

282 SPECIAL PROBLEMS IN VOCATIONAL EDUCATION. (4) I, II, III, IV Armstrong
An independent work course for students interested in vocational education. Students make individual investigations and report on special problems.

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* See appended list of leaves of absence, resignations, deaths, etc., p. 399.

COLLEGE OF COMMERCE

Edward Wiest, Wendell Everett Beals, Cecil C. Carpenter, Lucian Hugh Carter, Merrill DeVoe, Herman A. Ellis, Robert D. Haun, Walter W. Jennings, A. J. Lawrence*, Robson Duncan McIntyre, James Walter Martin, Joe Logan Massie, Ralph R. Pickett, Rodman Sullivan, Ruth E. Thomas, and William Allan Tolman.

ECONOMICS

1 PRINCIPLES OF ECONOMICS. (5) I, II, III, IV Wiest and others

The theory of production, consumption, value, and distribution. **Not open to freshmen.**

2 ECONOMIC HISTORY OF EUROPE.
(4) I, III, IV Jennings and others

A survey of conditions preceding the modern period with a more intensive study of the subsequent development of agriculture, industry, and finance. **Open only to freshmen and sophomores.**

3 ECONOMIC HISTORY OF THE UNITED STATES.
(4) II, III, IV Jennings and others

A brief sketch of economic life in the colonies, followed by a more detailed account of the national evolution in agriculture, manufacture, transportation, commerce, and finance. **Open only to freshmen and sophomores.**

4 RESOURCES AND INDUSTRIES. (4) I, II, IV Jennings

The economic factors which govern the utilization of world resources and the exchange of products.

15 APPLIED ECONOMICS. (4) II Sullivan and others

Fundamental aspects of money and banking, industrial efficiency, marketing, transportation, public utilities, public finance, social control, et cetera.

16 TUTORIAL WORK IN ECONOMICS. (1) II, III Carter

Open only to Arts and Sciences majors.

102 LABOR PROBLEMS. (4) I, IV Carter

Insecurity, wages and income, substandard workers, industrial conflict; wage theories, the economics of collective bargaining, unionism in its structural and functional aspects; recent developments. **Prerequisite: Econ. 1.**

103 TRANSPORTATION. (4) I, IV Sullivan

Railways, waterways, highways, and airways. Rates, service, management, and regulation. **Prerequisite: Econ. 1.**

104 PUBLIC FINANCE. (4) I, III, IV Martin

A study of public receipts; public expenditures; the principles of taxation with special reference to their application to the tax systems, federal and state. **Prerequisite: Econ. 1.**

* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

105 MONEY AND BANKING. (4) II, III, IV Carpenter

Nature and functions of money; the importance of credit; relation of money and credit to prices, bank deposits, and loans; complete study of our national banking system. **Prerequisite: Econ. 1.**

107 STATISTICAL METHOD. (4) I, IV Carpenter and Massie

Introduction to the sources of business data, the use of calculating machinery, tabulation, simple charts and graphs, the averages, dispersion, correlation, and time series analysis.

110 BUSINESS CYCLES. (4) I, II, III, IV Carpenter

The nature and characteristics of the economic factors which underlie the cyclical fluctuations in business conditions and the methods of business and investment forecasting. **Prerequisite: Econ. 1 and an elementary course in statistics.**

112a-f INDIVIDUAL WORK IN ECONOMICS. (1) I, II, III, IV Staff

Students confer individually with the instructor.

115 VALUE AND DISTRIBUTION THEORY. (4) I Sullivan

The major emphasis is on current theory.

124 STATE AND LOCAL TAXATION. (4) II, IV Martin

Classified property taxes; separation of sources of revenue; taxation of banks, forests, public utilities, mines, and rural and urban real estate; income, inheritance, and sales taxes.

125 EVOLUTION OF ECONOMIC INSTITUTIONS. (4) II Jennings

The rise of economic institutions such as property rights, capital formation, contractual labor, et cetera, as influenced by the family, the city-state, nationalism, commerce, finance, the manor, the guilds, and the industrial revolution. **Prerequisite: Econ. 2 or consent of instructor.**

126 ECONOMICS OF PUBLIC UTILITIES. (4) I, IV 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, and accounting. **Prerequisite: Econ. 1.**

127 INTERNATIONAL ECONOMIC POLICIES. (4) III Sullivan

Modern fallacies respecting foreign trade, free trade, protectionism, preferential tariffs, colonial tariff policies, dumping, commercial treaties, control of raw materials, encouragement of shipping, international investments and the movement of capital, international debts, and reparations. **Prerequisite: Econ. 1.**

130 LABOR LEGISLATION. (4) III, IV Carter

The status of labor law, mediation, conciliation, arbitration, the minimum wage, the eight-hour day, unemployment relief, safety and health legislation, and social insurance. **Prerequisite: Econ. 1.**

134 ADVANCED ECONOMIC HISTORY OF THE UNITED STATES. (4) II Jennings

An advanced study of English colonial policy, population growth, immigration, territorial expansion, agriculture, manufactures, tariff, labor, industrial combinations, commerce, transportation facilities, money and banking, and conservation. **Not open to students who have had Econ. 3 except when doing graduate work.**

142 **INDEX NUMBERS.** (2) II Carpenter and Massie
The problems of sampling, selection of formula and weighting in the construction of index numbers; a study of the construction and use of the common index numbers of prices and production. **Prerequisite: An elementary course in statistics.**

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. **Prerequisite: Econ. 3 or consent of instructor.**

148 **EUROPEAN BUSINESS LEADERS.** (2) II Jennings
Biographical sketches of a selected list of men including their business achievements and their relationships to the economic and social life of their time. **Prerequisite: Econ. 2 or consent of instructor.**

152 **INCOME AND WEALTH.** (2) I Carpenter
The definition of these concepts, the relations between them, their relations to economic theory, their measurement on a national, regional, local, corporate, and individual basis, with particular reference to Kentucky, and the causes of differences in income and wealth between different localities. **Prerequisites: Econ. 1, and an elementary course in statistics.**

153 **THE ECONOMICS OF CONSUMPTION.** (3) II Sullivan
The place of consumption in economic theory with special emphasis upon its relation to the phases of the business cycle, including the institutional background of our consumer habits; sources of information on consumption; and government regulation of consumer standards.

157 **GOVERNMENT FINANCE ADMINISTRATION.** (4) III Martin
Government budget, accounting, debt, purchasing, treasury, revenue, and auditing administration is examined; illustrations are drawn from federal, state, and local experience. Each student makes a special report on finance-management study or experience. **Not open, without instructor's permission, to undergraduates other than commerce, economics, and political science seniors.**

158 **ADMINISTRATIVE RESEARCH PROBLEMS.** (4) III Carpenter
The place of a research program in an administrative agency, the coordination between research work and the agency's functional activities, the types of research and the place of each type in the program, the sources of data within and without the agency, tabulation and charting procedures, the simpler processes of analysis of statistical and other information but with a minimum amount of practice in statistical techniques. **Not open, without instructor's permission, to undergraduates other than commerce, economics, and political science seniors.**

202a-f **SEMINAR.** (1 ea.) I, II, III, IV Wiest and others
An extended investigation of some specific topic with a view to giving training in methods of research and studying intensively a particular subject in the field of economics.

203 **HISTORY OF ECONOMIC THOUGHT.** (5) I Wiest
A survey of the history of economic thought from the ancient period to about the end of the classical school. **Prerequisite: Econ. 1.**

204 ECONOMIC HISTORY OF THE UNITED STATES PRIOR TO 1860. (3) 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 Econ. 134 for graduate credit.

205 ECONOMIC HISTORY OF THE UNITED STATES SINCE 1860. (3) II Jennings
A continuation of Econ. 204, but may be taken independently. Not open to students who have taken Econ. 134 for graduate credit.

206a MUNICIPAL FINANCE. (2) I Martin
City and county budget and related problems are studied in reports and seminar.

206b MUNICIPAL FINANCE. (2) II Martin
City and county debt, purchasing, treasury, and revenue problems are studied in reports and seminar.

207a, b PROBLEMS IN PUBLIC FINANCE. (2, 2) II, III Martin
Depending on varying needs of public finance students from time to time, specific subject matter will be selected for study. Each student's report will indicate the class of problems intensively examined.

208 ADVANCED ECONOMIC THEORY. (4) III Sullivan
A critical examination of current literature on economic problems and policies. **Prerequisite: Econ. 1.**

209 COMPARATIVE BANKING AND MONETARY SYSTEMS. (4) II Carpenter
A comparative study of banking systems and monetary policies in the principal countries of the world. Emphasis is placed upon present-day organization. The commercial bank with its monetary functions is the main theme of the course, but brief surveys of investment banking systems are also attempted.

210 RESEARCH STATISTICS. (2) I Carpenter
The place of statistics in research method, the theory of statistical averages, the application of advanced statistical methods to economic data, the statistical meaning of economic concepts and the testing of economic theory. **Prerequisite: An elementary course in statistics.**

211 ADVANCED MONEY AND BANKING. (4) III Carpenter
A general survey of the subject is attempted with the emphasis upon its historical and theoretical aspects.

212a-f RESEARCH PROBLEMS IN ECONOMICS. (1) I, II, III, IV Staff
Students confer individually with the instructor.

215 SURVEY OF ECONOMIC THEORY SINCE THE AUSTRIAN SCHOOL. (4) II Wiest
This course is virtually a continuation of Course 203.

216 BUSINESS CYCLE THEORY. (2) III Carpenter
An advanced course including a reading of important theories and studies of the business cycle. **Prerequisite: Econ. 110.**

COMMERCE

6 SECRETARIAL ACCOUNTING. (3) III Thomas
A study of accounting systems for the professions, small businesses, and institutions in which the secretary ordinarily keeps the records. **Prerequisite: Com. 7b.**

7a, b PRINCIPLES OF ACCOUNTING.
(5, 5) I, II, III, IV Haun and others

Instruction in the science and adaptation of the accounts of going concerns, together with sufficient practice to acquire proficiency. Recitation, three hours; laboratory, four hours a week.

9 BUSINESS ORGANIZATION.
(4) I, II, III, IV Pickett and others

A course designed to introduce students to the field of business. The relation of the business unit to the economic system; the internal organization of business firms of different types and in varied industries; description of the major functions of departments of a business unit; governmental regulation of monopoly and other undesirable commercial practices.

10 PRINCIPLES OF MARKETING.
(5) I, II, III, IV DeVoe and McIntyre

A functional study of the market organization. Considerable time is given to the discussion of retail types such as general store, chain store, department store, and mail order house. Special attention is devoted to market finance, market risk, market news, competition and prices, market price, price maintenance, unfair competition, and the cost of marketing. **Prerequisite: Econ. 1.**

11 SALESMANSHIP. (2) I, II, III McIntyre

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: Econ. 1 and Com. 10.**

13a SECRETARIAL PRACTICE, SHORTHAND.
(4) I, II, III, IV Thomas

The theory of Gregg shorthand with sufficient practice in writing to develop skill and speed in writing. Secretarial duties and traits are given some consideration. Personal use as well as vocational values are emphasized. Credit for this course will not be given until 13b is completed. **Prerequisite or concurrent: English 1a.**

13b SECRETARIAL PRACTICE, SHORTHAND.
(4) I, II, III, IV Thomas

A continuation of Gregg shorthand with sufficient practice to develop a speed of from 90-100 words a minute in dictation. **Prerequisite: Com. 13a or its equivalent.**

14a ADVANCED SECRETARIAL PRACTICE.
(4) I, II, III, IV Thomas

This course combines shorthand and typewriting in the transcription of shorthand notes and the development of office proficiency. Accuracy and speed in transcribing is emphasized. Four recitations a week. **Prerequisites: Com. 13a, 13b, 17a, 17b, or their equivalent.**

14b ADVANCED SECRETARIAL PRACTICE.
(4) II, IV Thomas

A continuation of Commerce 14a with special emphasis on secretarial duties and traits. A speed of 125 words a minute in dictation and 40 words a minute in transcription is required. Four recitations a week. **Prerequisites: Com. 13a, 13b, 17a, 17b, or**

17a SECRETARIAL PRACTICE, TYPEWRITING. (3) I, II, III, IV Thomas
Theory and techniques in typewriting are included with a thorough study of form, style and arrangement of typewritten material. A speed of 40 words a minute is required. **Prerequisite or concurrent: English 1a.**

17b SECRETARIAL PRACTICE, TYPEWRITING. (3) I, II, III, IV Thomas
A continuation of Commerce 17a with emphasis on the development of speed and accuracy sufficient for vocational use. A speed of 60 words a minute is required. **Prerequisite: 17a.**

18 FILING. (2) I, III, IV Thomas
The general principles, procedures, and systems of filing including sufficient practice with laboratory sets to develop facility and skill. Emphasis will be placed upon filing in business and government offices with a view to preparing file clerks for such offices.

19 OFFICE APPLIANCES. (2) II, IV Thomas
The use of dictating, duplicating, and addressing machines, and similar appliances. Sufficient practice will be given to develop skill in the operation and care of such equipment. **Prerequisite: Com. 17a.**

20 PRINCIPLES OF ADVERTISING. (4) I, III McIntyre
An introductory study of the function of advertising in its relation to the broad field of marketing. Emphasis is placed upon the scope and organization of advertising and its economic implications. Advertising media are briefly surveyed and various testing devices used in advertising are examined. **Prerequisite: Com. 10.**

101 SECRETARIAL OFFICE PRACTICE. (2) III
This course is designed to provide laboratory and office experience for senior secretarial students. A minimum of 48 hours of office experience under supervision is required. **Prerequisites: Com. 14a, b.**

106a INTERMEDIATE ACCOUNTING. (4) II, IV Haun and Beals
Principles of financial statement, arrangement, and content. Corporation accounting. Accounting for consignment and installment sales. **Prerequisites: Com. 7a, b.**

106b INTERMEDIATE ACCOUNTING. (4) III, IV Haun and Beals
Accounting for partnerships, ventures, agencies, and branches. Accounting features of insolvent concerns and of consolidations and mergers. Estate accounting. **Prerequisites: Com. 7a, b.**

108 ACCOUNTING THEORY. (3) I Beals
The function of accounting, asset valuation, recognition of revenue and expenses, and classification of equities, will be studied with a view to presenting a coordinated body of accounting theory. **Prerequisite: Com. 106b.**

109a, b BUSINESS LAW. (4, 4) I, II, III, IV Haun
A survey of the principles of contracts, sales, bills and notes, and that portion of the law of torts applicable to business practices. **Prerequisite: 2 years of Commerce Curriculum.**

111 ADVANCED SALESMANSHIP. (4) IV McIntyre
This course is designed primarily for high school and college teachers who are required to give such work in their respective schools. Extensive reading, preparation, and presentation of sales

demonstrations, critical analysis of modern sales techniques and coordination of selling with the related fields of advertising, merchandising, credit management, and market research will be considered. **Prerequisite: Com. 11 or consent of instructor.**

113 AUDITING. (4) III, IV Haun and Beals
The theory of auditing, the valuation of assets, analysis of accounting procedure, and the presentation of statements. Special problems applicable to particular businesses will also be presented. **Prerequisite: Com. 7a and 7b.**

117 CORPORATION FINANCE. (4) I, II, III, IV Pickett
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. **Prerequisite: Com. 1, Com. 7a, and Com. 7b.**

118 COST ACCOUNTING. (4) I, IV Haun and Beals
The place of cost accounting in the general field of accounting, special records and cost statistics, and application to particular business. **Prerequisite: Com. 7a and 7b.**

119 RETAIL MERCHANDISING. (4) II, IV McIntyre and DeVoe
Selecting a business location, internal layout, departmentalization, merchandizing control, store policies toward the public, training and management of personnel, and related subjects. **Prerequisite: Com. 1 and Com. 10.**

129 CREDIT AND STATEMENT ANALYSIS. (3) I Haun and Beals
The theory underlying credit-granting, credit administration, and analysis and interpretation of financial statements. **Prerequisite: Com. 7a.**

131 INVESTMENTS. (4) II Pickett
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. **Prerequisite: Econ. 105 and Com. 117.**

132a, b C. P. A. PROBLEMS. (3, 3) II, III 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. **Prerequisite: Com. 106a and 106b.**

133 INCOME TAX PROCEDURE. (4) II Haun and Beals
The preparation of income tax returns for individuals and corporations of all classes and a practical application of principles of accounting. **Prerequisite: Com. 106a, b.**

135 ADVANCED MARKETING. (3) II DeVoe
The literature and problems in the retail distribution of consumers' goods, wholesale distribution of consumers' goods, industrial goods, sales organizations, sales promotion and advertising, and price policies. **Prerequisite: Com. 10.**

136 SALES MANAGEMENT. (3) I McIntyre
The case method is used, supplemented with outside reading and written reports. **Prerequisite: Com. 11 or the consent of the instructor.**

137 PROBLEMS IN MANAGEMENT. (4) II, III Carter
Emphasis is placed upon factory management, but an attempt is made to coordinate managerial aspects of business in its entirety. Approximately half of the quarter is devoted to the consideration and criticism of business reports dealing with various managerial problems and prepared by members of the class. **Open only to seniors of the College of Commerce and to graduate students who have had the necessary prerequisite training.**

138 INVESTIGATION OF BUSINESS PROBLEMS. (4) III Carpenter
The methods of surveying, analyzing, and actual investigation of problems of business management. It is intended for mature students who have had a thorough training in commerce and who are capable of doing research work under the guidance of the instructor. The work will involve the statistical analysis of data secured through interviews, questionnaires, and otherwise, and the use of the results in determining a satisfactory solution. **Open only to seniors in the College of Commerce and to graduate students who have had the prerequisite training.**

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. **Prerequisite: Com. 20, or the consent of the instructor.**

143 LIFE INSURANCE. (4) I, IV Pickett
Economics of life insurance, organization and control, special forms of life insurance, and fundamental principles of rate-making. **Prerequisite: Econ. 1.**

144 PROPERTY AND CASUALTY INSURANCE. (4) II Pickett
Public control, nature of contracts, analysis of reserve functions, and rate-making processes. Prerequisite: Com. 1.

145 OFFICE MANAGEMENT. (4) III, IV Lawrence
Planning and scheduling of work; employment procedures; supervision of employees, retraining, promotion, and equipment.

149 MARKET ANALYSIS. (4) III DeVoe
Training in the application of scientific method to research in fields of marketing. A major marketing investigation will be conducted by the class. **Prerequisite: Com. 10 and a course in statistics.**

150 BUSINESS STATISTICS. (3) I, II, III, IV Carpenter
Advanced statistical techniques with special application in economics and business, a survey of the work of government and private research organizations, a study of general research methods, indicating the importance of each type, and training in the application of statistical and other techniques to business data. **Prerequisite: An elementary course in statistics.**

151 SECRETARIAL STATISTICS. (4) II Carpenter and Massie
To be taken by students pursuing the Secretarial-Training curriculum. The rules of accuracy in computation, tabulation of data, graphing of business data, organization charts, statistical maps, the operation of calculators and other machines used in statistical work, and the sources of statistical materials of interest to business. **Prerequisite: Com. 17a.**

154 URBAN REAL ESTATE. (4) III Pickett
Urban land economics, the growth and planning of urban communities, survey of the real estate business and institutions, essentials of real estate law and contracts, the financing of real estate transactions, the problem of property valuation and appraisal, the management of real estate properties, the problem of ownership versus rental, and the problem of real estate securities as investments. Governmental activities. **Prerequisite: Com. 117.**

155 INDUSTRIAL RELATIONS. (4) III Carter
Historical development of industrial relations; the economic implications of job analysis, recruitment, selection and training for industry; wages, hours, promotion and health policies; employee representation, collective bargaining, established policies, practices, and procedures under the law; union-management cooperation, building morale, and the public service.

156 BUSINESS REPORTS. (3) II, III
Major emphasis is placed upon sources of data, compilation and arrangement of data, documentation, bibliographies, and effective presentation of reports. Problems will be assigned in the various areas of interest.

159 GOVERNMENTAL ACCOUNTING. (3) III Beals
The requirements of adequate accounting systems for various governmental units, including the recording of usual transactions and the form and content of reports. **Prerequisite: Com. 7b.**

Courses in Mathematics of Finance, Psychology of Advertising, Industrial Psychology, and Business English are offered by departments of the College of Arts and Sciences.

ARMY SPECIALIZED TRAINING PROGRAM
CURRICULA OFFERED AND CREDIT ALLOWED IN TERMS OF EQUIVALENT UNIVERSITY COURSES
Basic Phase—Curriculum BE-1

FIRST TERM

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number	Qtr. Hrs. Allowed
Mathematics	406	6	0	College Algebra and Plane Trigonometry	Math. 5a, b or 17, and 3	3 3
Physics	304	4	2 (1*)	General Elementary Physics	Physics 1a	5
Chemistry	205	3	0	None		3
English	111	3	0	English Composition	Eng. 1a	3
History	133	3	0	History of the United States Through 1865	Hist. 5a	3
Geography	163	2	0	Elements of Geography	Geol. 51c	
				El. of Geol: Climatology or	Geol. 51b	2
				Elements of Geography	Geog. 1a, b	
		—	—			—
Total		21	3			22

SECOND TERM

Mathematics	407	5	0	Plane and Solid Analytical Geometry	Math. 19	5
Physics	305	4	2 (1*)	General Elementary Physics	Physics 1b	5
Chemistry	206	2	4	General Chemistry	Chem. 1a or 2b†	4
English	111	2	0	The Essentials of Speech	English 6	2
History	133	2	0	History of the United States Since 1865	Hist. 5b	2
Geography	163	2	0	Economic Geography—Commerce	8	2
		—	—			—
Total		17	7			20

* One hour for writing reports.
† The successful completion of both Chemistry AST 205 and 206 is considered equivalent to Chemistry 1a and 1b or 2a and 2b.

Basic Phase—Curriculum BE-1

† The successful completion of both Chemistry AST 205 and 206 is considered equivalent to Chemistry 1a and 1b or 1c and 2b.

Basic Phase—Curriculum BE-1

THIRD TERM

Mathematics	408	5	0	Differential Calculus	Math.	20a	5
Physics	306	4	2 (1*)	General Elementary Physics	Physics	1c	5
Engineering Drawing	001	0	6	Elementary Engineering Drawing	Eng. Dr.	1a	2
English	111	2	0	The Essentials of Speech	Eng.	6	2
History	133	2	0	History of the United States Since 1865	Hist.	5b	2
Geography	163	2	0	None			2
Total		15	9				18

* One hour for writing reports.

Basic Phase—Curriculum BE-3

INTERNAL COMBUSTION ENGINES

FIRST TERM

Mathematics	406	6	0	College Algebra and Plane Trigonometry	Math. 5a, b or 17, and 3		3
Physics	304	4	3*	General Elementary Physics	Physics	1a	5
Engineering Drawing	001	0	6	Elementary Engineering Drawing	Eng. Dr.	1a	2
English	111	3	0	English Composition	English	1a	3
History	133	3	0	History of the United States Through 1865	Hist.	5a	3
Geography	163	2	0	Elements of Geography:	Geol.	51c	
				El. of Geol: Climatology or	Geol.	51b	2
				Elements of Geography	Geog.	1a, b	
Total		18	9				21

* One hour of the three used for supervised report writing.

ARMY SPECIALIZED TRAINING PROGRAM—Continued

Basic Phase—Curriculum BE-3

SECOND TERM

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number		Qtr. Hrs. Allowed
Mathematics	407	5	0	Plane and Solid Analytical Geometry	Math.	19	5
Physics	305	4	3*	General Elementary Physics	Physics	1b	5
Mechanisms and Power Transmissions	326	1	6	Elective		3	3
English	111	2	0	The Essentials of Speech	English	6	2
History	133	2	0	History of the United States Since 1865	Hist.	5b	2
Geography	163	2	0	Economic Geography—Commerce		8	2
Total		16	9				19

THIRD TERM

Mathematics	408	5	0	Differential Calculus	Math.	20a	5
Physics	306	4	3*	General Elementary Physics	Physics	1c	5
Internal Combustion Engines	336	3	4	Elective			4
English	111	2	0	The Essentials of Speech	English	6	2
History	133	2	0	History of the United States Since 1865	Hist.	5b	2
Geography	163	2	0	None			2
Total		18	7				20

* One hour of the three used for supervised report writing.

Basic Phase—Curriculum B-60 (Prior to November 1, 1944)

FIRST TERM

Mathematics	61	6	0	College Algebra and Plane Trigonometry	Math.	17.3	6
Physics	61	4	3	General Elementary Physics	Physics	1a	5
Chemistry	61	3	2	General Chemistry (Partial Equivalent)	Chem.	1a	4
English	11-61	3	0	English Composition	Eng.	1a	3*
History	11-61	4	0	History of the United States Since 1865	Hist.	5b	4
Total		20	5				22

SECOND TERM

Mathematics	62	5	0	Plane and Solid Analytical Geometry	Math.	19	5
Physics	62	4	3	General Elementary Physics	Physics	1a	5
Chemistry	62	3	3	No Equivalent†			4
English	12-62	3	0	English Composition	Eng.	1a	3
Geography	61	5	0	Elem. of Geog:			
				Meteorology or	Geol.	51a	
				Elem. Meteorology or	Geol.	52‡	
				Introd. to Meteorology and	Geog.	20	
				Economic Geog.	Com.	8	5
Total		20	6				22

* For A or B grade.

† This course, together with Chemistry AST 61 is considered as a minimum prerequisite for Chemistry 20, Qualitative Analysis, but not for any other Chemistry courses numbered 21 or above.

‡ Geol. 52 was dropped by The University Faculty November, 1945.

ARMY SPECIALIZED TRAINING PROGRAM—Continued

Basic Phase—Curriculum B-60 (Prior to November 1, 1944)

TERM 3-E

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number		Qtr. Hrs. Allowed
Mathematics	63	6	0	Differential Calculus	Math.	20a	5
Physics	63	4	3	General Elementary Physics	Physics	1c	5
Engineering Drawing	11-61	0	6	Engineering Drawing	Eng. Dr.	1a	2
English	13-63	4	0	English Composition	English	1a	3
Total		14	9				15

Basic Phase—Curriculum B-60 (From November 1, 1944)

FIRST TERM

Mathematics	61	6	0	College Algebra and Plane Trigonometry	Math.	17.3	6
Physics	61	4	3	General Elementary Physics	Physics	1a	5
Chemistry	61	3	2	General Chemistry	Chem.	1a	4
English	11-61	3	0	English Composition	Eng.	1a	3*
History	31-71	5	0	History of the United States Since 1865	Hist.	5b	4
Total		21	5				22

* For A or B grade.

Basic Phase—Curriculum B-60 (From November 1, 1944)

Basic Phase—Curriculum B-60 (From November 1, 1944)

SECOND TERM

Mathematics	62	5	0	Plane and Solid Analytical Geometry	Math.	19	5
Physics	62	4	3	General Elementary Physics	Physics	1b	5
Chemistry	62	3	3	None			4†
English	12-62	3	0	English Composition	English	1a	3
Geography	31-71	5	0	Elements of Geography:			
				Climatology and	Geol.	51b	
				Elements of Geography or	Geol.	51c	
				Elements of Geography and	Geog.	1a, b	
				Economic Geography	Com.	8	5
Total		20	6				22

TERM 3-E‡ or E-1

Engineering Problems	61	0	4	Engineering Problems	Assembly	2	1
Mathematics	63	6	0	Differential Calculus	Math.	20a	5
Physics	63	4	3	General Elementary Physics	Physics	1c	5
Engineering Drawing	11-61	0	6	El. Engineering Drawing	Eng. Dr.	1a	2
English	13-63	4	0	English Composition	English	1a	3
Total		14	13				16

† This course has no equivalent at the University of Kentucky. Successful completion of both AST 61 and 62 is considered as a minimum prerequisite for Chemistry 20, Qualitative Analysis, but not for any other Chemistry courses numbered 21 or above.

‡ This curriculum is the same as the curriculum designated Engineering Curriculum E-1.

ARMY SPECIALIZED TRAINING PROGRAM—Continued

Basic Phase—Curricultum B-65

TERM I

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number	Qtr. Hrs. Allowed
Mathematics	61	6	0	College Algebra and Plane Trigonometry	Math. 5a, b or 17, and 3	6
Physics	61	4	3	General Elementary Physics	Physics 1a	5
English	61	5	0	None		No Credit
History	72	5	0	History of the United States Through 1865	Hist. 5a	5
Total		20	3			16

TERM II

Mathematics	62	6	0	Plane and Solid Analytical Geometry	Math. 19	6
Physics	62	4	3	General Elementary Physics	Physics 1b	5
Geography	72	4	0	Elements of Geography	Geog. 1a	4
English	62	3	0	English Composition	Eng. 1a	3
History	73	3	0	History of the United States Since 1865	Hist. 5b	3
Total		20	3			21

Basic Phase—Curriculum N-20 (Prior to November 1, 1944)

FIRST TERM

Total		20	3				21

Basic Phase—Curriculum N-20 (Prior to November 1, 1944)

FIRST TERM

Mathematics	11	6	0	None			0
Physics	11	3	4	None			0
English	11-61	4	0	English Composition	English	1a	3*
Geography	11	4	0	Elements of Geography:			
				Meteorology or	Geol.	51a	
				Elementary Meteorology or	Geol.	52‡	
				Introd. to Meteorology and	Geog.	20	
				Economic Geography	Com.	8	4
Total		17	4				7

SECOND TERM

Mathematics	12	6	0	College Algebra and Plane Trigonometry	Math.	17.3	6
Physics	12	3	4	None			0
Engineering Drawing	11-61	0	6	Elementary Engineering Drawing	Eng. Dr.	1a	2
English	12-62	4	0	English Composition	English	1a	3
Total		13	10				11

THIRD TERM

Physics	13	3	4	None			0
Chemistry	11	3	3	None			0
English	13-63	4	0	English Composition	Eng.	1a	3
History	11-61	4	0	History of the United States Since 1865	Hist.	5b	4
Total		14	7				7

* For A or B grade.

‡ Geol. 52 was dropped by the University Faculty, November, 1945.

ARMY SPECIALIZED TRAINING PROGRAM—Continued
Basic Phase—Curriculum N-30 (From November 1, 1944)

FIRST TERM

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number		Qtr. Hrs. Allowed
Mathematics	11	6	0	None		0	0
Physics	11	3	4	None		0	0
English	11-61	4	0	English Composition	English	1a	3*
Geography	31-71	5	0	Elements of Geography:			
				Climatology and	Geol.	51b	
				Elements of Geography or	Geol.	51c	
				Elements of Geography and	Geog.	1a, b	
				Economic Geography	Com.	8	5
Total		18	4				8

SECOND TERM

Mathematics	12	6	0	College Algebra and Plane Trigonometry	Math.	17.3	6
Physics	12	3	4	None		0	0
English	12-62	4	0	English Composition	English	1a	3
History	31-71	5	0	History of the United States Since 1865	Hist.	5b	4
Total		18	4				13

THIRD TERM

Physics	13	3	4	None		0	0
Technical Problems	31	1	4	Engineering Problems—Assembly		2	1
English	13-63	4	0	English Composition	English	1a	3
Engineering Drawing	11-61	0	6	Elementary Engineering Drawing	Eng. Dr.	1a	2
Total		8	14				6

* For A or B grade.

Total		8	14			6

* For A or B grade.

Basic Phase—Curriculum P-1

PREMEDICAL, PREDENTAL, PREVETERINARY

THIRD TERM

Qualitative Analysis	211	3	6	Qualitative Analysis	Chem. 20†	5
Physics	306	4	2 (1*)	General Elementary Physics	Physics 1c	5
Biology	951	3	4	General Zoology	Zoology 1a, b	6
English	111	2	0	The Essentials of Speech	English 6	2
History	133	2	0	History of the United States Since 1865	Hist. 5b	2
Geography	163	2	0	None		2
Total		16	13			22

Basic Phase—Curriculum 4P

PREMEDICAL, PREDENTAL, PREVETERINARY

TERM 4

Qualitative Analysis	211	3	6	Qualitative Analysis	Chem. 20†	5
Quantitative Analysis	125a	3	6	Quantitative Analysis	Chem. 21a	5
Biology	951	3	4	General Zoology	Zoology 1a, b	6
Total		9	16			16

* One hour for writing reports.

† Except for the difference in laboratory hours.

ARMY SPECIALIZED TRAINING PROGRAM—Continued

Advanced Phase—Curriculum P-1

PREMEDICAL, PREDENTAL, PREVETERINARY

FOURTH TERM

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number	Qtr. Hrs. Allowed
Organic Chemistry	261	3	6	Organic Chemistry	Chem. 30a or 130a	5
Biology	952	3	4	General Zoology	Zool. 1b, c	6
English	112	2	0	None		2
Psychology	904	4	0	Introduction to Psychology	Psych. 1	4
Selected Courses (German)		6	0	Elementary German	Germ. 1a	6
Total		18	10			23

FIFTH TERM

Organic Chemistry	262	3	6	Organic Chemistry	Chem. 30b or 130b	5
Embryology	954	3	4	Embryology	Zool. 106	6
English	113	2	0	None		2
Psychology	905	4	0	Applied Psychology	Psych. 2	4
Selected Courses (German)		6	0	Intermediate German (Medical Section)	Germ. 2a, b	6
Total		18	10			23

Advanced Phase—Curriculum 4a-1

CIVIL, ELECTRICAL AND MECHANICAL ENGINEERING

TERM 4a

Mathematics	406-7-8	10	0	None		0-6*
Physics	304-5-6	11	0	None		9
Engineering Drawing	001	3	0	Elementary Engineering Drawing	Eng. Dr. 1a	2
Total		24	0			11-17

Advanced Phase—Curriculum 4a-2

CHEMICAL ENGINEERING

Mathematics	406-7-8	9	0	None		0-6*
Physics	304-5-6	10	0	None		9
Chemistry	305-6	5	0	None		3
Total		24	0			12-18

Advanced Phase—Curriculum CE-1 (May, 1943 to May, 1944)

CIVIL ENGINEERING

FOURTH TERM

Mathematics	401	5	0	Integral Calculus	Math. 20b	5
Mechanics	401	6	0	Statics and Dynamics	App. Mech. 3 App. Mech. 4	5
Surveying	407	2	4	Plane Surveying	C. E. 12	4
Elements of Electrical Engineering	401	4	4	Fundamentals of Electrical Machinery	E. E. 101	5
Engineering Drawing—Structural Drafting	408	0	3	Elementary Engineering Drawing and Descriptive Geometry	E. D. 1b	1
Total		17	11			20

* No quarter hours if the student has had Differential Calculus. Three quarter hours if the student has had Analytics, but not Differential Calculus. Six quarter hours if the student has not had Analytics or Differential Calculus.

ARMY SPECIALIZED TRAINING PROGRAM—Continued
Advance Phase—Curriculum CE-1 (May, 1943, to May, 1944)

CIVIL ENGINEERING

FIFTH TERM

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number	Qtr. Hrs. Allowed
Strength of Materials	401	4	0	Strength of Materials	App. Mech. 100	4
Materials Testing Laboratory	401	0	3	Testing Materials	C. E. 81	2
Stress Analysis	413	2	3	Theory of Structure	C. E. 171a	4
Fluid Mechanics	401	4	0	Hydraulics	C. E. 120	4
Surveying—Advanced	408	2	3	Advanced Surveying	C. E. or 13 or C. E. 114	3
Internal Combustion Engines	405	3	3	Elective		4
Total		15	12			21

SIXTH TERM

Structural Design	403	4	3	Graphic Statics or	C. E. 72	
				Graphic Solutions and	C. E. 174	
				Elementary Structural Design	C. E. 170	5
Water Supply and Sewerage	403	3	3	Water Supply and Water Works and	S. E. 151	
				Sewers and Sewage Disposal	S. E. 152	5
Transportation	403	3	3	Highway Location, Construction, Maintenance and	C. E. 31	
				Highway Materials	C. E. 35 or 37	4
Foundations	403	3	3	Foundations and Tunneling and	C. E. 106*	
				Soil Mechanics	C. E. 107	4
Engineering Drawing—Topographic Drafting	409	0	3	Mapping and Topographic Drawing	C. E. 18	2
Total		13	15			20

* C. E. 106 was dropped by The University Faculty, January, 1945.

* C. E. 106 was dropped by The University Faculty, January, 1945.

Advanced Phase—Curriculum CE-1 (From May, 1944)

CIVIL ENGINEERING

FOURTH TERM

Mathematics	401	5	0	Integral Calculus	Math. 20b	5
Mechanics	401	6	0	Statics and Dynamics	App. Mech. 3 App. Mech. 4	6
Elementary Surveying	601	2	6	Plane Surveying	C. E. 12	4
Elements of Electrical Engineering	401	4	4	Fundamentals of Electrical Machinery	E. E. 101	5
Total		17	10			20

FIFTH TERM

Strength of Materials	401	4	0	Strength of Materials	App. Mech. 100	4
Stress Analysis	518	3	4	Theory of Structure	C. E. 171a	5
Fluid Mechanics	401	4	0	Hydraulics	C. E. 120	4
Advanced Surveying	602	2	4	Advanced Surveying	C. E. 13 or 114	4
Internal Combustion Engines	405	3	3	Elective		4
Total		16	11			21

ARMY SPECIALIZED TRAINING PROGRAM—Continued

Advanced Phase—Curriculum CE-1 (From May, 1944)

CIVIL ENGINEERING

SIXTH TERM

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number	Qtr. Hrs. Allowed
Structural Design	523	3	4	Graphic Statics and	C. E. 72	
				Elements of Structural Design or	C. E. 170	5
				Graphic Solutions	C. E. 174	
Water Supply and Sewerage	403	3	3	Water Supply and Waterworks and	S. E. 151	
				Sewers and Sewage Disposal	S. E. 152	5
Transportation Facilities	403	3	3	Highway Location, Construction, and Maintenance and	C. E. 31	
				Highway Materials	C. E. 35 or 37	4
Foundations	403	3	3	Foundations and Tunneling and	C. E. 106*	
				Soil Mechanics	C. E. 107	4
Materials Testing Laboratory	401	0	3	Testing Materials	C. E. 81	2
Total		12	16			20

Advanced Phase—Curriculum EE-1 (May, 1943 to May, 1944)

ELECTRICAL ENGINEERING

FOURTH TERM

Mathematics	401	5	0	Integral Calculus	Math. 20b	5
Mechanics	401	6	0	Statics and	App. Mech. 3	
				Dynamics	App. Mech. 4	6
Electrical Measurements	403	0	6	Experimental Physics: Electricity	Physics 131	3
Electric and Magnetic Phenomena	405	5	3	Principles of Electrical Engineering	E. E. 21	6
Shop Practices	406A	0	3	Manufacturing Processes	Mech. Eng. 15b	1
Total		16	12			21

* C. E. 106 was dropped by the University Faculty, January, 1945.

Advanced Phase—Curriculum EE-1 (May, 1943 to May, 1944)

Total		16	12			21

* C. E. 106 was dropped by the University Faculty, January, 1945.

Advanced Phase—Curriculum EE-1 (May, 1943 to May, 1944)

ELECTRICAL ENGINEERING

FIFTH TERM

Electric Circuits	414	5	6	Electrical Laboratory and	E. E. 110a	
				Alternating Current Circuits	E. E. 114	7
				Elective		3
Engineering Mathematics	403	3	0			
Strength of Materials	401	4	0	Strength of Materials	App. Mech. 100	4
Materials Testing Laboratory	401	0	3	Testing Materials	C. E. 81	2
Direct Current Machinery	409	3	3	Electrical Laboratory and	E. E. 110b	
				Direct Current Machinery	E. E. 115	4
Total		15	12			20

(Communications Specialist)

SIXTH TERM

Electronics and Associated Circuits, Theory and Laboratory	415	5	6	Electrical Communication Engineering or	E. E. 131b	
				Radio Engr. Receivers and	E. E. 162	
				Vacuum Tubes and Circuit Theory	Physics 114	7
Electric Circuits—Transients	416	2	3	Elective		3
Electric Circuits—Distr. Const.	417	3	0	Elective		3
Alternating Current Machinery	410	5	3	Alternating Current Machinery and	E. E. 116	
				Electrical Laboratory	E. E. 110c	6
Total		15	12			19

ARMY SPECIALIZED TRAINING PROGRAM—Continued
Advanced Phase—Curriculum EE-1 (May, 1943 to May, 1944)
ELECTRICAL ENGINEERING
(Communications Specialist)
SEVENTH TERM

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number	Qtr. Hrs. Allowed
High Frequency and U.H.F. Circuits and Laboratory	420	6	6	E. E. Elective or	E. E. ———	
				Electrical Communication Engineering, Adv. Radio	E. E. 132*	6–8
Communication Networks	422	3	3	Electrical Communication Engineering or	E. E. 131a	4
				Electrical Networks	E. E. 135	
Servo-Mechanisms and Control Devices	424	3	3	Electrical Control	E. E. 107	4
Radiation and Propagation	426	3	0	Electrical Communication Engineering, Ultra High Frequency or	E. E. 133	3
				Radio Engr. Fundamentals of Elec. Waves	E. E. 165	
Total		15	12			17–19

Advanced Phase—Curriculum EE-1 (From May, 1944)
ELECTRICAL ENGINEERING
(Communications Specialist)
FOURTH TERM

Mathematics	401	5	0	Integral Calculus	Math. 20b	5
Mechanics	401	6	0	Statics and Dynamics	App. Mech. 3, 4	6
Electrical Measurements	403	0	6	Experimental Physics: Electricity	Physics 131	3
Electric and Magnetic Phenomena	405	5	3	Principles of Electrical Engineering	E. E. 21	6
Shop Practice	406a	0	3	Manufacturing Processes	M. E. 15b	1
Total		16	12			21

* E. E. 132 dropped by Univ. Faculty 1-8-45.

Advanced Phase—Curriculum EE-1 (From May, 1944)
ELECTRICAL ENGINEERING

Total		16	12			21

* E. E. 132 dropped by Univ. Faculty 1-8-45.

Advanced Phase—Curriculum EE-1 (From May, 1944)

ELECTRICAL ENGINEERING

(Communications Specialist)

FIFTH TERM

Alternating Current Circuits	414	5	6	Electrical Laboratory and	E. E.	110a and
				Alternating Current Circuits	E. E.	114 7
				Elective		3
Engineering Applications of Mathematics	403	3	0			
Strength of Materials	401	4	0	Strength of Materials	App. Mech.	100 4
Materials Testing Laboratory	401	0	3	Testing Materials	C. E.	81 2
Direct Current Machinery	409	3	3	Electrical Laboratory and	E. E.	110b
				Direct Current Machinery	E. E.	115 4
Total		15	12			20

SIXTH TERM

Electronics and Associated Circuits, Theory and Laboratory	415	5	6	Vacuum Tubes and Circuit Theory and	Physics	114
				Electrical Communications	E. E.	131b*
				Engineering or Radio Engr. Receivers	E. E.	162 7
Telephone Circuits and Equipment	435	5	3	Electrical Communication Engineering or	E. E.	131a, c 6
				Electrical Networks and	E. E.	135
				Telephony	E. E.	139
Alternating Current Machinery	410	5	3	Alternating Current Machinery	E. E.	116
				Electrical Laboratory	E. E.	110c 6
Total		15	12			19

* Dropped by Univ. Faculty 1-8-45.

ARMY SPECIALIZED TRAINING PROGRAM—Continued

Advanced Phase—Curriculum EE-1 (From May, 1944)

ELECTRICAL ENGINEERING
(Communications Specialist)
SEVENTH TERM

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number	Qtr. Hrs. Allowed
High Frequency and U.H.F. Circuits and Laboratory	420	6	6	Electrical Communication Engineering, Adv. Radio, or	E. E. 132*	6–8
				E. E. Elective	E. E. ———	
Communication Networks	422	3	3	Electrical Communication Engineering	E. E. 131a	4
				or Electrical Networks	E. E. 135	
Servo-Mechanisms and Control Devices	429	5	3	Electrical Control and Elective	107	6
Total		14	12			16–18

Advanced Phase—Curriculum ME-1 (May, 1943 to May, 1944)

MECHANICAL ENGINEERING
FOURTH TERM

Mathematics	401	5	0	Integral Calculus	Math. 20b	5
Mechanics	401	6	0	Statics and	App. Mech. 3	
				Dynamics	App. Mech. 4	6
Thermodynamics	401	5	0	Engineering Thermodynamics	M. E. 104a	5
Engineering Drawing	406	0	4	Advanced Engineering Drawing	E. D. 18	2
Shop Practices	406	0	6	Manufacturing Processes	M. E. 15a	3
Total		16	10			21

* Dropped by Univ. Faculty 1-8-45.

Advanced Phase—Curriculum ME-1 (May, 1943 to May, 1944)

* Dropped by Univ. Faculty 1-8-45.

Advanced Phase—Curriculum ME-1 (May, 1943 to May, 1944)

MECHANICAL ENGINEERING

FIFTH TERM

Strength of Materials	401	4	0	Strength of Materials	App. Mech. 100	4
Materials Testing Laboratory	401	0	3	Testing Materials	C. E. 81	2
Internal Combustion Engines	410	6	0	Internal Combustion Engines	M. E. 108	6
Mechanical Laboratory	420	0	3	Mechanical Laboratory	M. E. 112a	2
Kinematics	402	3	3	Mechanisms	App. Mech. 2	2
Metalography and Heat Treatment	430	4	0	Engineering Metallurgy or Adaptive Met. for Engineers	Met. 35 / Met. 37	4
Total		17	9			20

SIXTH TERM

Mechanical Vibrations	410	3	0	Mechanical Vibrations	App. Mech. 107	3
Machine Design	408	3	6	Machine Design	M. E. 100a	5
Fluid Mechanics	401	4	0	Hydraulics	C. E. 120	4
Internal Combustion Engines—Lab.	411	0	4	Mechanical Laboratory	M. E. 112b	2
Elements of Electrical Engineering	401*	4	4	Fundamentals of Electrical Machinery	E. E. 101	5
Total		14	14			19

ARMY SPECIALIZED TRAINING PROGRAM—Continued

Advanced Phase—Curriculum ME-1 (From May, 1944)

MECHANICAL ENGINEERING

FOURTH TERM

AST Subject	AST Number	Total Hrs. Class	Per Week Lab.	Equivalent University Course	Number	Qtr. Hrs. Allowed
Mathematics	401	5	0	Integral Calculus	Math. 20b	5
Mechanics	401	6	0	Statics and Dynamics	App. Mech. 3, 4	6
Thermodynamics	401	5	0	Engineering Thermodynamics	M. E. 104a	5
Engineering Drawing	406	0	4	Adv. Engineering Drawing	E. D. 18	2
Shop Practices	406	0	6	Manufacturing Processes	M. E. 15a	3
Total		16	10			21

FIFTH TERM

Strength of Materials	401	4	0	Strength of Materials	App. Mech. 100	4
Materials Testing Laboratory	401	0	3	Testing Materials	C. E. 81	2
Internal Combustion Engines	410	6	0	Internal Combustion Engines	M. E. 108	6
Mechanical Laboratory	420	0	3	Mechanical Laboratory	M. E. 112a	2
Kinematics	402	3	3	Mechanisms	App. Mech. 2	3
Properties of Metals	471	4	0	Engineering Metallurgy or	Met. 35	4
				Adaptive Met. for Engineers	Met. 37	
Total		17	9			21

Total		17	9				21

Advanced Phase—Curriculum ME-1 (From May, 1944)

MECHANICAL ENGINEERING

SIXTH TERM

Advanced Mechanical Laboratory	524	0	3	Mechanical Laboratory	M. E.	112a	2
Machine Design	408	3	6	Machine Design	M. E.	100a	5
Fluid Mechanics	401	4	0	Hydraulics	C. E.	120	4
Internal Combustion Engines—Laboratory	411	0	4	Mechanical Laboratory	M. E.	112b	2
Elements of Electrical Engineering	401	5	3	Fundamentals of Electrical Machinery	E. E.	101	5
Total		12	16				18

SEVENTH TERM

Applied Thermodynamics	469	3	0	Engineering Thermodynamics	M. E.	104b	3
Electrical Controls and Machines	436	2	4	Electrical Control	E. E.	107	3
Fluid Mechanics Laboratory	525	2	6	Mechanical Laboratory	M. E.	112a	2
Heat Power Engineering	470	5	0	Steam Power Plant Equipment	M. E.	105	5
Theory of Structures	620	3	0	Theory of Structures	C. E.	171a	4
Total		15	10				17

THE ENGINEERS' SPECIALISTS SCHOOL

This school was operated from September, 1942, to September, 1943, as a branch of the Engineers' School at Fort Belvoir, Virginia. Each student was given instruction 44 hours a week, for a period of 12 weeks, in one of four curricula. These four curricula and their evaluation in terms of University of Kentucky courses are as follows:

Curriculum	No. Weeks	Equivalent University Courses
SURVEYING		
Map and Aerial Photo Reading	1	Elementary Engineering Drawing—E. D. 1a
Mathematics	1	Plane Surveying—Civil Engineering 12
Basic Drafting	1	Advanced Surveying—Civil Engineering 13 or 114
Sketching	2	General Surveying—Civil Engineering 15
Chaining and Leveling	2	Route Surveying—Civil Engineering 16a
Transit	2	
Computations	1	
Stadia	1	
Planetable	1	
	12	Total credit allowed—18 quarter hours
GENERAL DRAFTING		
Basic Drafting	2	Elementary Engineering Drawing and Descriptive Geometry—E. D. 1a, 1b, 1c
Map and Aerial Photo Reading	1	Mapping and Topographic Drawing—C. E. 18
Sketching	2	Graphic Statics—C. E. 72 and
Topographic Drafting	3	Elements of Structural Design—C. E. 170 or 174, Graphic Solutions
Engineering Drafting	4	
	12	Total credit allowed—18 quarter hours
TOPOGRAPHICAL DRAFTING		
Basic Drafting	2	Elementary Engineering Drawing and Descriptive Geometry—E. D. 1a, 1b, 1c
Basic Map and Aerial Photo Reading	1	

Planetable Sketching	2	Graphic Statics—C. E. 72
Advanced Map and Aerial Photo Reading	1	Elements of Structural Design—C. E. 170 or 174, Graphic Solutions
Topographic Drafting	6	Mapping and Topographic Drawing—C. E. 18
	12	Total credit allowed—18 quarter hours

TOPOGRAPHICAL COMPUTING

Basic Drafting	1	Elementary Engineer'g Drawing and Descriptive Geometry—E. D. 1a, 1b, 1c
Map and Aerial Photo Reading	1	Plane Surveying—C. E. 12
Mathematics Review	1	Mapping and Topographic Drawing—C. E. 18
Recording	1	Geodesy, Precise Surveying, and Leveling—C. E. 113 or
Traverse Computation and Adjustment	2	Adv. Surveying—C. E. 114
Triangulation	3	
Field Astronomy	2	
General Problems	1	
	12	Total credit allowed—18 quarter hours

CIVILIAN PILOT TRAINING

Total credit allowed—6 quarter hours in Civilian Pilot Training—No University Equivalent.

WAR TRAINING SERVICE

Total credit allowed—10 quarter hours in War Training Service—No University Equivalent.

PART V

SPECIAL SERVICES OF THE UNIVERSITY

SPECIAL SERVICES OF THE UNIVERSITY

While the major function of the University is that of instruction, it renders important service to the state in other ways. Through the efforts of individual members of the staff and by means of special agencies and publications it makes important contributions in research, experimentation, and public service. The divisions, the publications, and the institutes or meetings through which such work is carried on are described in the following paragraphs.

AGRICULTURAL EXPERIMENT STATION

The Kentucky Agricultural Experiment Station was established by the Executive Committee of the Board of Trustees of the Agricultural and Mechanical College of Kentucky on September 25, 1885. It continues to function in accordance with an act of Congress, approved March 2, 1887, entitled, "An Act to establish Agricultural Experiment Stations, in connection with the Agricultural Colleges established in the several states under the provisions of an act approved July 2, 1862, and under the acts supplementary thereto," and an act of the Legislature of the State of Kentucky, approved February 20, 1888, accepting these provisions.

The Experiment Station is established as an institution for investigation and research. Through carefully planned experiments it investigates problems of basic and applied science and interprets them in terms of the needs of the state. The main station farm of 600 acres is located at Lexington. Two substations, one of 15,000 acres at Quicksand and the other of more than 600 acres at Princeton, greatly facilitate investigations dealing with regional problems.

The Experiment Station publishes bulletins and circulars giving the results of its research.

AGRICULTURAL EXTENSION DIVISION

The Division of Agricultural Extension carries the teachings of the College of Agriculture and Home Economics, and the U. S. Department of Agriculture to rural folk in every county in Kentucky. Field agents representing all departments, county farm agents, and county home agents cooperate in building a program of work for the state and for each county.

Farm and Home Week is held during the last week in January. It is the purpose of this meeting to bring together representative men and women from all sections of the state to discuss problems of the farm and the home, with the view of developing more profitable farming and more satisfying home life.

The Junior Week program is held annually early in June. At this time county champion demonstration teams and champions in the various projects compete for state championships. Several hundred boys and girls from all over the state attend for the entire week.

Short courses are held from time to time to meet the needs of special groups. The Extension Division publishes circulars written in popular form for use in developing state and county programs of work.

BUREAU OF AUDIO-VISUAL AIDS

The University maintains, in the Department of University Extension, a library of teaching films and other visual material which is available to schools, churches, clubs and colleges in the State for a nominal rental. The Department is prepared to give assistance in audio-visual aids problems through consultations, conferences, short courses or other informal means.

BUREAU OF BUSINESS RESEARCH

The Bureau of Business Research was established to provide facilities for the investigation of problems in the fields of economics and business. The research done by the Bureau is supplementary to that done individually by the Faculty of the College of Commerce. The Bureau does considerable work for civic organizations and private business groups, but its main activities have been concerned with the business problems of federal, state, and local governments. For example, it has done service and research work for such Kentucky agencies as the Legislative Council, Departments of Finance and Revenue, and city and county governments, as well as for departments of the federal government.

BUREAU OF CURRICULUM SERVICE

This Bureau functions as the service division of the College of Education in assisting the schools of Kentucky in curriculum studies, in the preparation of instructional materials, and in related problems. The Bureau serves as a clearing house of information concerning materials of instruction with emphasis upon local and inexpensive sources and types. Effective liaison is maintained with southern regional agencies and state programs for the improvement of instruction.

Publications of the Bureau of Curriculum Service include a monthly Newsletter which goes direct to all schools of the Commonwealth and a series of occasional reports and studies.

BUREAU OF GOVERNMENT RESEARCH

This Bureau is the research division of the Department of Political Science, with the members of the Department constituting

its staff. It conducts investigations in the problems of government and renders such services to the various agencies and officials of the government of Kentucky as it may be called upon to give. Currently it is engaged in a series of studies, among others, on the Constitution of Kentucky.

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, and problems of a similar nature. The scope of the work of the Bureau of School Service embraces the entire field of education, from the elementary school through the college and university.

The Bulletin of the Bureau of School Service is a quarterly publication in which are reported the results of the studies carried on in the Bureau.

BUREAU OF SOURCE MATERIALS IN HIGHER EDUCATION

The purpose of this Bureau is to provide a research laboratory for graduate students in the field of higher education by acquiring and preserving source material in this field and by locating and listing the material available elsewhere.

Emphasis is placed on source material pertaining to the following:

1. The University of Kentucky: Its history and its contribution through faculty, alumni, and former students, to the state, including its part in the Nation's war effort in both civilian and military service.
2. Institutions of higher learning, land-grant colleges and private academies: the official publications, including minutes of the faculty and the board of trustees, the contribution of the faculty and alumni, including their publications, inventions and special services.
3. Trends in education: Charters and admission and degree requirements of the colleges in the United States by twenty-five-year periods.
4. Special collections, such as Kentuckiana founded by Professor Noe, and the International Textbook Exhibit.

Special Assignments:

Service Men Survey: Preparation for publication of a roster of the faculty and former students of the University in the armed forces of the United States, including their rank, branch of service, and citations.

War Memorial Survey: Securing the names of all Kentuckians killed in the armed forces of the United States during World War II. These names, arranged by counties, are to be inscribed in permanent form in the lobby of the War Memorial Auditorium-Field House.

CHILD GUIDANCE SERVICE

The Child Guidance Service offered at the University, through the cooperation of the Lexington Junior League and Community Chest, provides expert psychological diagnosis and recommendations regarding personality difficulties and mental development for children or others brought to it by the schools, welfare organizations, juvenile court, and parents. In this it cooperates with the medical clinics. It also provides clinical training for graduate students.

INDUSTRIAL PSYCHOLOGICAL SERVICE

The Department of Psychology makes available to industries, business establishments, and offices, both private and public, industrial psychological service including various forms of industrial testing, personnel surveys, selection devices, and advice on miscellaneous personnel problems. It constitutes a significant opportunity for students interested in industrial personnel work to obtain practical experience and to conduct research in this field.

DEPARTMENT OF PUBLIC RELATIONS

The Department of Public Relations has the twofold function of informing residents of Kentucky and elsewhere of the manifold activities of the University of Kentucky, and of endeavoring to encourage people to take advantage of the many services the institution offers. Public relations activities are carried out by means of newspapers, magazines, special publications, radio broadcasts, exhibits, films, school contacts, and personal appearance of University speakers and musical groups. All general publicity of the University is handled by the Department of Public Relations. The office also has general supervision over all publications of the University that are classified as announcements, bulletins, or other public relations materials.

TEACHER PLACEMENT BUREAU

The Teacher Placement Bureau is maintained for the purpose of assisting graduates of the University of Kentucky in

securing teaching positions. This service is without charge. It is open to all graduates of the University and to graduate students. The function of the Bureau is to present the candidates for positions to the administrative officers of school boards. The Bureau is located in Room 115 of the Education Building.

EDUCATIONAL CONFERENCE

Annually in October there is held on the campus of the University of Kentucky a joint meeting of the Educational Conference and the Kentucky Association of Colleges and Secondary Schools. At this meeting teachers and administrators from the elementary and secondary schools and from the colleges and universities of the state come together to hear addresses on current educational problems by outstanding authorities and to discuss in sectional meetings their mutual problems.

ENGINEERING EXPERIMENT STATION

The Engineering Experiment Station of the College of Engineering was established on July 1, 1946, by action of the Board of Trustees of the University of Kentucky.

Its objectives are to initiate, organize, and supervise engineering research of special interest to Kentucky and to the Nation; to advise with state and federal authorities on problems proposed for investigation; to aid and consult industry with its research problems; to serve as an agency for developing and coordinating industrial and scientific research; and to collaborate with other agencies engaged in engineering research in order to achieve coordination and prevent duplication of effort.

The departments of research include Civil, Highway, Metallurgical, Mechanical, Electrical, Communications, Mining, Prospecting and Aircraft Engines.

The Engineering Experiment Station publishes bulletins and circulars on subjects of general and scientific interest.

THE KENTUCKY ENGINEER

The Kentucky Engineer, founded in 1939, is published each quarter of the school year in November, February, May, and August by students and faculty of the College of Engineering. In general the articles are written by students, faculty, and alumni. It is also the official publication of the Kentucky Society of Professional Engineers. Special consideration is given to important engineering projects within the State of Kentucky, to the activities of the College of Engineering, to reporting research projects, and to other matters of general interest to the engineering profession.

LAW JOURNAL

The Kentucky Law Journal is published quarterly in November, January, March, and May. It consists of the following distinct divisions or parts: (a) leading articles; (b) notes and case comments by students; and (c) book reviews.

The most important purpose of the publication is to train students to write. The recent cases discussed are mainly from Kentucky. The leading articles are written by scholars or practicing lawyers in the various fields of the law and are intended to be of benefit to practitioners.

PUBLIC SERVICE INSTITUTES

The University promotes, organizes, and administers short institutes or study courses for various groups of public officials. From time to time such institutes have been held for peace officers, firemen, welfare workers, finance officers, bankers, legislators, etc.

SCHOOL ACTIVITIES PROGRAM

The Department of University Extension sponsors the Kentucky High School Speech League, the Kentucky High School Music Festivals, and the Kentucky High School Art Exhibit. The music and speech events are held in April and May and are preceded by district or regional meetings.

PART VI

THE ACADEMIC AND ADMINISTRATIVE STAFF OF THE UNIVERSITY

THE ACADEMIC AND ADMINISTRATIVE STAFF

Adams, Estelle, M.A., Second Grade, University School
Adams, Clinton Stanley, M.A., Instructor in Geography, Fall Quarter, 1946-47
Adams, Leslie Keene, LL.B., Supervisor and Laboratory Assistant, Electrical Laboratory
Allen, Harry Raymond, M.A., Chief Chemist in Charge Fertilizer Analysis; Feed and Fertilizer Control, Experiment Station
Allen, Richard Sweetnam, M.S., Professor of Anatomy and Physiology, Head of the Department of Anatomy and Psysiology
Allen, Samuel Judson, B.S., Instructor in Physics
Allen, William Ray, M.A., Ph.D., Professor of Zoology; Curator of Zoology Museum
Allison, Nathan Breckinridge, M.A., Instructor in Electrical Engineering
Amyx, Clifford, M.A., Assistant Professor of Art
Anderson, C. Arnold, M.A., Ph.D., Associate Professor of Sociology
Anderson, Charles Herbert, Professor of Engineering Design, Emeritus
Anderson, Grace, M.A., English, University School
Anderson, Mary Littell, A.B., Seed Analyst, Experiment Station
Anderson, Walter Sewell, M.A., Professor of Genetics, Emeritus
Archdeacon, James William, Ph.D., Assistant Professor of Anatomy and Physiology
*Armstrong, Watson, M.A., Assistant Professor of Agricultural Education
Armstrong, William Davis, B.S., Horticulturist, Experiment Station
Atkins, Delbert Ferrell, M.S., Instructor in Mathematics
*Asher, Eston Jackson, M.A., Associate Professor of Psychology
Austin, Calvin Murray, A.B., Assistant Chemist, Department of Chemistry, Experiment Station
Averitt, Ruth, M.S. in Ed., Home Economics, Lafayette School; Instructor in Education
Averitt, Saxe Dabney, M.S., Chemist Emeritus, Experiment Station
Baker, John A., Ph.D., Instructor (part-time) in Psychology
Baker, Robert Fulton, M.S. in C.E., Part-time Assistant Professor of Civil Engineering
Baker, Walter Maurice, M.A., Associate Professor of Education; Head of the Department of Distributive Occupations
Baldwin, Henry Mitchell, A.B., Instructor in English
Ball, William, A.B., State Farm Labor Supervisor, Agricultural Extension Division
Barber, Harold, Head Herdsman, Experiment Station
Barkenbus, Charles, Ph.D., Professor of Organic Chemistry

* See appended list of changes of status, p. 399.

Barkley, Marie Rodes, M.A., Associate Professor of Home Economics
Barkman, John Orville, B.S. in Agr., Assistant Professor of Dairy Manufactures; Field Agent in Dairy Manufactures, Agricultural Extension Division
Barnett, Brinkley, B.M.E., Associate Professor of Electrical Engineering
Barnhart, C. Raymond, M.A., Assistant Professor of Art
Baskett, Virginia Stuart, A.B., Instructor in Mathematics
Baugh, Lucy Gaines, B.S., Seed Analyst, Experiment Station
Beals, Wendell Everett, M.B.A., C.P.A., Associate Professor of Accounting
*Beaumont, Henry, Ph.D., Professor of Psychology; Director of Bureau of Industrial Psychology
Beebe, Morris Wilson, M.S., Part-time Associate Professor of Metallurgical Engineering; Part-time Assistant Editor of Bulletins, Engineering Experiment Station
Beers, Howard Wayland, M.S., Ph.D., Professor of Rural Sociology; Rural Sociologist, Experiment Station
*Bekker, Konrad, Dr. jur., Ph.D., Instructor in Economics
Bentley, Leora, B. S., Instructor in Home Economics
Best, Harry, LL.B., Ph.D., LL.D., Professor of Sociology
*Betz, Albert Leslie, B.S. in Com., M.A., Business Education, University School
Bigge, Adolph Edmund, M.A., Ph.D., Professor of German, Head of the Department of German Language and Literature
*Bills, Robert, Science, University School
Binkley, Harold, B.S. in Agr., Agriculture, Lafayette High School
Binkley, Wendell Chester, M.S., Field Agent in Cooperative Marketing, Agricultural Extension Division
*Black, Harold M., M.A., Part-time Instructor in Psychology
Bondurant, John Harvey, M.S., Ph.D., Assistant in Farm Economics, Experiment Station
Boone, Anna Bruce, A.B., Fourth Grade, University School
Bortner, Charles Eugene, M.S., Assistant Agronomist, Experiment Station
Bostick, Lew, B.S. in Com., Assistant Professor in the Department of Athletics; Assistant Football Coach
*Bosworth, Julian E., Master Sergeant, U.S. Army, Instructor in Military Science and Tactics
*Botto, Mark Maynard, B.S., Instructor in Agricultural Education
Boughton, Bessie M., A.B., B.S., Cataloging Assistant, University Library
Bower, William Clayton, M.A., LL.D., D.D., Part-time Professor of Sociology
*Boyd, George, M.A., Instructor in English

* See appended list of changes of status, p. 399.

*Boyd, Paul Prentice, M.A., Ph.D., LL.D., Professor of Mathematics, Head of the Department of Mathematics and Astronomy; Dean of the College of Arts and Sciences

Boyden, Ruth, M.A., Assistant in Home Economics, Agricultural Experiment Station

Bradford, Lawrence Allen, M.S. in Ed., Associate Professor of Farm Management

Brady, George Keyports, M.A., Ph.D., Professor of English

Brake, Evelyn Reep, M.A., Assistant Professor of Phamacognosy and Bacteriology, College of Pharmacy.

Brauer, Alfred Charles, M.A., Ph.D., Professor of Zoology

*Brewer, Lawrence Condit, B.S., Assistant in Short Courses and Exhibits, Agricultural Extension Division

Briggs, Wallace Earl, M.A., Instructor in English

Briscoe, Vera, M.A., Research Associate, College of Commerce

Brooks, Jesse Byron, B.S., Field Agent in Agricultural Engineering, Agricultural Extension Division

*Browder, James, B.S. in Agr., Field Agent in Cream Grading

Brown, Aubrey J., M.S., Ph.D., Associate Professor of Marketing, Head of the Department of Markets and Rural Finance

*Brown, Ernest Benton, Jr., M.S., Assistant Professor of Anatomy and Physiology

*Brown, Henry Corley, B.S. in Agr., Field Agent in 4-H Club Work, Agricultural Extension Division

Brown, James Stephen, M.A., Assistant in Rural Sociology, Agricultural Experiment Station

Brown, Joe Beckham, B.S. in Agr., Inspector, Creamery License Section

Brown, Linwood Arnold, Pharm.D., Ph.G., Head, Public Service Laboratory, Experiment Station

Brown, Marion Clay, M.A., Assistant Professor of Mathematics

Brown, Ross, M.S., D.V.M., Extension Veterinarian, Agricultural Extension Division

Brown, William Randall, Ph.D., Assistant Professor of Geology

Bruner, Dorsey William, D.V.M., Ph.D., Virologist, Department of Animal Pathology, Experiment Station

Bryant, Thomson Ripley, M.S., Professor of Agricultural Extension; Assistant Director of Agricultural Extension Division

*Buckler, William E., M.A., Instructor in English

Buckner, Garrett Davis, Ph.D., Chemist in Charge of Animal Nutrition, Agricultural Experiment Station

*Bull, Jacqueline Page, A.B., Part-time Instructor in Library Science; Head of Archives Department, University Library

Bureau, Ernest Adolphe, B.S., Ph.B., E.E., Professor of Electrical Engineering

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* See appended list of changes of status, p. 399.

Byers, George Boyd, M.S. in Agr., Assistant in Farm Management, Agricultural Experiment Station

Caldwell, Lowry McReynolds, B.S. in Agr., Assistant Superintendent, Western Kentucky Sub-Station

Callihan, Anne Worthington, A.B., Assistant Professor of Art

Callaway, Bernice Naylor, M.A., First Grade, University School

Calvin, James Sutherland, Ph.D., Assistant Professor of Psychology

Capurso, Alexander Alexis, B.S. in Music, M.A., Ph.D., Professor of Music, Head of the Department of Music

Card, Dana George, M.S., Ph.D., Professor of Agricultural Economics; Assistant in Markets, Experiment Station

Carpenter, Cecil C., M.S., Ph.D., Professor of Economics

Carrel, William Joseph, C.E., Professor of Structural Engineering, Emeritus

Carson, George Barr, Jr., M.A., Ph.D., Assistant Professor of History

Carter, Carroll Sparks, B.S. in E.M., Instructor in Mining Engineering

Carter, Lucian Hugh, M.A., Ph.D., Professor of Economics

Carter, John L., A.B., Lieutenant Colonel, U.S. Army, Assistant Professor of Military Science and Tactics

Carter, Willis Merle, M.S. in M.E., Professor of Machine Design

Cass, Norma Beatrice, B.S., M.A. in L.S., Head of Reference Department, University Library

Caton, Stanley, B.S. in Agr., Field Agent in Poultry, Agricultural Extension Division

*Cawood, Charles D., M.D., C.P.H., Assistant Professor of Hygiene and Public Health

*Chamberlain, Donald William, Ph.D., Assistant in Forage Crop Investigations, Department of Agronomy, Experiment Station

*Chamberlain, Leo Martin, M.A., Ph.D., Vice President

Chambers, Alvin Lee, C.E., Associate Professor of Testing Materials

Chambers, John Sharpe, M.S., M.D., Professor of Hygiene and Public Health; Head of the Department of Hygiene and Public Health; Director of University Health Service

Cheek, Frank Jacobs, A.B., C.E., M.S., Professor of Sanitary Engineering

Cherry, Ralph Walter, M.A., Ed. D., Associate Professor of Education

Church, Elsie, M.A., Mathematics, University School

*Church, William F., M.A., Ph.D., Assistant Professor of History

*Clark, Carl McKinley, M.S., Assistant Professor of Markets and Rural Finance; Assistant in Markets, Experiment Station

Clark, Jacqueline W., A.B., Part-time Instructor in English

Clark, Louise Swinford, A.B., Kindergarten, University School

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* See appended list of changes of status, p. 399.

Clark, Thomas D., M.A., Ph.D., Professor of History; Head of the Department of History
Clay, Maurice, M.A., Physical Education, University School
Cleveland, Ellen O'Bannon, M.A., Testing, University School
Clifton, Carl, M.S., Field Agent in Dairying, Agricultural Extension Division
Clifton, Louis, M.A., Director of University Extension; Professor in University Extension; Professor of Education
Cochran, L. Wellington, M.S., Assistant Professor of Physics
Coffinberry, Arthur S., M.S., S.D., Professor of Physical Metallurgy
Cole, Constance Larsen, B.S., Instructor in Anatomy and Physiology
*Collier, Blanton, A.B., Assistant in Physical Education, University School
*Collins, Ernest, M.A., Instructor in Political Science
Conforti, Joseph Terry, Assistant in Physical Education, University School
Conroy, Katherine, M.A., Sixth Grade, University School
Cooke, Arthur L., M.A., Ph.D., Assistant Professor of English
Cooper, Mary Hester, M.A., Assistant Director, Bureau of Source Materials in Higher Education
Cooper, Thomas Poe, B.S. in Agr., D. Sc., LL.D., Dean, College of Agriculture and Home Economics; Director of Experiment Station; Director of Agricultural Extension Division
*Copeland, Lynn, M.S., Field Agent in Dairying, Agricultural Extension Division
Cotterill, Robert S., M.A., Ph.D., Visiting Professor of History
Crawley, Betty Divine, M.A., Instructor in Mathematics
Crawley, Clyde Brooks, M.S., Ph.D., Associate Professor of Physics
Croft, Daisy Taylor, A.B., B.S., Head of Circulation Department, University Library
Croft, Lysle Warrick, M.A., Ph.D., Part-time Associate Professor of Psychology; Director of University Personnel Office
Crouse, Charles Stevens, E.M., Professor of Metallurgical Engineering, Head of the Department of Mining and Metallurgical Engineering
Crumpton, Charles R., B.S. in Chem. Engr., M.S., Instructor in Industrial Education
Cullis, Lela, Instructor in Applied Music (Organ)
Cundiff, Charlotte Baugh, Seed Analyst, Experiment Station
Curnutt, Vivian Lee, M.A., Field Agent in Home Economics, Agricultural Extension Division
Curry, Gordon Laten, Phar.D., Dean Emeritus, Professor of Pharmaceutical Chemistry and Director of Chemical Laboratories, College of Pharmacy
Cutler, John Levi, M.A., Assistant Professor of English

* See appended list of changes of status, p. 399.

*Dantzler, Lehre Livingston, M.A., Litt. D., Professor of Philology, Head of the Department of English
*Davies, Herbert Howell, Instructor in Engineering Drawing
*Davis, George Tansel, M.S., Acting Field Agent in Poultry Improvement, Agricultural Extension Division
Dawson, Lyle R., B. Ed., M.S., Ph.D., Professor of Physical Chemistry, Head of the Department of Chemistry
Day, Ollie E., Technical Sergeant, U.S. Army, Instructor in Military Science
DeBoer, Jesse, M.A., Ph.D., Assistant Professor of Philosophy
Deen, Encil, B.S. in Agr., Seed Inspector, Experiment Station
Deily, Robert Howard, M.A., M.S., Ph.D., Professor of Library Science, Head of the Department of Library Science
DeVoe, Merrill, B.A., M.B.A., Associate Professor of Marketing
Diachun, Stephen, M.S., Ph.D., Associate Plant Pathologist, Department of Agronomy, Experiment Station
Dickey, Frank, A.B., Graduate Assistant, Bureau of School Service
Didlake, Mary LeGrand, M.S., Associate Entomologist and Botanist, Emeritus, Experiment Station
Dimmick, Graham B., M.A., Ph.D., Professor of Psychology
Dimock, William Wallace, D.V.M., Professor of Veterinary Science, Veterinarian, Experiment Station
Doll, Elvis Roger, M.A., D.V.M., Associate Veterinarian, Department of Animal Pathology, Experiment Station
Donovan, Herman Lee, M.A., Ph.D., LL.D., President of the University
Dotson, Harold, M.A., Assistant, University School
*Downing, Harold Hardesty, B.C.E., M.S., Ph.D., Professor of Mathematics, Head of the Department of Mathematics
*Duggan, James E., Captain, U.S. Army, Associate Professor of Military Science and Tactics
*Drake, Maurice, B.S., Field Agent in 4-H Club Work, Agricultural Experiment Station
Duncan, May Kenney, M.A., Professor of Elementary Education, Head of the Department of Elementary Education
Duncan, Robert Carlisle, Jr., B.S. in Met.E., Instructor in Metallurgical Engineering
Durr, J. S., Master Sergeant, U. S. Army, Instructor in Military Science
Dyer, Theodore K., M.S., Instructor in Mathematics
Eaton, William Clement, M.A., Ph.D., Professor of History
*Eaves, James Clifton, Instructor in Mathematics and Astronomy
Edelmann, Alexander, M.A., Ph.D., Assistant Professor of Political Science
Edwards, Ogden Frazelle, M.S., Ph.D., Assistant Professor of Bacteriology

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* See appended list of changes of status, p. 399.

Edwards, Philip Rarick, Ph.D., Bacteriologist, Department of Animal Pathology, Experiment Station

*Ellias, Loretta Christine, B.S., Part-time Instructor in Bacteriology

Elliott, Norris Raymond, B.S. in Hort., Professor of Landscape Architecture and Floriculture; Field Agent in Horticulture, Agricultural Extension Division

Ellis, Herman Adam, M.A., Assistant Professor of Economics

Ellison, Robert R., Captain, U.S. Army, Assistant Professor of Military Science and Tactics

Elsey, Edward Everett, B.S. in M.E., Editor and Secretary, Engineering Experiment Station

Ely, Fordyce, M.S., Ph.D., Professor of Dairy Husbandry; in charge of Dairy Section

Emmert, Emery Myers, M.S., Ph.D., Associate Professor of Horticulture; Assistant in Horticulture, Experiment Station

England, Merton, Ph.D., Instructor in History

Erikson, Statie Estelle, Ph.D., Professor of Home Economics; Head of the Department of Home Economics

Estes, Reedus Ray, M.S., Ph.D., Assistant Professor of Chemistry

Evans, Alvin E., M.A., Ph.D., J.D., Professor of Law; Dean of the College of Law

*Evans, Charles Albert, Ph.D., Assistant Chemist, Department of Chemistry, Experiment Station

Evans, Dorothy Hillenmeyer, A.B., Social Director

Fallis, Robert White, Assistant Bacteriologist, Public Service Laboratory, Experiment Station

Farquhar, Edward Franklin, M.A., Professor of Literature

Farris, Elgan Brooks, C.E., Chief Engineer, Department of Maintenance and Operations; Part-time Associate Professor of Engineering

Fergus, Ernest Newton, M.S., Ph.D., Professor of Farm Crops; Agronomist in charge of Pastures and Forage Crops, Experiment Station

Fields, Raymond, M.A., Instructor in Mathematics

Fischer, Lydia Roberts, M.A., Instructor in Mathematics

Fish, Ernest Ellsworth, M.S., Field Agent in 4-H Club Work, Agricultural Extension Division

Flanary, Harold Graham, A.B., Temporary Instructor in Physics

Forbes, Richard Mather, M.S., Ph.D., Assistant Professor of Animal Husbandry; Assistant in Animal Husbandry, Agricultural Experiment Station

Foster, A.E., M.A., Instructor in Mathematics

Foster, James Douglas, M.S. in Agr., Inspector in Charge of Creamery License Section, Experiment Station

Fowler, Frank Charles, M.A., Associate Professor of English; Director of Guignol Theatre

* See appended list of changes of status, p. 399.

*Frank, John P., A.B., Instructor in English
Freeman, Joe Frank, M.S. in Agr., Associate Agronomist; Superintendent of Experiment Station Farm
Freeman, Louise Barton, M.S., Ph.D., Part-time Assistant Professor of Geology
Funkhouser, William Delbert, M.A., Ph.D., Sc.D., Professor of Zoology; Professor of Anthropology; Head of the Department of Zoology; Dean of the Graduate School
Gail, Irving A., A.B., M.D., Part-time Visiting Lecturer, Department of Social Work, Winter Quarter, 1946-47
*Gafford, Joe M., B.S. in Chem. Engr., 1st Lieutenant, U. S. Army, Assistant Professor of Military Science and Tactics
*Galloway, Louise, A.B. in Ed., Librarian, University School; Part-time Instructor in Library Science
Gardner, John Samuel, M.A., Field Agent in Horticulture, Agricultural Extension Division
Garrigus, Wesley Patterson, M.S., Ph.D., Professor of Animal Husbandry; in charge of Animal Husbandry Section; Chairman, Animal Industry Group
Garside, Matthew Stanley, B.S., Field Agent in 4-H Club Work, Agricultural Extension Division
Gault, Lelah Vaughn, B.S., Assistant Chemist, Feed and Fertilizer Control, Experiment Station
Gentry, Dorothy, B.S., Field Agent in 4-H Club Work, Agricultural Extension Division
Gedrich, Edward, Captain, U.S. Army, Assistant Professor of Military Science and Tactics
Gerhard, George Richard, Met.E., M.S., Associate Professor of Metallurgical Engineering
Gibbs, Walter Chesterfield, A.B., B.D., Part-time Assistant Professor of History
Gibson, Harry Best, B.S. in Agr., Field Agent in 4-H Club Work, Agricultural Extension Division
Gifford, Chloe, A.B., LL.B., Assistant in University Extension
Gilb, Stella Spicer, B.P.E., M.A., Hygiene and Physical Education, University School
Gillis, Ewen, Ph.C., M.S., Ph.D., Associate Professor of Pharmaceutical Chemistry, College of Pharmacy
Gillis, Ezra L, A.B., Director, Bureau of Source Materials in Higher Education
Ginger, Lyman Vernon, A.B. in Educ., M.A., Director, University School
Ginocchio, Oleva Louise, Administrative Assistant, Experiment Station
Glenn, Donald W., Major, U.S. Army, Assistant Professor of Military Science and Tactics

* See appended list of changes of status, p. 399.

Godbey, Gordon Clay, A.B., Assistant in University Extension
Godfrey, Robert, M.A., Instructor in English
Goffman, Casper, Ph.D., Assistant Professor of Mathematics
Goldman, Jack Benjamin, M.A., Instructor in History
Good, Edwin Stanton, M.S., Professor of Animal Husbandry, Emeritus
Graddy, Ivan Clay, M.S. in Agr., Assistant State Agent, County Agent Work, Agricultural Extension Division
Graham, James Hiram, C.E., Dean of the College of Engineering, Emeritus
Grau, Albert A., Ph.D., Assistant Professor of Mathematics
*Greathouse, Gladys, M.A., Speech and Dramatics, University School
Greenhood, Aida, A.B., Instructor in Spanish, Fall Quarter, 1946-47
*Gregory, James Parker, Jr., M.A., Part-time Instructor in History
Griffith, Robert Bell, B.S. in Agr., Assistant in Tobacco Research, Department of Agronomy, Experiment Station
*Grillot, Gerald Francis, Ph.D., Assistant Professor of Chemistry
*Gustafson, Richard O., B.S., M.F., Assistant Forester, Department of Farm Economics, Experiment Station
*Guy, Hollis Preston, M.A., Assistant Professor of Commerce
Guyn, Anne Young, A.B., Circulation Assistant, University Library
Haag, William George, Jr., M.S., Assistant Professor of Anthropology; Curator of Museum of Anthropology
Haak, Pearl Jones, B.S. in H.E., Field Agent in Farm Labor, Agricultural Extension Division
Hackensmith, Charles William, M.A., Ph.D., Associate Professor of Physical Education; Acting Head of the Department of Physical Education
Hageman, Richard Harry, M.S., Assistant Chemist, Department of Chemistry, Experiment Station
Hagman, Ida Catherine, M.A., Field Agent in Home Economics, Agricultural Extension Division
*Hahn, Thomas Marshall, M.S., Ph.D., Associate Professor of Physics
Haines, Ruth, M.A., Instructor in Public School Art and Elementary Education
Hamilton, William Brooks, M.S., Ph.D., Associate Professor of Hygiene; Bacteriologist for University Health Service
Hammonds, Carsie, M.A. in Ed., Ph.D., Professor of Agricultural Education, Head of the Department of Agricultural Education
Hankins, Thomas L., M.S., Associate Professor of Education
Hanson, Mary Elizabeth, A.B., B.S. in L.S., Head of Periodical Department, University Library
*Hardesty, Thomas Clifton, B.S., Field Agent in Cream Grading, Experiment Station

* See appended list of changes of status, p. 399.

Harris, Charles Edgar, B.S. in Agr., Field Agent in Poultry, Agricultural Extension Division
Harris, Leila Gott, M.A., Instructor in English
Harris, Odis Lee, A.B., Assistant, Vocational Education
Harrison, John Scovill, B.S. in Agr., Assistant Analyst, Agronomy Department, Experiment Station
Harrison, Lura Claude, A.B., M.T. (A.S.C.P.) Instructor in Medical Technology, Department of Bacteriology
Hartford, Ellis Ford, M.A., Ed.D., Professor of Education, Head of the Department of Curriculum and Instruction; Director, Bureau of Curriculum Service
Harvard, Gertrude J., A.B., Head Resident of Boyd Hall
Haselden, Jane, M.A., Ph.D., Part-time Assistant Professor of Romance Languages; Assistant Dean of Women
Hatch, David Lincoln, M.A., Assistant Professor of Sociology
Haun, Robert Dee, M.A., J.D., C.P.A., Professor of Accounting
Hawkins, Robert Dawson, M.E., M.S., Professor of Theoretical and Applied Mechanics
Hegeman, Daniel VonBrunt, Ph.D., Associate Professor of German
Heinz, Wilbur August, M.S.P.H., Associate Professor of Hygiene
Helton, Stella Elizabeth, M.S., Assistant Professor of Home Economics
Henning, Alda, B.S., Assistant State Leader of Home Demonstration Agents, Agricultural Extension Division
Henry, Amanda Harms, B.S., Assistant in Animal Nutrition, Experiment Station
Henry, Lyle Kenneth, Ph.D., Associate Professor of Psychology
Henson, Lawrence, M.S. in Agr., Associate Agronomist in Forage Crops Investigations, Department of Agronomy, Experiment Station
*Hernandez, J. Eduardo, M.A., Ph.D., Associate Professor of Romance Languages
Herndon, George Collins, A.B., Th.M., Instructor in English
*Hertenstein, Charles H., Captain, Infantry, U.S. Army, Associate Professor of Military Science and Tactics
Hilliard, Pauline, M.A., Fifth Grade, University School
Hillis, Charity Ruth, M.A., Research Assistant, Bureau of School Service
*Himes, Ralph Eugene, Sergeant, U.S. Army, Instructor in Military Science
Hoffmann, Clinton Kelly, B.S. in C.E., Instructor in Engineering Drawing
Holley, Charles E., Jr., Ph.D., Assistant Professor of Chemistry
Holmes, Elwyn S., B.S., Extension Agricultural Engineer, Agricultural Extension Division

* See appended list of changes of status, p. 399.

Holmes, Sarah Bennett, M.A., Part-time Professor of Sociology; Dean of Women

Hopkins, James Franklin, M.A., Instructor in History

Horine, John Sherman, M.E., Associate Professor of Engineering Drawing

*Horlacher, Levi Jackson, M.S., Professor of Animal Husbandry; Assistant Dean in Resident Teaching, College of Agriculture and Home Economics; Director of Radio

Hornbeck, Benn Lee, B.S.F., Junior Forester, Robinson Experiment Substation

*Horsfield, Margaret Bennett, M.A., Diplome d'Etudes Francaises de l'Universite de Montpelier, Assistant Professor of Romance Languages

*Horton, Lewis Henry, M.A., Assistant Professor of Music

Hotchkiss, Margaret, Ph.D., Associate Professor of Bacteriology

*Howard, Joseph M., B.S. in Agr., Captain, Infantry, U.S. Army, Associate Professor of Military Science and Tactics

Howard, Noel Judson, B.S. in Agr., Inspector, Creamery License Section, Experiment Station

Hubbard, Jesse Y., Ph.G., LL.B., Part-time Instructor in Pharmaceutical Economics and Toxicology, College of Pharmacy

*Huddleston, Joseph Jenkins, M.S., Assistant Professor of Physical Education

Hull, Floyd Edgar, D.V.M., Professor of Veterinary Science; Head of the Department of Animal Pathology

Humphrey, James Ellison, B.S. in Agr., Field Agent in Poultry, Agricultural Extension Division

Humphreys, Herbert H., Ph.D., Assistant Professor of Psychology

Humphreys, Margaret Bell, M.A., Business Education, University School

Humphries, James Charles, Ph.D., Associate Professor of Bacteriology

*Hunt, Roy Haynes, B.S. in Agr., Assistant in Radio and Exhibits, Agricultural Extension Division

Hunt, Russell Aubrey, M.S. in Agr., Field Agent in Tobacco, Agricultural Extension Division

Hutter, Harry K., M.A., Assistant Professor of Geography

Imlay, Florence, M.A., Field Agent in Home Economics, Agricultural Extension Division

Insko, Wyatt Marion, Jr., M.S. in Agr., Professor of Poultry Husbandry, in charge of Poultry Section

Irvine, Kate Tipton, A.B., M.A., Assistant Reference Librarian, University Library

Jackson, William Edward, Jr., B.S. in For., F.Engr., Field Agent in Forestry, Agricultural Extension Division

* See appended list of changes of status, p. 399.

Jaggers, Gerald, A.B., Graduate Assistant, Bureau of School Service

*Jaracz, Thaddeus, A.B., Instructor in Physical Education

Jasper, Samuel J., M.A., Instructor in Mathematics

*Jeffrey, Robert Newell, M.S., Ph.D., Plant Physiologist, Department of Agronomy, Experiment Station

Jennings, Walter Wilson, M.A., Ph.D., Professor of Economics

Jewett, Howard Herman, M.A., Associate Research Entomologist, Experiment Station

*John, Fritz, Ph.D., Associate Professor of Mathematics

Johnson, Bernard Mason, A.B., Instructor, Department of Physical Education

Johnson, Edward Marshall, Ph.D., Associate Plant Pathologist, Department of Agronomy, Experiment Station

Johnson, Ernst Vern, M.F.A., Part-time Associate Professor of Architectural Engineering

Johnson, James Richard, B.M.E., Professor of Applied Mechanics, Emeritus

Johnson, Orinne, B.S., Assistant in Information, Agricultural Extension Division

Johnson, Ray Smith, Supervisor, Mechanical and Electrical Engineering Laboratories

Johnstone, William Clarkson, B.S. in Agr., Field Agent in Agronomy, Agricultural Extension Division

Jones, Carl Wilfred, B.S., Field Agent in 4-H Club Work, Agricultural Extension Division

Jones, John C., Technical Sergeant, U.S. Army, Instructor in Military Science

Jones, Roger Walter, Superintendent, Robinson Experiment Substation

Jones, Sadocie Connellee, M.S., Field Agent in Agronomy, Agricultural Extension Division

Jones, Smith Jameson, B.S., Field Agent in Farm Labor, Agricultural Extension Division

*Jones, Theodore Tolman, M.A., Ph.D., Professor of Ancient Languages, Head of the Department of Ancient Languages and Literatures; Dean of Men

Jongeward, Mattys, Ph.G., M.S., Professor of Pharmacy, Director of Pharmaceutical Laboratories, College of Pharmacy

Josephson, Leonard Melvin, Ph.D., Associate Agronomist, Experiment Station

Kammerer, Gladys Marie, M.A., Ph.D., Associate Professor of Political Science

Karraker, Perry Elmer, M.A., Professor of Soils; Agronomist in Soil Technology, Experiment Station

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* See appended list of changes of status, p. 399.

Katterjohn, Catherine Lynn, A.B., B.S. in L.S., Cataloging Assistant, University Library

Kaufman, Harold Frederick, Ph.D., Assistant Professor of Rural Sociology, Assistant Rural Sociologist, Experiment Station

Keegan, William John, B.S., Field Agent in Dairy Husbandry, Agricultural Extension Division

Keller, John Esten, M.A., Ph.D., Assistant Professor of Romance Languages

Kelley, James Byron, B.S. in A.E., B.S. in M.E., Professor of Agricultural Engineering; Agricultural Engineer, Experiment Station

*Kemper, Durbin Collins, M.A., Science, University High School

Kendall, Thomas Alexander, M.E., Research Analyst in Department of Mining and Metallurgical Engineering

Kennard, Clifford deBock, Pattern Maker and Foundry Technician

Kenney, Ralph, B.S. in Agr., Field Agent in Agronomy, Agricultural Extension Division

*Ketchum, Marshall Dana, M.S., Ph.D., Professor of Economics

Kilpatrick, Elmer James, M.S. in Agr., Assistant State Agent, County Agent Work, Agricultural Extension Division

King, Margaret Isadora, A.B., B.S., University Librarian

Kinker, Elmer O., Master Sergeant, U.S. Army, Instructor in Military Science

Kinney, Edmund J., B.S. in Agr., Professor of Farm Crops; Head of the Department of Agronomy, Experiment Station

*Kirwan, Albert Dennis, M.A., Associate Professor of History, Dean of Men

Kiser, Edgar L., A.B., Major, U.S. Army, Assistant Professor of Military Science and Tactics for Air Forces R.O.T.C.

Kiviniemi, Aimo, B.S. in Mus. Ed., Instructor in Applied Music (Voice)

*Knapp, Charles Merriam, Ph.D., Professor of History

Knight, Grant Cochran, M.A., Professor of English

Knight, Richard Bennett, B.S. in E.E., M.S. in M.E., Associate Professor of Heating and Ventilating

Koppius, Otto Townsend, Ph.D., Professor of Physics

Kuhlman, Robert H., B.S. in Ed., M.A., Instructor in Applied Music (Voice)

Kuhn, Kenneth, A.B. in Journ., News Editor, Public Relations

Kuiper, John, M.A., Professor of Philosophy; Head of the Department of Philosophy

Lacy, Edith, M.A., Field Agent in Home Economics, Agricultural Extension Division

Lager, Paulette, M.A., License es Lettres, Instructor in Romance Languages

Lampert, Carl Albert, B.M., Professor of Music, Special Assignment

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* See appended list of changes of status, p. 399.

Lancaster, Harry Current, M.A., Instructor in Physical Education, Assistant Basketball Coach
Land, Mary Rees, M.A., Assistant in University Extension
Lankford, Ann Elizabeth, A.B., Instructor in Physical Education
*Latimer, Claiborne Green, M.S., Ph.D., Professor of Mathematics
*Latimer, Ruth, B.S. in H.E., Field Agent in 4-H Club Work, Agricultural Extension Division
Latzke, Verna, M.S., Assistant Professor of Home Economics
*Lawrence, Armon Jay, M.A., Ph.D., Professor of Commerce and Education; Head of Department of Business Education (College of Education)
Lawrence, Chester, Assistant Inspector, Creamery License Section, Experiment Station
Lawson, Stanton Clowes Davison, B.A. Sc., M.S., Associate Professor of Applied Mechanics
Leader, Gordon R., Ph.D., Assistant Professor of Chemistry
Lerner, Gerald P., Lieutenant Colonel, U.S. Army, Assistant Professor of Military Science and Tactics
*LeStourgeon, Flora Elizabeth, M.A., Ph.D., Associate Professor of Mathematics
Lewis, Chester Arthur, B.J., Editor, Agricultural Extension Division
Lewis, Elisha Betts, M.S., Assistant Chemist, Department of Chemistry, Experiment Station
Lewis, Mildred Sinclair, B.S. in Music; M.A., Assistant Professor of Music
Lickert, Raymond Henry, B.S. in Agr., Assistant State Agent, County Agent Work, Agricultural Extension Division
*Ligon, Moses Edward, M.A., LL.D., Professor of Secondary Education; Head of the Department of Secondary Education, Director of Placement Bureau
*Ligon, William Scherffius, M.S., Ph.D., Associate Professor of Soils
*Lincicome, David Richard, M.S., Ph.D., Assistant Professor of Zoology
*Lincicome, Dorothy, A.B., M.A., Part-time Instructor in German
Link, Harold Forest, M.S. in Agr., Assistant State Agent, Agricultural Extension Division
Linville, Dorothy C., A.B., Admissions Officer
*Lippert, Gertrude, M.A., Part-time Instructor in German
Logan, Lulie Elizabeth, A.B., Assistant State Leader of Home Demonstration Agents, Agricultural Extension Division
Lovelady, Venice, B.S. in H.E., Field Agent in Home Economics, Agricultural Extension Division
Lowry, Samuel Jechonias, B.S. in Agr., Superintendent Western Kentucky Experiment Sub-Station

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* See appended list of changes of status, p. 399.

Ludwick, Thomas Murrell, M.S., Assistant in Dairying, Agricultural Experiment Station

Lunde, Ragnhild, A.B., Part-time Instructor in English for Fall Quarter 1946-47

Lunde, Robert Gerhard, M.A., Associate Professor of History

*McAllister, Cloyd N., B.S., Part-time Instructor in Hygiene and Public Health

McCauley, J. Ardery, B.J., Part-time Instructor in Journalism

McCloy, Shelby Thomas, Ph.D., Professor of History

McCubbin, William Edward, A.B., Instructor in Physical Education; Director of Intramural Athletics, Acting Head of the Department of Physical Education, 1946-47

McDaniel, Alice Marrs, A.B. in Educ., Seed Analyst, Experiment Station

McFarlan, Arthur Crane, Ph.D., Professor of Geology; Head of the Department of Geology

McFarland, Frank T., M.S., Ph.D., Research Professor of Botany

McGuire, Henry Sanders, Jr., B.S. in Med. Tech., Assistant Bacteriologist, Public Service Laboratory, Experiment Station

McHargue, James Spencer, M.S., Ph.D., D.Sc., Chemist; Head of Department of Chemistry, Experiment Station

McInteer, Berthus Boston, M.S., Ph.D., Associate Professor of Botany

McIntyre, Robson Duncan, M.S. in Com., Professor of Marketing

McKenney, Garnett Jennings, B.S. in Agr., Field Agent in 4-H Club Work, Agricultural Extension Division

McKitrick, John Leslie, B.S. in Agr., Field Agent in Agricultural Engineering and Soil Management, Agricultural Extension Division

McLaughlin, Marguerite, A.B., Assistant Professor of Journalism

McVey, Frank LeRond, Ph.D., LL.D., L.H.D., President Emeritus; Professor of Agricultural Economics

MacKenzie, Gabriel T., M.S., Colonel, U.S. Army, Professor of Military Science and Tactics, Head of the Department of Military Science and Tactics

MacLaury, Donald Wayne, M.S., Assistant in Poultry, Experiment Station

MacLaury, Meitha Hiteman, N.M., Music, University School

MacQuown, William C., Ph.D., Assistant Professor of Geology

Magill, Wilbur William, B.S. in Agr., Field Agent in Horticulture, Agricultural Extension Division

Mahan, Charles Alfred, M.S., State Agent, Agricultural Extension Division

Mangelsen, Fritz, Superintendent of Machine Shop

*Manning, John Walker, M.A., Ph.D., Professor of Political Science; Director, Bureau of Government Research

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* See appended list of changes of status, p. 399.

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Martin, James Henderson, Ph.G., Assistant Chemist, Emeritus; Public Service Laboratory, Experiment Station
Martin, James Walter, M.A., Professor of Economics; Director of Bureau of Business Research
*Martin, Laura Katherine, M.A., Associate Professor of Library Science
Massie, Joe Logan, M.A., Instructor in Economics
Mathews, Robert, Chief Inspector and Assistant Administrator, Feed and Fertilizer Control, Experiment Station
Matthews, John Watson, M.S., Field Agent in Poultry Improvement, Experiment Station
Maxwell, Elmer Stephens, M.D., Part-time Professor of Clinical Pathology, Department of Bacteriology
*May, Mildred, B.S., Mathematics, University School
Meader, Arthur Lloyd, A.B., Assistant Chemist, Public Service Laboratories, Experiment Station
Meadow, Jacob R., M.A., Ph.D., Professor of Chemistry; Director of Freshman Instruction
Meece, Leonard Ephraim, M.A., Ph.D., Professor of Education
Meers, Joseph Tinsley, B. S., Instructor in Physics
*Melcher, Columbus Rudolph, M.A., LL.B., LL.D., Professor of German Language and Literature, Special Assignment
Mellenbruch, Parl L., M.A., Ph.D., Associate Professor of Psychology
Meyer, Andre Johannes, B.S. in M.E., Director of Aeronautical Research Laboratory
Midkiff, Valva C., B.S., Assistant Chemist, Feed and Fertilizer, Experiment Station
Miles, Robert Whitfield, Sr., A.B., D.D., Part-time Professor of History, Fall Quarter 1946-47
Miller, Harold Franklin, B.S. in Agr., Assistant in Agronomy, Experiment Station
Miller, Richard Clarence, M.S., Field Agent in Animal Husbandry, Agricultural Extension Division
*Milton, Mary Page, A.B., University Recorder
Mitchell, John Richard, A.B., Assistant Professor of Chemistry
Mock, Clifton, O'Neal, M.E., Associate Professor of Engineering Drawing
Molloy, Jeanette Elliot Robinson, M.A., Supervisor of Sloan Schools, Bureau of School Service
Monical, Thelma, M.S. in Ed., Home Economics, Lafayette School
Monroe, Zelma, A.B., B.S., Assistant State Leader of Home Demonstration Agents, Agricultural Extension Division
Montgomery, Ford, B.M., Instructor in Applied Music (Piano)

* See appended list of changes of status, p. 399.

*Montgomery, Wilbert Clyde, B.S. in Agr., Agriculture, Lafayette School
*Moore, Henry Boian, M.B.A., Associate Professor of Economics
Moores, Maple, Assistant Registrar
Moran, Alice Barbara, B.S., Assistant Bacteriologist, Department of Animal Pathology, Experiment Station
Moreland, Roy, A.B., LL.B., J.D., S.J.D., Professor of Law
Morgan, Robert, M.M., Instructor in Applied Music (Piano)
Morris, Thomas Buie, M.S., Assistant Field Agent in Poultry Improvement, Experiment Station
Morrison, Henry Bartlett, M.S., Ph.D., Associate Professor of Dairying; Assistant in Dairying, Experiment Station
Morrow, Glenn David, M.A., Research Associate, College of Commerce
Mory, Samuel Albert, Jr., C.E., Professor of Structural Engineering
Muedeking, Mary, Ph.D., Instructor in Bacteriology
Muller, William Adam, M.A., Instructor in Zoology
Mulligan, Mary, A.B., Speech and Dramatics, University School
Mumford, Mary, M.S., Assistant Professor of Home Economics
Murray, Frank, A.B., LL.B., S.J.D., Professor of Law
Myers, Georgia, M.A., Part-time Instructor in English
Nelson, Vincent Edward, Ph.D., Associate Professor of Geology
Nelson, Hubert Edward, A.B., LL.B., LL.M., Professor of Law
Nesius, Ernest Joseph, M.S. in Agr., Assistant in Farm Management, Experiment Station
Nevitt, Esther, A.B., Instructor in German
Newbury, Edward, M.A., Assistant Professor of Psychology
Nicholls, William Durrett, M.S. in Agr., Ph.D., Professor of Farm Management; Head of the Department of Farm Economics
Niess, Robert Judson, Ph.D., Associate Professor of Romance Languages
Noble, Earl Thomas, B.S. in E.E., Instructor in Electrical Engineering
Noe, James Thomas Cotton, M.A., Litt.D., Professor of Education, Emeritus
Nollau, Louis Edward, M.E., Professor of Engineering Drawing
*O'Bannon, Lester Severance, B.M.E., Research Engineer, Experiment Station
Oberst, Paul, A.B., LL.B., LL.M., Assistant Professor of Law
Odor, Anna Frances, Ph.D., Assistant Professor of German
Olney, Albert Jackson, M.H., M.S., Professor of Horticulture, Head of Department of Horticulture
*Palmer, Edgar Zavitz, Ph.D., Professor of Economics
Pardue, Louis Arthur, M.S., Ph.D., Professor of Physics
Park, No-Yong, Ph.D., Visiting Professor of History and Political Science, Spring Quarter, 1946-47

* See appended list of changes of status, p. 399.

Parker, Ethel Lee, M.A., Ph.D., Professor of Home Economics Education, Head of the Department of Home Economics Education

*Pasco, Eddie Chester, B.S. in Agr., Assistant Inspector, Feed and Fertilizer Control, Experiment Station

Patterson, Mary Jerry, M.A., Editorial Associate, Bureau of School Service

Pattie, Frank A., M.A., Ph.D., Professor of Psychology, Head of the Department of Psychology

Pauls, Franklin Benjamin, M.S., Instructor in Physics

Peak, Bart Nixon, A.B., LL.B., Executive Secretary, University Young Men's Christian Association

Peck, Anna Browning, M.A., Social Sciences, University School

Pence, Sallie Elizabeth, M.A., Ph.D., Assistant Professor of Mathematics

*Peniston, Era Wilder, B.Mus., M.A., Instructor in Applied Music (Piano) for 1945-46

Penrod, Estel Burdell, B.S. in M.E., M.S., Professor of Mechanical Engineering, Head of the Department of Mechanical Engineering

Peter, Alfred Meredith, M.S., D.Sc., Professor of Soil Technology, Emeritus

Peterson, Frank D., A.B., University Comptroller

Pherigo, Anna S., Lecturer, Department of Physical Education, Winter Quarter, 1946-47

Phillippe, Paul Merwin, M.S., Ph.D., Associate Professor of Farm Crops

Phillips, Carroll Davidson, M.S., Ph.D., Assistant in Marketing, Experiment Station

Pickett, Ralph Russell, M.A., Ph.D., Professor of Economics

*Pifer, Raymond Woodrow, M.S. in Agr., Associate Professor of Animal Husbandry, Assistant in Animal Husbandry, Experiment Station

Pinney, Paul, B.S., Assistant in Farm Labor, Agricultural Extension Division

Plummer, Leonard Niel, M.A., Ph.D., Professor of Journalism, Head of the Department of Journalism

*Poole, Irma A., M.A., Director of Residence Halls for Women; Head Resident of Jewell Hall

Portmann, Victor Rowe, B.J., Assistant Professor of Journalism

*Potter, Merwin Elwood, M.A., Professor of Physical Education, Head of the Department of Physical Education

Poundstone, Albert Bruce, M.S. in Agr., Head, Department of Feed and Fertilizer Control, Experiment Station

Povlovich, Charles, M.A., Instructor in Political Science

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* See appended list of changes of status, p. 399.

*Powers, Marvin Jackson, B.S., Field Agent in Cream Grading, Experiment Station

Prewitt, Charles Walker, A.B., Junior Instructor, Department of Curriculum and Instruction

Price, Hugh Bruce, M.A., Ph.D., Professor of Agricultural Economics; Economist in Markets and Rural Finance, Experiment Station

Price, Walter Allen, M.S., Professor of Entomology; Head of the Department of Entomology and Botany, Experiment Station

Prindl, Frank J., B. Ed., M.M., Instructor in Music (Band Instruments), Director of University Band

*Proctor, Roy Estes, M.S. in Agr., Ph.D., Field Agent in Farm Management, Agricultural Extension Division

Pryor, Joseph William, M.D., Professor of Anatomy and Physiology, Special Assignment

*Pryor, William Munson, Field Agent in Farm Labor, Agricultural Extension Division

Puente, Jose I., Instructor in Spanish

Raber, Edward R., Staff Sergeant, U.S. Army, Instructor in Military Science and Tactics

*Ramsay, Bertrand Pettus, M.S., Ph.D., Associate Professor of Physics

Ramsey, Ralph, M.A., Field Agent in Rural Sociology, Agricultural Extension Division

Randall, Frank Hall, A.B., LL.B., S.J.D., Professor of Law

*Randle, Stacy Boyce, M.S., Ph.D., Chief Chemist, in Charge of Feed Analysis, Feed and Fertilizer Control, Experiment Station

Rannells, Edward Warder, M.A., Professor of Art, Head of the Department of Art

Rapp, Karl, Jr., M.S. in Ind. Chem., Assistant Chemist, Experiment Station

Ratliff, Margaret McLeod, M.A., Ph.D., Associate Professor of Psychology

Reid, David Alexander, M.S., Associate Agronomist, Experiment Station

*Reeves, John Estill, M.A., Ph.D., Associate Professor of Political Science

*Rhoads, Wayland, M.S., Field Agent in Animal Husbandry, Agricultural Extension Division

Riggs, Charles L., M.A., Part-time Instructor in Mathematics

Riley, Herbert Parkes, M.A., Ph.D., Professor of Botany; Head of the Department of Botany

*Ringrose, Arthur Thomas, Ph.D., Assistant Professor of Poultry Husbandry

Ripy, Sara Louise, A.B., Instructor in Mathematics

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* See appended list of changes of status, p. 399.

Ritcher, Paul Osborn, M.A., Ph.D., Associate Entomologist, Experiment Station
Roberts, George, M.S., Professor of Agronomy, Emeritus
Roberts, John Bissell, M.S. in Agr., Assistant Professor of Marketing; Assistant in Markets, Experiment Station
Roberts, William Lewis, M.A., J.D., S.J.D., Professor of Law
Robinson, Lolo Lemme, A.B., Assistant Professor of Radio Arts
Rohde, Florence Virginia, M.A., Instructor in Mathematics, 1946-47
Romanowitz, Harry Alex, E.E., M.S., Professor of Electrical Communications
*Rose, Donald, A.B., Instructor in Mathematics
*Rose, Joseph P., A.B., 1st Lieutenant, U.S. Army, Assistant Professor of Military Science and Tactics
Roser, Margaret, A.B., Librarian, University School
*Ross, Clay Campbell, M.A., Ph.D., Professor of Educational Psychology, Head of the Department of Educational Psychology
Rowland, Russell, B.S. in Agr., Assistant in Agronomy, Agricultural Experiment Station
*Rucker, Alice Kennedy, M.A., Assistant Professor of Social Work
*Ryland, Hobart, M.A., Docteur de l'Universite', Professor of Romance Languages, Head of the Department of Romance Languages
Sanders, Irwin T., Ph.D., Professor of Sociology, Head of the Department of Sociology
Saunier, Stephen Thaddeus, Supervisor of Metallurgical Laboratory
Savage, William Frederick, B. of Aero. Engr., Instructor in Aeronautical Engineering
Scherago, Morris, B.S., D.V.M., Professor of Bacteriology, Head of the Department of Bacteriology
*Schick, Blaine Wilhelm, M.A., Assistant Professor of Romance Languages
*Schoeffler, Carolyn, Instructor in Education, Seventh Grade, University School
Schwendeman, Joseph Raymond, Ph.D., Professor of Geography, Head of the Department of Geography
*Seay, Maurice F., M.A., Ph.D., LL.D., Dean of the University and Registrar
Seeds, Frances, M.S., Associate Professor of Home Economics
Segerquist, Arvid W., Master Sergeant, U.S. Army, Instructor in Military Science and Tactics
*Sellards, Henry Grady, B.S. in Agr., Field Agent in Animal Husbandry, Agricultural Extension Division
Server, Alberta Wilson, M.A., Docteur de l'Universite', Associate Professor of Romance Languages
Shannon, Jasper Berry, M.A., Ph.D., Professor of Political Science

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* See appended list of changes of status, p. 399.

Shaver, Robert Ezekiel, C.E., Professor of Civil Engineering, Head of the Department of Civil Engineering
Shaw, Revell Estill, M.A., Assistant Professor of Physical Education
Shedd, Oliver March, M.S., Research Chemist, Experiment Station
Sheibley, Fred E., Ph.D., Assistant Professor of Chemistry
Shipman, Martha Virginia, M.A., Eighth Grade, University School
Shively, Bernie Armstead, M.A., Director of Intercollegiate Athletics
Shrader, John Aaron, M.S., Ph.D., Assistant Microscopist, Feed and Fertilizer Control, Experiment Station
*Shropshire, Anne Wallace, A.B., Instructor in English
Shropshire, William Oscar, M.S., Instructor in Physics
Skiles, Jonah W. D., M.A., Ph.D., Professor of Ancient Languages, Head of the Department of Ancient Languages
Slaughter, Susan, Records and Budgetary Assistant, Agricultural Extension Division
Slone, Earl Platt, Ph.G., B.S., Dean, Professor of Pharmacognosy, College of Pharmacy
*Smith, Coleman R., B.S., Manager of Ticket Sales, Department of Athletics
Smith, Evangeline, B.S., Home Economics, Bryan Station School
Smith, J. Allan, M.A., Ph.D., Bulletin Editor, Experiment Station and Agricultural Extension Division
Sneed, Ruth, M.S., Instructor in Home Economics Education
Snodgrass, Grace Lee, A.B., Librarian, Experiment Station
Snow, Charles Ernest, M.A., Ph.D., Professor of Anthropology
Sokol, Vilem, B. Mus., M.A., Instructor in Applied Music (Strings) and in Theory
South, Dudley Eugene, M.A., Ph.D., Associate Professor of Mathematics and Astronomy
Spain, Charles R., M.A., Ed.D., Associate Professor of Education; Associate Director, Bureau of Curriculum Service
Sparks, Harry, M.A., Junior Instructor, Department of Curriculum and Instruction
Spears, Lawrence, A.B., Captain, U.S. Army, Assistant Professor of Military Science and Tactics, for Air Forces R.O.T.C.
Spencer, Jack Taif, Ph.D., Assistant Agronomist, Experiment Station
Sprowles, Lee, M.A., Graduate Assistant, Bureau of School Service
Stamper, James Marion, B.S., Instructor in English
*Starnes, W. Gayle, M.A., Assistant Director
Steele, Dewey George, M.S., Ph.D., Professor of Genetics, Geneticist in charge Section of Genetics
*Stephenson, Wendell Homes, M.A., Ph.D., Professor of History
Sterrett, J. Reid, M.A., Ph.D., Associate Professor of English

* See appended list of changes of status, p. 399.

Stewart, Olus Jesse, M.S., Ph.D., Professor of Analytical Chemistry
Stewart, Orville Watson, B.S. in M.E., Instructor in Mechanical Engineering, Superintendent of Mechanical Engineering Laboratory
*Stoakes, James Paul, Ph.D., Associate Professor of English
Stout, Florence Offutt, Professor of Physical Education, Special Assignment
Stout, William David, M.A., Instructor in Political Science
Straus, Erwin W., M.D., Part-time Lecturer, Department of Psychology
Stutsman, Ellen Butler, A.B., M.S., Head of Cataloging Department, University Library
Sullivan, Merrell Rodman, M.A., Ph.D., Professor of Economics
Sulzer, Elmer Griffith, A.B., Associate Professor of Radio Arts, Head of the Department of Radio Arts
Summers, George Perry, M.S. in Agr., Field Agent in Marketing, Agricultural Extension Division
Sumner, Lottie Ellen, M.S., Assistant Professor of Home Economics
Survant, William Gregory, B.S. in Agr., Field Agent in Soils, Agricultural Extension Division
Tabb, William Roy, B.S. in Agr., M.S. in Ed., Assistant Professor of Agricultural Education
Tartar, Jerome, A.B., Lieutenant Colonel, U.S. Army, Assistant Professor of Military Science and Tactics for Air Forces R.O.T.C.
Taylor, Artie Lee, Head of Reserve Book Department, University Library
Taylor, Edgar Lee, D.V.M., Assistant Veterinarian, Experiment Station
Taylor, Rhea Alec, M.A., Instructor in History
Taylor, William Septimus, M.S., Ph.D., LL.D., Professor of Education; Dean of the College of Education
*Templeton, William Chelcy, Jr., M.S., Instructor in Farm Crops
Terrell, Daniel Voiers, C.E., Dean of the College of Engineering
Terrell, Willis Granville, Assistant in Feed Laboratory, Emeritus, Experiment Station
Terry, George Sylvester, M.A., Bacteriologist, Public Service Laboratories, Experiment Station
Terry, Taylor Rankin, B.S. in M.E., Instructor in Mechanical Engineering
Thaxton, Robert, M.S., Instructor in Farm Crops
Thomas, Ruth Edith, A.M., Ph.D., Assistant Professor of Commerce
Threlkeld, Dorothy Elizabeth, B.S. in H.E., Field Agent in Home Economics, Agricultural Extension Division
Tiller, Garnet Louis, M.A., Instructor in Mathematics and Astronomy

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* See appended list of changes of status, p. 399.

Tilson, Howard Gilbert, M.S. in Agr., Nursery Inspector, Department of Entomology and Botany, Experiment Station
*Tittle, Maynard C., Technical Sergeant, U.S. Army, Instructor in Military Science
Todd, Anne, B.S., Seed Analyst, Department of Entomology and Botany, Experiment Station
*Todd, Jarvis, M.A., Assistant Professor of Physics
*Tolman, William Allen, M.A., Associate Professor of Economics
Toombs, Frances P., M.A., Instructor in English
Townsend, Arlie L., M.A., Part-time Instructor in Physics, College of Pharmacy
Townsend, Lee Hill, M.S., Ph.D., Associate Professor of Agricultural Entomology; Acting Assistant Dean in Resident Teaching
Trimble, Ernest Greene, Ph.D., Associate Professor of Political Science
Truitt, Jack Paschal, B.S., Agriculture, Lafayette High School
Trumbo, Charles Randolph, A.B., Instructor in English
Tucker, Willis Carleton, M.A., Associate Professor of Journalism
Turner, Earl K., Research Assistant, Bureau of Business Research
Turner, Mildred S., A.B., Head Resident of Patterson Hall
Tuthill, Edward, M.A., Ph.D., Professor of History, Special Assignment
Tuthill, Richard Lovejoy, M.A., Ph.D., Associate Professor of Geography
Tuttle, Franklin Elliott, M.A., Ph.D., Professor of Chemistry, Special Assignment
Tuttle, Margaret Helmsing, A.B., B.S. in L.S., Department Librarian, University Library
Tyler, Earl T., A.B., Instructor in English
Udall, Robert Hovey, D.V.M., Assistant Veterinarian, Agricultural Experiment Station
Valleau, William Dorney, Ph.D., Professor of Plant Pathology, Department of Agronomy; Pathologist, Experiment Station
Vandenbosch, Amry, Ph.D., Professor of Political Science, Head of the Department of Political Science
Vanlandingham, Kenneth Earl, M.A., Instructor in Political Science
Vaughn, Erle Cleveland, A.B., Field Agent in Improved Seed Production, Experiment Station
Vennes, Leon Angus, M.S., Assistant Professor of Marketing; Field Agent in Markets, Agricultural Extension Division
Von Holle, Alvin E., Captain, U.S. Army, Associate Professor of Military Science and Tactics
Wachs, Elizabeth, Technician in Animal Nutrition, Experiment Station
Wakefield, Joyce, B.S., Instructor in Physical Education

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* See appended list of changes of status, p. 399.

Walker, Madie Lee, M.A., Part-time Instructor in Mathematics, Fall Quarter 1946-47

Walker, William Russell, M.S., Field Agent in Dairying, Agricultural Extension Division

Wall, Bennett Harrison, M.A., Instructor in History

Wall, Maurice Stanley, B.S. in Agr., Instructor in Agricultural Education

*Walters, Alice, A.B., Assistant Analyst, Department of Agronomy, Experiment Station

Waltman, Clair Smith, M.S., Ph.D., Associate Professor of Horticulture; Assistant in Horticulture, Experiment Station

*Walton, Sylvan Brooks, M.S., Professor of Mechanical Engineering, Acting Head of the Department of Mechanical Engineering

*Warburton, Fred William, Ph.D., Associate Professor of English

Ward, William Smith, M.A., Ph.D., Associate Professor of English

*Warren, A. Bernard, Ph.D., Assistant Professor of Psychology

Watson, Walter, Ph.D., Part-time Lecturer, Department of Psychology

Watters, James I., Ph.D., Associate Professor of Chemistry

Weaver, Ralph Holder, M.S., Ph.D., Professor of Bacteriology

Webb, Louise Gray, Librarian Emeritus, College of Engineering

Webb, William Snyder, M.S., D.Sc., Professor of Physics, Head of the Department of Physics; Professor of Archaeology, Head of the Department of Anthropology

Weeks, Martin Edward, Ph.D., Agronomist, Experiment Station

Welch, Earl George, B.S. in Agr., Field Agent in Agricultural Engineering, Agricultural Extension Division

Weldon, Myrtle, M.A., State Leader of Home Demonstration Agents, Agricultural Extension Division

*Wender, Simon Harold, M.S., Ph.D., Assistant Professor of Chemistry

Wesley, William Clarence, M.A., Graduate Assistant, Bureau of School Service

West, Mary Griffith, A.B., Assistant Bacteriologist, Department of Animal Pathology, Experiment Station

West, Mary Lucille, M.A., Languages, University School

*Westerfield, Clifford, M.S., D.V.M., Associate Animal Pathologist, Experiment Station

Wetzel, Faye, M.A., Part-time Instructor in English, Fall Quarter 1946-47

Wetzel, Harold E., M.A., Professor of Social Work, Head of the Department of Social Work

Wheeler, Boyd Edgar, B.S., Field Agent in 4-H Club Work, Agricultural Extension Division

Whitaker, Paul Knowlton, M.A., Ph.D., Associate Professor of German

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* See appended list of changes of status, p. 399.

*White, Frank D., M.Ed., Instructor in Mathematics
White, Helen McMichael, B.S., Assistant State Leader of Home Demonstration Agents, Agricultural Extension Division
*White, Martin Marshall, M.A., Ph.D., Dean of the College of Arts and Sciences
Whitehouse, James William, M.S. in Agr., State Leader in 4-H Club Work, Agricultural Extension Division
Wiedeman, Mary Purcell, M.S., Instructor in Anatomy and Physiology
Wiest, Edward, M.A., Ph.D., Professor of Economics; Dean of the College of Commerce
Wiggin, Gilbert Henry, B.S., Instructor in Forestry; Forester, Robinson Substation
Wightman, Ernest Thomas, M.S., Associate Professor of Poultry Husbandry; Assistant in Poultry Husbandry, Experiment Station
Wild, Raymond Wesley, A.B., Ph.M., Part-time Assistant Professor of Journalism; Director of Public Relations
Wilford, Edward James, M.S. in Agr., Professor of Animal Husbandry; in charge of Meats Laboratory; Assistant in Animal Husbandry, Experiment Station
Willson, Louise, M.A., Third Grade, University School
Wilmore, Helen, M.S. in H.E., Assistant Professor of Home Economics
*Wilson, Jessie Louise, M.A., Recorder
Wilson, William Clark, B.S. in Agr., Assistant State Agent, County Agent Work, Agricultural Extension Division
Wofford, Azile May, M.S., Associate Professor of Library Science
*Wood, Julia Clarke, B.S. in H.E., Assistant Analyst, Department of Agronomy, Experiment Station
Wood, Kenneth Proctor, M.A., Instructor in Mathematics
Wooldridge, Mary Terrell, M.S., Instructor in Home Economics
Wyant, Zae, M.H.E., A.M., Technician, Department of Animal Pathology, Experiment Station
*Wyatt, Charles Early, B.S. in Agr., Field Agent in Test Demonstrations, Agricultural Extension Division
Yeardley, Nelson, M.S., Part-time Instructor in Mathematics
Young, Earl Robert, M.S. in Agr. Engr., Associate Professor of Agricultural Engineering
Young, Harry Maxie, Jr., B.S. in Agr., Field Agent in Farm Management, Agricultural Extension Division
Young, Ruth Theobald, B.S. in L.S., Visiting Instructor in Library Science
Zemp, Gertrude M., Manager of Residence Halls for Women

* See appended list of changes of status, p. 399.

OFFICE ORGANIZATION AND PERSONNEL

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Jane Jarvis Nichols, Secretary
Lucy Roberta Hogan, A.B., Assistant Secretary

OFFICE OF THE VICE PRESIDENT

*Leo M. Chamberlain, M.A., Ph.D., Vice-President
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Rosa Lena Brumfield, B.S. in Com., Secretary

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*Martin Marshall White, M.A., Ph.D., Dean
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Willena Duncan Long, Assistant Secretary
Mary Elizabeth Doyle, A.B., Secretary
Barbara Winters, A.B., Clerk-Stenographer
Juliette Jones, A.B., Clerk-Stenographer

Virginia Frances Anderson, B.S., Supervisor of Stockroom and Laboratory Equipment
Sara Ballenger, Part-time Secretary, Department of German
Reba Marie Bennett, Secretary, Department of Art
Geraldine Brock, Part-time Secretary, Department of Romance Languages
*Laura Graham Cutler, Part-time Secretary, Department of English
Constance W. Gallant, Secretary, Department of Chemistry
*Marjorie Geary, Secretary, Department of Journalism
*Constance Sims Goldberg, Secretary, Department of Bacteriology
Norris C. Goldben, Assistant Secretary, Department of Chemistry
*Virginia E. Hartin, Secretary, Department of History
Faye Hays, Part-time Secretary, Department of Mathematics
*Eileen Sullivan Hillenmeyer, Part-time Secretary, Departments of Sociology and Geography
*Elizabeth Hunt, A.B., Part-time Secretary, Department of Psychology

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* See appended list of changes of status, p. 399.

Ima Moe Junkins, B.S. in L.S., M.A., Secretary, Department of Library Science
R. C. Layson, M.S., Lecture Assistant and Storekeeper, Department of Physics
Julia Leach, Part-time Secretary, Department of Psychology
W. Lee McDaniel, Military Storekeeper
*Betty Matlack, Secretary, Department of Physical Education
Evelyn Louise Midkiff, Secretary, Department of Sociology
Willie Prater Mills, Librarian, Carnegie Record Set
Floye Mullinaux, Clerk, Office of the Associate Dean
Katherine W. Owens, Secretary, Department of Hygiene and Public Health
Frances Parsons, Secretary, Department of History
Fannie Belle Pherigo, Secretary, Department of Military Science
Irene H. Russell, A.B., Secretary, Department of Political Science
Juanita H. Shely, A.B. in Educ., Secretary, Department of Physics
Frances C. Smith, A.B., Secretary, Department of Social Work
*Minerva M. Smith, Secretary, Department of Journalism
Winona Timberlake, Secretary, Department of Bacteriology
*Mary Louise Wallace, A.B., Librarian-Secretary, Department of Library Science
Irene Waters, Secretary, Department of Music
Julia Anne Waters, A.B., Secretary, Department of Geography

COLLEGE OF AGRICULTURE AND HOME ECONOMICS EXPERIMENT STATION AND EXTENSION DIVISION

Thomas Poe Cooper, B.S. in Agr., D.Sc., LL.D., Dean and Director
*Levi Jackson Horlacher, M.S., Assistant Dean in Resident Teaching
Thomson Ripley Bryant, M.S., Assistant Director of Agricultural Extension
Lee Hill Townsend, M.S., Ph.D., Acting Assistant Dean in Resident Teaching
Oleva L. Ginocchio, Assistant in Administration, Experiment Station
Susan Kidd Slaughter, Records and Budgetary Assistant, Agricultural Extension Division
Elizabeth Sloan, A.B., Secretary, Office of the Dean

Secretarial and Clerical Staff, Teaching, Experiment Station and Extension

V. Maewood Alsop, B.S. in Com.
*Lucille Bush Anderson
Dora Baker
Juanita Barnhill
Katherine Bascom
Marguerite Berry
Grace Hardman Brown
Ednabelle Byron
Sophia Campbell
Margaret H. Carroll

* See appended list of changes of status, p. 399.

Ethel V. T. Caswell
Jessie Frazer Caswell
Janet Collins
Frances Cook
*Betty Cotton
Mattie C. Croghan
Eudell Jones Curtis
Ruth O. Deeringer
Alvis Derrickson
Mary Dolan
Anna Mae Duncan
Pauline Elliston
Margaret Hinton Frye
*Lucille Graves
Betty C. Grayson
Mary Lou Guyn
*Virginia E. Faulconer Haggard
Mary Belle Hall
Cassie Hamilton
Gertrude Elizabeth Hanley
Louise Heizer
Alma Henry
Betty Howson
Sarah G. Hutchison
Grace Jones
Ruth E. Jones
Frances Keller
Ruth Kelley, A.B.
Nellie Mae Lawrence
Ruth Turley Lawrence
Edwina R. Layton
*Mildred E. McCarty, B.S. in Com.
Christine McCauley
Ethel N. McGlothen
*Edna Brumagen Marrs, A.B. in Ed.
Marietta Gerard Meeks
Fannie Bush Merritt
Susan Milbourn
Josephine Mitchell, A.B.
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Ruby E. Morrow
Norma Motsinger
Margaret H. Munday
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Mattie Ramsey
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Jean D. Razor
Dorothy Rice
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Myrtle B. Shorter
Virginia Singleton
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Rosemary Stephenson
Mary E. Stilwell
Frances Stivers
Erma Taylor
*Flora G. Taylor
Evazona J. Thomas
Josephine Turner
Peggy Vaughn
Mary Harned Versaw
Mary Bronston Utterback
Anna Wallis, A.B.
Violette Shankland Weaver
Ethel Louise Welch
May Wheat
Lee V. Wilson
Hugh Winkle

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Ethel Jelley, Secretary
Helen Louise Trapp, Secretary
Cecil Bertram, Senior Clerk-Stenographer
Clara Joy Francis, Clerk-Typist
Nancy Lee Slade, Clerk-Stenographer

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* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

Engineering Experiment Station

Daniel Voiers Terrell, C.E., Dean and Director
Ernest Adolphe Bureau, B.S., Ph.D., E.E., Head of the Department of Electrical Engineering
Charles Stevens Crouse, E.M., Head of the Department of Mining and Metallurgical Engineering
Estel Burdell Penrod, B.S. in M.E., M.S., Head of the Department of Mechanical Engineering
Robert Ezekiel Shaver, C.E., Head of the Department of Civil Engineering
E. Everett Elsey, B.S. in M.E., Editor and Secretary
Harry Comer Wolf, Consulting Engineer

Clerical, Engineers, Supervisors, Laboratory Technicians and Mechanics

Glenn T. Abbott
Robert Gerald Beavers
Douglas Winn Cox
V. C. Currens
Robert S. Dean
*Ralph T. Eschborn
Joseph A. Eyl
J. C. Farney
George R. Hayden
McClelland J. Heath
Edna W. Murphy
Edna L. Overstreet
Mary P. Russell
Francis Joseph Trapp
George E. Umstead
Edwin C. Wade
Robert Witt, Jr.
George W. Whitlow
Henry Wilder

COLLEGE OF LAW

Alvin E. Evans, M.A., Ph.D., J.D., Dean
Mary Dunne, A.B., Secretary
Margaret Dorothy Salmon, B.S. in Com., LL.B., Librarian

COLLEGE OF EDUCATION

William Septimus Taylor, M.S., Ph.D., LL.D., Dean
Anne Lewis Wilson, A.B. in Ed., Secretary
Virginia Campbell Withers, A.B. in Ed., Assistant Secretary
Virginia Barber, Secretary, Home Economics Education
Cassie Pace Bobbitt, Secretary, Bureau of School Service
*Eloise DeJarnette, B.S. in Com., Part-time Secretary, Business Education
Lois Allen Duncan, A.B. in Ed., Secretary, Agricultural Education
Margaret Griffin, Assistant Secretary, University School
Willa Belle Hamilton, B.S. in Com., Secretary, Home Economics Education
Ruthe Maxedon Henderson, A.B., Assistant Secretary, Bureau of School Service

* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

Mary Herrington, A.B., Secretary, Trade and Industrial Education
Katherine Hammack Kemper, A.B., Secretary, Placement Bureau and Secondary Education
Josephine G. King, Secretary, Business Education
*Patsy Lowe, Part-time Secretary, Elementary Education
Betsy Roach Hutcheson, A.B., Secretary, University School
Billy Whitlow Smith, A.B., Secretary, Educational Psychology and Curriculum and Instruction
Agnes Spence, B.S. in Com., Secretary, Bureau of Curriculum Service

COLLEGE OF COMMERCE

Edward Wiest, M.A., Ph.D., Dean
Jane Earle Middelton, A.B., Secretary
Josephine Gee King, Secretarial Assistant
Toba Mlavsky Reitman, Secretary, Bureau of Business Research

THE GRADUATE SCHOOL

William Delbert Funkhouser, M.A., Ph.D., D.Sc., Dean
Queenie Morrow Grable, M.A., Secretary

DEPARTMENT OF UNIVERSITY EXTENSION

Louis Clifton, M.A., Director
Chloe Gifford, M.A., LL.B., Assistant in University Extension
Gordon C. Godbey, A.B., Assistant in University Extension
Maude Ward Lafferty, Secretary, Emeritus, Women's Club Work
Mary Rees Land, M.A., Assistant in University Extension
Effie Cox Starnes, M.A., Instructor
Bethel Chase Lipps, Secretary
Eva Frances Downing, A.B., Bookkeeper
Almira D. Parks, B.S., Secretary
Harriet W. Meadors, Secretary
Mildred R. Morrissey, Secretary
Jemima C. Harris, Film Technician
John Dicker, Projectionist

OFFICE OF THE DEAN OF MEN

*Theodore Tolman Jones, M.A., Ph.D., Dean of Men
*Albert Dennis Kirwan, Ph.D., Dean of Men
*Bush Allen Gorman, Secretary
Mary Hanifan Mitchell, A.B., Secretary
Kyra Wilson Ketron, Secretary

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* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

OFFICE OF THE DEAN OF WOMEN

Sarah Bennett Holmes, M.A., Dean of Women
Jane Haselden, Ph.D., Assistant Dean of Women
Margaret Bruce Cruise, A.B., Assistant to the Dean of Women
Dorothy Hillenmeyer Evans, A.B., Social Director
Dorothy Louise Adams, Part-time Student Assistant

OFFICE OF THE REGISTRAR

*Leo M. Chamberlain, M.A., Ph.D., Registrar
*Maurice F. Seay, M.A., Ph.D., LL.D., Registrar
Maple Moores, Assistant Registrar
Dorothy Linville, A.B., Admissions Officer
*Jessie Wilson, M.A., Recorder
*Mary Page Milton, A.B., Recorder
Lucille Hope Newton, A.B., Assistant Recorder
Sarah Utterback, M.A., Assistant Admissions Officer
Cornelia J. Clarke, Clerk
Frances Ann Daniel, A.B., Clerk
Anne Elizabeth Garrison, B.S. in Com., Senior Clerk-Stenographer
Mabel Claire Gumm, B.S. in Music, Clerk
Betty Virginia Pearson, Clerk
Martha Robards, Transcript Clerk
Evelyn Merrell Talbott, A.B., Clerk
Jane Williamson, Clerk-Stenographer
Betty Rue Lawrence, Clerk

LIBRARIES

Margaret Isadora King, A.B., B.S., University Librarian
Ruth K. Allender, A.B., Gift and Exchange Assistant, Order Department
Austell Beaton, B.S. in Com., Accountant, Order Department
Judith T. Berkowitz, M.A., Assistant, Order Department
Bessie M. Boughton, A.B., B.S., Senior Cataloger
Jacqueline Page Bull, A.B., Head, Archives Department
Norma Beatrice Cass, B.S., M.A. in L.S., Reference Librarian
Daisy Taylor Croft, A.B., B.S., Head of Circulation Department
Frances L. Dugan, A.B., B.S., Assistant Archivist
Betty Lee Fein, A.B., Assistant Archivist
Elizabeth F. Fowler, A.B. in Journ., Assistant, Order Department
Mary Elizabeth Hanson, A.B., B.S. in L.S., Periodical Librarian
Carolyn Hayes, B.S., Librarian, Geology Department
Kate Tipton Irvine, A.B., M.A., Assistant Reference Librarian
Catherine Lynn Katterjohn, A.B., B.S. in L.S., Assistant Cataloger
Martha Jane Livesay, A.B., Assistant, Order Department

* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

Millicent M. Mercer, A.B., Assistant Reference Librarian
Juanita C. Moberly, A.B., Assistant, Circulation Department
Mary A. Nooe, A.B., Assistant Cataloger
Maxine L. Perrine, A.B., B.S. in L.S., Document Librarian, Reference Department
Mary Frances Pope, Librarian, Engineering Library
Carolyn Reading, AB., B.S., Head, Order Department
Margaret E. Rogers, A.B., Assistant, Circulation Department
Margaret E. Roser, A.B., Librarian, University School Library
Margaret Dorothy Salmon, B.S. in Com., LL.B., Librarian, College of Law
Emilie Varden Smith, A.B., Assistant Cataloger
Grace Lee Snodgrass, A.B., Librarian, Experiment Station
Ellen Butler Stutsman, A.B., M.S., Head, Cataloging Department
Stella Sumner, A.B., Librarian Biological Sciences Library
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
Gertrude W. Champion, Assistant, Periodical Department, Part-time
Margaret E. Clegg, Secretary, Part-time
June Everman, Clerk, Order Department
Bess Stapleton, Mender, Catalog Department, Part-time

UNIVERSITY HEALTH SERVICE

John Sharpe Chambers, M.S., M.D., Director
Charles McChord, M.S., M.D., Physician
George Fergison Doyle, A.B., M.D., F.A.C.S., Physician
Edward C. Humphrey, A.B., M.D., Physician
*Oliver H. Pinney, M.D., Associate Professor of Hygiene and Public Health
W. Brooks Hamilton, M.S., Ph.D., Bacteriologist; Associate Professor of Hygiene and Public Health
Wilbur August Heinz, M.S. in P.H., Associate Professor of Hygiene and Public Health
Allen Edward Crowe, B.S. in Med. Tech., R.M.T., Technician
Ann L. Brown, Registered Nurse
Thelma Southworth Cook, Registered Nurse
Helen B. Crews, Registered Nurse
Ann C. Hickey, Registered Nurse
Juanita Peel, Registered Nurse
Vivian Combs Morris, Clerk
Katherine W. Owens, Secretary

UNIVERSITY Y. M. C. A.

Bart Nixon Peak, A.B., LL.B., Secretary
Martha Huber, Assistant Secretary

* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

UNIVERSITY Y. W. C. A.

*Dorothy Collins, B.S., Secretary

RESIDENCE HALLS FOR WOMEN

*Irma A. Poole, M.A., Director of Residence Halls for Women, Head Resident for Jewell Hall
Margaret Storey, M.A., Head Resident for Patterson Hall
Gertrude J. Harvard, A.B., Head Resident for Boyd Hall
Mildred Turner, A.B., Head Resident for Patterson Hall
Gertrude M. Zemp, Manager
Frances K. Kendall, B.S., Assistant Dietitian
Charleen Burris, B.S., Assistant Dietitian
Hettie B. Schad, Secretary-Bookkeeper
*Margery McCabe, A.B., Secretary
Eugenia Williamson, Postmaster of Residence Halls for Women
Catherine A. Spaulding, Head Resident for Lydia Brown House
Lillian Caldwell, Head Resident for McDowell House
Lucile A. Newman, Head Resident for Elmside

House Directors for Sorority and Cooperative Houses

Zoa H. Hale, Alpha Delta Pi House
Mable Paddison, Alpha Gamma Delta House
Jennie W. Hughes, Alpha Xi Delta House
Lillian Tatum, Chi Omega House
Lucille Phillips, Delta Delta Delta House
Frances Pennington, Delta Zeta House
Kathleen King McGee, Kappa Alpha Theta House
Ada Louise Adams, Kappa Delta House
Algernon Dickson, M.A., Kappa Kappa Gamma House
Mable Riedell, Zeta Tau Alpha House
Betty Henry, Hamilton House

RESIDENCE HALLS FOR MEN

Bennett H. Wall, M.A., Supervisor
Maie Johnson Wall, Hostess

PERSONNEL OFFICE

Lysle Warrick Croft, M.A., Ph.D., Director
Lyle Kenneth Henry, M.A., Ph.D., Assistant Director
Parl L. Mellenbruch, M.A., Ph.D., Test Consultant
*Joseph A. Larkin, A.B., Assistant in Personnel
Dorothy Dean, A.B., Secretary
Doris Hall Barnes, A.B., Clerk
Marjorie Orr, A.B., Clerk
Renee Gordon, Secretary
Anne A. Lewis, Receptionist

* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

DEPARTMENT OF PUBLIC RELATIONS

Raymond W. Wild, A.B., Ph.M., Director of Public Relations
Kenneth L. Kuhn, A.B., News Editor
Analie Francis, Secretary

UNIVERSITY RADIO STATION

Elmer Griffith Sulzer, A.B., Director
Lolo Lemme Robinson, A.B., Program Supervisor
James Hisle, Transmitter Engineer and Head Studio Engineer

DEPARTMENT OF ATHLETICS

Bernie Armstead Shively, M.A., Director of Intercollegiate Athletics
Paul William Bryant, A.B., Head Football Coach
Adolph Fred Rupp, M.A., Head Basketball Coach
Ermal Glen Allen, B.S., Assistant Football Coach
Joseph Gwynne Atkinson, B.S., Assistant Football Coach
Michael Balitsaris, B.S., Assistant Football Coach
Carney Graham Laslie, B.S., Assistant Football Coach
Frank O'Rear Moseley, B.S., Assistant Football Coach and Baseball Coach
Phil Hudson, M.A., Athletic Trainer
Coleman Rogers Smith, B.S., Manager, Ticket Sales
Ray Dukes Pickett, Assistant Bookkeeper
Louise Loving Gilchrist, A.B., Secretary to the Athletic Director
*Jean Ray Rice, Secretary to the Football Coach
*Edward Howard Shannon, B.S., Equipment Manager

BUREAU OF SOURCE MATERIALS IN HIGHER EDUCATION

Ezra L Gillis, A.B., Director
Mary Hester Cooper, M.A., Assistant Director
Mary Scully, Clerk

ALUMNI ASSOCIATION

Helen G. King, A.B., Executive Secretary
Jeannette Graves, A.B., Assistant Secretary

OFFICE OF THE COMPTROLLER

Frank D. Peterson, A.B., University Comptroller
David Howard Peak, LL.B., M.A., Business Agent Emeritus
Ena Jones, Secretary
Elizabeth Heron Bryan, Clerk-Stenographer

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* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

Accounting Division

Linn Hemingway McCain, Assistant Comptroller
Walter E. Bromley, C.P.A., Accountant
Ruth Earnest, Assistant Accountant
Clay Maupin, Internal Auditor
Fleming B. Griffith, Senior Account Clerk
Charles B. Richardson, Plant Inventory Supervisor
Camilla Weathers, B.S. in Com., Clerk-Stenographer
Margaret Lewis, Cashier
Virginia Baxter Earnest, Bookkeeper
Emma Grace Merrell, Payroll Clerk
Nelson B. Turner, Account Clerk
Dorothy Garrison Morris, Bookkeeper
LeGrand Briggs, M.A., Account Clerk
Evelyn Newall, Clerk
Ruby Bartlett, B.S. in Com., Bookkeeper
Mary Louise Ransdell, Clerk
*Frances Brack, Bookkeeper

Purchasing and Stores Division

Ken Broomell, A.B., Supervisor
Minnie Pherigo, Order Clerk
Edith Miller, Stenographer
Janet Stark, Clerk
Arkley Wright, Storekeeper
Art Masters, Assistant Storekeeper

Division of Maintenance and Operation

Elgan B. Farris, C.E., Chief Engineer
John M. Howard, B.S. in M.E., Assistant Chief Engineer
Jonathan B. Rieman, Superintendent of Construction
John Tyler Gess, B.S. in M.E., Engineer of Veterans Housing Project
Clyde Lilly, Chief Clerk
Evelyn Weber Hay, Secretary
Sally Denny, Clerk-Stenographer
Mary Day, Clerk-Typist
Elizabeth Holsclaw, Clerk-Typist and Relief Telephone Operator
Laura Johnson Shade, Clerk-Typist
Claude Dickerson, Steamfitting and Plumbing Foreman
G. C. Jones, Carpenter Foreman
L. D. Kitchen, Electrician Foreman
Julius Rominger, Gardener and Labor Foreman
James Wood, Painter Foreman
Watts Bean, Supervisor of Janitors
Scudder Pearson, Foreman of Janitors
J. Y. Peck, Foreman Heating Plant
Bettie Swope, Chief Telephone Operator
H. O. Bradshaw, Mechanic

* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

STENOGRAPHIC BUREAU

Mary Johnston, Head
Katherine W. Shelburne, Stenographer
Helen Gilbert, Mimeograph Operator

POST OFFICE

Carrie Bean, Superintendent of University Station
Eloise Gray Webb, Assistant Superintendent
Adrain Bradshaw, Clerk
Marylene Williams, Clerk
Greeley Bradshaw, Mail-Carrier

KENTUCKY KERNEL

Niel Plummer, M.A., Ph.D., Acting Director of Student Publications
William Donald Grote, A.B., Manager of Printing Plant
Betty Park, Bookkeeper

TRAINING SCHOOL CAFETERIA

Flora O'Neil, B.S. in Inst. Mgt., Director

STUDENT UNION BUILDING

Mackie Rasdall, M.A., Director
Margaret Crutcher, Hostess
*Blanche Hyden, A.B., Hostess
Anne Jackson, Hostess
Allie Evans, Hostess and Clerk

STUDENT UNION CAFETERIA

*Jennie Mae Trigg, B.S. in H.E., Director
Thelma Thompson, B.S. in H.E., Assistant Director
Georgia Booher, B.S. in H.E., Assistant Director
Laurence Roberts, Manager of Grill
Elizabeth Gault, Storeroom Clerk
Mamie Lois Duke, Clerk-Bookkeeper

CAMPUS BOOK STORE

James E. Morris, A.B., Manager
Lloyd Q. Mautz, Assistant Manager
Bess Dudley Mayes, Secretary
Elizabeth Moores, Clerk

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* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

CHANGES IN STATUS AFFECTING MEMBERS OF THE UNIVERSITY STAFF
1946-47

Anderson, Lucille Bush, Resigned May 15, 1946
Armstrong, Watson, On leave 1946-47
Asher, Eston Jackson, Resigned July 1, 1945
Beaumont, Henry, Died February 21, 1947
Bekker, Konrad, Resigned September 1, 1946
Betz, Albert Leslie, Resigned March 1, 1946
Bills, Robert, Resigned September 1, 1946
Black, Harold M., Resigned July 1, 1946
Bosworth, Julian E., Transferred June 1946
Botto, Mark Maynard, Resigned June 1, 1946
Boyd, George, Resigned January 1, 1947
Boyd, Paul Prentice, Special Assignment June 16, 1947
Brack, Frances, Resigned December 15, 1946
Brewer, Lawrence Condit, Resigned September 19, 1945
Browder, James, Resigned June 30, 1945
Brown, Ernest Benton, Jr., Resigned April 1, 1946
Brown, Henry Corley, Resigned March 1, 1946
Buckler, William E., Resigned September 1, 1946
Bull, Jacqueline Page, Resigned as Instructor in Library Science, April 1, 1945
Cawood, Charles D., Resigned July 1, 1946
Chamberlain, Donald W., Resigned December 31, 1945
Chamberlain, Leo Martin, Vice President December 1, 1946
Church, William F., On leave 1946-47
Clark, Carl McKinley, On leave October 1, 1946 to August 31, 1947
Cohen, Leon W., Resigned June 30, 1947
Collier, Blanton, Resigned September 1, 1946
Collins, Dorothy, Resigned June 30, 1947
Collins, Ernest, Resigned August 1, 1946
Copeland, Lynn, Resigned February 14, 1946
Cotton, Betty, Resigned April 17, 1946
Cutler, Laura Graham, Resigned January 15, 1947
Dantzler, Lehre Livingston, Special Assignment March 1, 1947
Davies, Herbert Howell, Resigned September 17, 1946
Davis, George Tansel, Resigned September 30, 1945
DeJarnette, Eloise, Resigned June 1, 1946
Downing, Harold Hardesty, Head of Department of Mathematics, June 16, 1947
Duggan, James E., Transferred January 1, 1946
Drake, Maurice, Resigned August 31, 1946
Eaves, J. C., Resigned September 1, 1946
Ellias, Loretta C., Resigned August 1, 1946

STENOGRAPHIC BUREAU

Mary Johnston, Head
Katherine W. Shelburne, Stenographer
Helen Gilbert, Mimeograph Operator

POST OFFICE

Carrie Bean, Superintendent of University Station
Eloise Gray Webb, Assistant Superintendent
Adrain Bradshaw, Clerk
Marylene Williams, Clerk
Greeley Bradshaw, Mail-Carrier

KENTUCKY KERNEL

Niel Plummer, M.A., Ph.D., Acting Director of Student Publications
William Donald Grote, A.B., Manager of Printing Plant
Betty Park, Bookkeeper

TRAINING SCHOOL CAFETERIA

Flora O'Neil, B.S. in Inst. Mgt., Director

STUDENT UNION BUILDING

Mackie Rasdall, M.A., Director
Margaret Crutcher, Hostess
*Blanche Hyden, A.B., Hostess
Anne Jackson, Hostess
Allie Evans, Hostess and Clerk

STUDENT UNION CAFETERIA

*Jennie Mae Trigg, B.S. in H.E., Director
Thelma Thompson, B.S. in H.E., Assistant Director
Georgia Booher, B.S. in H.E., Assistant Director
Laurence Roberts, Manager of Grill
Elizabeth Gault, Storeroom Clerk
Mamie Lois Duke, Clerk-Bookkeeper

CAMPUS BOOK STORE

James E. Morris, A.B., Manager
Lloyd Q. Mautz, Assistant Manager
Bess Dudley Mayes, Secretary
Elizabeth Moores, Clerk

---

* See appended list of leaves of absences, resignations, deaths, etc., p. 399.

CHANGES IN STATUS AFFECTING MEMBERS OF THE UNIVERSITY STAFF
1946-47

Anderson, Lucille Bush, Resigned May 15, 1946
Armstrong, Watson, On leave 1946-47
Asher, Eston Jackson, Resigned July 1, 1945
Beaumont, Henry, Died February 21, 1947
Bekker, Konrad, Resigned September 1, 1946
Betz, Albert Leslie, Resigned March 1, 1946
Bills, Robert, Resigned September 1, 1946
Black, Harold M., Resigned July 1, 1946
Bosworth, Julian E., Transferred June 1946
Botto, Mark Maynard, Resigned June 1, 1946
Boyd, George, Resigned January 1, 1947
Boyd, Paul Prentice, Special Assignment June 16, 1947
Brack, Frances, Resigned December 15, 1946
Brewer, Lawrence Condit, Resigned September 19, 1945
Browder, James, Resigned June 30, 1945
Brown, Ernest Benton, Jr., Resigned April 1, 1946
Brown, Henry Corley, Resigned March 1, 1946
Buckler, William E., Resigned September 1, 1946
Bull, Jacqueline Page, Resigned as Instructor in Library Science, April 1, 1945
Cawood, Charles D., Resigned July 1, 1946
Chamberlain, Donald W., Resigned December 31, 1945
Chamberlain, Leo Martin, Vice President December 1, 1946
Church, William F., On leave 1946-47
Clark, Carl McKinley, On leave October 1, 1946 to August 31, 1947
Cohen, Leon W., Resigned June 30, 1947
Collier, Blanton, Resigned September 1, 1946
Collins, Dorothy, Resigned June 30, 1947
Collins, Ernest, Resigned August 1, 1946
Copeland, Lynn, Resigned February 14, 1946
Cotton, Betty, Resigned April 17, 1946
Cutler, Laura Graham, Resigned January 15, 1947
Dantzler, Lehre Livingston, Special Assignment March 1, 1947
Davies, Herbert Howell, Resigned September 17, 1946
Davis, George Tansel, Resigned September 30, 1945
DeJarnette, Eloise, Resigned June 1, 1946
Downing, Harold Hardesty, Head of Department of Mathematics, June 16, 1947
Duggan, James E., Transferred January 1, 1946
Drake, Maurice, Resigned August 31, 1946
Eaves, J. C., Resigned September 1, 1946
Ellias, Loretta C., Resigned August 1, 1946

Eschborn, Ralph T., Employment terminated January 24, 1947
Evans, Charles A., Resigned September 15, 1946
Frank, John P., Resigned April 1, 1946
Gafford, Joe M., Transferred 1946
Galloway, Louise, Resigned July 1, 1946
Geary, Marjorie, Resigned July 1, 1946
Goldberg, Constance Sims, Resigned March 1, 1946
Gorman, Bush Allen, Resigned July 1, 1946
Graves, Lucille, Resigned June 30, 1946
Greathouse, Gladys, Resigned July 1, 1946
Gregory, James P., Resigned January 1, 1947
Grillot, Gerald Francis, Resigned September 1, 1946
Gustafson, Richard O., Resigned October 11, 1945
Guy, Hollis Preston, Resigned July 1, 1946
Haggard, Virginia E. Faulconer, Resigned July 13, 1946
Hahn, Thomas Marshall, Resigned April 1, 1946
Hardesty, Thomas C., Resigned October 30, 1946
Hartin, Virginia E., Resigned July 1, 1946
Hernandez, J. Eduardo, Military leave
Hertenstein, Charles H., Transferred May 25, 1945
Hillenmeyer, Eileen Sullivan, Resigned July 1, 1946
Himes, Ralph Eugene, Transferred November 20, 1945
Horlacher, Levi Jackson, On leave January 1, 1947 to March 25, 1947
Horsfield, Margaret Bennett, On leave Fall Quarter 1946-47
Horton, Lewis Henry, Resigned July 1, 1946
Howard, Joseph M., Transferred November 23, 1946
Huddleston, Joseph Jenkins, Resigned January 1, 1947
Hunt, Elizabeth, Resigned June 30, 1947
Hunt, Roy Haynes, Resigned December 14, 1946
Hyden, Blanche, Resigned June 30, 1947
Jaracz, Thaddeus, Resigned July 1, 1946
Jeffrey, Robert Newell, Resigned June 26, 1946
John, Fritz, Resigned July 1, 1946
Jones, Theodore Tolman, Special Assignment July 1, 1947
Kemper, Durbin Collins, Military leave
Ketchum, Marshall D., Resigned April 15, 1946
Kirwan, Albert Dennis, Dean of Men Effective July 1, 1947, On leave 1946-47
Knapp, Charles Merriam, Resigned July 1, 1946
Latimer, Claiborne G., Resigned July 1, 1947
Latimer, Ruth, Transferred to Home Demonstration Agent Work
Lawrence, Armon Jay, Resigned July 1, 1947
LeStourgeon, Flora Elizabeth, Resigned July 1, 1946
Ligon, Moses Edward, Emeritus July 1, 1947
Ligon, William Scherffius, On leave May 1, 1946 to March 24, 1947
Lincicome, David R., Resigned July 1, 1947

Lincicome, Dorothy, Resigned July 1, 1947
Lippert, Gertrude, Resigned July 1, 1946
Lowe, Patsy, Resigned August 1, 1946
McAllister, Cloyd N., Resigned January 1, 1947
McCabe, Margery, Resigned June 1, 1947
McCarty, Mildred E., Resigned October 10, 1945
Manning, John Walker, Resigned September 1, 1946
Marrs, Edna Brumagen, Resigned April 30, 1946
Martin, Donald W., Resigned November 15, 1945
Martin, Laura Katherine, On leave Spring Quarter 1946-47 and Fall and Winter Quarters 1947-48
Matlack, Betty, Resigned January 1, 1947
May, Mildred, Resigned July 1, 1946
Melcher, Columbus R., Died March 24, 1947
Milton, Mary Page, Recorder, May 16, 1947
Montgomery, W. C., Resigned July 1, 1946
Moore, Henry Boian, Resigned September 1, 1945
O'Bannon, Lester Severance, On leave 1946-47
Palmer, Edgar Zavitz, Resigned June 5, 1946
Pasco, Eddie C., Resigned October 12, 1946
Peniston, Era Wilder, Resigned September 1, 1946
Pennebaker, Frances, Resigned March 31, 1946
Pifer, Raymond Woodrow, Resigned December 31, 1946
Pinney, Oliver H., On leave
Poole, Irma A., Resigned June 30, 1947
Potter, Merwin Elwood, Resigned January 1, 1947
Powers, Marvin J., Resigned December 31, 1946
Proctor, Roy Estes, Resigned June 30, 1946
Pryor, William M., Resigned November 30, 1946
Ramsay, Bertrand Pettus, Resigned July 1, 1946
Randle, Stacy Boyce, Resigned May 1, 1946
Reeves, John Estill, On leave 1946-47
Rezatto, John L., Resigned July 1, 1946
Rhoads, Wayland, Resigned June 30, 1947
Ringrose, Arthur T., Resigned June 10, 1946
Rose, Donald, Resigned November 1, 1946
Rose, Joseph P., Transferred November 1, 1946
Ross, Clay Campbell, Died March 8, 1947
Rucker, Alice R., On leave Winter Quarter 1946-47
Ryland, Hobard, Military leave to September 1, 1946
Schick, Blaine Wilhelm, On leave Fall Quarter 1946-47
Schoeffler, Carolyn, Resigned December 20, 1946
Seay, Maurice F., Dean of the University and Registrar December 1, 1946
Sellards, Henry Grady, Military leave to March 1, 1946
Shropshire, Anne W., Resigned September 1, 1946

Smith, Coleman R., Transferred to Department of Athletics July 1, 1946
Smith, Minerva, Resigned April 1, 1947
Stalnaker, William A., Resigned March 31, 1946
Starnes, W. Gayle, Military leave
Stephenson, Wendell Holmes, Resigned September 1, 1946
Stoakes, James Paul, Resigned June 30, 1947
Taylor, Flora G., Resigned March 31, 1946
Templeton, William Chelcy, Jr., Resigned November 15, 1946
Tittle, Maynard C., Transferred November 1, 1946
Todd, Jarvis, On leave to September 1, 1946
Tolman, William Allen, On leave to September 1, 1946
Trigg, Jennie Mae, Resigned June 30, 1947
Wallace, Mary Louise, Resigned February 15, 1946
Walters, Alice, Resigned October 18, 1946
Walton, Sylvan Brooks, Resigned August 31, 1946
Warburton, F. W. Resigned August 10, 1946
Warren, A. Bernard, Resigned August 1, 1946
Wender, Simon Harold, Resigned July 1, 1946
Westerfield, Clifford, Resigned September 14, 1946
White, Frank D., Resigned September 1, 1946
White, Martin Marshall, Dean, beginning June 16, 1947
Wilson, Jessie, Died February 5, 1947
Wood, Julia Clarke, Resigned April 15, 1946
Wyatt, Charles Early, Military leave

ADMINISTRATIVE COMMITTEES 1946-47

Accredited Relations—Paul P. Boyd, E. N. Fergus, J. S. Horine, A. J. Lawrence, Maple Moores, Roy Moreland, Maurice F. Seay, W. S. Taylor, M. M. White.

Commencement Exercises—A. E. Bigge, Leo M. Chamberlain, Anne Callihan, Alexander Capurso, E. B. Farris, Jane Haselden, Helen King, Mildred Lewis, Colonel G. T. Mackenzie, Lucille Newton, A. J. Olney, Maurice F. Seay, R. W. Wild.

Foreign Students—A. E. Bigge, Jane Haselden, Grant C. Knight, Dorothy Linville, J. R. Schwendeman, Alberta Server, Amry Vandenbosch.

Founders Day—Leo M. Chamberlain, H. H. Downing, E. B. Farris, Ezra L Gillis, Jane Haselden, Helen King, Margaret King, Mildred Lewis, Marguerite McLaughlin, E. G. Sulzer, W. S. Taylor, James W. Whitehouse, R. W. Wild.

Freshman Week—Lysle W. Croft, W. E. Beals, W. A. Heinz, Sarah B. Holmes, J. S. Horine, R. L. Mellenbruch, Maple Moores, Bart N. Peak, C. C. Ross, Dewey G. Steele.

Haggin Fund Publications—Frank L. McVey, Howard Beers, T. D. Clark, E. F. Farquhar, W. D. Funkhouser, Edward Wiest.

Honors Day—Edward Wiest, Ralph Cherry, Sarah B. Holmes, T. T. Jones, Maple Moores, W. L. Roberts, R. W. Wild, D. V. Terrell, R. H. Weaver.

Insurance—Edward Wiest, Charles Barkenbus, C. C. Carpenter, Alvin E. Evans, E. F. Hartford, J. B. Kelly, L. H. McCain, Frank D. Peterson, H. A. Romanowitz

Library—J. W. Martin, George K. Brady, T. D. Clark, C. S. Crouse, H. B. Price, Frank H. Randall, Herbert P. Riley, W. S. Taylor.

Music—Alexander Capurso, Howard Beers, Frank C. Fowler, John Kuiper, Mildred Lewis, Maurice Seay.

Non-Resident Fees—Maurice F. Seay, Frank Murray, Frank D. Peterson.

Personnel Office—Lysle W. Croft, Paul P. Boyd, Thomas P. Cooper, Sarah B. Holmes, T. T. Jones, Maple Moores, W. S. Taylor, D. V. Terrell, Edward Wiest.

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[1] When not otherwise included, the Vice-President is ex-officio a member of each administrative committee. The first named member of each committee is the chairman.

Schedule of Classes—O. T. Koppius, L. L. Dantzler, Lyle R. Dawson, L. J. Horlacher, W. W. Jennings, Robert G. Lunde, L. E. Meece, Roy Moreland, Morris Scherago, R. E. Shaver.

Scholarships—Leo M. Chamberlain, L. H. Carter, May K. Duncan, Wesley P. Garrigus, Chloe Gifford, Sarah B. Holmes, T. T. Jones, Frank Murray, D. V. Terrell, M. M. White.

Scholarship and Attendance—Paul P. Boyd, Lysle W. Croft, Alvin E. Evans, Jane Haselden, L. J. Horlacher, W. A. Price, W. S. Taylor, D. V. Terrell, Edward Wiest, M. M. White.

Service Men's Survey—Ezra L Gillis, Leo M. Chamberlain, Colonel G. T. Mackenzie, Frank L. McVey.

Social Program—Sarah B. Holmes, Dorothy Collins, Dorothy Evans, T. T. Jones, Edward Newbury, Bart N. Peak, Irma Poole, Mackie Rasdall, Margaret Storey, Bennett H. Wall, and eight student members.

Student Loans—T. T. Jones, W. R. Allen, Jane Haselden, W. W. Jennings, and three student members.

University Extension—Maurice F. Seay, L. H. Carter, Frank Murray, Walter A. Price, C. C. Ross, J. R. Schwendeman, D. V. Terrell.

Veterans' Affairs—Leo M. Chamberlain, Lysle W. Croft, Lyle K. Henry, T. T. Jones, Frank D. Peterson, Bennett H. Wall, and representatives of veterans' organizations.

Veterans' Housing—Leo M. Chamberlain, S. A. Boles, Jesse DeBoer, Lyle K. Henry, Sarah B. Holmes, T. T. Jones, Frank D. Peterson, Harold E. Wetzel.

COMMITTEES OF THE UNIVERSITY FACULTY 1946-47

Elections—Alvin E. Evans, N. R. Elliott, T. L. Hankins, R. E. Shaver, D. E. South, R. M. Sullivan

Planning and Policy—W. E. Beals, C. S. Crouse, Alvin E. Evans, Statie Erikson, L. E. Meece, Frank D. Peterson, John Kuiper, Maurice F. Seay, Charles E. Snow.

Rules—A. J. Lawrence, H. W. Beers, Leo M. Chamberlain, M. E. Ligon, Roy Moreland, E. B. Penrod, Irwin T. Sanders, Maurice F. Seay.

Student Organizations—Sarah B. Holmes, Dorothy Evans, T. T. Jones, Hobart Ryland, W. S. Ward, M. M. White.

PART VII

STATISTICAL SUMMARY

UNIVERSITY ENROLLMENT BY SEX AND BY COLLEGES AND CLASSES FOR THE YEAR ENDING JUNE 30, 1947 INCLUDING BOTH SUMMER TERMS OF 1946

(All duplicates excluded)

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	670	431	670	431	1101
Seniors	218	271	117	62	92	7	65	2	54	130	160	43	.....	.....	706	515	1221
Juniors	324	230	113	55	193	7	73	2	28	104	205	49	.....	.....	936	447	1383
Sophomores	458	273	179	58	551	.....	103	6	21	23	268	54	.....	.....	1580	414	1994
Freshmen	1139	342	274	72	618	5	.....	.....	38	30	319	60	.....	.....	2388	509	2897
Specials	37	31	13	3	3	.....	.....	.....	71	39	13	8	.....	.....	137	81	218
Auditors	4	14	1	4	.....	.....	.....	.....	.....	5	.....	2	3	4	8	29	37
Transients	12	43	1	3	1	.....	.....	.....	7	23	4	1	.....	.....	25	70	95
Totals	2192	1204	698	257	1458	19	241	10	219	354	969	217	673	435	6450	2496	8946

UNIVERSITY ENROLLMENT FOR THE FALL, WINTER, AND SPRING QUARTERS OF 1946-47 BY SEX AND BY COLLEGES AND CLASSES

(All duplicates excluded)

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	419	173	419	173	592
Seniors	195	223	99	53	89	6	54	.....	45	72	141	35	.....	.....	623	389	1012
Juniors	299	213	104	53	192	7	71	2	24	67	201	46	.....	.....	891	388	1279
Sophomores	452	256	171	57	541	.....	96	6	18	18	266	53	.....	.....	1544	390	1934
Freshmen	1068	328	263	71	599	5	.....	.....	33	23	303	59	.....	.....	2266	486	2752
Specials	22	22	10	3	3	.....	.....	.....	2	.....	13	6	.....	.....	50	31	81
Auditors	3	12	1	3	.....	.....	.....	.....	.....	1	.....	2	.....	1	4	19	23
Transients	4	16	.....	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	.....	8	16	24
Totals	2043	1070	648	240	1424	18	221	8	126	181	924	201	419	174	5805	1892	7697

UNIVERSITY ENROLLMENT FOR THE FALL QUARTER OF 1946-47 BY SEX AND BY COLLEGES AND CLASSES

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	276	114	276	114	390
Seniors	133	165	69	39	49	4	24	.....	27	52	87	32	.....	.....	389	292	681
Juniors	213	205	73	42	118	7	54	1	25	46	124	37	.....	.....	607	338	945
Sophomores	377	265	125	58	413	2	101	5	11	15	206	55	.....	.....	1233	400	1633
Freshmen	1116	338	278	72	676	3	.....	.....	21	22	308	63	.....	.....	2399	498	2897
Specials	16	19	10	1	2	.....	.....	.....	1	1	12	2	.....	.....	41	23	64
Auditors	2	4	.....	3	.....	.....	.....	.....	.....	.....	.....	1	.....	1	2	9	11
Transients	2	14	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	3	14	17
Totals	1859	1010	555	215	1258	16	179	6	86	136	737	190	276	115	4950	1688	6638

UNIVERSITY ENROLLMENT FOR THE WINTER QUARTER OF 1946-47 BY SEX AND BY COLLEGES AND CLASSES

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	286	102	286	102	388
Seniors	146	170	76	43	57	4	31	.....	37	50	92	29	.....	.....	439	296	735
Juniors	250	194	95	36	141	5	73	1	17	51	149	38	.....	.....	725	325	1050
Sophomores	367	246	138	56	477	2	93	5	12	17	242	40	.....	.....	1329	366	1695
Freshmen	1004	312	249	57	629	5	.....	.....	27	19	290	51	.....	.....	2201	444	2645
Specials	12	7	5	1	3	.....	.....	.....	1	.....	6	6	.....	.....	27	14	41
Auditors	1	5	1	1	1	.....	.....	.....	.....	.....	.....	1	.....	1	3	8	11
Transients	5	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5	15	20
Totals	1787	949	564	194	1308	16	197	6	94	137	779	165	286	103	5015	1570	6585

UNIVERSITY ENROLLMENT FOR THE SPRING QUARTER OF 1946-47 BY SEX AND BY COLLEGES AND CLASSES

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	323	100	323	100	423
Seniors	173	177	83	39	75	4	40	.....	43	59	108	27	.....	.....	522	306	828
Juniors	275	196	98	49	181	5	69	2	22	61	183	39	.....	.....	828	352	1180
Sophomores	402	214	150	47	494	.....	89	6	17	16	242	42	.....	.....	1394	325	1719
Freshmen	813	261	199	54	509	4	.....	.....	29	19	245	41	.....	.....	1795	379	2174
Specials	13	7	5	3	2	.....	.....	.....	1	.....	6	1	.....	.....	27	11	38
Auditors	.....	7	.....	2	.....	.....	.....	.....	.....	1	.....	1	.....	2	.....	13	13
Transients	4	12	.....	.....	.....	.....	.....	.....	3	.....	.....	.....	.....	.....	7	12	19
Totals	1680	874	535	194	1261	13	198	8	115	156	784	151	323	102	4896	1498	6394

UNIVERSITY ENROLLMENT FOR THE SUMMER SESSION OF 1946 BY SEX AND BY COLLEGES AND CLASSES

(All duplicates excluded)

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	412	313	412	313	725
Seniors	89	93	62	26	30	3	27	1	28	80	69	14	.....	.....	305	217	522
Juniors	180	88	53	19	54	2	38	.....	20	58	90	22	.....	.....	435	189	624
Sophomores	159	77	66	11	168	1	70	3	10	8	104	17	.....	.....	577	117	694
Freshmen	435	61	100	13	348	.....	.....	.....	12	8	155	9	.....	.....	1050	91	1141
Specials	18	9	9	1	1	.....	.....	.....	69	40	4	2	.....	.....	101	52	153
Auditors	2	6	.....	1	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	2	12	14
Transients	7	26	1	1	.....	.....	.....	.....	3	21	3	1	.....	.....	14	49	63
Totals	890	360	291	72	601	6	135	4	142	220	425	65	412	313	2896	1040	3936

UNIVERSITY ENROLLMENT FOR THE FIRST SUMMER TERM OF 1946 BY SEX AND BY COLLEGES AND CLASSES

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	365	273	365	273	638
Seniors	70	76	51	23	29	3	25	2	27	75	61	12	.....	.....	263	191	454
Juniors	159	80	53	15	55	2	38	.....	21	51	80	22	.....	.....	406	170	576
Sophomores	142	65	60	10	167	1	65	3	8	7	98	13	.....	.....	540	99	639
Freshmen	423	63	103	15	324	.....	.....	.....	14	8	159	9	.....	.....	1023	95	1118
Specials	20	8	8	.....	2	.....	.....	.....	28	29	5	2	.....	.....	63	39	102
Auditors	2	4	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	3	2	5	7	12
Transients	7	23	.....	4	1	.....	.....	.....	1	20	.....	.....	.....	.....	9	47	56
Totals	823	319	275	68	578	6	128	5	99	190	403	58	368	275	2674	921	3595

UNIVERSITY ENROLLMENT FOR THE SECOND SUMMER TERM OF 1946 BY SEX AND BY COLLEGES AND CLASSES

Classification	Arts and Sciences		Agriculture and Home Economics		Engineering		Law		Education		Commerce		Graduate		Totals		Grand Totals
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Graduates	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	242	139	242	139	381
Seniors	78	67	50	19	30	3	26	.....	22	52	58	11	.....	.....	264	152	416
Juniors	158	62	44	10	51	2	37	.....	14	33	81	10	.....	.....	385	117	502
Sophomores	140	43	57	8	162	1	66	2	8	3	99	11	.....	.....	532	68	600
Freshmen	341	39	90	8	334	.....	.....	.....	6	3	130	7	.....	.....	901	57	958
Specials	13	3	8	1	1	.....	.....	.....	41	10	4	.....	.....	.....	67	14	81
Auditors	1	2	.....	.....	.....	.....	.....	.....	.....	5	.....	.....	.....	.....	1	7	8
Transients	3	14	1	1	.....	.....	.....	.....	1	4	5	.....	.....	.....	10	19	29
Totals	734	230	250	47	578	6	129	2	92	110	377	39	242	139	2402	573	2975

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